

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
1001 I Street, Sacramento, CA 95814
<http://www.waterboards.ca.gov>

**ORDER WQ 20XX-00XX-DWQ, NPDES NO. CAS000004
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
GENERAL PERMIT FOR
WASTE DISCHARGE REQUIREMENTS FOR
STORMWATER DISCHARGES FROM
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)**

TABLE 1. PERMITTEE INFORMATION

Facility type:	Small MS4s, listed in Attachment B of this Order
Discharge type:	Stormwater and authorized non-stormwater discharges

TABLE 2. ADMINISTRATIVE INFORMATION

This Order was adopted on:	<Adoption Date>
This Order shall become effective on:	<Six Months from Adoption Date>
This Order shall expire on:	<Expiration Date>

I, Courtney Tyler, Clerk to the Board, do hereby certify that this Order is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board on XXXX XX, 202X.

Courtney Tyler, Clerk to the Board

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1. FACILITY INFORMATION AND SCOPE OF ORDER

This Order serves as a National Pollutant Discharge Elimination System (NPDES) permit that regulates stormwater and authorized non-stormwater discharges to waters of the United States (U.S.) from small municipal separate storm sewer systems (MS4s).

This Order provides the criteria for designating a Small MS4 and the requirements for implementing the Order for Traditional Permittees and Non-Traditional Permittees.

The Fact Sheet, Attachment A, provides the designation criteria for new permittees, permitting rationale, and regulatory background. Attachment B identifies each Permittee and is sorted by subset. The preceding permits provide the designating criteria for renewal permittees.

2. UPDATED PERMIT REQUIREMENTS

A summary of updated requirements is in the Fact Sheet (Attachment A).

3. FINDINGS OF APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

3.1 Legal Authority

This Order serves as waste discharge requirements pursuant to California Water Code (Water Code) division 7, chapter 4, article 4 (commencing with section 13260). This Order is also issued pursuant to federal Clean Water Act section 402 and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA), and Water Code division 7, chapter 5.5 (commencing with section 13370) and serves as an NPDES permit for discharges to waters of the U.S.

3.2 Rationale for Requirements

The State Water Board developed the requirements in this Order based on information obtained through notices of intent, monitoring and reporting programs, and other available information submitted by the Permittees through State Water Board Order WQ 2013-0001-DWQ and amendments. The Fact Sheet (Attachment A), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments B through J are also incorporated into this Order.

3.3 Notification of Interested Parties

The State Water Board notified existing Permittees, new Permittees, and interested agencies and persons of its intent to prescribe this Order's requirements and provided an opportunity to submit written and oral comments and recommendations. The Fact Sheet provides details regarding the notification.

3.4 Consideration of Public Comment

The State Water Board considered all written comments received pertaining to this Order and, in a public meeting, heard and considered all oral comments pertaining to the Order. The Fact Sheet provides details regarding the public comment process.

4. PERMIT APPROACH

The USEPA's final MS4 General Permit Remand Rule (Federal Register Vol. 81, No. 237, Friday, December 9, 2016), establishes two alternative approaches for developing small municipal stormwater permits: (1) the Comprehensive General Permit and (2) the Two-Step General Permit. The State Water Board selected the Comprehensive General Permit, which includes necessary terms and conditions and approach for this Order. Refer to the Fact Sheet for additional information.

THEREFORE, IT IS HEREBY ORDERED that Order WQ 2013-0001-DWQ and amendments is rescinded upon the effective date of this Order except for enforcement purposes, and in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, the Permittee shall comply with the requirements in this Order. This action in no way prevents the State Water Board or a Regional Water Board from taking enforcement action for violations of the Order WQ 2013-0001-DWQ, amendments, or previous Orders affiliated with Order WQ 2013-0001-DWQ at the time these Orders were in effect.

5. DISCHARGE PROHIBITIONS

5.1 Maximum Extent Practicable

Stormwater discharges regulated under this Order containing pollutants that have not been reduced to the maximum extent practicable are prohibited.

5.2 Discharges into Areas of Special Biological Significance

Stormwater and non-stormwater discharges into Areas of Special Biological Significance (ASBS) are prohibited unless allowed under the conditions provided below. Permittees that are authorized to discharge into an ASBS must additionally comply with Attachment F – Area of Special Biological Significance Implementation Requirements.

5.2.1 Existing Stormwater Discharges into ASBS

Stormwater discharges from existing stormwater outfalls (outfalls that were constructed or under construction prior to January 1, 2005) to ASBS are allowed provided that they comply with all applicable requirements of the Special Protections as laid out in this Order, including its Attachments, and:

- Are essential for flood control and slope stability, including roof, landscape, road, and parking lot drainage,
- Are designed to prevent soil erosion,
- Occur only during wet weather, and
- Are composed only of stormwater runoff.

Discharges composed of stormwater runoff shall not alter natural ocean water quality in an ASBS.

Only discharges from existing stormwater outfalls are allowed under this provision. Any proposed or new stormwater runoff discharge shall be routed to existing stormwater discharge outfalls and shall not result in any new contribution of waste (e.g., any addition of waste beyond what would have occurred as of January 1, 2005) to an ASBS. A change to an existing stormwater outfall, in terms of relocation or alteration, in order to comply with these requirements, is allowed and does not constitute a new discharge.

5.2.2 Non-Stormwater Discharges into ASBS

The following non-stormwater discharges into ASBS are allowed provided that the discharges are essential for emergency response purposes, structural stability, slope stability, or occur naturally:

- Discharges associated with emergency firefighting operations,
- Foundation and footing drains,
- Water from crawl space or basement pumps,
- Hillside dewatering,
- Naturally occurring groundwater seepage via a storm drain, and

- Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

Authorized non-stormwater discharges into ASBS shall not alter natural ocean water quality nor cause or contribute to violations of the water quality objectives in Chapter II of the Water Quality Control Plan for Ocean Waters of California (Ocean Plan).

5.2.3 Additional Non-Stormwater Discharge Authorizations and Prohibitions into ASBS

1. Non-stormwater discharges from utility vaults and underground structures to the Permittee's MS4s with a direct discharge to ASBS are authorized if the discharges are authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES CAG990002.
 - a. Other short-duration, intermittent non-stormwater 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 applicable Regional Water Board.
 - b. The State Water Board or a Regional Water Board may prohibit a specific discharge from a utility vault or underground structure if the State Water Board or Regional Water Board determines that the discharge is causing the MS4 discharge to alter natural ocean water quality or cause or contribute to a violation of a water quality objective in Chapter II of the Ocean Plan.
2. Additional non-stormwater discharges to a segment of the Permittee's MS4 with a direct discharge to an ASBS are authorized only to the extent the applicable Regional Water Board finds that the discharge will not alter natural ocean water quality in the ASBS nor cause or contribute to a violation of a water quality objective in Chapter II of the Ocean Plan.
3. This Order does not supersede the authority of a Permittee to effectively prohibit a non-stormwater discharge that has been found to alter natural ocean water quality in the ASBS or cause or contribute to a violation of a water quality objective in Chapter II of the Ocean Plan.
4. The discharge of trash into ASBS is prohibited.

5.3 Trash Narrative Water Quality Objective and Prohibition of Discharge

Trash shall not be present in inland surface waters, enclosed bays, estuaries, in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.

The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited. Compliance with this discharge prohibition shall be achieved through compliance with the trash implementation requirements in Attachment H of this Order.

5.4 Exceedances of Water Quality Objectives and Standards

Discharges from a Permittee's MS4 to waters of the U.S. that cause or contribute to the violation of water quality standards or water quality objectives, or that impact the beneficial uses established in a water quality control plan or in a promulgated policy of the State or Regional Water Boards, are prohibited.

5.5 Pollution or Nuisance

A discharge from a Permittee's 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 section 13050 is prohibited.

5.6 Maintenance Activities

Discharge of wastes or wastewater from road-sweeping vehicles or other maintenance activities to waters of the U.S. or to a storm drainage facility leading to waters of the U.S. is prohibited unless the discharge is in compliance with Attachments D, E, F, G, H, and I of this Order, as applicable, or is authorized under another NPDES permit.

5.7 Waste

Discharges of waste from a Permittee's MS4 that are prohibited by Statewide Water Quality Control Plans or applicable Regional Water Quality Control Plans (Basin Plans) are prohibited.

5.8 Non-Stormwater Discharges

Non-stormwater discharges, other than authorized discharges into ASBS, are to be effectively prohibited unless authorized by a separate NPDES permit or as allowed under this section.

5.8.1 Conditionally Exempt Non-Stormwater Discharges

The following non-stormwater discharges to the MS4 are not required to be effectively 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 stormwater program.

1. Water line flushing,
2. Incidental runoff from landscaped areas (as defined in and in accordance with this section),
3. Diverted stream flows,
4. Rising ground waters,
5. Uncontaminated ground water infiltration (as defined at 40 Code of Federal Regulations (C.F.R.) 35.2005(b)(20)) to separate storm sewers,
6. Uncontaminated pumped ground water,
7. Discharges from potable water sources,
8. Foundation drains,
9. Air conditioning condensation,
10. Springs,
11. Water from crawl space pumps,
12. Footing drains,
13. Individual residential car washing,
14. Flows from riparian habitats and wetlands, and
15. Dechlorinated swimming pool discharges.

Additionally, discharges or flows associated with emergency firefighting activities are excluded from the effective prohibition on non-stormwater discharges and need only be addressed where they are identified as significant sources of pollutants to the waters of the U.S. The use of best management practices is recommended during emergency firefighting events when feasible.

This section does not obviate the need for the Permittee to obtain any other appropriate permits for such discharges. The State or Regional Water Boards may have separate WDRs or NPDES permits for non-stormwater discharges. The Permittee shall comply with requirements of the State Water Board or an applicable Regional Water Board for coverage under separate waste discharge requirements or NPDES permit for a specific non-stormwater discharge, including a conditionally exempt non-stormwater discharge. Additionally, the Permittee may be subject to other Basin Plan requirements not specified in this Order that are applicable to one or more specific non-stormwater discharge types.

If a Permittee or a Regional Water Board Executive Officer identifies any individual or class of non-stormwater discharge listed above as a significant source of pollutants to waters of the U.S. or physically interconnected MS4, or as a threat to water quality standards, the Permittee may implement best management practices for the discharge or stop the discharge from recurring, or the Regional Water Board Executive Officer shall require the applicable Permittee(s) to monitor, submit a report, and implement best management practices for the discharge, or to stop the discharge from recurring.

5.8.2 Discharges in Excess of Incidental Runoff from Landscaped Areas

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. Discharges in excess of incidental runoff from landscaped areas are required to be effectively prohibited.

Water discharging from an area of intended use is considered to be in excess of incidental runoff if it is due to any of the following: the facility design, excessive application, intentional overflow or application, or 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 ponds 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 applicable 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.

6. EFFLUENT LIMITATIONS

1. Permittees shall implement best management practices to reduce the discharge of pollutants in stormwater discharged from their MS4 to the maximum extent practicable standard.
2. Permittees shall reduce the discharge of pollutants as necessary to comply with total maximum daily load (TMDL) wasteload allocations in accordance with Attachment G.
3. Permittees shall reduce the discharge of pollutants as necessary to comply with the Special Protections for discharges to ASBS in accordance with Attachment F.

4. Stormwater discharges shall not contain a hazardous substance in concentrations equal to or in excess of a reportable quantity listed in 40 C.F.R. sections 117 or 302.

7. RECEIVING WATER LIMITATIONS

7.1 Implementation of Receiving Water Limitations

Discharges from the Permittee's MS4 must comply with receiving water quality objectives, as specified in federal and state regulations, including State and Regional Water Board water quality control plans and policies. Discharges from the Permittee's MS4 shall not cause or contribute to an exceedance of any applicable water quality standard or water quality objective. The Permittee's stormwater management programs shall be designed such that discharges do not cause or contribute to exceedances of receiving water limitations and the other requirements of this Order. If exceedances of water quality objectives or water quality standards persist notwithstanding the implementation of the requirements of this Order, Permittees shall assure compliance with receiving water limitations by complying with the procedure described in this section, below.

Full compliance with the requirements for a TMDL, including the requirement to demonstrate attainment of the applicable wasteload allocation as specified in Attachment G, constitutes compliance with the receiving water limitations for the waterbody-pollutant combinations addressed by the TMDL.

7.1.1 Exceedance of Applicable Water Quality Standard and Technical Report

Either the Permittee or the applicable Regional Water Board may determine that an MS4 is causing or contributing to an exceedance of an applicable water quality standard. If the Permittee makes this determination, it shall promptly notify the applicable Regional Water Board of its determination. Following the determination by the Permittee or the determination and notification to the Permittee by the applicable Regional Water Board, the Permittee shall within 30 days of the determination submit a technical report to the Regional Water Board that describes best management practices that are currently being implemented and additional best management practices that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards, as well as any monitoring necessary to demonstrate compliance with this Order. The technical report shall include an implementation schedule.

7.1.2 Modifications of Technical Report

The Regional Water Board Executive Officer or State Water Board Executive Director may require modifications to this technical report. The Permittee shall submit any required modifications to the technical report within 30 days of notification by the applicable Board.

7.1.3 Implementation of Best Management Practices per Technical Report

In accordance with the implementation schedule of the technical report, the Permittee shall implement the revised best management practices and conduct additional necessary monitoring to demonstrate compliance with this Order.

7.1.4 Compliance with Procedures and Implementation Actions

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 Regional Water Board Executive Officer or State Water Board Executive Director to develop additional best management practices.

7.2 Total Maximum Daily Loads

Permittees shall comply with the applicable TMDL-related requirements in Attachment G of this Order.

7.3 Water Code Compliance

Where a Permittee discharges waste to a water of the State that is not a water of the U.S., compliance with the prohibitions, limitations, and provisions of this Order will constitute compliance with the requirements of the Porter-Cologne Water Quality Control Act within the Water Code, unless the State Water Board Executive Director or a Regional Water Board Executive Officer provides written notification to the Permittee stating otherwise.

8. REOPENER AND REVOCATION PROVISIONS

This Order may be modified, revoked and reissued, or terminated for cause, including promulgation of amended regulations, receipt of USEPA guidance concerning regulated activities, judicial decision, or in accordance with 40 C.F.R. sections 122.62, 122.63, 122.64, and 124.5. Additionally, the State Water Board may reopen and modify this Order at any time prior to its expiration under any of the following circumstances:

8.1 Present or Future Investigations

Present or future investigations demonstrate discharges regulated by this Order may have the potential to cause or contribute to adverse impacts on water quality or beneficial uses.

8.2 New or Revised Water Quality Objectives or Total Maximum Daily Loads

New or revised water quality objectives come into effect, or a TMDL is adopted or revised that is applicable to a Permittee. In such cases, effluent limitations and other requirements in this Order may be incorporated or modified as necessary to reflect the new or revised TMDLs or water quality objectives.

8.3 Precedential Decisions, Regulations, Laws, or Policies

New or revised regulations, laws, policies or State Water Board precedential decisions come into effect.

8.4 Clean Water Act Section 307(a)

Any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Clean Water Act section 307(a) 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 Order.

8.5 Test of Significant Toxicity

This Order may be reopened for modification to revise the aquatic toxicity provisions if the Supreme Court determines that the test of significant toxicity cannot be used in NPDES permits and the State Water Board suspends or revises the aquatic toxicity water quality standards.

9. REGIONAL WATER BOARD AUTHORITIES

1. Upon the effective date of this Order, Regional Water Boards are responsible for overseeing compliance with and enforcing the requirements of this Order. This may include, but is not limited to, determining compliance through reviewing plans, reports, and other information; conducting inspections and program evaluations; conducting monitoring; and issuing informal and formal enforcement orders¹. While State Water Board generally acts as an administrative appellate body for enforcement proceedings, it also has

¹ Water Quality Enforcement Policy, Appendix A, section B
(https://www.waterboards.ca.gov/water_issues/programs/enforcement/water_quality_enforcement.html)

oversight authority in water quality enforcement matters and may take enforcement action in lieu of the Regional Water Board where it determines that it is appropriate to do so.

2. Regional Water Boards may require retention of records for more than three years.
3. To the extent authorized by the Water Code, Regional Water Boards may impose additional notification, monitoring, reporting requirements and may provide guidance on monitoring plan implementation.
4. Regional Water Board staff may inspect the Permittee's facilities, storm sewer system, roadways, appurtenances, and construction sites.
5. Where a Permittee believes that additional time to comply with the final water quality-based effluent limitations or receiving water limitations in a TMDL is necessary, a Permittee may request a time schedule order pursuant to Water Code 13300 for the applicable Regional Water Board's consideration. Any such request should be made in writing and submitted to the Regional Water Board's Executive Officer.
6. To the extent authorized by the Water Code, Regional Water Boards may require modification to stormwater program components and reporting requirements.
7. The Regional Water Boards may designate additional Small MS4s on a case-by-case basis, following public review and comment. The State Water Board Executive Director may amend Attachment B to reflect Regional Water Board designations and may amend the Fact Sheet to incorporate the reasons for designation. Determination of designation shall be based on the potential of an 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.
8. Regional Water Boards may issue other NPDES permits or waste discharge requirements to Permittees for discharges not regulated by this Order.
9. The Regional Water Boards may issue individual stormwater permits to Permittees regulated under this Order or alternative stormwater general permits to categories of Permittees. Upon issuance of such permits by a Regional Water Board and approval by the State Water Board Executive Director, this Order shall no longer regulate the affected Permittees and Executive Director shall take action to delist the Permittees from this Order.
10. Where the Regional Water Board Executive Officer or State Water Board Executive Director has determined that additional best management practices are needed to address a continuing or recurring exceedance of receiving

water limitations already addressed in a Permittee's technical report per section 7.1, the Regional Water Board or State Board may direct the Permittee to repeat the technical report process to incorporate additional best management practices.

10. REQUIREMENTS OF OTHER AGENCIES

This Order does not preempt or supersede the authority of other State or local agencies (such as the Department of Toxic Substances Control or the California Coastal Commission) or local municipal authorities to prohibit, restrict, or control stormwater discharges and conditionally exempt non-stormwater discharges to storm drain systems or other watercourses within their jurisdictions as allowed by State and federal law.

11. DISPUTE RESOLUTION

In the event of a disagreement between a Permittee and a Regional Water Board over the interpretation of any provision of this Order, the Permittee shall first attempt to resolve the disputed issue with the Executive Officer of the Regional Water Board. If a resolution satisfactory to the Permittee is not obtained at the Regional Water Board level:

1. Within 30 days of any final determination by the Executive Officer of the Regional Water Board, the Permittee may submit its dispute and request for resolution in writing to the State Water Board Executive Director or designee for resolution, with a copy to the Executive Officer of the Regional Water Board and a copy to the State Water Board Division of Water Quality Deputy Director. If a request for resolution is not submitted within 30 days of any final determination by the Executive Officer of the Regional Water Board, the Permittee will be deemed to have accepted that determination.
2. The Regional Water Board Executive Officer will be provided with an opportunity to respond.
3. Within 60 days of the Permittee's submittal of the written dispute and request for resolution by the Executive Director or designee, the State Water Board Executive Director or designee shall make a determination on the Permittee's request.

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 or through its Executive Officer acts under Water Code sections 13300, 13304, or 13383.

This dispute resolution process does not apply to formal enforcement actions.

12. NOTICE OF INTENT

All Permittees listed in Attachment B must electronically file a Notice of Intent via SMARTS, as described in Attachment C.

1. By the effective date of this Order, Small MS4s regulated under the previous Order (Order WQ 2013-0001-DWQ, as amended, NPDES No. CAS000004) must electronically file a Notice of Intent and the applicable technical information required in Attachment C.
2. By the effective date of this Order, Small MS4s that are newly regulated by this Order must electronically file a Notice of Intent, upload the applicable technical information required in Attachment C, and submit the applicable fee.
3. Small MS4s designated after adoption of this Order must submit the applicable fee and electronically file a Notice of Intent within 180 days of designation along with applicable technical information required in Attachment C and applicable fee.
4. A Small MS4 identified in Attachment B may seek a waiver from the requirements of this Order if the Small MS4 meets the waiver criteria specified in Attachment C. Those entities under a waiver provided per the provisions of the previous permit must reapply under this Order.

13. STANDARD PROVISIONS – PERMIT COMPLIANCE

The Permittee shall comply with all Standard Provisions of this Order as required by 40 C.F.R. and as listed in sections 13 through 18.

This Order is effective for five years from the effective date. The terms and conditions of an expired Order are automatically continued pending reissuance. The Permittee shall continue to implement the requirements of this Order until a subsequent reissued permit becomes effective.

13.1 Duty to Comply

1. The Permittee shall comply with all the conditions of this Order. Any permit noncompliance constitutes a violation of the Clean Water Act and the Water Code, which may be grounds for enforcement action or denial of permit coverage.
2. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement.

3. Permittees who cannot certify compliance and/or who have had instances of noncompliance shall notify the applicable 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 calendar 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.

13.2 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this Order.

13.3 Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this Order.

13.4 Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee, or by a contractor to the Permittee, to achieve compliance with the conditions of this Order. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures. The operation of backup or auxiliary facilities or similar systems installed by the Permittee is required only when necessary to achieve compliance with the conditions of this Order.

13.5 Property Rights

This Order does not convey any property rights of any sort, or any exclusive privilege, 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.

13.6 Inspection and Entry

Upon the presentation of credentials and other documents required by law, the Permittee shall allow representatives of the State Water Board, Regional Water Boards, or USEPA to:

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order.
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order.
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order.
4. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance, or as otherwise authorized by the Clean Water Act, any substances, or parameters at any location.
5. Photograph or videotape outdoor areas of the facility to document compliance or non-compliance with this Permit.

14. STANDARD PROVISIONS – PERMIT ACTION

14.1 General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition.

14.3 Transfers

This Order is not transferable to any person except after notice to the State Water Board. The State Water Board may require modification or revocation and reissuance of the Order to change the name of the Permittee and incorporate such other requirements as may be necessary under the Clean Water Act and the Water Code.

14.4 Removal from Coverage

In the event that a Permittee is removed from coverage under this Order, the Permittee may be required to seek coverage under an individual or alternative general permit.

14.5 Availability of this Order

The Permittee shall always maintain a copy of this Order at the facility and make it available to the appropriate facility personnel and to representatives of the Regional Water Boards, State Water Board, or USEPA.

14.6 Provisions of this Order are Severable

The provisions of this Order are severable; and if any provision of this Order or the application of any provision of this Order to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

15. STANDARD PROVISIONS – MONITORING

15.1. Samples and Measurements

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

15.2. Test Procedures

Monitoring must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

1. The method minimum level is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method minimum level is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method minimum level is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
2. The method has the lowest minimum level of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N for the measured pollutant or pollutant parameter. In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. part 136, or otherwise required under 40 C.F.R. chapter 1,

subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters.

16. STANDARD PROVISIONS – RECORDS

16.1 Records Retention

The Permittee shall retain records related to its stormwater management program for a minimum of three years and make the records available to the permitting authority upon request; this includes a written description of the Permittee's stormwater management program. (40 C.F.R. 122.34(d) and State Water Board)

16.2 Retain Records of All Monitoring Information

The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the State Water Board Executive Director or Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2))

16.3 Records of Monitoring Information

Records of monitoring information shall include the following:

1. The date, exact place, and time of sampling or measurements;
2. The individual(s) who performed the sampling or measurements;
3. The date(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(i) – (vi).)

16.4 Claims of Confidentiality

Claims of confidentiality for the following information will be denied:

1. The name and address of any permit applicant or Permittee, and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b))

17. STANDARD PROVISIONS – REPORTING

Permittees shall submit all reports and plans electronically through the Stormwater Multiple Application and Report Tracking System (SMARTS). When notified by the State Water Board Executive Director, Permittees shall electronically report to SMARTS the USEPA-specified reporting information (referred to as “[NPDES eRule](#)” reporting), including the data elements associated with MS4 permit requirements and minimum control measures ([Federal Register, Final Rule](#), April 15, 2020). (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

17.1 Duty to Provide Information

The Permittee shall furnish to the Regional Water Board, State Water Board, or US EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or US EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Permittee shall also furnish to the Regional Water Board, State Water Board, or US EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

17.2 Signatory and Certification Requirements

1. All notices of intent, applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with this section. (40 C.F.R. § 122.41(k).)
2. All permit notices of intent and applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 C.F.R. § 122.22(a)(1).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in the above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in the Standard Provisions – Reporting sections, above;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity

such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

- c. The written authorization is submitted to the Regional Water Board and State Water Board. 40 C.F.R. § 122.22(b)(1)) – (b)(3)
4. If an authorization of a duly authorized representative is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)
5. Any person signing a document under The Standard Provisions – Reporting sections, above, 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, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 C.F.R. § 122.22(d).)
6. Any person providing the electronic signature for documents described in Standard Provisions – 16.2.1, 16.2.2, or 16.2.3 that are submitted electronically shall meet all relevant requirements of the Standard Provisions – Reporting sections, and shall ensure that all relevant requirements of 40 C.F.R. section 3 (Cross-Media Electronic Reporting) and 40 C.F.R. section 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R § 122.22(e).)

17.3 Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the monitoring and reporting sections of Attachments D, E, F, G, H, and I of this Order. (40 C.F.R. § 122.41(l)(4).)
2. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

3. If the Permittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monitoring reports (40 C.F.R. § 122.41(l)(4)(ii).)

17.4 Planned Changes

The Permittee shall give notice to the State Water Board and the applicable Regional Water Board as soon as possible of any planned physical alteration or additions to the permitted facility. Notice is required under this section only when the alteration or addition could significantly change the nature or could increase the quantity of pollutants discharged or otherwise meets the criteria in 40 C.F.R. section 122.41(l)(1).

17.5 Anticipated Noncompliance

The Permittee shall give advance notice to the applicable Regional Water Board of any planned changes in the permitted facility or activity which may result in noncompliance with the requirements of this Order.

17.6 Other Information

If the Permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in a permit application or in any required report, it shall promptly submit such facts or information.

17.7 Twenty-Four Hour Reporting

The Permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

18. STANDARD PROVISIONS – ENFORCEMENT

18.1 Limitation on Board Authority

The Standard Provisions of this section shall not act as a limitation on the statutory or regulatory authority of the State and Regional Water Boards.

18.2 Water Code and Clean Water Act

Any violation of this Order constitutes a violation of the Water Code and regulations adopted hereunder and the provisions of the Clean Water Act, and is the basis for an enforcement action, permit termination, permit revocation and reissuance, denial of an application for permit reissuance, or a combination thereof.

18.3 Enforcement Actions

The State Water Board and Regional Water Boards may impose administrative civil liability, may refer the Permittee to the State Attorney General to seek civil monetary penalties, may seek injunctive relief, or may take other appropriate enforcement action as provided in the Water Code or federal law for violations subject thereto.

18.4 Falsification of Monitoring

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device, report, or method or reports of compliance or noncompliance required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both

18.5 False Statements

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 Order 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 both.

18.6 Significant Penalties

Significant penalties may be imposed for violation of this Order, pursuant to Water Code section 13385 and other statutes. Court-imposed liability may not exceed \$25,000 per day, and Regional Water Boards may impose administrative fines not to exceed \$10,000 per day.

18.7 Section 311 Responsibilities

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under section 311 of the Clean Water Act.

19. STORMWATER MANAGEMENT PROGRAM

19.1 Traditional and Non-Traditional Permittee Requirements

This Order requires the Permittee to implement a stormwater management program consistent with the requirements of this Order. Stormwater management program requirements are specified separately for Traditional and Non-Traditional Permittees. Traditional Permittees shall comply with Attachment D of this Order. Non-Traditional Permittees shall comply with Attachment E of this Order.

19.2 Renewal Permittee Continuing Implementation

Where this Order requires a Renewal Permittee to update a plan or program required by the prior Order, the Renewal Permittee must continue implementing its existing plan or policy until the new plan or policy is finalized.

19.3 Receiving Water Limitations

Stormwater management programs shall be designed to achieve compliance with receiving water limitations through timely implementation of control measures, best management practices and other actions to reduce pollutants in the discharges and other requirements of this Order including any modifications.

19.4 MS4 Boundary

The Permittee's Stormwater Management Program must be implemented in all areas that drain into the storm sewer system, such as roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, storm drains, and other structures designed or used for collecting and conveying stormwater to the MS4.

1. For cities, towns, and other incorporated areas; the boundary includes the incorporated area and the MS4's jurisdictional boundary. This includes the MS4's storm sewer system and all areas, appurtenances, and structures that drain into the MS4.
2. For counties; boundaries include any portion of urban areas with a population of at least 50,000 based on the 2020 census and places identified in Attachment B for coverage by counties. Boundaries must be proposed in

the boundary map and may be developed in conjunction with the applicable Regional Water Board.

3. For Non-Traditional Permittees; the boundary includes the extent of the MS4 system. For military installations, this Order applies to areas where the activities and population density resemble that of a Traditional Small MS4. For Department of Corrections and Rehabilitation Permittees, this Order applies to facilities that are in active operation (i.e., it does not apply to closed facilities lacking management oversight).

20. SECURITY CONCERNS

Department of Defense, Department of Corrections and Rehabilitation Permittees, ports, and transportation agencies are exempt from Annual Reporting and Guidance Document requirements in this Order that could pose a security risk and/or compromise facility security. The Permittee shall note in the Annual Report any questions not answered, or items not submitted due to such security concerns.

21. ELECTRONIC MS4 SYSTEM SERVICE AREA BOUNDARY MAP

The Permittee shall submit an up-to-date electronic spatial map of its MS4 service area boundaries. The map must be in accordance with Attachment C section C3 (Electronic MS4 Service Area Boundary Map) and the specification provided on the [Small MS4 Program](#) website. By the Effective Date of this Order, specifications for the electronic MS4 service area boundary map format will be provided on the statewide [Small MS4 Program](#) website.

ATTACHMENT A – FACT SHEET

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A1 INTRODUCTION

This Order provides requirements for the discharge of stormwater to surface water by designated small municipalities and public agencies. During rain, runoff picks up pollutants, is washed into storm sewer systems, and eventually ends up in local rivers, creeks, and streams. Common pollutants found in runoff include oil and grease from roadways; pesticides from lawns and gardens; nutrients from lawn and agricultural fertilizers; bacteria from warm-blooded species and failing septic systems; sediment from roadways and construction sites; and trash from roads, sidewalks, and illegal dumping. When deposited into nearby waterways through storm sewer discharges, these pollutants can impair waterways, thereby discouraging recreation, contaminating drinking water supplies, and degrading the habitat for fish, wildlife, and aquatic species. The Small Municipal Separate Storm Sewer System (MS4) permit aims to control these pollutants to protect surface water quality.

This Fact Sheet provides federal and state regulations and state and regional policies for this Order's requirements to control stormwater discharges. Federal regulations include the Clean Water Act. State regulations and policies include the California Water Code (Water Code), and State Water Board Trash Provisions, Areas of Special Biological Significance (ASBS), Policy for the Standardization of Cost Reporting in Municipal Stormwater Permits, and Antidegradation Policy. Regional water board policies include the Basin Plans. All Attachments to this Order, including this Fact Sheet, are hereby incorporated by reference into this Order.

A2 PERMITTING BACKGROUND

In 2003, the State Water Board adopted WQ Order [2003-0005-DWQ](#), the first statewide general permit for stormwater discharges from Small Municipal MS4 permittees to comply with Clean Water Act section 402(p)(6). A subsequent permit, WQ Order [2013-0001-DWQ](#), was adopted by the State Water Board on February 15, 2013 and has since been amended several times.

This Order is a Comprehensive General Permit that is structured to contain all necessary requirements for all Small MS4 Permittees covered under this Order. Requirements are expressed in clear, specific, and measurable terms for all parts of the permit that addresses the six minimum control measures, total maximum daily loads (TMDLs), and annual reports.

A3 FEDERAL REGULATORY BACKGROUND AND DESIGNATION CRITERIA

In 1972 the Federal Water Pollution Control Act (also referred to as the Clean Water Act) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharger obtains

an NPDES permit and the discharges comply with an NPDES permit. In 1987, the Clean Water Act was amended, adding section 402(p) and establishing stormwater discharges as point source discharges. Section 402(p) of the Clean Water Act provides a framework for regulating municipal stormwater discharges under the NPDES program. USEPA authorized California State and Regional Water Boards to administer the NPDES stormwater permit program.

On December 8, 1999, USEPA issued the Phase II rule. The Phase II rule requires operators of Small MS4s also be permitted for discharging stormwater, as described in the following subsections.

A3.1 Definition of an MS4

The definition of an MS4 per 40 C.F.R. 122.26(b)(8) is:

- (8) Municipal separate storm sewer means 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 by or pursuant to State law)...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States.*
 - (ii) Designed or used for collecting or conveying stormwater;*
 - (iii) Which is not a combined sewer; and*
 - (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 C.F.R. 122.2.*

A3.2 Definition of a Small MS4

The definition of a Small MS4 per 40 C.F.R. 122.26(b)(16) is:

- (16) Small municipal separate storm sewer system means all separate storm sewers that are:*
 - (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, stormwater, or other wastes, 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 to waters of the United States.

- (ii) Not defined as “large” or “medium” municipal separate storm sewer systems pursuant to [paragraphs \(b\)\(4\)](#) and [\(b\)\(7\)](#) of section 40 C.F.R 122.26(b), or designated under [paragraph \(a\)\(1\)\(v\)](#) of 122.26(b).*
- (iii) This term 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. The term does not include separate storm sewers in very discrete areas, such as individual buildings.*

(17) Small MS4 means a small municipal separate storm sewer system.

A3.3 Designating Traditional and Non-Traditional Small MS4s

The term “Traditional Small MS4s” refers to typical municipally-owned systems of conveyance (like storm drains, pipes, and ditches) that collect and convey stormwater and are part of a local government unit with the usual powers of self-government, including the authority to pass and enforce ordinances related to stormwater management.

The term “Non-Traditional Small MS4s” includes systems of conveyances at military bases, large hospital or prison complexes, and highways and other thoroughfares that collect and convey stormwater. The term does not include separate storm sewers in very discrete areas, such as individual buildings. They may have different administrative structures and often do not have the same ordinance-passing or general enforcement authority over the public within a defined geographic area.

An MS4 may be designated automatically or on a case-by-case basis. Small MS4s listed in Attachment B are designated and are regulated under this Order.

A3.3.1 Automatic Designation – Traditional Permittees

Automatic designation applies to operators of Traditional Small MS4s located within the boundaries of an urban area¹ with a population of 50,000 or more people based on the latest decennial Census. Once a Small MS4 is automatically designated, it cannot be removed from the program on the basis

¹ Urban Area: According to the 2020 Census, an urban area represents densely developed territory, and encompass residential, commercial, and other nonresidential urban land uses. Each urban area must encompass at least 2,000 housing units or at least 5,000 people. See FAQ p. 2 for more information ([2020 Urban Areas Frequently Asked Questions \(census.gov\)](https://www.census.gov/faq/2020-urban-areas-frequently-asked-questions)).

that a subsequent decennial urban area calculation shows that the Small MS4 is no longer within the urban area with a population of 50,000 or more people.

A3.3.2 Case-by-Case Designation by State and Regional Water Boards

1. On a case-by-case basis, the State and Regional Water Boards may designate Small MS4s for regulation other than those subject to automatic nationwide designation. The State and Regional Water Boards apply a balanced consideration of the following case-by-case designation criteria on a watershed or other local basis to entities that meet the definition of a traditional or non-traditional Small MS4:
 - a. discharges to sensitive waters.
 - b. has a high population density.
 - c. has a high growth or growth potential.
 - d. has contiguity to an urban area with a population of 50,000 or more people.
 - e. Is a significant contributor of pollutants to waters of the United States.
 - f. other programs are not effectively protective of water quality.
 - g. discharges to an ASBS.
 - h. other criteria.
2. The designation criteria are applied, at a minimum, to entities that meet the definition of a traditional or non-traditional Small MS4 that are located outside of an urban area with a population of 50,000 or more people and:
 - a. Are serving a jurisdiction with a population of at least 10,000 and a population density of at least 1,000 people/square mile; or
 - b. That discharge to Areas of Special Biological Significance as defined in the California Ocean Plan; or
 - c. That have caused, or have the potential to cause, an adverse impact on water quality.

The State Water Board has discretion to apply the criteria above to jurisdictions with smaller population or lower density.

Additionally, the State Water Board is required to designate any Small MS4 that contributes substantially to the pollutant loadings of a physically interconnected regulated MS4 (40 C.F.R. 123.35(b)(4)). 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. A Small MS4 whose discharge makes up more than 10 percent of the other

permitted MS4's total stormwater volume is presumed to be a significant contributor of pollutants to the permitted MS4.

A3.3.3 *Separate Implementing Entity (Co-Permittees)*

A Separate Implementing Entity is a separate third-party entity that a Small MS4 Permittee can rely on to implement some or all of its minimum control measures as required under this Order. The Separate Implementing Entity implements the measures on behalf of the Small MS4 Permittee. This allows a Small MS4 Permittee, such as a town or city, to share responsibility with other organizations like counties, government agencies, or non-profits, which are the Separate Implementing Entities. Some Small MS4 Permittees may lack the necessary legal authority to implement one or more of the required minimum control measures required under this Order. In these situations, the Small MS4 Permittee may work with the neighboring regulated MS4s.² The Small MS4 Permittee remains ultimately responsible for meeting this Order's requirements.

A3.3.4 *Limited Co-Permittee*

If the regulated Small MS4 is in the same urban area as a medium or large MS4 with an NPDES storm water permit and that other MS4 is willing to have the Small MS4 operator participate in its storm water program, the parties may jointly seek a modification of the other MS4 permit to include the Small MS4 operator as a limited co-permittee. A Small MS4 co-permittee is a smaller public entity that, along with other municipalities, shares responsibility for a single stormwater permit under a joint agreement. The applicability of this Order is automatically terminated on the effective date of the joint permit or the date of approval for coverage under the alternative general permit. (40 C.F.R. §122.34(b)(3) and §122.28(b)(3)).

A3.3.5 *Census Designated Place*

A Census Designated Place is a concentration of population defined by the US Census Bureau for statistical purposes that is not an incorporated municipality. A Census Designated Place does not have its own legal government with elected officials and public services are typically handled by the county.

A3.4 *Application for Coverage*

To apply or re-apply for coverage authorizing stormwater discharges pursuant to this Order, the Permittees shall electronically file a Notice of Intent using SMARTS and shall mail the appropriate permit fee to the State Water Board.

² USEPA [fact sheet](#) for the Stormwater Phase II Rule, August 2023, Page 4.

The Notice of Intent represents the Permittee's commitment to comply with this Order, including the BMP requirements of this Order in lieu of proposing BMP practices. Order Attachment C provides additional information on the application process.

For a Permittee that designates a Separate Implementing Entity to implement some or all of the Permittee's obligations under this Order, the Permittee must submit a Notice of Intent and name the other entity, identify which sections of this Order will be delegated to the Separate Implementing Entity, and which sections of this Order the Permittee will handle itself.

The county in which a Census Designated Place is located is the Permittee and the county will list the Census Designated Places within its jurisdiction when it files the Notice of Intent.

A4 WAIVERS

A Permittee may request a waiver of this Order's requirements. Directions for requesting a waiver are provided in Attachment C.

Regulated Small MS4s may seek a waiver from Phase II requirements if they meet criteria specified in 40 C.F.R. sections 122.32(c)-(e). The State Water 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)).

A5. NEW AND REMOVED PERMITTEES

A5.1 New Traditional and Non-Traditional Permittees

Table 5.1. New Traditional and Non-Traditional Permittees

Regional Board	New Entity/Place Name	Category	Rationale
1	California State Polytechnic University, Humboldt	Non-Traditional	Operates a stormwater sewer system contiguous to the City of Arcata, a permitted Small MS4. California State Polytechnic University, Humboldt was mistakenly left off of the list of Permittees in the 2013 permit. However, Cal Poly Humboldt has been actively implementing the permit since 2013 and should continue to do so and be listed in the reissuance.

Regional Board	New Entity/Place Name	Category	Rationale
1	Garberville	Traditional; Census Designated Place	Census Designated Place in Humboldt County MS4 jurisdictional area; Garberville is in the Eel River sediment and temperature TMDL watershed.
1	Redway	Traditional; Census Designated Place	Census Designated Place in Humboldt County MS4 jurisdictional area; Redway is in the Eel River sediment and temperature TMDL watershed.
1	Shelter Cove	Traditional; Census Designated Place	Census Designated Place in Humboldt County MS4 jurisdictional area. Shelter Cove discharges to the King Range ASBS via Humboldt County's existing outfall and is in the Mattole River sediment and temperature TMDL watershed
1	Willits	Traditional	Willits discharges to a waterbody with a sediment and temperature TMDL and as of the 2020 census has a population density of 1,770 residents per square mile which is considered high (>1,000 residents per square mile).
1, 2	Sonoma Marin Area Rail Transit (SMART)	Non-Traditional Special District	SMART is a special district rail corridor paralleling Highway 101 through Sonoma and Marin Counties. As of 4/7/2026, SMART includes 14 stations, an is planning constructions of more future stations. In order to fully regulate both maintenance facilities as well as existing and future stations and plazas, SMART needs 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. SMART serves thousands of passengers per day and needs to control trash as well as other typical MS4 pollutants from its parking lots and other operations.

Regional Board	New Entity/Place Name	Category	Rationale
5	Mountain House, City of	Traditional	Mountain House was designated in previous permits as a Community Services District which made it a non-traditional permittee. In 2024 Mountain House was incorporated and is now a city, making it a traditional permittee.

A5.2 Removed Traditional and Non-Traditional Permittees

Table A5.2. Removed Traditional and Non-Traditional Permittees

Regional Water Board	Removed Entity/Place Name	Category	Rationale
1	Sonoma State University	Non-Traditional	The North Coast Water Board moved this entity to the Phase I MS4 permit.
2	San Jose International Airport	Non-Traditional	The City of San Jose covers the airport under the San Francisco Bay Water Board's Phase I MS4 permit.
3	Carpinteria Unified School District	Non-Traditional	This is a small school district with under 2,000 students. It was incorrectly designated in previous permits.
3	Fort Hunter Liggett Army Garrison	Non-Traditional	Following designation under the 2013 Phase II Permit, the Fort made an agreement with State Board and Region 3 that the Fort's SWPPP for the IGP was adequate to address their stormwater discharges and that they could be removed from the Phase II Permit upon approval of the SWPPP.
3	Fort Ord Reuse Authority	Non-Traditional	Fort Ord Reuse Authority no longer exists. Areas of Fort Ord that have been developed were subsumed into the MS4 boundaries of the neighboring communities.

Regional Water Board	Removed Entity/Place Name	Category	Rationale
3	Oceano Community Services District	Non-Traditional	Previously incorrectly designated and does not own or operate drainage infrastructure and has no development permitting authority.
3	Templeton Community Services District	Non-Traditional	Previously incorrectly designated and does not own or operate drainage infrastructure and has no development permitting authority.
4	CCM Long Beach, Bureau of Prisons	Non-Traditional	This downtown Long Beach office closed and moved to FCI Terminal Island.
4	Lanternman Development Center	Non-Traditional	This psychiatric hospital closed in 2015, and ownership was transferred to Cal Poly Pomona. This area now falls under Cal Poly Pomona's MS4 permit coverage.
5	Mountain House Community Services District	Non-Traditional	Mountain House was incorporated into a city in 2024 and has been redesignated as a traditional permittee.
5	Sacramento Medical Center at Mather	Non-Traditional	Sacramento Medical Center at Mather was incorrectly designated in the 2013 permit. The facility is not a threat to water quality and does not satisfy the criteria for case-by-case basis designation.
9	MCC San Diego	Non-Traditional	MCC San Diego was incorrectly designated in the 2013 permit. This is a single building located in downtown San Diego. It has a small footprint and no stormwater infrastructure. A single building does not meet the minimum definition of an MS4.

A5.3 New and Removed California Department of Parks and Recreation Parks

Table A5.3. New and Removed California Department of Parks and Recreation

Regional Water Board	State Park Name	New or Removed	Rationale
2	Candlestick Point State Recreation Area	New	Meets the criteria for a Small MS4
2	Presidio of San Francisco	New	Meets the criteria for a Small MS4

Regional Water Board	State Park Name	New or Removed	Rationale
3	Asilomar State Beach	New	Meets the criteria for a Small MS4
4	Point Dume State Beach, Point Mugu State Park, and Robert H. Meyer Memorial State Beach	Removed	Previously incorrectly designated. These locations do not meet the minimum definition of MS4s as they are parking lots with no stormwater infrastructure.
9	Old Town San Diego State Historic Park	New	Meets the criteria for a Small MS4

A6 UPDATED AND REVISED PERMIT REQUIREMENTS

The following provides a summary of the major updates incorporated into this Order as compared to the previous statewide National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System Permit for the Small MS4s (Order WQ 2013-0001-DWQ):

1. Trash Provisions³ Requirements

Implements the Trash Provisions, including

- Definitions,
- Methods for compliance,
- Trash water quality objectives and prohibition of discharge,
- Compliance tracks,
- Plans, maps, and reporting,
- Monitoring, inspections, and maintenance,
- Milestones to meet the final December 2, 2030, deadline for all existing regulated permittees.

³ Water Quality Control Plan Ocean Water of California ([Ocean Plan](#)) Final Trash Amendment to the Ocean Plan (§§II.C.5, III.I.6, and III. L) and [Trash Provisions](#) for Inland Surface Waters, Enclosed Bays and Estuaries.

- h. Milestones to implement the Trash Provisions over 10 years from the effective date of designation for new regulated permittees.

2. Cost Reporting

Adds Cost Reporting Requirements for Traditional permittees, per the Water Quality Control Policy for Standardized Cost Reporting in Municipal Stormwater Permits (Cost Policy).

3. Post-Construction Requirements

- a. Minor changes to existing low impact development standards.
- b. Clarifies and reduces exclusions.
 - Removes exclusion for single family homes over 5,000 square feet.
 - Clarifies that full depth reclamation that meets certain guidelines may be an excluded road maintenance activity.
- c. Removes Soil Quality Improvement as a Site Design Measure. Inspection staff at Regional Boards found this measure difficult to verify that it was both installed properly and maintained over time.
- d. Applies 50 percent redevelopment rule to alteration of existing impervious development in addition to existing 50 percent increase of impervious development area. For example, under the alteration clause, if 7,000 ft² of an existing 12,000 ft² parking lot is being removed and replaced with a building (greater than 50% being altered), stormwater control measures are required to treat the runoff from the entire 12,000 ft². Under the increase clause, if a 7,000 ft² building is added to an unaltered 12,000 ft² parking lot within the project boundaries (greater than 50% increase), then stormwater control measures are required to treat runoff from the entire 19,000 ft².
- e. Adds new allowances for offsite compliance, providing flexibility for permittees.
- f. Adds option for permittee-led inspections to verify the condition of post-construction BMPs in addition to the existing self-certification method. Self-certification method requires inspections of half of all post-construction BMPs per five years.

4. Asset Management

Adds condition assessments and longer-term maintenance planning requirements for asset categories that permittees have already been tracking through the previous permit (outfalls, catch basins, post-construction BMPs, structural controls required by ASBS or TMDL requirements).

5. Public Education and Outreach

- a. Removes the option for the Regional Board to impose community based social marketing requirements. Community based social marketing wasn't broadly used under the previous permit, and it was unclear if there was enough additional benefit to justify the added complexity of the program. Permittees may still conduct this style of public outreach as part of the Public Education strategy.
6. Illicit Discharge Priority Area Inspections
- a. Increases inspection frequency for areas at higher risk for pollution from illicit discharges
 - b. Removes requirement to maintain an inventory of individual facilities and focuses on proactive high-level inspections of larger areas instead of individual sites or outfalls.
7. Pet Waste Pollution Prevention and Control
- a. Requires permittees to maintain an inventory of sites in their jurisdiction that have potential pet waste disposal issues (dog parks, trails, etc.).
 - b. Permittees must conduct at least one site visit to determine which sites may need additional BMPs.
 - c. Requires permittees to add pet waste disposal topics to their public education and outreach.
8. Traditional Construction Program
- a. Changes inspection frequency and sets minimum annual inspection for non-priority sites and a minimum of two annual inspections for priority sites (one before and one during the rainy season).
9. . Non-Traditional Construction Program
- a. Requires Non-Traditional Permittees to create policies and procedures for erosion and sediment controls for small construction projects of less than 1 acre (projects not subject to the Statewide Stormwater Construction General Permit).
10. Snow Removal and Traction Application Operations Pollution Prevention and Control
- a. Requires permittees that conduct snow removal operations to implement BMPs to ensure that snow removal, snow storage, street sweeping, and traction application don't contribute pollution to water bodies.

- b. Adds requirements based on Tahoe Regional Planning Agency BMP Handbook⁴ with some street sweeping requirements from the Caltrans Construction Site BMP Manual⁵.

11. Monitoring – Receiving Water and Special Studies

- a. Removes general receiving water and special studies monitoring. This applied to a small number of permittees and was not found to be providing conclusive, actionable information. Removal of these monitoring requirements will allow those permittees to focus on other aspects of their program.

12. Compliance Options – Stormwater Capture

- a. Adds incentives for stormwater capture and use projects.
- b. Provides new on-site and offsite options to promote individual or group projects.
- c. Off-site option allows for collaboration on larger projects from the local to regional scale.
- d. Permittees participating in one of the proposed compliance options will be deemed in compliance with multiple permit requirements, including those related to TMDL implementation (as applicable).

A7 LEGAL AUTHORITIES, APPLICABLE PLANS, POLICIES, REGULATIONS

A7.1 Legal Authorities

This Order serves as waste discharge requirements pursuant to California Water Code division 7, chapter 4, (commencing with §13260) for discharges to waters of the State. This Order is also issued pursuant to Clean Water Act §402 and implementing regulations adopted by USEPA and California Water Code⁶ division 7, chapter 5.5, (commencing with §13370) for discharges to the waters of United States. Therefore, this Order serves as an NPDES permit and as waste discharge requirements for point source discharges to waters of the State and waters of United States.

A7.2 California Environmental Quality Act

This action to adopt an NPDES permit is exempt from the provisions of California Environmental Quality Act (CEQA) Public Resources Code §21100, et seq. in accordance with California Water Code §13389.

⁴ [Best Management Practices Handbook, Tahoe Regional Planning Agency, May 2014](#)

⁵ [Caltrans FINAL Construction Site Best Management Practices Manual, March 2024](#)

⁶ California Water Code, [Porter-Cologne Water Quality Control Act](#), February 2025.

A7.3 Federal and State Regulations, Policies, and Plans

A7.3.1 Antidegradation Policy

Federal regulation 40 C.F.R. §131.12 requires water quality standards to include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy through State Water Board [Resolution 68-16](#), Statement of Policy with Respect to Maintaining High Quality of Waters in California, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Water Quality Control Plans implement, and incorporate by reference, both the State and federal antidegradation policies. Permitted discharges shall be consistent with the antidegradation provisions of 40 C.F.R. §131.12 and State Water Board Resolution 68-16.

This Order is consistent with the above-stated antidegradation policies and provisions. The State Water Board expects that the controls in this Order would not permit degradation in high quality waters, but to the extent that degradation does occur, this Order would comply with antidegradation requirements for discharges to any high quality waters. This Order continues the previous level of water quality protection for waters of the United States and any affected non-federal waters of the state as the previous Order, and further protects water quality in the following ways:

A7.3.2 Anti-Backsliding Requirements

Regulations at 40 C.F.R. §122.44(l) prohibit backsliding in NPDES permits. The regulations restrict the relaxation of final effluent limitations and the relaxation of standards or conditions contained in existing permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be at least as stringent as those in the previous permit, with some exceptions that limitations may be relaxed based on new information made available since the adoption of the previous permit. All effluent limitations and other requirements in this Order are at least as stringent as the requirements in the previous permit.

A7.3.3 Endangered Species Act Requirements

This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Acts (Fish and Game Code, §§2050-2097) or the Federal Endangered Species Act (16 United States Code §§1531-1544). This Order requires compliance with effluent limitations, receiving water limitations, and

other requirements to protect the beneficial uses of waters of the United States. The Permittee is responsible for complying with all requirements of the applicable Endangered Species Act.

A7.3.4 Regional Water Boards' Water Quality Control Plans

The Porter-Cologne Water Quality Control Act (California Water Code), §§13050 and 13240, provides requirements for Regional Water Boards' formulation and adoption of Water Quality Control Plans.

Each Regional Water Board has adopted Basin Plans specific to its region. The region-specific water quality control plans, referred to as Basin Plans, designate receiving water beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Permittee is subject to the prohibitions and requirements of each Basin Plan. Requirements in this Order implement the Regional Water Board Basin Plans.

A7.3.5 Clean Water Act 303(d) List and Relationship to Total Maximum Daily Loads

Clean Water Act §303(d) requires identification of specific waters where data indicate those waters are not achieving water quality standards. For each 303(d) listed water body, the state or USEPA is required to establish a Total Maximum Daily Load (TMDL), or implement alternative approaches as defined in USEPA's Long-Term Vision for Assessment, Restoration and Protection under the Clean Water Act §303(d) Program. TMDLs establish wasteload allocations for point source discharges and load allocations for non-point source discharges. TMDLs are established to achieve the water quality standards for the impaired waters. This Order includes provisions to implement TMDLs assigned to Permittees regulated by this Order.

A7.3.6 Enforcement and Non-Compliance

The State and Regional Water Boards are authorized to enforce the provisions and requirements of this Order. NPDES regulations require the Permittee to notify the State or appropriate Regional Water Board of anticipated non-compliance with this Order (40 C.F.R. §122.41(l)(2)) or of instances of non-compliance that endanger human health or the environment (40 C.F.R. §122.41(l)(6)).

A7.3.7 Public Participation

California Water Code §13167.5 requires that the State Water Board provide notice and period of at least 30 days for public comment prior to the adoption of waste discharge requirements.

State Water Board staff issued an Informal Draft Small MS4 permit on August 1, 2024, and a Draft Small MS4 permit on XXX xx, 202x, for 60 day comment periods.

On September 3 and 5, 2024, State Water Board staff conducted workshops on the Informal Draft Permit. In addition, over the summer of 2024 State Water Board staff met informally with stakeholders and accepted verbal comments.

On July 29 and July 30, 2026, State Water Board staff conducted public workshops on the Draft Permit.

A7.3.8 Human Right to Water

The Order is consistent with the State Water Board Resolution's No. 2016-0010, which adopts the human right to water as a core value and directs its implementation in programs and activities. The Order is expected to positively impact the human right to water through improving stormwater quality discharged to surface water.

A7.3.9 Public Outreach

The public process to consider adoption of this Order provided opportunities for stakeholders, disadvantaged communities and tribes⁷, and interested parties to provide meaningful input on the Order requirements that affect their communities.

The Permittees, tribal contacts, disadvantaged communities, and interested agencies and persons have been notified of the State Water Board's intent to reissue the waste discharge requirements for stormwater discharges and have been provided an opportunity to submit their written comments and recommendations and receive responses to these written comments. The State Water Board, through public testimony in public meetings and in written form, has received and considered all comments pertaining to this Order.

A7.4 Local Jurisdictions and Preemption

This Order does not supersede the authority of the Permittee or the authority of the local jurisdiction to prohibit, restrict, or control stormwater discharges, and conditionally exempt non-stormwater discharges to storm drain systems or other watercourses within its jurisdiction as allowed by state and federal law.

The Permittee is expected to comply with the lawful requirements of municipalities and other local, regional, and state agencies regarding discharges

⁷ Assembly Bil 2108 requires the Water Boards to incorporate environmental justice considerations into water policy, planning, and permitting processes.

of stormwater to separate storm sewer systems or other watercourses under those jurisdictions. Stormwater and non-stormwater discharges from MS4s that are owned and managed by local jurisdictions may discharge to stormwater conveyance systems owned and managed by the Permittee; likewise, stormwater and non-stormwater discharges from the Permittee's right-of-way, properties, facilities, and activities may discharge to stormwater conveyance systems managed by local jurisdictions.

A7.5 Economic Considerations – Cost of Compliance

Cost of compliance has been considered in issuing this Order while taking into consideration that many stormwater program components and associated costs existed before any MS4 permits were issued. For example, storm drain maintenance, street sweeping and trash/litter collection costs cannot solely or even principally be attributed to MS4 permit compliance since these long-standing practices preceded the adoption of the earliest stormwater 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 stormwater program costs.

Cost of Compliance – Six Minimum Control Measures

Federal Regulations require that Phase II Small MS4 permits include the six minimum measure of control (i.e., public education and outreach, public participation, illicit discharge detection and elimination, management of construction site runoff, management of post construction site runoff, and good housekeeping in municipal operations).

California State University, Sacramento, Office of Water Program's January 2005 [NPDES Stormwater Cost Survey](#) found stormwater costs per household for the Phase II six minimum control measures had a mean cost of 26 dollars per household per year. Adjusted for April 2024 using the U.S. Bureau of Labor Statistics [CPI Inflation Calculator](#), the mean is 42.75 dollars per household per year.

Where appropriate, this Order continues the requirements from the previous Order. The State Water Board has considered the requirements for the Permittee to implement BMPs to meet the minimum "Maximum Extent Practicable" (MEP) standard required by federal law and has determined that the costs reflect this standard.

Consistent with [State Water Board Order WQ 2000-11](#), cost is one factor that should be considered in determining whether a permit reflects the Maximum Extent Practicable standard. The Maximum Extent Practicable standard is an

evolving, flexible, and advancing concept that considers technical and economic feasibility. Because of the numerous advances in stormwater regulation, this Order does not require the Permittee to fully incorporate and implement all advances in a single permit term; this Order takes an incremental approach that allows for ongoing prioritization and effective use of limited Permittee funds. While costs associated with the [statewide Trash Provisions](#) and TMDL requirements are discussed below, they are not subject to the Maximum Extent Practicable standard.

The Permittee will incur costs for trash implementation requirements, in the continuation of complying with TMDL-related wasteload allocations, and in implementing the iterative process as required by this Order.

Consistent with State Water Board [Resolution 2013-0029](#), State Water Board staff considered the cost of permit compliance during the development of this Order. State Water Board staff held meetings with interested parties to develop permit requirements that protect water quality per federal and state regulations and law and that are compatible with the Permittee's existing protocols and established Stormwater Management Plan. During these meetings, State Water Board staff provided guidance to understand permit requirements and the various options this Order provides to demonstrate compliance.

1. Potential Additional Compliance Costs to Maintain Water Quality Protection

This Order may increase the Permittee's cost of permit compliance due to the following changes from the previous Order:

a. Post-Construction Treatment

While the trigger project sizes and general flow of the post-construction low impact development requirements have not been changed from the previous permit, this Order does make several clarifying changes and changes to exceptions to the definition of Regulated Projects that will require permittees to spend resources updating their ordinances, codes, policies, standard contract language, and/or guidance documents. This Order removes the Regulated Project exemption for large single-family homes which may require more permittee resources to track these projects. However, this Order also clearly spells out that standalone full-depth reclamation projects to repair roads can be an exempt if the project is not changing drainage patterns.

b. Resilience to Climate Change

Climate change refers to observed changes in weather patterns that may occur such as temperature, precipitation, and storms. The State Water Board's Resolution No. 2017-0012: "Comprehensive Response to Climate

Change,” requires a proactive approach to climate change in all California Water Board actions, with the intent to embed climate change consideration into all programs and activities. Aligning with Resolution No. 2017-0012, this Order promotes stormwater capture and use projects. This Order requires Permittees to assess stormwater assets for resilience to climate change, such as sea level and groundwater rise, flooding, and drought.

c. Revised Requirements for Asset Management

Similar to other NPDES permits, this Order requires the Permittee to develop and implement aspects of asset management that focus on the long-term operation and maintenance of the Permittee’s stormwater assets. While this Order adds some new requirements, the asset management requirements build on existing permit protocols, phase in over the course of the permit term, and allow for alternative approaches with Regional Board approval.

The State Water Board anticipates that the stormwater-specific asset management planning will result in cost savings in the long term. In the March 2017 [Asset Management Programs for Stormwater and Wastewater Systems: Overcoming Barriers to Development and Implementation](#), USEPA states that benefits of asset management will vary by utility, but potential benefits include reduced overall costs for both operations and capital expenditures, prolonged asset lifecycle and enhanced long term asset performance, and confidence in capital planning regarding rehabilitation, repair, and replacement decision making.

d. New Requirements to Implement 2015 Statewide Trash Provisions

This Order includes trash management-related requirements to implement the statewide Trash Provisions. While costs associated with implementing the Trash Provisions are expected to be significant, these new costs are for actions that directly improve water quality. The Trash Provisions were adopted by the State Water Board in 2015, and interested parties participated in the Trash Provisions development and adoption process. During the State Water Board’s consideration of the Trash Provisions, the State Water Board complied with the [California Water Code](#) §§13170 and 13241, subdivision (d) requirements to consider economics when establishing water quality objectives. Small MS4 permittees’ capital expenditures and annual costs were considered for compliance, as detailed in the Trash Provisions’ [Economic Considerations](#).

e. Pet Waste Requirements

This Order includes new requirements for reducing bacteria pollution from pet waste in MS4s through two programs: 1. Identification of municipally owned and operated areas (parks, trails, etc.) that accumulate pet waste that will enter the MS4 and planning actions to reduce this waste; and 2. public education aimed at reminding the public to clean up after their pets.

It is expected that the costs of these two programs can be minimized by integrating the programs into existing inspections, maintenance, and public outreach.

f. Snow Removal and Traction Application Operations Pollution Prevention and Control

For Permittees above 3,000 feet in elevation that have snow removal and traction application activities, this Order adds requirements to minimize pollution in stormwater runoff from these activities. This affects a small subset of permittees and is not expected to cause major changes to their existing operations.

g. Construction Site Inspections

This Order sets a more specific frequency for construction site inspections than the previous permit. This will likely require increased construction site inspections. The previous order did not set an inspection frequency for non-priority sites and required inspections of priority sites at specific steps of the construction process. This order calls for at least one inspection annually for all sites and two inspections annually for sites identified as high priority.

h. TMDLs

This Order adds new TMDLs and updates requirements for TMDLs already in the existing permit. This affects a large number of permittees, but the requirements, and accompanying costs, vary widely. The State and Regional Water Boards have worked closely with stakeholders to craft feasible requirements to meet the TMDLs.

2. Potentially Reduced and Minimized Compliance Costs

This Order may reduce the Permittee's cost of permit compliance due to the following considerations or changes from the previous Order:

a. Removal of potential illicit discharge list and changes to dry weather inspections

The previous permit required permittees to maintain an extensive list of facilities within their MS4 that had potential to contribute pollutants through

illicit discharges. Permittees have found this list burdensome to maintain and not useful in identifying illicit discharges.

The previous order also contained vague requirements for dry weather flow inspections that had some permittees conducting unnecessary sampling or dry weather flow inspections that proved ineffective at identifying active illicit discharges.

This Order focuses instead on priority area inspections which will allow permittees to proactively inspect large areas instead of tracking granular details about specific facilities. This also puts a more proactive focus on inspecting the areas for dry weather flow instead of the outfall. Ideally illicit discharges are identified and stopped before reaching an outfall.

b. Alternative options for post-construction BMPs

This Order adds options for meeting post-construction standards through offsite BMPs. This allows for flexibility in planning development and redevelopment and has the potential to both decrease costs and improve water quality simultaneously by locating BMPs at sites that may be more cost effective or located in another area of the watershed where it could be more effective overall.

c. Reduced water quality monitoring for some permittees

This Order ends general receiving water monitoring and special studies for permittees with a population above 50,000 that don't conduct monitoring otherwise (through TMDLs, ASBS, or 303(d) monitoring). While this is only a subset of permittees, it will be a significant cost reduction.

d. Alternative Compliance Pathway

Attachment H sets out a new pathway for compliance with multiple aspects of this Order including TMDLs through stormwater capture and infiltration. This alternative pathway also allows adjacent MS4s to coordinate efforts and collaborate on shared capture and infiltration projects, which can allow for agreements for MS4s to discharge to adjacent MS4s.

A8 GENERAL DISCHARGE PROHIBITIONS

A8.1 Maximum Extent Practicable Standard for Controlling Polluted Runoff

Stormwater discharges from the Permittee's municipal separate storm sewer system containing pollutants that have not been reduced to the Maximum Extent Practicable are prohibited, as required by Clean Water Act. See the section on Effluent Limitations, below, for more information.

The federal Clean Water Act §402(p)(3)(B) provides that NPDES permits for MS4s must require municipalities to reduce pollutants in their stormwater discharges to the Maximum Extent Practicable. MS4 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."*

The Maximum Extent Practicable standard involves applying BMPs that are effective in reducing the discharge of pollutants in stormwater runoff. In discussing the Maximum Extent Practicable standard, the State Water Board has stated the following: *"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 Maximum Extent Practicable 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. Maximum Extent Practicable 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."* (Order No. [WQ 2000-11](#), at p.20.)

Maximum Extent Practicable is the result of the cumulative effect of implementing, continuously evaluating, and making corresponding changes to a variety of technically and economically feasible BMPs that ensures 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 approach. For Small MS4s, USEPA has stated that pollutant reductions to the Maximum Extent Practicable will be realized by implementing BMPs through the six minimum measures described in the permit. (64 Federal Register 68753.)

A8.2 Stormwater and Non-Stormwater Discharges into ASBS

This Order includes requirements for Small MS4 Permittees that discharge to an Area of Special Biological Significance (ASBS). Public agencies or public entities that do not meet the definition of an MS4s are not included in this Order's ASBS requirements. Attachment F provides a list of Small MS4 Permittees that discharge to an ASBS.

Attachment F provides the compliance requirements for a Small MS4 to discharge to an ASBS. The Water Quality Control Plan for Ocean Waters of California ([Ocean Plan](#)) regulates territorial marine waters of the state for use and enjoyment by the people of the State. Appendix V of the Ocean Plan includes designations for coastal marine waters as ASBS, defined as a coastal area requiring protection of species or biological communities.

The Ocean Plan prohibits stormwater discharges to ASBS unless the discharges comply with State Water Board Resolution [No. 2012-0012](#), Approving Exceptions to the California Ocean Plan for Selected Discharges into Areas of Special Biological Significance, Including Special Protections for Beneficial Uses (General Exception). Applicable Small MS4 Permittees applied for and have been granted an exception to the prohibition on the condition that the applicable Permittee complies with the special protections specified in the General Exception and contained in this Order.

Non-stormwater discharges to ASBS are prohibited except where specifically authorized as specified in the General Exception and Attachment F of this Order.

This Order includes requirements for Small MS4 Permittees that are authorized under the General Exception to discharge to Areas of Special Biological Significance. See Attachment F for a list of MS4 Permittees and the ASBS they discharge to.

A8.3 Non-Stormwater Discharge Prohibition and Conditionally Exempt Non-Stormwater Discharges

Non-stormwater discharges consist of all discharges from an MS4 that do not originate from precipitation events. This Order prohibits non-stormwater discharges through an MS4 into waters of the U.S (see Order section 5.8.1), unless authorized by a separate NPDES permit or are conditionally exempt.

Certain categories of non-stormwater discharges are conditionally exempt as specified at 40 C.F.R. §122.26(d)(2)(iv)(B)(1). However, conditionally exempt non-stormwater discharges that are found to be significant sources of pollution are to be effectively prohibited.

A8.4 Prohibition of Discharges that Cause or Contribute to Exceedances

This Order prohibits discharges that cause or contribute to exceedances of water quality objectives or that unreasonably affect beneficial uses.

A8.5 Maintenance Activities

This Order continues the previous permit requirements for implementation of maintenance to reduce the discharge of wastes or wastewater from the Permittee's MS4 boundary to waters of the United States or to a storm drainage facility leading to waters of the United States. Federal NPDES stormwater regulations (40 C.F.R. §§122.41(e) and 122.26(d)(2)(iv)) provide the regulatory basis for incorporating provisions related to maintenance activities into this Order.

A8.6 Discharge Prohibition of Waste

This Order prohibits the discharge of waste directly or adjacent to waters of the United States unless authorized by the State Water Board or a Regional Water Board. Waste includes “sewage and any and all other waste substances, liquid, solid, gaseous, 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.” (California Water Code §13050(d).)

A9 EFFLUENT LIMITATIONS

Clean Water Act §301(b)(1)(A) and 40 C.F.R. §122.44 generally require that NPDES permits include technology based effluent limitations. However, pursuant to Clean Water Act §402(p)(3)(B)(iii), NPDES municipal stormwater dischargers are required to comply with the technology-based standard to “reduce the discharge of pollutants to the Maximum Extent Practicable.”

Maximum Extent Practicable is generally achieved by emphasizing pollution prevention and source control BMPs as the first lines of defense in combination with structural and treatment methods where appropriate. The Maximum Extent Practicable approach is an ever evolving, flexible, and advancing concept, which considers technical and economic feasibility. Knowledge about controlling urban runoff and what constitutes the Maximum Extent Practicable continues to evolve. The final determination of whether a municipality has reduced pollutants to the Maximum Extent Practicable can only be made by the permitting agency, not by the discharger.

These effluent limitations are achieved through implementation of BMPs in lieu of numeric effluent limitations, as authorized by 40 C.F.R. §122.44(k)(2).

The State Water Board assembled a panel to address the feasibility of including numeric effluent limits as part of NPDES municipal, industrial, and construction stormwater permits. The panel issued a report dated June 19, 2006⁸, that included recommendations as to the feasibility of including numeric limitations in stormwater permits, how such limitations 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 best management practices and 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

⁸ State Water Board Storm Water Panel of Experts, The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 19, 2006)

design target.” Consistent with the findings of the Panel and precedential State Water Board orders (State Water Board Orders Nos. WQ 91-03 and WQ 91-04), this Order allows the Permittee to implement BMPs to comply with the requirements of this Order.

A10 RECEIVING WATER LIMITATIONS

This order conditions the discharge of pollutants from MS4s to satisfy requirements of Clean Water Act section 402(p)(3)(B). The recent U.S. Supreme Court decision *City and County of San Francisco, California v. Environmental Protection Agency* (2025) 145 S.Ct. 704 holds that NPDES permits issued by the United States Environmental Protection Agency (USEPA) to implement Clean Water Act section 301(b)(1)(C) (33 U.S.C. § 1311(b)(1)(C)) may not include “end-result requirements,” which are provisions that do not spell out what a permittee must do or refrain from doing; rather, they make a permittee responsible for the quality of the water in the body of water into which the permittee discharges pollutants.

Under the Clean Water Act, MS4 discharges are not required to strictly comply with water quality standards pursuant to Clean Water Act section 301(b)(1)(C). (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.) MS4 discharges must meet a technology-based standard of prohibiting non-storm water discharges and reducing pollutants in the discharge to the Maximum Extent Practicable in all cases, but requiring strict compliance with water quality standards (e.g., by imposing numeric effluent limitations) is at the discretion of the permitting agency. (33 U.S.C. § 1342(p)(3)(B); *Defenders of Wildlife, supra*.) To the extent NPDES permitting authorities impose conditions requiring discharges to meet water quality standards, either strictly or through an iterative process, they are relying on authority in Clean Water Act section 402(p)(3)(B) to include “such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.” (33 U.S.C. § 1342(p)(3)(B)(iii).) This Order is not based on Clean Water Act section 301(b)(1)(C). Nothing in the U.S. Supreme Court’s holding in *City and County of San Francisco* addressed Clean Water Act section 402(p)(3)(B), and the U.S. Supreme Court grounded its decision limiting end-result requirements in Clean Water Act section 301(b)(1)(C). (*City and County of San Francisco, supra*, at pp. 10-20.) As a result, *City and County of San Francisco* does not limit the inclusion of receiving water limitations in this MS4 NPDES order.

This Order includes receiving water limitations not only in recognition of the authority conveyed by Clean Water Act section 402(p)(3)(B) and recognized by *Defenders of Wildlife*, but alternatively as a matter of independent state law authority (33 U.S.C. § 1370). Under the Porter-Cologne Water Quality Control Act, waste discharge requirements must implement applicable water quality control plans, which include the beneficial uses to be protected for a given water

body and the water quality objectives reasonably required for that protection. (Wat. Code, § 13263.) When implementing requirements under the Porter-Cologne Act that are not compelled by federal law, the Water Boards have some flexibility to consider other factors, such as economics, when establishing the appropriate requirements. (Wat. Code, §§ 13241, 13263; *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613.) Accordingly, since the Water Boards have discretion under federal law to determine whether to require MS4 discharges to strictly comply with water quality standards identified in applicable water quality control plans and federal water quality criteria, the Water Boards may also utilize the flexibility under the Porter-Cologne Act to decline to require MS4 discharges to strictly comply with water quality standards. (See also, State Water Board Order WQ 2015-0075 (*Los Angeles MS4*), p. 14, n. 51.)

Multiple State Water Board precedential decisions guide and control the Water Boards in requiring MS4 NPDES permits to include receiving water limitations based on state water quality standards identified in applicable water quality control plans and applicable federal water quality criteria and to implement such limitations through an iterative process, and over time through appropriate watershed management plans. (State Water Board Orders WQ 98-01 (*Environmental Health Coalition*), WQ 99-05 (*Environmental Health Coalition*), WQ 2001-15 (*Building Industry Association of San Diego*), WQ 2015-0075.) That iterative process involves reporting of the exceedance of an applicable water quality standard, submission of a report describing proposed improvements to BMPs expected to better meet water quality standards and an implementation schedule, and implementation of these new or improved BMPs in accordance with the approved schedule. (State Water Board Order WQ 99-05, pp. 2-3; see also State Water Board Order WQ 2001-15, pp. 7-9.) The State Water Board previously found it appropriate to require implementation of BMPs in lieu of numeric water quality-based effluent limitations to meet water quality standards. (See State Water Board Orders WQ 91-03 (*Citizens for a Better Environment*), WQ 91-04 (*Natural Resources Defense Council*), WQ 98-01, WQ 2001-15.) The State Water Board's precedential decisions direct the Water Boards to require compliance with water quality standards through incorporation of receiving water limitations provisions consistent with State Water Board Order WQ 99-05.

The Ninth Circuit held in *Natural Resources Defense Council, Inc. v. County of Los Angeles* (Ninth Circuit 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. The Ninth Circuit holding is consistent with the position of the State Water Board and Regional Water Boards that exceedances of water quality standards in an MS4 permit constitute violations of permit terms subject to enforcement by the Water Boards or through a citizen suit. While the Water Boards have generally directed dischargers to achieve compliance by improving control measures through the iterative process,

the Water Boards retain the discretion to take other appropriate enforcement and the iterative process does not shield dischargers from citizen suits. The State Water Board reaffirmed this position in State Board Order WQ 2015-0075, stating, “we will continue to read those provisions consistent with how the courts have: engagement in the iterative process does not excuse exceedances of water quality standards.” (State Water Board Order WQ 2015-0075, p. 15.) Further, the State Water Board supplemented its prior precedent and included further direction to allow appropriate watershed management plans to provide an additional pathway for compliance with water quality standards. (State Water Board Order WQ 2015-0075, pp. 15-17.)

Because *City and County of San Francisco* did not construe Clean Water Act section 402(p)(3)(B) or apply to MS4 NPDES permits, but also in recognition that states may include such other provisions as determined appropriate for the control of pollution from MS4s (33 U.S.C. § 1342(p)(3)(B)(iii)) and include more stringent requirements than the federal Clean Water Act (33 U.S.C. § 1370) and that multiple State Water Board precedential orders require inclusion of receiving water limitations and provisions incorporating an iterative approach to implementing water quality standards, this Order retains receiving water limitations consistent with State Water Board Order WQ 2015-0075 and prior precedent.

A11 STANDARD PROVISIONS

Standard Provisions are provided in sections 13 through 18 in this Order. Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. §122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. §122.42, are included in this Order. The Permittee shall comply with all standard provisions and with those additional conditions that are applicable under §122.42.

Conditions that apply to all State issue NPDES permits are established in 40 C.F.R. §§122.41(a)(1) and (b) through (n). These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations shall be included in the Order. 40 C.F.R. §123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. §123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. §§122.41(j)(5) and (k)(2) because the enforcement authority under the California Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference California Water Code §13387(e).

A12 PERMIT-SPECIFIC PROVISIONS

This Order establishes prescriptive permit conditions to which Permittees are subject.

A12.2.1 Minimum Control Measures

Federal regulations at 40 C.F.R. §122.34(b) require that any permit issued to a regulated Small MS4 must include permit terms and conditions to reduce the discharge of pollutants from the Small MS4 to the Maximum Extent Practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. Terms and conditions in the permit must be expressed in clear, specific, and measurable terms. The permit must also require a written stormwater management program document or documents that, at a minimum, describes in detail how the permittee intends to comply with the permit's requirements for each minimum control measure.

This Order implements 40 C.F.R. 122.34(b)(1) through (6) that requires Permittees to implement the six minimum control measures, as follows⁹:

1. Public Education and Outreach on Stormwater Impacts – Distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.
2. Public Involvement/Participation – Provide an opportunity for the public to participate in the development/implementation of their stormwater management program. Public notices for the opportunity to participate must comply with state, Tribal, and local public notice requirements.
3. Illicit Discharge Detection and Elimination – Find and eliminate sources of non-stormwater from the Permittee's storm sewer system. This Order requires the Permittee effectively prohibit, through ordinance, or other regulatory mechanism, non-stormwater discharges into the storm sewer system and implement appropriate enforcement procedures and actions; develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to the system; and inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.
4. Construction Site Stormwater Runoff Control – Requires the development, implementation, and enforcement of the Permittee's program to reduce pollutants in any stormwater runoff to the Small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre must be included if that construction activity is part of a larger common plan of development or sale that would disturb

⁹ Final Rule, page 68754, Program Requirements

one acre or more. At a minimum, this Order requires Permittees to develop and implement:

- a. An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal, or local law;
 - b. Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;
 - c. Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
 - d. Procedures for site plan review which incorporate consideration of potential water quality impacts;
 - e. Procedures for receipt and consideration of information submitted by the public, and
 - f. Procedures for site inspection and enforcement of control measures. The Permittee may leverage existing inspections (other MS4 inspections e.g., building, grading, code enforcement) and personnel to conduct Regulated Construction Project inspections and enforcement as long as they include assessments specific to stormwater issues.
5. Post-Construction Stormwater Management in New Development and Redevelopment – Requires the permittee to:
- a. Develop and implement strategies, which include a combination of structural and/or non-structural BMPs appropriate for the community;
 - b. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law; and
 - c. Ensure adequate long-term operation and maintenance of BMPs.
6. Pollution Prevention/Good Housekeeping for Municipal Operations – Requires the Permittee to develop and implement an operation and maintenance program that includes a training component with the ultimate goal of reducing pollutant runoff from municipal operations. The program must include employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

A12.2 Monitoring Requirements

Clean Water Act §308 and 40 C.F.R. §§122.41(h), 122.41(j)-(l), 122.449(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. California Water Code section 13383 authorizes the State Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Attachments D, E, F, G, H, and I establish monitoring requirements that implement federal and State laws and regulations. The State Water Board Executive Director may amend the monitoring and reporting requirements in this Order pursuant to 40 C.F.R. section 122.63.

This Order includes monitoring requirements in accordance with the federal Sufficiently Sensitive Methods Rule, requiring NPDES Permittees to use analytical test methods with minimum levels that are at least as sensitive as effluent limitations or action levels in accordance with applicable permit requirements and corresponding BMPs. The Sufficiently Sensitive Methods requirements are in accordance with 40 C.F.R. §§122.41(j)(4) and 122.44(i)(1)(iv).

A12.3 Reporting Requirements

Clean Water Act section 308 and 40 C.F.R. §§122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. California Water Code section 13383 authorizes the State Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Attachment G, Summary of Reporting Requirements, summarizes the reporting, and recordkeeping requirements in this Order that implement federal and State laws and regulations.

The electronic reporting requirements in this Order are based on USEPA's NPDES Electronic Reporting Rule (40 C.F.R. §127). The Rule requires electronic reporting in lieu of paper-based reporting. On April 30, 2019, USEPA's NPDES Electronic Reporting Rule was updated to include electronic reporting consistent with MS4 regulations. This Order implements the Rule similar to implementation for other NPDES Permittees regulated by the State and Regional Water Boards.

A12.4 Alternative Compliance Options for Stormwater Capture

The federal Clean Water Act provides that NPDES permits for MS4s must require municipalities to reduce pollutants in their stormwater discharges to the Maximum Extent Practicable and permits "shall require controls to reduce the discharge of pollutants to the Maximum Extent Practicable, which includes management practices, control techniques and system, design and engineering methods."

Attachment I of this Order, the Alternative Compliance Options for Stormwater Capture (capture option), provides two best management capture options that are consistent with the Maximum Extent Practicable standard and with State Water Board precedential Order WQ 2015-0075. Permittees are not required to implement either of the two compliance options.

The Permittee may discharge to a capture option for capture and use, infiltration, and/or evapotranspiration of municipal stormwater and authorized non-stormwater discharges. Capture options allow for the implementation of best management practices either on-site or off-site. If opting to utilize an Alternative Compliance Option, the Permittee must comply with the design, certification, approval, implementation, and reporting criteria.

Some schools have already begun incorporating low-impact development stormwater elements such as [Robert Louis Stevenson Elementary School](#) in San Francisco. If schools have capacity to capture excess stormwater beyond their own, expanded projects on those schools could intake water from neighboring MS4s for watershed-based compliance plans, serving as off-site compliance options.

A12.5 ASBS Requirements Overview

This Order requires the applicable Permittees to submit an updated ASBS Compliance Plan to the State Water Board Executive Director for review and consideration of approval. Permittees discharging into ASBS identified in Attachment F are required to submit and implement an updated ASBS Compliance for the applicable ASBS.

A12.6 TMDL Requirements

1. Overview

This Order implements TMDLs through implementation requirements in accordance with 40 C.F.R. §122.44(d)(1)(vii)(B). Clean Water Act section 303(d) requires States to identify waters that do not comply with water quality standards (impaired water bodies). States are required to compile this information in a list and submit the list to USEPA for review and approval. This list is known as the Section 303(d) List of Impaired Waters.

The State and Regional Water Boards prepare the Section 303(d) List of Impaired Waters, and subsequently develop TMDLs. TMDLs are developed by either the Regional Water Boards or USEPA in response to section 303(d) listings. TMDLs developed by Regional Water Boards include implementation provisions and can be incorporated as Water Quality Control Plan amendments. TMDLs developed by USEPA typically contain the total wasteload and load allocations required by section 303(d), but do not contain comprehensive implementation provisions.

TMDLs 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 defined as the sum of the individual wasteload allocations for point sources of pollution, the load allocations for nonpoint sources of pollution, the contribution from background sources of pollution, and a margin of safety. Discharges from Small MS4s are point source discharges subject to applicable TMDLs. This Order requires Permittees to comply with all applicable TMDLs approved pursuant to 40 C.F.R. §130.7 that assign a Wasteload Allocation to Permittee, as identified in Order Attachment G.

2. Toxicity Provisions

On December 1, 2020, the State Water Board adopted the State Policy for Water Quality Control: Toxicity Provisions (Toxicity Provisions) which established statewide numeric water quality objectives for both acute and chronic toxicity, using the Test of Significant Toxicity (TST), and a program of implementation to control toxicity. On October 5, 2021, the State Water Board adopted a resolution confirming that the Toxicity Provisions were adopted as a State Policy for Water Quality Control, for all inland surface waters, enclosed bays, estuaries, and coastal lagoons of the state, regardless of their status as waters of the United States. The Toxicity Provisions establish a uniform regulatory approach to provide consistent protection of aquatic life beneficial uses and protect aquatic habitats and life from the effects of known and unknown toxicants. The Toxicity Provisions were approved by OAL on April 25, 2022, and by U.S.EPA on May 1, 2023.

On December 14, 2023, the State Water Board applied for USEPA Region IX review and approval of a limited-use alternative test procedure (ATP), for the use of one-effluent concentration when conducting whole effluent toxicity (WET) testing, pursuant to 40 C.F.R. §136.5 (Aug. 28, 2017). The application is specific to acute or chronic WET tests in Table 1 of the application when using the TST statistical approach (USEPA, 2010) for analyzing the data. The application is being sought for all dischargers or facilities in the State of California and their associated laboratories. The ATP application is still pending with USEPA.

The use of the TST has been the subject of litigation. In December 2024, the Second District Court of Appeal upheld the use of the TST in an NPDES permit in the case *Camarillo Sanitary District v. California Regional Water Quality Control Board - Los Angeles Region*.

A separate legal challenge to the State Water Board's adoption of the Toxicity Provisions originated in Fresno County Superior Court on July 18, 2022, through a petition for writ of mandate filed by Camarillo Sanitary District, City of Simi Valley, City of Thousand Oaks, Central Valley Clean Water Association, and Clean Water SoCal (formerly known as Southern California

Alliance of Publicly Owned Treatment Works) (Petitioners) . One of the claims was that the Toxicity Provisions were inconsistent with the Clean Water Act. On October 9, 2023, the superior court denied the petition in its entirety.

On December 19, 2023, three of the Petitioners filed a notice of appeal of the Fresno Superior Court's decision upholding the Toxicity Provisions. On August 5, 2025, the Fifth District Court of Appeal issued a published opinion holding that the TST statistical approach, which is an integral component of the Toxicity Provisions, cannot be utilized in NPDES permitting to evaluate WET data because the TST is not an approved method under 40 C.F.R. Part 136. The Court of Appeal did not, however, disturb the Toxicity Provisions' use of the TST as a part of its water quality objectives. The State Water Board prevailed on all other claims in the litigation. The Court of Appeal's decision became final on September 4, 2025.

On September 15, 2025, the State Water Board filed a petition for review of the Fifth Circuit Court of Appeal's decision with the California Supreme Court. On November 12, 2025, the California Supreme Court granted review. The issues to be briefed and argued are limited to the issues raised in the State Water Board's petition for review.

Pending the California Supreme Court's review, the opinion of the Fifth Circuit Court of Appeal is not binding on the Water Boards. However, the opinion may be cited, not only for its persuasive value, but also for the limited purpose of establishing the existence of a conflict in authority.

In accordance with Water Code §§13146 and 13247, the Regional Board must fully implement the water quality objectives and their implementation procedures in the Toxicity Provisions. The numeric water quality objectives for chronic and acute toxicity established by the Toxicity Provisions, which are based on the TST, were approved by USEPA and remain in effect. As such, the numeric water quality objectives continue to serve as the applicable federal water quality standards in California.

The Water Boards must also continue to comply with federal Clean Water Act NPDES regulations for determining reasonable potential and establishing applicable water quality-based effluent limitations (WQBELs). NPDES regulations (40 C.F.R. § 122.44(d)(1)(vii)(A)) require that all WQBELs be derived from and comply with all applicable water quality standards. Moreover, although the Toxicity Provisions left in place narrative water quality objectives for aquatic toxicity in regional water board water quality control plans (basin plans), the Toxicity Provisions did supersede basin plan provisions and portions of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) for implementing narrative water quality objectives. As such, there are

currently no basin plan or SIP procedures in effect for implementing narrative water quality objectives to determine reasonable potential as required by 40 C.F.R. § 122.44(d)(1)(ii). As a result, the Regional Board must fully implement all of the Toxicity Provisions.

A12.7 Trash Requirements – Overview

In 2015, the State Water Board adopted the statewide *Trash Provisions*¹⁰, which became effective on December 2, 2015. The Trash Provisions establish a narrative water quality objective for trash and a prohibition on trash discharges to California waters to be implemented through Water Board-issued permits for certain dischargers. As applied to municipal stormwater discharges, the Trash Provisions:

- a. Set a compliance deadline for existing permitted dischargers and a schedule for new permitted dischargers,
- b. Require compliance with the prohibition of discharge through selection and implementation of Track 1 or Track 2 measures,
- c. Require milestones to evaluate progress towards final compliance,
- d. Provide a framework for monitoring, maintenance, and reporting requirements, and
- e. Provide a glossary with definitions of key terms.

This Order incorporates the Trash water quality objective and prohibition of discharge in Order section 5.3. Attachment H specifies how compliance with the prohibition of discharge is met.

Attachment H incorporates the Trash Provisions' definitions of terms, which are used throughout the attachment.

Track 2 Permittees are required to annually report the yearly decrease in trash. Attachment H provides the formula to calculate this decrease.¹¹ The formula includes ratios of the approximate midpoints of the categorical trash generation ranges which provides a means of weighing relative benefit to actions in Very High and High areas compared to actions in Moderate areas.

¹⁰ In 2015 the State Water Board adopted the Trash Amendments to the Water Quality Control Plan for Ocean Waters of California ([Ocean Plan](#), §§II.C.5, III.I.6, and III.L) to Control Trash and [Appendix E: Part 1 Trash Provision of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries](#). Together, the Trash Amendments are collectively referred to as the 'Trash Provisions'.

¹¹ The formula is from the San Francisco Bay Water Board's Phase I MS4 permit ([Order R2-2022-0018](#)) and is incorporated into section 11 of Attachment H of this Order.

- The Moderate range is 5-10 gallons/acre/year, with a midpoint of 7.5 gallons/acre/year.
- The High range is 10-50 gallons/acre/year with a midpoint of 30 gallons/acre/year.
- Therefore, the weighed ratio of High to Moderate is $30/7.5 = 4$.
- The Very High range, greater than 50 gallons/acre/year, does not have a specified upper bound that allows calculation of a midpoint. An alternative that provides reasonable weighing of Very High is 90 gallons/acre/year, which is 40 percent higher than the low end of the Very High range. This results in a weighed ratio of Very High to Moderate of $90/7.5 = 12$.

For Track 1 Permittees, the Trash Provisions mandate annual reporting demonstrating the installation, operation, maintenance, and GIS-mapped locations and drainage areas for all full capture systems.

For Track 2 Permittees, the Trash Provisions mandate implementation of monitoring plans that demonstrate the effectiveness of the full capture systems, multi-benefit projects, other treatment controls, institutional control, and compliance with full capture system equivalency. The Trash Provisions require that annual reporting must include GIS-mapped locations and drainage areas served by trash controls, and must demonstrate the effectiveness of the total combination of treatment controls. In addition, the Permittee must address the following topics when developing its annual report: (1) type, quantity, and location of treatment controls, institutional controls, and/or multi-benefit projects installed over the reporting year; (2) effectiveness, quantity, locations and individual area served by installed full capture systems installed over the reporting year; (3) the effectiveness of the total combination of treatment controls, institutional controls, and multi-benefit projects employed by the Permittees, (4) has the amount of trash discharged from the MS4 decreased from the previous year?; and (5) has the amount of trash in the Permittee's receiving water decreased from the previous year?

Order Attachment H addresses the above mandates. The following reports are not specifically named in the Trash Provisions, but as a whole, address the Trash Provisions mandates for installation, operation, maintenance, monitoring, mapping, and reporting:

- Trash Implementation Inventory: Area Treated and Area Remaining – Permittees prepare and annually update an inventory of treated areas and areas requiring treatment.
- Trash Generation Map – Submitted to SMARTS initially, upon selecting or changing tracks, and then annually, thereafter.

- Trash Assessment Plan: Track 2 and Non-Traditional Track 1 –The assessment is only required to demonstrate Full Capture System Equivalency for areas where other trash treatment controls and/or institutional controls have been implemented.
- Trash Implementation Plan: Track 2 - Acres Treated and Acres Remaining - Prepare and then update annually as necessary a detailed plan for implementation of BMPs to achieve Full Capture System Equivalency.

The reports, maps, and plans, where not directly required by the Trash Provisions, were determined to be necessary to facilitate implementation or to evaluate compliance with the Trash Provisions.

The Trash Provisions state that full capture trash systems must have a design treatment capacity that is either: a) of not less than the peak flow rate, Q , resulting from a one-year, one-hour, storm in the subdrainage area, or b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain. The Trash Provisions provide the Rational Equation to compute the peak flow rate. Rational Equation is most accurate for runoff estimates from small drainages with large amounts of impervious area, such as housing developments, industrial areas, parking lots, etc. For larger or complex basins, Order Attachment H provides an opportunity for the Permittee to propose an alternative to the Rational Equation.

A12.8 Utility Vaults

Utility vaults that are part of a Small MS4 Permittee's stormwater system are covered under this Order, the Small MS4 general permit, NPDES No. CAS000004. This Order allows utility vault discharges to a Small MS4 that have 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 (Utility Vaults General Permit), NPDES No. CAG990002.

The State Water Board is in the process of reissuing the Utility Vaults General Permit. As part of the renewal, the State Water Board will review the results of the 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 Small MS4s that discharge directly to an ASBS, the State Water Board finds that discharges from utility vaults and underground structures to a Small 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 Utility Vaults General Permit is renewed incorporating the results of the study.

A12.9 Cost Reporting

On January 22, 2025, the State Water Board passed [Resolution No. 2025-0005](#) which adopted the Municipal Stormwater Cost Policy¹². Section D11 of this Order applies the Policy to traditional permittees as required by the Policy. The purpose of the Municipal Stormwater Cost Policy is to ensure that MS4 permittees in California estimate, track, and report annual expenditures in a consistent manner. The State Water Board and the regional water boards intend to use this information to a) determine what it costs to implement each Permittee's municipal stormwater program as required by the applicable permit; and b) gather adequate levels of data with appropriate details to inform cost-effective permit development and equitable investment in municipal stormwater programs around the State.

The standardized cost reporting requirement for the traditional permittees is consistent with California Water code section 13383 which gives the State Water Board authority to impose additional reporting requirements to Permittees.

A13 REGION-SPECIFIC TMDL INFORMATION

The following sections summarize the pertinent information extracted from the adopted TMDLs, which includes responsible permittees, the pollutant, wasteload allocations, and final deadlines.

A13.1 NORTH COAST WATER BOARD TMDLS

Information in the following subsections has been summarized from the [North Coast Water Board's Basin Plan](#) and [USEPA-established TMDLs](#).

A13.1.1 *Shasta River Watershed Temperature and Dissolved Oxygen TMDL*

Description: The Shasta River watershed is impaired for beneficial uses, including cold freshwater habitat and sport fishing due to low dissolved oxygen and increased temperature. The TMDL identifies urban and suburban runoff as a pollutant source and specifies implementation actions. The TMDL was adopted by the North Coast Water Board, which was subsequently approved by USEPA on December 26, 2007.

Responsible Permittee: The TMDL identifies the City of Yreka as a source from urban and suburban runoff, and as an implementing party for control measures of fine sediment, nutrients, and other oxygen consuming materials and elevated temperature waste.

¹² [Final Draft Water Quality Control Policy for Standardized Cost Reporting in Municipal Stormwater Permits, December 2024.](#)

Wasteload Allocations: The TMDL does not specify wasteload allocations for the City of Yreka.

Final Compliance Deadline: The effective date is January 26, 2007. The TMDL does not specify a final compliance deadline for dissolved oxygen and temperature. As required by the TMDL, the City of Yreka submitted its plan to control sources. Therefore, over the term of this Order, the Permittee shall implement the on-going actions in its plan to minimize and control pollutants.

A13.1.2 Lower Eel River Temperature and Sediment TMDL

Description: USEPA established the Lower Eel River Temperature and Sediment TMDL on December 18, 2007. The Lower Eel River is impaired for temperature and sediment, which adversely impacts cold freshwater habitat. These TMDLS focus on salmonids as the aquatic species that are most sensitive to elevated sediment and temperature conditions, and for which data are available. Urban stormwater runoff are sources of potential heat and sediment. Salmon can be adversely affected by stream conditions related to sediment. For temperature, the most sensitive period in the Lower Eel River is the summer, when stream temperatures are hottest and young salmonids rear for several summers before migrating to the ocean. Point sources may discharge some sediment, but diffuse nonpoint sources are responsible for most sediment loading in the watershed.

Responsible Permittee: City of Fortuna

Wasteload Allocations: The TMDL provides wasteload allocations for temperature and sediment. The temperature wasteload allocation is zero net increase in receiving water temperatures.¹³

The annual sediment wasteload allocation for human-related sources is 180 tons per mile square per year. The average daily wasteload allocation is 2.5 tons per mile square per day.¹⁴

Final Compliance Deadlines: An implementation plan and schedule were not included; therefore, over the term of this Order, the Permittee shall implement actions to comply with this Order.

¹³ [Lower Eel River Temperature TMDL](#), December 18, 2007, pages 43-44

¹⁴ [Lower Eel River Temperature TMDL](#), December 18, 2007, pages 63-64

A13.2 SAN FRANCISCO BAY WATER BOARD TMDLS

Information in the following subsections has been summarized from Chapter 7 the [San Francisco Bay Water Board's Basin Plan](#) and from [USEPA-established TMDLs](#).

A13.2.1 *TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks*

Description: In 1998, a number of urban creeks were listed as impaired due to toxicity, which was attributed to pesticides, and particularly diazinon. The term “urban creeks” refers to freshwater streams that flow through urban areas, including incorporated cities and towns and unincorporated areas with similar land use intensities. Urban creeks within the San Francisco Bay Water Board’s region do not meet the narrative toxicity objective and the narrative sediment objective. Urban stormwater runoff is identified as a source of pesticides to urban creeks. Pesticides, including diazinon, enter urban creeks through urban runoff. Most urban runoff flows through storm drains owned and operated by the municipalities and other sources. Urban runoff contains pesticides as a result of pesticides being manufactured, formulated into products, and sold through distributors and retailers to businesses and individuals who apply them for structural pest control, landscape maintenance, agricultural, and other pest management purposes.

Responsible Permittees: The TMDL identifies the following Small Phase II MS4 Permittees as a source of urban runoff and implementing permittees: the City of American Canyon, City of Belvedere, City of Benicia, City of Calistoga, City of Larkspur, City of Mill Valley, City of Napa, City of Novato, City of Petaluma, City of San Anselmo, City of San Rafael, City of Sausalito, City of Sonoma, City of St. Helena, County of Marin, County of Napa, County of Sonoma, Town of Corte Madera, Town of Fairfax, Town of Ross, Town of Tiburon, Town of Yountville.

Wasteload Allocations: The TMDL is allocated to all urban runoff, including urban runoff associated with municipal separate storm sewer systems. The allocations are expressed in terms of toxic units and diazinon concentrations in urban creek water, and are the same as the numeric targets. The wasteload allocation for diazinon is 100 nanograms per liter as a one-hour average, which addresses both acute and chronic diazinon-related toxicity. The wasteload allocation for toxicity is 1.0 Acute Toxicity Unit (TUa) and 1.0 Chronic Toxicity Unit (TUc). Although the allocations apply to all urban runoff, responsibility for attaining the allocations is not the sole responsibility of urban runoff management agencies, whose authority to regulate pesticide use is constrained.

Final Compliance Deadline: The TMDL does not specify a final compliance deadline. The San Francisco Bay Water Board will periodically

review effectiveness of the implementation actions, the monitoring undertaken to track progress toward meeting the targets, and the most current scientific understanding pertaining to pesticide-related toxicity, and the strategy will be adapted as necessary to reflect changing conditions and information.

A13.2.2 Napa River Pathogens TMDL

Description: Napa River and its tributaries are impaired by pathogens. The listing was made in response to elevated bacteria in the river, which indicate the presence of fecal contamination and health risks to recreational users from water-borne pathogens. The overall goal of this TMDL is to minimize human exposure to waterborne disease-causing pathogens and to protect uses of water for recreational activities such as wading, swimming, fishing, and rafting. The most common sources of pathogens are wastes from warm-blooded animals, including humans, livestock, domestic pets, and wildlife. Potential pathogen sources in the watershed include municipal stormwater runoff.

Responsible Permittees: The TMDL identifies the Cities of American Canyon, Calistoga, St. Helena and Napa, the Town of Yountville and the County of Napa as responsible parties for implementing the stormwater runoff requirements of this TMDL.

Wasteload Allocations: San Francisco Bay Water Board staff, in collaboration with Permittees, will conduct water quality monitoring to evaluate *E. coli* concentration trends in the Napa River and its tributaries. Napa River pathogen wasteload allocations are based on a minimum of five consecutive samples collected at equal intervals over a 30-day period. These allocations are applicable year-round. The Napa River pathogens TMDL assigns a group wasteload allocation to municipal stormwater sources in units of colony-forming units, as follows:

Napa River Pathogens Municipal Runoff Group Wasteload Allocations (colony-forming units/100 mL)

<i>E. coli</i> Geometric Mean	<113
<i>E. coli</i> 90th percentile	<368
Fecal Coliform Geometric Mean	<180
Fecal Coliform 90th percentile	<360
Total Coliform Median	<216
Total Coliform Single Sample Maximum	9,000

Final Compliance Deadlines: The TMDL does not include a final compliance deadline. This is an on-going effort that is implemented throughout the term of this Order.

A13.2.3 Sonoma Creek Pathogens TMDL

Description: Sonoma Creek and its tributaries are impaired by pathogens, which impairs water contact and non-contact recreation beneficial uses. Wastes from warm-blooded animals, including humans, livestock, domestic pets, and wildlife pollutes stormwater runoff with pathogens. The TMDL identifies municipal stormwater runoff as a source of pathogens.

Responsible Permittees: The TMDL identifies the City of Sonoma, the County of Sonoma, and Sonoma Water as municipal stormwater sources are responsible for implementing the requirements of this TMDL.

Wasteload Allocations: The Sonoma Creek Pathogens TMDL assigns a group wasteload allocation to municipal stormwater permittees. The wasteload allocations are based on a minimum of five consecutive samples collected at equal intervals over a 30-day period. These allocations are applicable year-round:

Sonoma Creek Pathogens Group Wasteload Allocations (colony-forming units)

<i>E. coli</i> Geometric Mean	<113
<i>E. coli</i> 90th percentile	<368
Fecal Coliform Geometric Mean	<180
Fecal Coliform 90th percentile	<360
Total Coliform Median	<216
Total Coliform Single Sample Maximum	9,000

Final Compliance Deadlines: The TMDL does not include a final compliance deadline. Therefore, this is an on-going effort that is implemented throughout the term of this Order.

A13.2.4 Tomales Bay Watershed Pathogens TMDL

Description: Tomales Bay and its main tributaries (Lagunitas, Walker, and Olema creeks) are impaired by pathogens that effect beneficial uses that includes shellfish harvesting, (i.e., sport and commercial oyster, clam, and mussel harvesting), water contact recreation (i.e., swimming, fishing) and non-contact water recreation (i.e., boating, kayaking). Municipal stormwater runoff is identified as a source of pathogens.

Responsible Permittees: The TMDL identifies the Marin County Stormwater Pollution Prevention Program as the implementing Permittee for municipal runoff. This program provides collective stormwater management services to all cities and the County of Marin.

Wasteload Allocations: The TMDL assigns wasteload allocations to municipal runoff sources, including direct discharges to Tomales Bay and discharges to major tributaries of Tomales Bay, as shown in the following two tables. The wasteload allocations are applicable year-round.

Fecal Coliform Wasteload Allocations for Municipal Direct Discharges to Tomales Bay (Most Probable Number per 100 milliliters)

Median (minimum of 5 consecutive samples equally spaced over a 30-day period)	90th Percentile (no more than 10% of total samples during any 30-day period may exceed this number)
<14	<43

Fecal Coliform Wasteload Allocations for Discharges to Major Tomales Bay Tributaries (Most Probable Number per 100 milliliters)

Source	Log Mean (minimum of 5 consecutive samples equally spaced over a 30-day period)
Municipal Runoff	<200

Final Compliance Deadlines: The TMDL does not specify a compliance deadline. Instead, approximately every five years, the San Francisco Bay Water Board will evaluate new and relevant information from monitoring, special studies, and scientific literature. Any necessary modifications to the targets, allocations, or implementation plan will be incorporated into the San Francisco Water Board Bay Basin Plan.

A13.2.5 Richardson Bay Pathogens TMDL

Description: The TMDL states that Richardson Bay is impaired by pathogens. Monitoring results indicate that the Bay exceeds bacteria water quality objectives for shellfish harvesting (e.g., clam, mussel, and oyster harvesting), and water contact recreation (swimming, fishing). The presence of pathogens is inferred from high concentrations of fecal coliform bacteria, a commonly used indicator of human pathogenic organisms. Municipal stormwater runoff is identified as a source of pathogens.

Responsible Permittees: The TMDL identifies the City of Belvedere, City of Mill Valley, City of Sausalito, Town of Tiburon, and the County of Marin in the stormwater runoff source category.

Wasteload Allocations: The Richardson Bay Pathogens TMDL assigns a wasteload allocation to municipal stormwater as follows:

Fecal Coliform Wasteload Allocations for Municipal Sources Direct Discharges to Richardson Bay (Most Probable Number per 100 milliliters)

Median (minimum of 5 consecutive samples equally spaced over a 30-day period)	90th Percentile (no more than 10% of total samples during any 30-day period may exceed this number)
<14	<43

Final Compliance Deadlines: A final compliance deadline is not specified. The implementing Permittees are required to continue implementation of pathogen reduction measures and monitoring for the term of this Order. The San Francisco Bay Water Board will evaluate new and relevant information from monitoring, special studies, and scientific literature for future revisions to the TMDL.

A13.2.6 San Francisco Bay Beaches Bacteria TMDL

Description: Waters adjacent to several San Francisco Bay beaches are impaired by indicator bacteria. Bacteriological water quality objectives are exceeded, and there is impairment of the water contact recreation beneficial use. Recreating in waters with elevated indicator bacteria has been associated with adverse health effects. Urban runoff to the beaches is an identified source.

Responsible Permittees: Candlestick Point State Recreation Area, California State Parks and Recreation; County of Marin; Presidio of San Francisco; and City of San Francisco (San Francisco Public Utilities Commission) as responsible permittees.

Wasteload Allocations: Wasteload allocations for urban runoff are provided in the following table.

Small MS4 Urban Runoff Wasteload Allocations for San Francisco Bay Beaches TMDL

<i>Enterococcus</i> Geometric Mean^a (MPN/100 mL)^a	<i>Enterococcus</i> Single Sample Maximum (MPN/100 mL)
< 35	No sample > 104
^a . Based on a minimum of five consecutive samples equally spaced over a 30-day period.	

Final Compliance Deadline: The TMDL does not specify a final deadline. The responsible Permittees are required to continue the *General Approach for Controlling Bacteria in Permittee Discharges, San Francisco Bay Water Board Bacteria and Pathogen TMDLs*, as required in Attachment G.

A13.2.7 Petaluma River Bacteria TMDL

Description: Petaluma River and its tributaries are impaired by bacteria. Bacteriological water quality objectives are exceeded based on elevated indicator bacteria densities, and, thus, there is impairment of the water contact recreation beneficial use. Recreating in waters with elevated indicator bacteria densities has long been associated with adverse health effects. Impaired segments include the entire Petaluma River, San Antonio Creek, Lichau Creek, Willow Brook, Lynch Creek, Adobe Creek, Ellis Creek, as well as other named and unnamed tributaries. If not properly managed, municipal stormwater has the potential to discharge bacteria to Petaluma River and its tributaries.

Responsible Permittees: City of Petaluma, City of Novato, County of Sonoma, County of Marin

Wasteload Allocations: To determine the attainment of the bacteria water quality standards, the geometric mean values shall be applied based on a statistically sufficient number of samples, which is generally not less than five samples equally spaced over a six-week period. However, if a statistically sufficient number of samples is not available to calculate the geometric mean, then attainment of the water quality standard shall be determined based only on the statistical threshold value. Municipal stormwater wasteload allocations for fecal indicator bacteria are provided below¹⁵:

Municipal Stormwater Runoff Wasteload Allocations of Fecal Indicator Bacteria for Petaluma River

Estuarine Waters <i>Enterococcus</i> (colony forming unit per 100 milliliters of sample)	Fresh Waters <i>E. coli</i> (colony forming unit per 100 milliliters of sample)
Geometric mean < 30 Statistical threshold value = 110	Geometric mean < 100 Statistical threshold value = 320

¹⁵ San Francisco Bay Water Board [Basin Plan](#), Table 7.8.5-2

Final Compliance Deadlines: USEPA approved the TMDL on May 10, 2021. Wasteload allocations are required to be met within six years of approval, which is May 10, 2027.

A13.2.8 *Napa River Sediment TMDL*

Description: Napa River and its tributaries are listed as impaired due to excessive sediment and channel incision. Cold freshwater habitat, wildlife habitat, fish spawning, recreation, and preservation of rare and endangered species beneficial uses are impaired. Habitat for steelhead trout, chinook salmon, and other threatened species have declined substantially in recent decades. The Napa River Sediment TMDL identifies urban stormwater runoff as a source of impairment and identifies implementation measures to control and prevent sediment discharges associated with this runoff.

Responsible Permittees: The TMDL identifies the following Permittees as sediment sources of urban stormwater runoff and as implementing parties: Napa County, City of Napa, Town of Yountville, City of St. Helena, City of Calistoga, and City of American Canyon.

Wasteload Allocations: The Napa River Sediment TMDL provides a group wasteload allocation of 800 metric tons per year for urban stormwater runoff discharges for the Small MS4 Permit.

Final Compliance Deadlines: The TMDL does not specify a final compliance deadline. The TMDL requires compliance with this Order. The TMDL states that the San Francisco Bay Water Board will evaluate attainment of water quality objectives at five and ten years after the effective date of the TMDL. Therefore, implementation shall continue for the term of this Order.

A13.2.9 *Sonoma Creek Watershed Sediment TMDL*

Description: The San Francisco Bay Water Board adopted the Sonoma Creek Sediment TMDL, which was approved by USEPA on September 8, 2010. Sonoma Creek exceeds water quality standards for sediment, and the creek has declined in native fish populations. Steelhead populations have declined substantially since the late 1940s. Excessive amounts of fine sediment have been deposited in the streambed at potential steelhead spawning and rearing sites. Changes in habitat structure, possibly caused by erosion, are resulting in significant adverse changes to steelhead habitat. The TMDL addresses and identifies pollutant sources.

Responsible Permittees: Sonoma Water, City of Sonoma, County of Sonoma, Sonoma Water

Wasteload Allocations: Compliance with the combined wasteload allocation of 600 tons per year is demonstrated by complying with approved

stormwater management plan, complying with this Order, and amending and implementing stormwater management plans to control peak flow rates and durations.

Final Compliance Deadlines: A final compliance deadline was not included in this TMDL. Instead, waterbody attainment with sediment water quality objectives are to be evaluated over a 5 to 10-year averaging period, which runs from 2010 through 2020.

A13.2.10 San Francisco Bay Polychlorinated Biphenyls TMDL

Description: The San Francisco Bay Polychlorinated Biphenyls TMDL identifies all segments of San Francisco Bay as impaired due to elevated levels of polychlorinated biphenyls (PCBs) in sport fish. The narrative water quality objective (controllable water quality factors shall not cause a detrimental increase in toxic substances found in bottom sediments or aquatic life) and the numeric water quality objective (0.00017 micrograms per liter total PCBs in water) are not attained in the San Francisco Bay. The existing beneficial use for commercial and sport fishing is not fully supported. The TMDL identifies stormwater runoff as a PCB source category.

Responsible Permittees: County of Napa, City of American Canyon, City of Calistoga, City of Napa, Town of Yountville, City of St. Helena, County of Marin, 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 Solano, City of Benicia, County of Sonoma, City of Sonoma, City of Petaluma, Port of Oakland, Sonoma Water¹⁶, San Francisco Public Utilities Commission, and Port of San Francisco.

Wasteload Allocations: The combined group wasteload allocation for the stormwater runoff source category is 2 kilograms per year. County-based allocations are as follows:

¹⁶ Sonoma County Water Agency changed its name to Sonoma Water

**San Francisco Bay Polychlorinated Biphenyls TMDL:
County-Based Watershed PCB Wasteload Allocations for Stormwater Runoff**

County	Allocation (kilograms per year)
Alameda	0.5
Contra Costa	0.3
Marin	0.1
Napa	0.05
San Francisco	0.2
San Mateo	0.2
Santa Clara	0.5
Solano	0.1
Sonoma	0.05
Total:	2

Final Compliance Deadlines: The final compliance deadline is March 29, 2030.

A13.2.11 San Francisco Bay Mercury TMDL

Description: The San Francisco Bay Mercury TMDL states that San Francisco Bay and Suisun Marsh are impaired. Mercury contamination is adversely affecting beneficial uses, including sport fishing, preservation of rare and endangered species, and wildlife habitat. Mercury concentrations in fish are high enough to threaten the health of humans who consume them. In addition, mercury concentrations in some bird eggs harvested from the shores of San Francisco Bay are high enough to account for abnormally high rates of eggs failing to hatch.

Responsible Permittees: City of American Canyon, City of Belvedere, City of Benicia, City of Calistoga, City of Larkspur, City of Mill Valley, City of Napa, City of Novato, City of Petaluma, City of San Francisco (Port of San Francisco), City of San Francisco (San Francisco Public Utilities Commission), City of San Rafael, City of Sausalito, City of Sonoma, City of St. Helena, County of Marin, County of Napa, County of Solano, County of Sonoma, Port of Oakland, Town of Corte Madera, Town of Fairfax, Town of Ross, Town of San Anselmo, Town of Tiburon, Town of Yountville, Travis Air Force Base, Sonoma Water

Wasteload Allocations: The combined wasteload allocation for the Permittees is 16.25 kilograms per year. The final individual wasteload allocations are provided in the table, below:

San Francisco Bay Mercury TMDL: Individual Wasteload Allocations for Mercury in Small MS4 Urban Stormwater Discharges¹⁷

Permittee	Allocation (kilograms per year)
American Canyon	0.14
Sonoma County area	1.6
Napa County area	1.6
Marin County area	3.3
Solano County area	0.81
San Francisco County area	8.8
Combined Total	16.25

Final Compliance Deadline: The final compliance date is February 12, 2028, which is twenty years from the date of USEPA approval.

¹⁷ San Francisco Bay Water Board, [Basin Plan](#) Chapter 7, Table 7.2.2-2

A13.3 CENTRAL COAST WATER BOARD TMDLS

Information in the following subsections has been summarized from the [Central Coast Water Board's Basin Plan](#).

A13.3.1 *TMDL for Pathogens in Morro Bay and Chorro and Los Osos Creeks*

Description: USEPA approved the TMDL on January 24, 2004. The TMDL identifies Morro Bay, Chorro Creek, and Los Osos Creek as impaired by fecal coliform organisms (i.e., pathogens) and identifies urban stormwater runoff as a contributing source of these pathogens.

Responsible Permittees: City of Morro Bay, Los Osos Community Services District, and the County of San Luis Obispo.

Wasteload Allocations: The TMDL identifies wasteload allocations for Morro Bay waters, Los Osos Creek, and Chorro Creek, as follows:

1. For Moro Bay waters: for fecal coliform, a geometric mean of 14 Most Probable Number per 100 milliliter must be achieved and no more than 10 percent of the samples may be over 43 Most Probable Number per 100 milliliters.
2. For Chorro and Los Osos creeks and freshwater seeps to Moro Bay: for fecal coliform, the geometric mean shall not exceed 200 Most Probable Number per 100 milliliters over a 30-day period nor shall 10 percent of the samples exceed 400 Most Probable Number per 100 milliliters over any 30-day period.

Monitoring will be performed and evaluated by the California Department of Health Services (according to their regulations), the Morro Bay National Estuary Volunteer Program, and the Central Coast Water Board to ensure that numeric targets are met and implementation actions are taking place. Central Coast Water Board staff will review data on a triennial basis, at a minimum, and determine if progress towards fecal coliform reduction is adequate and whether changes to implementation actions are warranted (as described above).

Final Compliance Deadline: The final deadline to meet the wasteload allocations was November 19, 2013.

A13.3.2 *TMDL for Pathogens in Watsonville Slough*

Description: The effective date of the TMDL is November 20, 2006/ USEPA approved the TMDL on July 19, 2007. Fecal coliform concentrations exceed existing numeric water quality objectives that protect recreational

beneficial uses. Urban stormwater runoff is identified as a source of pathogens in Watson Slough.

Responsible Permittees: City of Watsonville and the County of Santa Cruz.

Wasteload Allocations: The wasteload allocations are receiving water allocations and is for each responsible Permittee. Stormwater discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Watsonville is assigned the following wasteload allocations in Watsonville, Struve, Harkins, Gallighan, and Hanson Sloughs. The County of Santa Cruz is assigned the following wasteload allocations in Watsonville, Struve and Harkins Sloughs.

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.

Final Compliance Deadlines: The final compliance deadline for the Watsonville Slough Pathogens TMDL was November 20, 2016, which is ten years after the effective date.

A13.3.3 TMDL for Fecal Coliform in the Pajaro River Watershed

Description: USEPA approved the TMDL on August 3, 2010. The fecal coliform TMDL for the Pajaro River Watershed includes the waters of Pajaro River, San Benito River, Llagas Creek, Tequisquita Slough, San Juan Creek, Carnadero/Uvas Creek, Bird Creek, Pescadero Creek, Tres Pinos Creek, Furlong (Jones) Creek, Santa Ana Creek, and Pacheco Creek. The beneficial use of water contact recreation is not being protected in these waters.

The TMDL identifies storm drain discharges into municipally owned and operated storm sewer systems as controllable sources.

Responsible Permittees: City of Gilroy, City of Hollister, City of Morgan Hill, City of Watsonville, the County of Monterey, County of Santa Clara, and County of Santa Cruz.

Wasteload Allocations: Wasteload allocations are measured in receiving waters, as follows:

1. 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:
 - a. 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
 - b. 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. The Cities of Hollister, Morgan Hill, Gilroy and Watsonville and the Counties of Santa Cruz, Santa Clara and Monterey are assigned the following wasteload allocations for Pajaro River, San Benito River, Llagas Creek, and Tequesquita Slough:
 - a. 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
 - b. 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.

Final Compliance Deadline: The TMDL specifies that all wasteload allocations must be achieved by July 12, 2023, which is 13 years after the California Office of Administrative Law approved the TMDL.

A13.3.4 TMDL for Sediment in Morro Bay

Description: USEPA approved the TMDL on January 20, 2004. The TMDL for Sediment in Morro Bay includes the waters of Chorro Creek, Los Osos Creek, and the Morro Bay Estuary. In Morro Bay, the natural process of sediment infill has been accelerated due to anthropogenic watershed disturbances, which has resulted in impairment that indicates an exceedance of the narrative objective for sediment. The TMDL identifies stormwater runoff as point sources of sediment.

Responsible Permittee: County of San Luis Obispo.

Wasteload Allocations: 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.

1. Sediment Allocation for Roads

The sediment allocation for roads is assigned as a group allocation of 5,137 tons per year, as provided in the April 24, 2002, Staff Report for the Morro Bay Sediment TMDL.

2. Numeric Targets for Chorro Creek, Los Osos Creek and Their Tributaries

Numeric targets and other parameters will be monitored to ensure that numeric targets are met. The Central Coast Water Board will rely on existing or planned efforts for this monitoring (e.g., Morro Bay National Estuary Program, Central Coast Ambient Monitoring Program). Five numeric targets are established for Chorro Creek, Los Osos Creek and their tributaries: residual pool volume; median diameter of sediment particles, percent fines, and percent coarse fines. The residual pool volume, V^* , is the portion of a pool in a stream that is available for fish to occupy and is the ratio of the pool volume filled in with fine, mobile sediment, to the total scour pool volume. One parameter is established for Morro Bay.

TMDL for Sediment in Morro Bay: Numeric Targets for Chorro and Los Osos Creeks and Tributaries Streambed Sediment

Parameter	Numeric Target
Residual Pool Volume (V^*)	$V^* = \text{Mean values} \leq 0.21$ $V^* = \text{Maximum values} \leq 0.45$
Median Diameter (D_{50}) of Sediment Particles in Spawning Gravels	$D_{50} = \text{Mean values} \geq 69$ millimeters $D_{50} = \text{Minimum values} \geq 37$ millimeters
Percent of Fine Fines (< 0.85 millimeters) in Spawning Gravels	Percent fine fines ≤ 21 percent
Percent of Coarse Fines (< 6.0 millimeters) in Spawning Gravels	Percent coarse fines $\leq 30\%$

TMDL for Sediment in Morro Bay: Numeric Targets for Chorro and Los Osos Creek and Tributaries Water Column Turbidity

Parameter	Percent of Samples Below Target
Turbidity, Wet Season	82 percent of turbidity samples are to be five Nephelometric <i>Turbidity</i> Units or less, while 93 percent of samples are to be no greater than 100 Nephelometric <i>Turbidity</i> Units.
Turbidity, Dry Season	96 percent of all turbidity samples collected monthly are to be five Nephelometric <i>Turbidity</i> Units or less.

TMDL for Sediment in Morro Bay: Numeric Targets for Morro Bay Estuary

Parameter	Difference Between the Mean High Water Volume and the Mean low Water Volume in an Estuary
Tidal Prism Volume	4,200 acre-feet

Final Compliance Deadline: The final compliance deadline is December 3, 2053.

A13.3.5 TMDL For Sediment in the San Lorenzo River

Description: USEPA approved the TMDL on February 19, 2004. The San Lorenzo River is impaired by sediment. Anthropogenic disturbances have accelerated the natural processes of erosion and sedimentation in the watershed. Urban stormwater discharge has been identified as a contributing source of sediment discharge to this water body.

Responsible Permittees: City of Santa Cruz, City of Scotts Valley, and the County of Santa Cruz.

Load Allocations and Numeric Targets: Load allocations are expressed as group allocations by sediment source category. The TMDL assigns the Permittees to the Other Urban and Rural Land and the Public/Private Roads categories.

San Lorenzo River TMDL Sediment Allocations (tons per year)

Source Category	Shingle Mill Creek	Carbonera Creek	Lompico Creek	San Lorenzo River
Upland Public/Private Roads	146	1,233	367	13,835
Other Urban and Rural Land	310	2,622	965	43,368

San Lorenzo River TMDL Sediment Numeric Targets

Parameter	Numeric Target
Residual Pool Volume (V*)	< 0.21 (mean) and < 0.45 (max)
Median particle size diameter (D ₅₀) from riffle crest surfaces	≥37 millimeter (minimum for a reach) ≥ 69 millimeter (mean for a reach)
Percent fine fines < 0.85 millimeter in spawning gravels	< 21% by wet volume using a McNeil Sampler
Percent coarse fines < 6.0 millimeter in spawning gravels	< 30% by wet volume using a McNeil Sampler

The Central Coast Water Board staff and San Lorenzo River Technical Advisory Committee implement the triennial monitoring during low flow conditions. Because the sediment objectives are narrative, numeric targets are established that support beneficial uses, the numeric targets serve to interpret the narrative water quality objectives and provide a measure with which to determine if the objectives and the TMDL are being met

Final Compliance Deadline: The final deadline to meet the allocations is December 18, 2028.

A13.3.6 TMDL for Sediment in Pajaro River Including Llagas Creek, Rider Creek, and San Benito River

Description: USEPA approved the TMDL on May 3, 2007. The Pajaro River (including Llagas Creek, Rider Creek and San Benito River) is impaired by sediment. Anthropogenic disturbances have accelerated the natural processes of erosion and sedimentation. Excessive sedimentation has caused an exceedance of the narrative water quality objective for sediment. Urban stormwater runoff has been identified as a source of sediment discharging to the watershed.

Responsible Permittees: City of Gilroy, City of Hollister, City of Morgan Hill, City of Watsonville, and Santa Cruz County Fairgrounds.

Wasteload Allocations: The TMDL provides numeric targets and wasteload allocations. Group wasteload allocations are assigned to the City of Gilroy, City of Hollister, City of Morgan Hill, and City of Watsonville as shown in the table, below.

TMDL for Sediment in Pajaro River: Pajaro River Group Wasteload Allocations for Urban Land Source Category

Major Subwatershed	Sediment 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

The TMDL establishes numeric targets as indicators of the narrative water quality objective for sediment. The TMDL uses two types of numeric targets: streambed characteristics and suspended sediment concentration-duration,

which are presented in the two tables below. The Central Coast Water Board will determine when the numeric targets are achieved. When numeric targets are achieved, the Central Coast Water Board will assume that these loads are met. For the numeric targets for suspended sediment conditions, there are five exposure categories per major subwatershed. Each exposure category is comprised of two components: a duration (consecutive days) and a suspended sediment concentration range in milligrams per liter.

Numeric targets are comprised of two components: a maximum number of exceedance events that may occur in any consecutive 15 years after development of the monitoring program and the maximum duration (consecutive days) in which the maximum suspended sediment concentration value for each range can be exceeded in 15 years. Exceedance events are specific to each exposure category and consist of consecutive days in which the duration and the maximum Suspended Sediment Conditions value for each range is exceeded.

TMDL for Sediment in Pajaro River: Pajaros River Numeric Targets for Streambed Characteristics

Parameter	Numeric Target ^{1.}
Residual Pool Volume (V^*) ^{2.}	$V^* = \text{Mean values} \leq 0.21$; $V^* = \text{Maximum values} \leq 0.45$
Median Diameter (D_{50}) of Sediment Particles in Spawning Gravels	$D_{50} = \text{Mean values} \geq 69$ millimeters $D_{50} = \text{Minimum values} \geq 37$ millimeters
Percent of Fine Fines (< 0.85 millimeters) in Spawning Gravels	Percent fine fines ≤ 21 percent
Percent of Coarse Fines (< 6.0 millimeters) in Spawning Gravels	Percent coarse fines ≤ 30 percent

Table Notes:

1. Target values are for sampling reaches within an individual waterbody.
2. Residual Pool Volume refers to the portion of a pool in a stream that is available for fish to occupy. Pool habitat is the primary habitat for steelhead in summer. Overwintering habitat requirements include deeper pools, undercut banks, side channels, and especially large, unembedded rocks, which provide shelter for fish against the high flows of winter. V^* gives a direct measurement of the impact of sediment on pool volume. It is the ratio of the amount of pool volume filled by fine, mobile sediment, to total pool volume. Qualifying pools are defined by Regional Board sampling protocol (2002).

TMDL for Sediment in Pajaro River: Numeric Targets for Suspended Sediment Conditions in the Pajaros River Major Subwatershed

Pajaros River Major Subwatershed	Exposure Category: Duration (consecutive days)	Exposure Category: Suspended Sediment Concentration Range (milligrams per liter)	Exceedance Event Criteria: Duration (consecutive days)	Exceedance Event Criteria: Suspended Sediment Concentration (milligrams per liter)	Numeric Targets: Maximum Number of Exceedance Events	Numeric Targets: Maximum Duration of Any Given Exceedance Event (consecutive days)
Tres Pinos	1	666 – 1808	2	>1808	15	22
Tres Pinos	2	245 – 665	3	>665	42	44
Tres Pinos	6	91 – 244	7	>244	36	51
Tres Pinos	14	91 – 244	15	>244	20	51
Tres Pinos	49	33 – 90	50	>90	5	108
San Benito River	1	666 – 1808	2	>1808	9	9
San Benito River	2	245 – 665	3	>665	30	21
San Benito River	6	91 – 244	7	>244	29	35
San Benito River	14	91 – 244	15	>244	14	35
San Benito River	49	33 – 90	50	>90	2	60
Llagas Creek	1	666 – 1808	2	>1808	0	0
Llagas Creek	2	245 – 665	3	>665	0	1
Llagas Creek	6	91 – 244	7	>244	9	15
Llagas Creek	14	91 – 244	15	>244	1	15
Llagas Creek	49	33 – 90	50	>90	0	28
Uvas Creek	1	666 – 1808	2	>1808	1	3
Uvas Creek	2	245 – 665	3	>665	12	8
Uvas Creek	6	91 – 244	7	>244	12	15

Pajaros River Major Subwatershed	Exposure Category: Duration (consecutive days)	Exposure Category: Suspended Sediment Concentration Range (milligrams per liter)	Exceedance Event Criteria: Duration (consecutive days)	Exceedance Event Criteria: Suspended Sediment Concentration (milligrams per liter)	Numeric Targets: Maximum Number of Exceedance Events	Numeric Targets: Maximum Duration of Any Given Exceedance Event (consecutive days)
Uvas Creek	14	91 – 244	15	>244	1	15
Uvas Creek	49	33 – 90	50	>90	0	18
Upper Pajaro River	1	666 – 1808	2	>1808	0	1
Upper Pajaro River	2	245 – 665	3	>665	3	3
Upper Pajaro River	6	91 – 244	7	>244	2	9
Upper Pajaro River	14	91 – 244	15	>244	0	9
Upper Pajaro River	49	33 – 90	50	>90	0	33
Corralitos	1	666 – 1808	2	>1808	0	1
Corralitos	2	245 – 665	3	>665	0	2
Corralitos	6	91 – 244	7	>244	8	11
Corralitos	14	91 – 244	15	>244	0	36
Corralitos	49	33 – 90	50	>90	0	1
Mouth of Pajaro River	1	666 – 1808	2	>1808	0	1
Mouth of Pajaro River	2	245 – 665	3	>665	0	2
Mouth of Pajaro River	6	91 – 244	7	>244	8	11
Mouth of Pajaro River	14	91 – 244	15	>244	0	11
Mouth of Pajaro River	49	33 – 90	50	>90	0	36

The TMDL specifies Central Coast Water Board staff for development of a monitoring program to measure instream numeric targets, which will be executed in cooperation with implementing parties (e.g., City of Gilroy, City of Hollister, City of Morgan Hill, and City of Watsonville).

Final Compliance Deadline: The final compliance deadline to achieve the numeric targets is November 27, 2051.

A13.3.7 TMDL for Pathogens in San Luis Obispo Creek

Description: USEPA approved the TMDL on September 23, 2005. Fecal coliform concentration in San Luis Obispo Creek exceeds the numeric objectives for protecting recreational beneficial uses. The TMDL identifies urban stormwater runoff is identified as a primary source of pathogens.

Responsible Permittees: City of San Luis Obispo; the County of San Luis Obispo; and California Polytechnic State University, San Luis Obispo Campus.

Wasteload Allocations: Wasteload allocation are concentration-based for fecal coliform. The wasteload allocations are receiving water allocations.

1. City of San Luis Obispo is assigned wasteload allocations in San Luis Obispo Creek and Stenner Creek;
2. County of San Luis Obispo is assigned wasteload allocations in San Luis Obispo Creek; and
3. California Polytechnic State University, San Luis Obispo Campus, is assigned wasteload allocations in Stenner Creek and Brizziolari Creek.

TMDL for Pathogens in San Luis Obispo Creek: Wasteload Allocations as Fecal Coliform Concentration in San Luis Obispo Creek, Stenner Creek, and Brizziolari Creek

Creek	Receiving Water Fecal Coliform Concentration (Most Probable Number per 100 Milliliters) ¹
San Luis Obispo Creek	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 most probable number per 100 milliliters, nor shall more than 10 percent of total samples collected during any 30-day period exceed 400 most probable number per 100 milliliters.
Stenner Creek and Brizziolari Creek	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 most probable number per 100 milliliters, nor shall more than 10 percent of total samples collected during any 30-day period exceed 400 most probable number per 100 milliliters.

Final Compliance Deadline: The final compliance deadline to meet the wasteload allocations was July 25, 2015.

A13.3.8 TMDLs for Nitrate-Nitrogen in San Luis Obispo Creek

Description: USEPA approved the TMDL on January 10, 2007. San Luis Obispo Creek exceeds the nitrate-nitrogen numeric objective in the Central Coast Water Board Basin Plan. The TMDL states that stormwater discharges currently meet the numeric standards and that stormwater discharge shall not cause an increase in receiving water nitrate-nitrogen. Residential stormwater sources are identified as a source.

Responsible Permittees: City of San Luis Obispo; County of San Luis Obispo; and California Polytechnic State University, San Luis Obispo campus.

Wasteload Allocations: Residential stormwater from the City of San Luis Obispo, County of San Luis Obispo, and California Polytechnic State University, San Luis Obispo campus.

The following residential sources wasteload allocations ensure that the receiving water will achieve compliance with water quality standards at the earliest possible date and will continue to meet water quality standards after the wasteload are attained, as follows:

1. Stormwater discharge shall not cause an increase in the receiving water nitrate-nitrogen concentration greater than the current increase in nitrate-nitrogen concentration resulting from the discharge.
2. The current increase in nitrate-nitrogen (i.e., the 2006 concentration) concentration in stormwater discharge was 0.3 milligrams per liter.¹⁸ Thus, in 2006 the City of San Luis Obispo; County of San Luis Obispo; and California Polytechnic State University, San Luis Obispo campus were achieving their wasteload allocations at the time the TMDL became effective.

Final Compliance Deadline: The final compliance deadline was during or before the year 2012. Therefore, compliance with the wasteload allocation is required immediately.

A13.3.9 TMDL for Fecal Coliform in Corralitos and Salsipuedes Creeks

Description: USEPA approved the TMDL on January 17, 2012. Fecal coliform concentrations in Corralitos Creek and Salsipuedes Creek exceed numeric water quality objectives for water contact beneficial use. The impaired reaches are: (1) all reaches of Corralitos Creek downstream of Browns Valley Bridge, and (2) all reaches of Salsipuedes Creek. The TMDL

¹⁸ [Technical Report](#), San Luis Obispo Creek TMDL and Implementation Plan for Nitrate-N

identifies storm drain discharges to municipally owned and operated storm sewer system as a contributing source.

Responsible Permittees: City of Watsonville, the County of Santa Cruz, and Santa Cruz County Fairgrounds.

Wasteload Allocations: The City of Watsonville and the County of Santa Cruz are assigned concentration-based wasteload allocations for all reaches of Corralitos Creek downstream of Browns Valley Bridge and all reaches of Salsipuedes Creek, as follows:

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
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 per 100 milliliters.

Final Compliance Deadline: The final compliance deadline to achieve wasteload allocations is September 8, 2024.

A13.3.10 TMDL for Fecal Coliform in Lower Salinas River Watershed

Description: USEPA approved the TMDL on January 31, 2012. Reaches of the Lower Salinas River Watershed are impaired due to fecal coliform. Impaired reaches include the Lower Salinas River, Old Salinas River, Tembladero Slough, Salinas Reclamation Canal, Alisal Creek, Gabilan Creek, Salinas River Lagoon, and the Santa Rita Creek. The beneficial use of water contact recreation is not protected in the impaired reaches. The TMDL identifies storm drain discharges into municipal separate storm sewer systems as a contributing source of fecal coliform.

Responsible Permittees: County of Monterey.

Wasteload Allocations: The County of Monterey is assigned allocations in the following water bodies:

**TMDL for Fecal Coliform in Lower Salinas River Watershed: County of Monterey
Wasteload Allocations in the Lower Salinas River Watershed**

Waterbody	Receiving Water Fecal Coliform Concentrations
Lower Salinas River, Old Salinas River, Tembladero Slough, Salinas Reclamation Canal, Alisal Creek, Gabilan Creek, Salinas River Lagoon, and the Santa Rita Creek	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 Most Probably Number per 100 milliliters, nor shall more than ten percent of total samples during any 30-day period exceed 400 Most Probably Number per 100 milliliters.

Final Compliance Deadline: The final compliance deadline is December 20, 2024.

A13.3.11 TMDL for Pathogens in San Lorenzo Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, and Lompico Creek

Description: USEPA approved the TMDL on July 20, 2011. Reaches in the San Lorenzo Estuary and River are impaired for pathogens and the beneficial use of water contact recreation is not protected in the impaired reaches. The impaired reaches include Branciforte Creek, Carbonera Creek, Lompico Creek, San Lorenzo River, and San Lorenzo River Estuary. The TMDL identifies contributing pathogen sources as storm drain discharges into municipal separate storm sewer systems.

Responsible Permittees: City of Santa Cruz, City of Scotts Valley, and the County of Santa Cruz.

Wasteload Allocations: City of Santa Cruz, City of Scotts Valley, and the County of Santa Cruz are assigned the following concentration based wasteload allocation for fecal coliform:

Fecal Coliform Wasteload Allocations for Pathogens TMDL in San Lorenzo Estuary, Reaches, and River

Waterbody	Responsible Permittee	Receiving Water Fecal Coliform Concentrations
San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, and Carbonera Creek	City of Santa Cruz	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 Most Probably Number per 100 milliliters, nor shall more than ten percent of total samples during any 30-day period exceed 400 Most Probably Number per 100 milliliters.

Waterbody	Responsible Permittee	Receiving Water Fecal Coliform Concentrations
Camp Evers Creek and Carbonera Creek	City of Scotts Valley	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, nor shall more than ten percent of total samples during any 30-day period exceed 400 Most Probable Number per 100 milliliters.
San Lorenzo River, Branciforte Creek, Lompico Creek, and Carbonera Creek	County of Santa Cruz	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, nor shall more than ten percent of total samples during any 30-day period exceed 400 Most Probable Number per 100 milliliters.

Final Compliance Deadline: The final compliance deadline is June 6, 2024.

A13.3.12 TMDLs for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch

Description: USEPA approved the TMDL on November 17, 2010. The TMDL identifies Soquel Lagoon, Soquel Creek, and Noble Gulch as impaired by pathogens (i.e., fecal coliform). The beneficial use of water contact recreation is not protected in the impaired reaches because fecal coliform concentrations exceed water quality objectives protecting this beneficial use. Contributing and controllable sources of fecal coliform are storm drain discharges into municipal separate storm sewer systems.

Responsible Permittees: City of Capitola and the County of Santa Cruz.

Wasteload Allocations: The City of Capitola and the County of Santa Cruz are assigned the following concentration-based wasteload allocation for fecal coliform:

Fecal Coliform Concentrations for the TMDLs for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch

Responsible Permittee	Waterbody Subject to Wasteload Allocations	Receiving Water Fecal Coliform Concentrations
City of Capitola	All waters of the Soquel Lagoon	Fecal coliform concentration, based on a minimum of not less than five samples for

Responsible Permittee	Waterbody Subject to Wasteload Allocations	Receiving Water Fecal Coliform Concentrations
		any 30-day period, shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, nor shall more than 10 percent of total samples during any 30-day period exceed 400 Most Probable Number per 100 milliliters.
County of Santa Cruz and City of Capitola	Soquel Creek ¹ and all reaches of Nobel Gluch	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, nor shall more than 10 percent of total samples during any 30-day period exceed 400 Most Probable Number per 100 milliliters.

Table Notes

- ¹ Beginning and including the downstream most reach of Soquel Creek, up to and including Soquel Creek at the bridge crossing at Porter Street

Final Compliance Deadline: The final compliance deadline is September 15, 2023.

A13.3.13 TMDL for Pathogens in Aptos Creek, Valencia Creek, and Trout Gulch

Description: USEPA approved the TMDL on January 20, 2011. The beneficial use of water contact recreation is not being attained in Aptos Creek, Valencia Creek and Trout Gulch because fecal coliform concentrations exceed numeric water quality objectives. Contributing and controllable sources of fecal coliform are storm drain discharges into municipal separate storm sewer systems.

Responsible Permittee: County of Santa Cruz.

Pathogen Wasteload Allocations for Aptos Creek, Trout Gulch, and Valencia Creek

Waterbody	Responsible Permittee	Receiving Water Fecal Coliform Concentrations
Aptos Creek ¹ , Trout Gulch ² , Valencia Creek ³	County of Santa Cruz	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, nor shall more than 10 percent of total samples during any 30-day period exceed 400 Most Probable Number per 100 milliliters.

Table Notes:

- ¹ Aptos Creek from the Pacific Ocean to the confluence of Aptos and Valencia Creeks
- ² All reaches of Trout Gulch
- ³ Valencia Creek from the confluence with Aptos Creek upstream to the west fork, where it intersects with Valencia Road, and to the east fork at the intersection of McKay and Cox Roads.

Final Compliance Deadline: Wasteload allocations was required to be achieved October 29, 2023.

A13.3.14 TMDL for Fecal Indicator Bacteria in Santa Maria River Watershed

Description: USEPA approved the fecal indicator bacteria TMDL on April 24, 2013. The beneficial use of water contact recreation is not protected in the impaired reaches of the Santa Maria River Watershed, including Santa Maria River, Main Street Canal, Blosser Channel, Bradley Channel, and Nipomo Creek. Contributing and controllable sources of fecal indicator bacteria are storm drain discharges into municipal separate storm sewer systems.

Responsible Permittees: City of Guadalupe, City of Santa Maria, County of Santa Barbara, and County of San Luis Obispo.

Wasteload Allocations: The wasteload allocations for the Santa Maria River Watershed, including the reaches, are identified in the following table:

Fecal Coliform Wasteload Allocations for Santa Maria Watershed and Reaches

Permittee	Waterbody	Receiving Water Fecal Coliform Concentrations
City of Santa Maria	Santa Maria River, Main Street Canal, Blosser Channel, and Bradley Channel	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, nor shall more than 10 percent of total samples during any 30-day period exceed 400 Most Probable Number per 100 milliliters. 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 <i>E. coli</i> densities shall not exceed 126 per 100 milliliters, and no sample shall exceed a one-sided confidence limit calculated using the following guidance: lightly used for contact recreation (90% confidence limit) = 409 per 100 milliliter.

Permittee	Waterbody	Receiving Water Fecal Coliform Concentrations
County of San Luis Obispo	Nipomo Creek	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, nor shall more than 10 percent of total samples during any 30-day period exceed 400 Most Probable Number per 100 milliliters. 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 <i>E. coli</i> densities shall not exceed 126 per 100 milliliters, and no sample shall exceed a one-sided confidence limit calculated using the following guidance: lightly used for contact recreation (90% confidence limit) = 409 per 100 milliliter.
County of Santa Barbara	Orcutt Creek	Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, nor shall more than 10 percent of total samples during any 30-day period exceed 400 Most Probable Number per 100 milliliters. 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 <i>E. coli</i> densities shall not exceed 126 per 100 milliliters, and no sample shall exceed a one-sided confidence limit calculated using the following guidance: lightly used for contact recreation (90% confidence limit) = 409 per 100 milliliter.

Final Compliance Deadline: The final compliance deadline is February 21, 2028.

A13.3.15 TMDL for Nitrogen Compounds and Orthophosphate in Lower Santa Maria River Watersheds and Tributaries to Oso Flaco Lake

Description: The Central Coast Water Board adopted the TMDL in 2013, and USEPA approved it on March 8, 2016. Discharges of nitrogen compounds and orthophosphate are occurring at levels in surface waters which are impairing a spectrum of beneficial uses. The Lower Santa Maria River Watersheds are impaired by nitrogen compounds and orthophosphate. Urban stormwater is identified as a relatively minor source (but can be locally significant) of these pollutants.

Responsible Permittees: City of Guadalupe, City of Santa Maria, County of Santa Barbara, and County of San Luis Obispo.

Wasteload Allocations: The TMDL specifies concentration-based wasteload allocations in all receiving surface waterbodies, including reaches and tributaries, as listed in the table, below. Wasteload allocation apply to the City of Santa Maria, County of Santa Barbara, County of San Luis Obispo, and City of Guadalupe. The wasteload allocations identify the dry season as May 1 through October 31 and the wet season as November 1 through April 30. See the two tables on the next two pages.

Final compliance Deadline: The compliance schedule for achieving the final wasteload allocations is May 17, 2044.

Final Nitrogen Compounds and Orthophosphate Receiving Water Wasteload Allocations, Lower Santa Maria River Watersheds (units in milligrams per liter; Dry Season is May 1 through October 31; Wet Season is November 1 through April 30.)

Permittee	Waterbody	Nitrate as Nitrogen	Orthophosphate as Phosphorous	Un-ionized Ammonia as Nitrogen
City of Santa Maria and City of Guadalupe	Santa Maria River (upstream from Highway 1), Blosser Channel, Bradley Channel, Main Street Canal, North Main Street Channel	10 year round	Not Applicable	0.025 year round
City of Guadalupe	Santa Maria River (downstream from Highway 1)	4.3 Dry Season 8.0 Wet Season	0.19 Dry Season 0.3 Wet Season	0.025 year round
County of San Luis Obispo	Nipomo Creek	10 year round	Not Applicable	0.025 year round
County of Santa Barbara	Orcutt Creek	4.3 Dry Season 8.0 Wet Season	0.19 Dry Season 0.3 Wet Season	0.025 year round

Interim Nitrogen Compounds and Orthophosphate Receiving Water Wasteload Allocations, Lower Santa Maria River Watersheds (units in milligrams per liter, Dry Season is May 1 through October 31. Wet Season is November 1 through April 30)

Permittee	Waterbody	First Interim Wasteload Allocation by May 22, 2028, for Un-ionized Ammonia as Nitrogen and Nitrate as Nitrogen	Second Interim Wasteload by May 22, 2036, Allocation for Nitrate as Nitrogen	Second Interim Wasteload Allocation by May 22, 2036, for Orthophosphate as Phosphorous
City of Santa Maria and City of Guadalupe	Santa Maria River (upstream from Highway 1), Blosser Channel, Bradley Channel, Main Street Canal, North Main Street Channel	0.025 of Un-ionized Ammonia as Nitrogen and 10 Nitrate as Nitrogen	4.3 Dry Season 8.0 Wet Season	10 year round
City of Guadalupe	Santa Maria River	0.025 Un-ionized Ammonia	4.3 Dry Season	10 year round

Permittee	Waterbody	First Interim Wasteload Allocation by May 22, 2028, for Un-ionized Ammonia as Nitrogen and Nitrate as Nitrogen	Second Interim Wasteload by May 22, 2036, Allocation for Nitrate as Nitrogen	Second Interim Wasteload Allocation by May 22, 2036, for Orthophosphate as Phosphorous
	(downstream from Highway 1)	as Nitrogen and 10 Nitrate as Nitrogen	8.0 Wet Season	
County of San Luis Obispo	Nipomo Creek	0.025 Un-ionized Ammonia as Nitrogen and 10 Nitrate as Nitrogen	4.3 Dry Season 8.0 Wet Season	10 year round
County of Santa Barbara	Orcutt Creek	0.025 Un-ionized Ammonia as Nitrogen and 10 Nitrate as Nitrogen	4.3 Dry Season 8.0 Wet Season	10 year round

A13.3.16 TMDL for Nitrogen Compounds and Orthophosphate in the Lower Salinas River Watersheds

Description: USEPA approved the TMDL on October 13, 2015. The TMDL states that nitrogen compounds and orthophosphate discharges into the Lower Salinas River Watershed are occurring at levels that impair a spectrum of beneficial uses. Urban stormwater is a relatively minor source of these pollutants but can be locally significant.

Responsible Permittee: County of Monterey.

Wasteload Allocations: The County of Monterey is assigned interim and final wasteload allocations as shown in the three tables, below. The TMDL states that wasteload allocations will be achieved through a combination of implementation of BMPs and strategies to reduce nitrogen compound, reduce orthophosphate loading, and implement water quality monitoring. The wasteload allocations are found in the tables, below.

Final Compliance Deadline: The final compliance deadline is May 7, 2044.

County of Monterey Final Wasteload Allocations in Receiving Water for Nitrogen Compounds and Orthophosphate in the Lower Salinas River Watersheds (concentration in milligrams per liter, dry season is May 1 through October 31 and wet season is November 1 through April 30)

Waterbody	Nitrate as Nitrogen Dry Season	Nitrate as Nitrogen Wet Season	Orthophosphate as Phosphorous Dry Season	Orthophosphate as Phosphorous Wet Season	Un-ionized Ammonia as Nitrogen Year Round
<u>Lower Salinas River</u> : all reaches from downstream of Spreckels (downstream of monitoring site 309SSP) to the confluence with the Pacific Ocean including Salinas River Lagoon (North)	1.4	8.0	0.03	0.3	0.025
<u>Santa Rita Creek</u> : all reaches and tributaries, from the confluence with the Reclamation Canal to the uppermost reach of the waterbody. <u>Reclamation Canal</u> : all reaches and tributaries, which includes from confluence with Tembladero Slough, to upstream confluence with Alisal Creek.	6.4	8.0	0.13	0.3	0.025
<u>Gabilan Creek</u> : all reaches and tributaries downstream of Crazy Horse Rd.	2.0	8.0	0.07	0.3	0.25
<u>Natividad Creek</u> : all reaches and tributaries, from the confluence with Carr Lake to the uppermost reach of the waterbody <u>Alisal Creek</u> : all reaches and tributaries from the confluence with the Reclamation Canal to the uppermost reach of the waterbody.	2.0	8.0	0.07	0.3	0.025

County of Monterey First and Second Interim Wasteload Allocations for Nitrogen Compounds and Orthophosphate in the Lower Salinas River Watersheds (concentration in milligrams per liter)

Waterbody	First Interim Wasteload Allocation by October 13, 2027, for Nitrate as Nitrogen Year Round	First Interim Wasteload Allocation by October 13, 2027, for Un-ionized Ammonia as Nitrogen Year Round	Second Interim Wasteload Allocation by October 13, 2035, for Orthophosphate as Phosphorous Wet Season	Second Interim Wasteload Allocation by October 13, 2035, for Nitrate as Nitrogen Wet Season
<u>Lower Salinas River</u> : all reaches from downstream of Spreckels (downstream of monitoring site 309SSP) to the confluence with the Pacific Ocean including Salinas River Lagoon (North)	10	.025	0.3	.025
<u>Natividad Creek</u> : all reaches and tributaries, from the confluence with Carr Lake to the uppermost reach of the waterbody: all reaches and tributaries, from the confluence with the Reclamation Canal to the uppermost reach of the waterbody. <u>Reclamation Canal</u> : all reaches and tributaries, which includes from confluence with Tembladero Slough, to upstream confluence with Alisal Creek.	10	.025	0.3	.025
<u>Gabilan Creek</u> : all reaches and tributaries downstream of Crazy Horse Rd.	10	.025	0.3	.025

Waterbody	First Interim Wasteload Allocation by October 13, 2027, for Nitrate as Nitrogen Year Round	First Interim Wasteload Allocation by October 13, 2027, for Un-ionized Ammonia as Nitrogen Year Round	Second Interim Wasteload Allocation by October 13, 2035, for Orthophosphate as Phosphorous Wet Season	Second Interim Wasteload Allocation by October 13, 2035, for Nitrate as Nitrogen Wet Season
<u>Natividad Creek</u>: all reaches and tributaries, from the confluence with Carr Lake to the uppermost reach of the waterbody <u>Alisal Creek</u>: all reaches and tributaries from the confluence with the Reclamation Canal to the uppermost reach of the waterbody.	10	.025	0.3	.025

A13.3.17 TMDL for Toxicity and Pesticides in the Santa Maria Watershed

Description: USEPA approved the TMDL on August 31, 2015. Surface waters in the Santa Maria River watershed are polluted with pesticides due to historic widespread use in the watershed. The organochlorine pesticides included in the TMDL are no longer applied in the watershed but are persistent in the environment. The TMDL identifies urban stormwater as a source of these pollutants.

Responsible Permittees: City of Guadalupe, City of Santa Maria, and the County of Santa Barbara.

Wasteload Allocations: The TMDL assigns the following wasteload allocations to the City of Santa Maria, County of Santa Barbara, and City of Guadalupe:

Santa Maria Watershed Pyrethroid Pesticides Wasteload Allocations

Permittee	Source	Wasteload Allocation Number
City of Guadalupe, City of Santa Maria; and County of Santa Barbara	Urban Stormwater	3, 4 and 5

Wasteload Allocation 3: Additive Wasteload Allocation for Pyrethroid Pesticides:

Pyrethroid pesticides contribute to additive toxicity in aquatic sediments. The numeric target for additive toxicity for pyrethroid pesticides is:

$$\frac{C (\text{Pyrethroid 1})}{NLC(\text{Pyrethroid 1})} + \frac{C (\text{Pyrethroid 2})}{NLC (\text{Pyrethroid 2})} = S; \text{ where } S \leq 1$$

Where:

C = The concentration of a pesticide measured in sediment.

NLC = The numeric Lethal Concentration 50 (i.e., LC50) for each pesticide present

S = The sum. S exceeding 1.0 indicates that beneficial uses may be adversely affected.

LC50 = A measure of toxicity representing the concentration that will kill 50 percent of the sample population of a test species.

Apply Wasteload Allocation 3, the additive toxicity numeric target formula, when pyrethroid pesticides are present in the sediment above the LC50s for Pyrethroid Sediment, as follows:

Lethal Concentration 50 (LC50) for Pyrethroid Sediment

Chemical	LC50 (nanograms per gram)	Median Lethal Concentration for Amphipods (<i>Hyalella azteca</i>) Organic Carbon Normalized Concentrations (micrograms per gram)
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

Standard Aquatic Toxicity Tests

Parameter	Test	Biological Endpoint Assessed
Water Column Toxicity	Water Flea – <i>Ceriodaphnia</i> (6-8 day chronic)	Survival and Reproduction
Sediment Toxicity	<i>Hyalella azteca</i> (10-day chronic)	Survival

Wasteload Allocation 5: Organochlorine Pesticide Wasteload:

Santa Maria River Watershed (Including all Reaches) Sediment Organochlorine Pesticide Wasteload Allocations (micrograms per kilogram, organic carbon concentrations)

Waterbody	4,4-Dichloro-Diphenyl-Dichloroethane	4,4-Dichloro-Diphenyl-Dichloroethylene	4,4-Dichloro-Diphenyl-Trichloroethane	Total Dichloro-Diphenyl-Trichloroethane
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

Santa Maria River Watershed Additional Organochlorine Pesticide Sediment Chemistry Wasteload Allocations (by organic carbon normalized concentrations in micrograms per kilogram)

Waterbody	Chlordane	Endrin	Dieldrin	Toxaphene
Oso Flaco Lake	1.7	550	0.14	20
Santa Maria River	1.7	550	0.14	20
Orcutt Creek	1.7	550	0.14	20

Santa Maria River Watershed Fish Tissue Wasteload Allocations for Organochlorine Pesticides (nanograms of pollutant per grams of fish tissue sample)

Waterbody	Chlordane	Dichloro-Diphenyl-Trichloroethane	Dieldrin	Toxaphene
Oso Flaco Lake	5.6	21	Not applicable	Not applicable
Oso Flaco Creek	5.6	21	Not applicable	Not applicable
Santa Maria River	5.6	21	0.46	6.1
Orcutt Creek	5.6	21	0.46	6.1

Final Deadline for Compliance: The final deadline for compliance with the pyrethroid wasteload allocation is November 1, 2029. The final compliance date to achieve the wasteload allocations for organochlorine pesticides (dichloro-diphenyl-trichloroethane, dichloro-diphenyl-dichloroethane, dichloro-diphenyl-dichloroethylene, chlordane, eldrin, toxaphene, and dieldrin) is November 1, 2044.

A13.3.18 TMDL for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin

Description: USEPA approved the TMDL on October 6, 2016, which is the effective date of the TMDL. Discharges of nitrogen compounds and orthophosphate are occurring in surface waters at levels that impair beneficial uses. The drinking water and aquatic habitat beneficial uses are not protected..

Responsible Permittees: City of Gilroy, City of Hollister, County of Monterey, City of Morgan Hill, County of Santa Clara, County of Santa Cruz, City of Watsonville.

Wasteload Allocations: Municipal stormwater Permittees are assigned final and interim wasteload allocations:

Final Receiving Water Wasteload Allocations for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin (mg/L)

Waterbody^C	Permittee	Nitrate as N <i>Aquatic Habitat</i>	Nitrate as N <i>Human Health</i>	Orthophosphate as P	Total Nitroge n as N	Un- ionized Ammoni a as N
Pajaro River	City of Watsonville; County of Santa Cruz	3.9 – Dry season ^D 8.0 – Wet season ^E	10 – Year-round	0.14 – Dry season ^D 0.3 – Wet season ^E	Not Applicable	0.025 – Year-round
All reaches of: Watsonville Slough, Harkins Slough, Gallighan Slough, Struve Slough	City of Watsonville; County of Santa Cruz	Not Applicable	10 – Year-round	0.14 – Dry season ^D 0.3 – Wet season ^E	2.1 – Dry season ^D 8.0 – Wet season ^E	0.025 – Year-round
Corralitos Creek, Salsipuedes Creek	City of Watsonville; County of Santa Cruz	1.8 – Dry season ^D 8.0 Wet season ^E	10 – Year-round	0.14 – Dry season ^D 0.3 – Wet season ^E	Not Applicable	0.025 – Year-round
Llagas Creek, Little Llagas Creek	City of Gilroy; City of Morgan Hill Urban areas; County of Santa Clara	1.8 – Dry season ^D 8.0 – Wet season ^E	10 – Year-round	0.05 – Dry season ^D 0.3 – Wet season ^E	Not Applicable	0.025 – Year-round
Uvas Creek, Carnadero Creek	City of Gilroy City of Morgan Hill	1.8 – Dry season ^D 8.0 Wet season ^E	10 – Year-round	0.05 – Dry season ^D 0.3 – Wet season ^E	Not Applicable	0.025 – Year-round
San Benito River	City of Hollister	Not Applicable	10 Year-round	Not Applicable	Not Applicable	0.025 – Year-round

Interim Wasteload Allocations for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin (mg/L)

Waterbody	Permittee Responsible for Achieving Wasteload Allocation	October 6, 2026 First Interim Deadline (10 years after effective date of the TMDL)	October 6, 2031 Second Interim Deadline (15 years after effective date of the TMDL)
All waterbodies identified in Final Wasteload Allocations Table	City of Gilroy, City of Morgan Hill Urban areas, City of Watsonville, County of Santa Cruz, and County of Santa Clara	Achieve the Nitrate-N (nitrate as nitrogen) concentration of ≤ 10 mg/L in receiving waters (the municipal drinking water standard), and the Un-ionized ammonia (as nitrogen) concentration of ≤ 0.025 mg/L (the Basin Plan's un-ionized ammonia numeric water quality objective)	Achieve the Wet Season (Nov. 1 to Apr. 30) wasteload allocations for Nitrate-N and Orthophosphate-P identified in the Final Wasteload Allocation Table, above, for the applicable pollutant/waterbody combination.

Final Deadline for Compliance: The deadline for compliance with the final allocations is October 6, 2041, which is 25-years after the TMDL effective date.

A13.3.19 TMDL for Sediment Toxicity and Pyrethroid Pesticides in Sediment in the Lower Salinas River Watershed

Description: The USEPA approved the TMDL on August 9, 2018, which is the effective date of the TMDL. Surface waters in the lower Salinas River watershed are impaired for sediment toxicity to the aquatic invertebrate (*Hyalella azteca*) and pyrethroid pesticides in sediment. These surface waters do not meet the Basin Plan general narrative objectives for toxicity and pesticides and the aquatic life beneficial uses are not protected. Sediment toxicity was detected in stream sediments throughout the lower Salinas River watershed. Several special sediment monitoring studies in the watershed link the sediment toxicity to pyrethroid pesticides in both agricultural and municipal runoff. Statewide urban pesticide studies indicate that pyrethroids are commonly detected in urban runoff and the primary sources are outdoor applications by pest control professionals and to a lesser extent consumer use.

Responsible Permittees: County of Monterey

Wasteload Allocations: The wasteload allocations for sediment toxicity are equal to the Sediment Toxicity Numeric targets and the wasteload allocations for pyrethroid pesticides are equal to the Pyrethroid Sediment Concentration Toxicity Unit Numeric targets.

Wasteload Allocations for the Sediment Toxicity and Pyrethroid Pesticides in Sediment in the Lower Salinas River Watershed

Responsible party	Source	Wasteload Allocations
County of Monterey	Municipal Stormwater	<u>Allocation-1</u> is equal to the Sediment Toxicity TMDL, which is the Sediment Toxicity Numeric target, and <u>Allocation-2</u> is equal to the Pyrethroids in Sediment TMDLs , which is the Pyrethroid Sediment Concentration Toxicity Unit Numeric Target

Wasteload Allocation 1 is equal to the Sediment Toxicity TMDL (i.e., the sediment toxicity numeric target in Central Coast Basin Plan section 4.19.19), as follows:

Toxicity to invertebrates shall be tested using chronic toxicity test, 10-day sediment exposure with Hyalella azteca (USEPA, 2000). It is recommended (not required) that toxicity determinations be based on a comparison of the test organisms' response to the receiving water sample compared to the control using the Test of Significant Toxicity, also referred to as the TST statistical approach (USEPA 2010; Denton et al., 2011). If a sample is declared "fail" (i.e., toxic), then the target is not met and additional receiving water sample(s) should be collected and evaluated for this specific receiving water to determine the pattern of toxicity and whether a toxicity identification evaluation (also referred to as a TIE) needs to be conducted to determine the causative toxicant(s). If the causative toxicant(s) is already known (e.g., based on land use patterns and similar responses in sub-watersheds), then implementation of management practices, management plans etc. should be examined for effectiveness if already in place, or implemented to reduce the toxicant(s).

Standard Aquatic Toxicity Tests (sediment toxicity numeric target)

Parameter	Test	Biological Endpoint Assessed
Sediment Toxicity	Hyalella azteca (10-day chronic)	Survival

Wasteload Allocation 2 is equal to the Pyrethroids in Sediment TMDLs, that is defined in Central Coast Basin Plan section 4.9.19 as Pyrethroid Sediment Concentration Toxicity Unit Numeric Target. The pyrethroid sediment concentration toxicity unit (TU) numeric targets are a comparison of toxic levels of pyrethroids in sediment to published criteria. Samples and

criteria are for organic carbon normalized concentrations (oc). The pyrethroid TU formula is as follows:

$$\text{Pyrethroid TU} = \frac{\text{sample concentration (oc)}}{\text{known LC50 concentrations values (oc)}}$$

Pyrethroid TUs for the pyrethroid concentrations measured in sediment are summarized using the following formula. The summary is for two toxicity unit formulas but it could be applied to additional pyrethroids in found in Table 4.9.19-2:

$$\text{Sum Pyrethroid TUs} = \text{Pyrethroid TU (1)} + \text{Pyrethroid TU (2)}$$

The numeric target for the sum pyrethroid TUs is where:

$$\text{Sum Pyrethroid TUs} < 1.0$$

Chemical	LC 50 ¹ ng/g ² (ppb ³)	LC50 ug/g ⁴ oc ⁵ (ppm ⁶)	Reference
Bifenthrin	12.9	0.52	(Amweg et al., 2005)
Cyfluthrin	13.7	1.08	(Amweg et al., 2005)
Cypermethrin	14.87	0.38	(Maund et al., 2002) mean value
Esfenvalerate	41.8	1.54	(Amweg et al., 2005)
Lambda-Cyhalothrin	5.6	0.45	(Amweg et al., 2005)
Permethrin	200.7	10.83	(Amweg et al., 2005)

Table Notes:

¹ Median lethal concentration (LC50) for amphipods (*Hyaella azteca*),

² nano grams per gram (ng/g),

³ parts per billion,

⁴ microgram per gram (ug/g),

⁵ organic carbon normalized concentrations (oc),

⁶ parts per million (ppm)

Final Deadline for Compliance: The final compliance deadline was June 29, 2023, which was five years after approval of the TMDL by the Office of Administrative Law (i.e., June 29, 2018).

A13.3.20 TMDL for Nitrogen and Phosphorous Compounds in Streams of the Franklin Creek Watershed

Description: The discharge of nitrogen and phosphorus compounds are occurring in surface waters of Franklin Creek watershed at levels which are impairing a beneficial uses. The municipal and domestic drinking water supply, groundwater recharge beneficial use, and the aquatic habitat

beneficial uses are not protected. The pollutants addressed in these TMDLs are nitrate, total nitrogen, and total phosphorus (biostimulatory substances objective). The TMDLs were approved by the California Office of Administrative Law (March 4, 2019), and the USEPA (May 9, 2019).

Responsible Permittees: City of Carpinteria, County of Santa Barbara

Wasteload Allocations: Final and interim wasteload allocations are assigned for nitrate, total nitrogen, and total phosphate (biostimulatory substances) as shown below:

Franklin Creek Interim Wasteload Allocations

First Interim Wasteload Allocations Achieve by May 9, 2029	Second Interim Wasteload Allocations Achieve by May 19, 2034
Achieve the municipal drinking water beneficial use of 10 mg/L Nitrate as Nitrogen	Achieve the wet season (Nov. 1 to Apr. 30) Biostimulatory target-based of 8 mg/L Total Nitrogen 0.3 mg/L Total Phosphorus

Franklin Creek Final Wasteload Allocations

Nitrate as Nitrogen	Total Nitrogen	Total Phosphorus
10 mg/L	1.1 mg/L Maximum Dry Season Samples (May 1 – October 31) 8 mg/L Maximum Wet Season Samples (November 1 - April 30)	0.075 mg/L Maximum Dry Season Samples (May 1 – October 31) 0.3 mg/L Maximum Wet Season Samples (November 1 - April 30)

Final Deadline for Compliance: The final wasteload allocations for Franklin Creek should be achieved 25-years after the TMDL effective date (i.e., the date of approval by Office of Administrative Law). Therefore, the final deadline is May 9, 2044.

A13.3.21 TMDL for Total Phosphorous to Address Cyanobacterial Blooms in Pinto Lake¹⁹

Description: Pinto Lake is a shallow, 103-acre lake located within the Lower Pajaro River watershed in Santa Cruz County. Pinto Lake has experienced nutrient-driven cyanobacteria blooms, associated toxicity, and water quality degradation for many years. Urban runoff is a source of phosphorus into Pinto Lake. Pinto Lake water quality impairments that will be corrected by reducing the total phosphorus load include the following: cyanobacteria hepatotoxic microcystins, chlorophyll a, low dissolved oxygen, and scum/foam. The TMDLs were approved by the California Office of Administrative Law (September 9, 2021), and the USEPA (November 21, 2021)

Responsible Permittees: City of Watsonville, County of Santa Cruz

Wasteload Allocations: This TMDL project identifies that major watershed improvement efforts should be directed towards phosphorus control.

Phosphorus Wasteload Allocation for all Surface Waterbodies in the Pinto Lake Catchment

Phosphorus Source	Current Total Phosphorus Loading (pounds per year)	Total Phosphorus Load Allocation (pounds per year)	Percent reduction (%)
Urban stormwater-runoff	130	20	~85

Numeric Targets

Numeric targets represent acceptable levels of pollutants that will result in the desired conditions for the lake. The numeric targets include the following:

1. Numeric targets for nutrient-response indicators (numeric targets to interpret the narrative Basin Plan objective for biostimulatory substances and aquatic life beneficial uses):
 - a. Dissolved oxygen concentration not to be reduced below 5.0 mg/L.
 - b. Median values for dissolved oxygen should not fall below 85% saturation.
 - c. In the growing season (June 1 – November 30), water column chlorophyll a concentration not to exceed 25 µg/L.

¹⁹ [Total Maximum Daily Load for Total Phosphorus to Address Cyanobacteria Blooms in Pinto Lake and a TMDL Implementation Strategy for the Pinto Lake Catchment](#)

- d. In the wet season (December 1- May 31), water column chlorophyll *a* concentration not to exceed 25 µg/L.
2. Primary numeric target for microcystin (numeric target to interpret the narrative Basin Plan objective for toxicity and recreational beneficial uses):
Microcystin concentration not to exceed 0.8 micrograms per liter (µg/L).
3. Secondary numeric target for microcystin (numeric target to interpret the narrative Basin Plan objective for toxicity and domestic and municipal supply beneficial uses):
Microcystin concentration not to exceed 0.3 µg/L.

Final Deadline for Compliance: By September 9, 2031, which is within 10 years after the Office of Administrative Law approval date, the Permittee shall:

1. Achieve the phosphorus wasteload allocation; or
2. Meet all regulatory and policy requirements necessary for removing the impaired waters from the Clean Water Act section 303(d) List of impaired waters; or
3. Attain the numeric targets for nutrient response indicators (i.e., dissolved oxygen water quality objectives, chlorophyll *a* numeric targets, and microcystin numeric targets).

A13.3.22 TMDL for Turbidity in Gabilan Creek Watershed

Description: All major surface waters in the lower Gabilan Creek watershed are highly impaired by turbidity and do not meet the turbidity water quality objective. Turbidity can be caused by suspended solids such as clay, silt, finely divided inorganic and organic matter, algae, and other microscopic organisms. At elevated levels, turbidity and associated suspended solids can have detrimental impacts on aquatic ecosystems, drinking water, and recreation beneficial uses. The TMDL identifies urban stormwater runoff as a source.

Responsible Permittees: County of Monterey.

Wasteload Allocations: The Gabilan Creek watershed has distinct geographic areas with separate numeric targets: the upper Gabilan Creek watershed headwaters have relatively undisturbed natural land cover and viable steelhead habitat, and the lower alluvial valley has highly developed land that includes waterbodies from the base of the Gabilan Range to the

brackish (tidally influenced) waters near the confluence of the watershed with Monterey Bay at Moss Landing.²⁰

The wasteload allocations are equal to the interim and final wasteload allocations defined in the three tables below.²¹

1. To determine attainment of the final wasteload allocation for streams in the upper Gabilan Creek watershed, compare the seasonal 75th percentile value of samples collected to the appropriate wasteload allocation.
2. To determine the interim and final wasteload allocations for streams in the lower Gabilan Creek watershed (sites 309GAB to 309OLD in the table) compare the seasonal median value of samples collected to the appropriate numeric wasteload allocation.

Gabilan Creek Turbidity First Interim Wasteload Allocations, Attainment by December 8, 2029

Waterbody (Site Number)	First Interim Wasteload Allocation Dry Season (NTU)	First Interim Wasteload Allocation Wet Season (NTU)
Upper Gabilan Creek, headwaters above Old Stage Road	Not available	Not available
Gabilan Creek (309GAB)	40	124
Natividad Creek (309NAD)	53	38
Salinas Reclamation Canal/Alisal Creek (309ALG)	27	72
Merritt Ditch (309MER)	42	67
Santa Rita Creek (309RTA)	51	65
Salinas Reclamation Canal (309JON)	18	43
Espinosa Slough (309ESP)	13	65
Alisal Slough (309ASB)	12	27
Tembladero Slough (309TEH)	57	84
Tembladero Slough (309TEM)	38	52
Tembladero Slough (309TDW) (brackish)	59	49
Old Salinas River (309OLD) (brackish)	29	36

Gabilan Creek Turbidity Second Interim Wasteload Allocations, Attainment by December 8, 2037

Waterbody (Site Number)	Second Interim Wasteload Allocation Dry Season (NTU)	Second Interim Wasteload Allocation Wet Season (NTU)
Upper Gabilan Creek,	Not available	Not available

²⁰ Map of Gabilan Creek Watershed, [Project Location and Area Maps](#)

²¹ From Table 2 in the [TMDL for Turbidity in Gabilan Creek Watershed](#)

Waterbody (Site Number)	Second Interim Wasteload Allocation Dry Season (NTU)	Second Interim Wasteload Allocation Wet Season (NTU)
headwaters above Old Stage Road		
Gabilan Creek (309GAB)	12	21
Natividad Creek (309NAD)	12	21
Salinas Reclamation Canal/Alisal Creek (309ALG)	12	21
Merritt Ditch (309MER)	12	21
Santa Rita Creek (309RTA)	12	21
Salinas Reclamation Canal (309JON)	12	21
Espinosa Slough (309ESP)	12	21
Alisal Slough (309ASB)	12	21
Tembladero Slough (309TEH)	12	21
Tembladero Slough (309TEM)	12	21
Tembladero Slough (309TDW) (brackish)	29	36
Old Salinas River (309OLD) (brackish)	29	36

Gabilan Creek Final Turbidity Wasteload Allocations, Attainment by December 8, 2042

Waterbody (Site Number)	Final Wasteload Allocation Dry Season (NTU)	Final Wasteload Allocation Wet Season (NTU)	Final Wasteload Allocation Year- Round (NTU)
Upper Gabilan Creek, headwaters above Old Stage Road	2.2	3.3	2.5
Gabilan Creek (309GAB)	6	11	8
Natividad Creek (309NAD)	6	11	8
Salinas Reclamation Canal/Alisal Creek (309ALG)	6	11	8
Merritt Ditch (309MER)	6	11	8
Santa Rita Creek (309RTA)	6	11	8
Salinas Reclamation Canal (309JON)	6	11	8
Espinosa Slough (309ESP)	6	11	8
Alisal Slough (309ASB)	6	11	8
Tembladero Slough (309TEH)	6	11	8
Tembladero Slough (309TEM)	6	11	8
Tembladero Slough (309TDW) (brackish)	Not available	Not available	Not available
Old Salinas River (309OLD) (brackish)	Not available	Not available	Not available

Final Deadline for Compliance:

The TMDL establishes a 20-year schedule to achieve the final turbidity wasteload allocations. The timeline for achieving the TMDL schedule and allocations starts upon the date of Office of Administrative Law approval of these TMDLs on December 8, 2022. Therefore, the TMDL attainment schedule is as follows.

1. First Interim Milestone: This allocation must be achieved by December 8, 2029, which is seven years after approval by the Office of Administrative Law.
2. Second Interim Milestone: This allocation must be achieved by December 8, 2037, which is fifteen years after approval by the Office of Administrative Law.
3. Final Attainment Date: This allocation must be achieved by December 8, 2042, which is twenty years after approval by the Office of Administrative Law.

A13.4 LOS ANGELES WATER BOARD TMDLS

Information in the following subsections has been summarized from the applicable TMDLs in [Chapter 7](#) of the Los Angeles Water Board Basin Plan and [USEPA established TMDLs](#). For the Avalon Beach bacteria TMDL, please use contact [staff](#).

A13.4.1 *Avalon Bay Bacteria TMDL*

Description: Avalon Beach bay waters are impaired due to indicator bacteria. Avalon Beach is located on Santa Catalina Island in the City of Avalon. The Avalon Beach bacteria TMDL was established as a single regulatory action within Cease and Desist Order R4-2012-0077 (adopted April 5, 2012) for the City of Avalon. The City of Avalon discharges urban runoff and stormwater to Avalon Beach. The TMDL identifies urban runoff and stormwater discharges as sources of impairment to surface water bodies in the watershed.

Responsible Permittee: City of Avalon.

Wasteload Allocations: The following wasteload allocations are receiving water allocations. If the number of exceedance days is greater than the allowable number of exceedance days, the City of Avalon is out of compliance with the wasteload allocation. 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.

Wasteload Allocation as Geometric Mean Limits

The wasteload allocation is zero allowable exceedances of the geometric mean of the bacterial density for each fecal indicator bacteria, at each compliance monitoring point. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30-day period.

- a. Total coliform concentration shall not exceed 1,000 per 100 milliliters.
- b. Fecal coliform density shall not exceed 200 per 100 milliliters.
- c. *Enterococcus* density shall not exceed 35 per 100 milliliters.

Wasteload Allocation as Single Sample Limits

The wasteload allocation for each compliance point based on daily sampling is zero (0) allowable exceedance days of the single sample limits during summer dry weather; 9 allowable exceedance days of the single sample numeric targets during winter dry weather; and 17 allowable exceedance days of the single sample numeric targets during wet weather. Allowable exceedance days are scaled according to sampling frequency. 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. If weekly sampling is conducted, one allowable exceedance day is provided during winter dry weather, and three allowable exceedance days are provided during wet weather throughout the year.

- a. Total coliform density shall not exceed 10,000 per 100 milliliters.
- b. Fecal coliform density shall not exceed 400 per 100 milliliters.
- c. *Enterococcus* density shall not exceed 104 per 100 milliliters.
- d. Total coliform density shall not exceed 1,000 per 100 milliliters, if the ratio of fecal to total coliform exceeds 0.1.

Compliance is the number of days that any single sample exceeds the limits shown above, based on the time of year:

- a. Summer dry-weather: April 1 to October 31;
- b. Winter dry-weather: November 1 to March 31; and
- c. Wet weather: defined as days with 0.1 inch of rain or greater and the three days following the rain event).

A storm year is defined as the period from November 1 through October 31.

Final Compliance Deadline: The City of Avalon is required to achieve the following milestones and targets for wasteload allocations assigned to its municipal stormwater discharges: By April 1, 2016, there shall be no allowable exceedances at any locations during summer dry weather (April 1 to October 31); by November 1, 2016, compliance with the allowable number of winter dry weather exceedance days shall be achieved (November 1 to March 31); by November 1, 2017, compliance with the allowable number of wet-weather exceedance days and geometric mean targets must be achieved.

A13.4.2 *Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDL*

Description: USEPA approved the revised TMDL on July 2, 2014. The creek, estuary, and tributaries are impaired due to bacteria, which is impacting recreational use. This TMDL addresses the bacteria impairments by establishing wasteload allocations. The major bacteria sources are dry- and wet-weather urban runoff from stormwater conveyance systems.

Responsible Permittees: University of California, Los Angeles; Veterans Affairs Greater Los Angeles Healthcare System.

Wasteload Allocations: The responsible jurisdictions and responsible agencies, which includes the Permittees, within the watershed are jointly responsible for complying with the wasteload allocation in each reach.

The TMDL states that the wasteload allocation are expressed as the allowable number of days a numeric water quality objective may be exceeded. Wasteload allocations are expressed as allowable exceedance days of the water quality objectives.

Wasteload Allocations as Allowable Exceedance Days of the Water Quality Objectives

For each monitoring site in Ballona Creek and its tributaries, allowable exceedance days are set on an annual basis and for two time periods. These two periods are: dry-weather days and wet-weather days (defined as days of 0.1-inch of rain or more plus three days following the rain event).

For each monitoring site in Ballona Estuary, allowable exceedance days are set on an annual basis and for three time periods. These three periods are: summer dry-weather (April 1 to October 31); winter dry-weather (November 1 to March 31); and wet-weather (defined as days of 0.1 inch of rain or more plus three days following the rain event).

Numeric Water Quality Objectives: The numeric water quality objectives are the water contact recreation and limited water contact recreation objectives, as follows:

In Marine Waters Designated for Water Contact Recreation

1. 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.

2. 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.

In Fresh Waters Designated for Water Contact Recreation

- Geometric Mean Limits: *E. coli* density shall not exceed 126/100 ml.
- Single Sample Limits: *E. coli* density shall not exceed 235/100 ml

In Fresh Waters Designated for Limited Water Contact Recreation

- Geometric Mean Limits: *E. coli* density shall not exceed 126/100 ml.

- Single Sample Limits: *E. coli* density shall not exceed 576/100 ml.

In Fresh Waters Designated for Non-Contact Water Recreation

- Geometric Mean Limits: Fecal coliform density shall not exceed 2000/100 ml.
- Single Sample Limits: Fecal coliform density shall not exceed 4000/100 ml.

Final Compliance Deadline: The final compliance deadline for the allowable exceedance days during wet and geometric mean targets for all seasonal periods was July 15, 2021.

A13.4.3 Los Angeles Harbor Bacteria TMDL – Inner Cabrillo Beach and Main Ship Channel

Description: The USEPA approved the Los Angeles Harbor Bacteria TMDL – Inner Cabrillo Beach and Main Ship Channel TMDL on March 1, 2005, and the revision on July 2, 2014. Elevated bacterial indicator densities are causing impairment of the water contact recreation beneficial use of Inner Cabrillo Beach and the potential uses of the Main Ship Channel in the Los Angeles Harbor. Swimming in marine waters with elevated bacterial indicator densities has long been associated with adverse health effects. Dry-weather urban runoff and stormwater conveyed by storm drains are major sources of elevated bacterial indicator densities to Inner Cabrillo Beach and the Main Ship Channel during dry and wet weather.

Responsible Permittees: Responsible Permittees are the Federal Correctional Institution, Terminal Island; and California State University, Dominguez Hills.

Wasteload Allocations: Wasteload allocations assigned to municipal storm sewer system discharges are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection.

The allowable number of exceedance days for a monitoring site for each time period is based on the lesser of two criteria (1) exceedance days in the designated reference system and (2) exceedance days based on historical bacteriological data at the monitoring site. This ensures that bacteriological water quality is at least as good as that of a largely undeveloped system and that there is no degradation of existing water quality.

Allowable Exceedance Days and Time Periods

The allowable number of exceedance days for a monitoring site for each time period is based on the lesser of two criteria (1) exceedance days in the designated reference system and (2) exceedance days based on historical

bacteriological data at the monitoring site. This ensures that bacteriological water quality is at least as good as that of a largely undeveloped system and that there is no degradation of existing water quality. For each monitoring site, allowable exceedance days are set on an annual basis as well as for three time periods.

These three time periods are:

- summer dry weather (April 1 to October 31);
- winter dry weather (November 1 to March 31); and
- wet weather (defined as days of 0.1 inch of rain or more plus three days following the rain event).

Wasteload Allocations

Discharges from Small MS4 permittees are not expected to be a significant source of bacteria. Wasteload allocations for these discharges for all time periods are the bacteriological objectives contained in the Numeric Targets section of the TMDL (Los Angeles Water Board Basin Plan, Table 7-11.1). The numeric targets are based on four bacterial indicators and include both geometric mean limits and single sample limits. For the Main Ship Channel, the numeric targets apply at existing or new monitoring sites with samples collected at the surface. These targets apply during both dry and wet weather, since there is water contact recreation throughout the year, including during wet weather. The Los Angeles Water Board Basin Plan water quality objectives that serve as the numeric targets for this TMDL are:

1. Rolling 30 day Geometric Mean Limits

The wasteload allocation for the geometric mean during any time period or monitoring site in Main Ship Channel or the Inner Harbor is zero (0) allowable exceedances. The geometric mean targets may not be exceeded at any time. The geometric means shall be calculated weekly as a rolling geometric mean using 5 or more samples, for six week periods starting all calculation weeks on Sunday.

- a. Total coliform density shall not exceed 1,000/100 milliliter
- b. Fecal coliform density shall not exceed 200/100 milliliter
- c. *Enterococcus* density shall not exceed 35/100 milliliter.

2. Single Sample Limits

The wasteload allocations for summer, dry weather, single sample bacterial densities in the Main Ship Channel and the Inner Harbor are zero (0) days of allowable exceedances. The wasteload allocations for storm drains in the Inner Harbor for summer, dry weather, single sample bacterial densities are also zero (0) days of allowable exceedances. For

the single sample targets, each existing monitoring site is assigned an allowable number of exceedance days for three time periods (1) summer dry weather (April 1 to October 31), (2) winter dry weather (November 1 to March 31), and (3) wet weather (defined as days with 0.1 inch of rain or greater and the three days following the rain event).

- a. Total coliform density shall not exceed 10,000/100 milliliter
- b. Fecal coliform density shall not exceed 400/100 milliliter
- c. *Enterococcus* density shall not exceed 104/100 milliliter
- d. Total coliform density shall not exceed 1,000/100 milliliter, if the ratio of fecal to total coliform exceeds 0.1.

Final Compliance Deadline: The final compliance deadline was March 10, 2010, which requires there shall be no exceedances in excess of the single sample limits at any location during summer dry weather (April 1 to October 31) or winter dry weather (November 1 to March 31) and the geometric mean targets shall be achieved. If the deadline has not been met, the Permittee may request a time schedule order from the Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.4 Los Angeles River Bacteria TMDL

Description: USEPA approved the Los Angeles River Bacteria TMDL on March 23, 2012. Elevated bacteria indicator densities are causing impairment of the water contact recreation beneficial use within the Los Angeles River Watershed. Recreating in waters with elevated bacteria indicator densities has been associated with adverse health effects. Stormwater discharges from the large municipalities are the principal source of bacteria. The Small MS4 stormwater permittees are not a significant source of bacteria to the river.

Responsible Permittees: California State University, Los Angeles; and California State University, Northridge.

Wasteload Allocations Expressed as Allowable Exceedance Days: Wasteload allocations are expressed as allowable exceedance days of the numeric targets. Permittees in the Los Angeles River Watershed are assigned wasteload allocations of zero (0) days of allowable exceedances of the single sample target for both dry and wet weather and no exceedances of the geometric mean target. Compliance with an effluent limit based on the water quality objective can be used to demonstrate compliance with the wasteload allocation.

The following are the numeric targets. 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.

1. Geometric Mean Limits: *E. coli* density shall not exceed 126/100 ml.
2. Single Sample Limits: *E. coli* density shall not exceed 235/100 ml.

Final Compliance Deadline: The final compliance deadline is 11.5 years after effective date (March 23, 2012) of the TMDL, which is September 19, 2023. If the deadline has not been met, the Permittee may request a time schedule order from the Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.5 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL

Description: The USEPA approved the San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL on June 14, 2016. Elevated bacterial indicator densities are causing impairment of the water contact recreation and non-contact recreation beneficial uses in several reaches of the San Gabriel River, San Gabriel River Estuary, and its tributaries. Recreating in waters with elevated bacterial indicator densities has long been associated with adverse human health effects. Contributors of bacteria loading to the San Gabriel River, San Gabriel River Estuary, and its tributaries are dry- and wet-weather discharges from municipal separate storm sewer systems.

Responsible Permittees: California State Polytechnic University, Pomona.

Wasteload Allocations as Exceedance Days: are expressed as the number of daily or weekly sample days that may exceed the single sample limits as identified under "Numeric Target" in the TMDL. No exceedances are allowed for the geometric mean limits. Allowable days of exceedance for the single sample limits differ depending on season, dry weather or wet weather, and locations.

1. For the San Gabriel River and its tributaries, allowable exceedance days are set on an annual basis (April 1 to March 31) for two conditions: dry-weather and wet-weather (defined as days of 0.1 inch of rain or more plus three days following the rain event).
 - a. Summer Dry Weather: 5 allowable exceedance days (based on daily sampling), or 1 allowable exceedance day (based on weekly sampling)
 - b. Waters not subject to the High Flow Suspension.

Wet weather: 17 allowable exceedance days (based on daily sampling), or 3 allowable exceedance days (based on weekly sampling)

- c. Waters subject to the High Flow Suspension.

Wet weather: 11 allowable exceedance days (daily sampling), or 2 allowable exceedance days (weekly sampling)

2. Geometric Mean Limits, Fresh Water

Geometric mean values shall be calculated weekly as a rolling geometric mean using a minimum of 5 samples for six week periods and starting all calculation weeks on Sunday. Geometric mean limits may not be exceeded at any time.

E. coli density shall not exceed 126/100 milliliter

3. Single Sample Limits, Fresh Water

E. coli density shall not exceed 235/100 milliliter

Final Compliance Deadline: The TMDL specifies that the final wasteload allocations are to be achieved for single sample objectives and during dry weather by June 14, 2026, while the final wasteload allocations during wet weather are to be achieved by June 14, 2036.

A13.4.6 Ballona Creek Metals TMDL

Description: USEPA approved the Ballona Creek Metals TMDL on October 29, 2008. Ballona Creek is impaired dissolved copper, dissolved lead, total selenium, and dissolved zinc. Water contact recreation, non-contact water recreation, warm freshwater habitat, and wildlife habitat beneficial uses are impaired. Dry weather and wet weather discharges from storm systems are a source of these pollutants

Responsible Permittees: University of California, Los Angeles; and Veterans Affairs Greater Los Angeles Healthcare System.

Wasteload Allocations: The TMDL provides wasteload allocations for dry and wet weather.

1. Concentration-based dry-weather wasteload allocations are assigned to the minor NPDES permits, which includes the Small MS4 Permittees, and general non-stormwater NPDES permits that discharge to Ballona Creek or its tributaries

Dry-weather Wasteload Allocations for Minor NPDES Permits (total recoverable metals)

<u>Copper (µg/L)</u>	<u>Lead (µg/L)</u>	<u>Zinc (µg/L)</u>
35.56	19.65	446.55

2. Concentration-based wet-weather wasteload allocations are assigned to the minor NPDES permits, which includes the Small MS4 Permittees, and general non-stormwater NPDES permits that discharge to Ballona Creek or its tributaries.

Wet-Weather Wasteload Allocations for Minor NPDES Permits (total recoverable metals)

<u>Copper (µg/L)</u>	<u>Lead (µg/L)</u>	<u>Zinc (µg/L)</u>
13.7	76.75	104.77

Final Compliance Deadline: The TMDL specifies that the final wasteload allocations during dry weather are to be achieved by January 11, 2016. The final wasteload allocations during wet weather shall be achieved by January 11, 2021. The final wasteload allocations during dry weather and wet weather are therefore effective immediately. If the deadline has not been met, the Permittee may request a time schedule order from the Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.7 Los Angeles River and Tributaries Metals TMDL

Description: The USEPA approved the TMDL on December 22, 2005, and the revision on December 12, 2016. Segments of the Los Angeles River and its tributaries are impaired for copper, cadmium, lead, zinc, aluminum, and selenium. The beneficial uses impaired by metals are those associated with aquatic life and water supply, including wildlife habitat, rare, threatened or endangered species, warm freshwater habitat, wetlands, and groundwater recharge. Stormwater discharge has been identified as a source of these pollutants.

Responsible Permittees: California State University, Los Angeles; and California State University, Northridge.

Wasteload Allocations: Concentration-based dry-weather wasteload allocations apply to discharges to the reaches and tributaries in the following table.

Los Angeles River and Tributaries Metals TMDL: Dry-Weather Wasteload Allocations (total recoverable metals in µg/L)

Waterbody	Copper	Lead	Zinc	Selenium
Reach 5,6 and Bell Creek	WER ¹ *30	WER ¹ *170	Blank cell	5
Reach 4	WER ² *103	WER ¹ *83	Blank cell	Blank cell
Tujunga Wash	WER ³ *20	WER ¹ *83	Blank cell	Blank cell
Reach 3 above LA-Glendale WRP	WER ² * 23	WER ¹ * 102	Blank cell	Blank cell
Verdugo Wash	WER ⁴ * 23	WER ¹ * 102	Blank cell	Blank cell
Reach 3 below LA-Glendale WRP	WER ² * 26	WER ¹ * 126	Blank cell	Blank cell
Burbank Western Channel (above WRP)	WER ⁵ * 26	WER ¹ * 126	Blank cell	Blank cell
Burbank Western Channel (below WRP)	WER ⁵ * 19	WER ¹ * 751	Blank cell	Blank cell
Reach 2	WER ² * 22	WER ¹ * 94	Blank cell	Blank cell
Arroyo Seco	WER ⁶ * 22	WER ¹ * 94	Blank cell	Blank cell
Reach 1	WER ² * 23	WER ¹ * 102	Blank cell	Blank cell
Compton Creek	WER ⁷ * 19	WER ¹ * 73	Blank cell	Blank cell
Rio Hondo Reach 1	WER ⁸ * 13	WER ¹ * 37	WER ¹ * 131	Blank cell

Table Notes

¹ WER(s) have a default value of 1.0 unless site-specific WER(s) are approved.

² The WER for this constituent in this reach is 3.97.

³ The WER for this constituent in this reach is 8.28.

⁴ The WER for this constituent in this reach is 2.18.

⁵ The WER for this constituent in this reach is 4.75.

⁶ The WER for this constituent in Reaches 1 and 2 of this reach is 1.32.

⁷ The WER for this constituent in this reach is 3.36.

⁸ The WER for this constituent in this reach is 9.69.

Los Angeles River and Tributaries Metals TMDL: Wet-Weather Wasteload Allocations (total recoverable metals, µg/L)

Cadmium	Copper	Lead	Zinc
WER ¹ * 3.1	WER ² * 17	WER ¹ * 94	WER ¹ * 159

Table Notes

¹ WER(s) have a default value of 1.0 unless site-specific WER(s) are approved.

² The WER for this constituent is 3.97.

Final Compliance Deadline: The TMDL specifies that the final dry weather wasteload allocations shall be achieved by January 11, 2024, and the final wet weather wasteload allocations shall be achieved by January 11, 2028.

A13.4.8 Los Cerritos Channel Metals TMDL

Description: The USEPA established the TMDL on March 17, 2010 and approved the Implementation Plan on May 11, 2017. Los Cerritos Channel is impaired waterbody for copper, zinc, and lead. Stormwater discharge is a source of pollutants.

Responsible Permittees: California State University, Long Beach; and Long Beach Veterans Affairs Medical Center.

Wasteload Allocations: Wasteload allocations are expressed as shared dry-weather and wet weather allocations.

1. Dry Weather Wasteload Allocations
Dry weather wasteload allocations are expressed as a shared allocation for the municipal NPDES stormwater permittees.

Dry weather Wasteload Allocations, Shared (total recoverable metals, grams/day)

Copper 67.2

2. Wet Weather Wasteload Allocations
Wet weather wasteload allocations are expressed as a shared allocation for the municipal NPDES stormwater permittees.

Wet Weather Wasteload Allocations, Shared (total recoverable metals, grams/day)

Copper: 461.4 Lead: 2,631.5 Zinc: 4,510.7

Final Compliance Deadline: The TMDL specifies that the final wasteload allocations during dry weather shall be achieved by September 30, 2023. The final wasteload allocations during wet weather shall be achieved by September 30, 2026. If a deadline has not been met, the Permittee may request a time schedule order from the Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee

to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.9 Calleguas Creek Watershed Metals and Selenium TMDL

Description: USEPA approved the Calleguas Creek Watershed Metals and Selenium TMDL on March 26, 2007 and the revision on June 9, 2017. Three of fourteen reaches in the Calleguas Creek Watershed (including Revolon Slough, Lower Calleguas Creek – Reach 2, and Mugu Lagoon) are impaired due to elevated levels of metals and selenium in water. Sources of metals and selenium include urban runoff.

Responsible Permittees: Naval Base Ventura County, includes Port Hueneme and Point Mugu; and California State University Channel Islands.

Wasteload Allocations: Wasteload allocations for permitted stormwater discharges include mass-based wasteload allocations established for copper, nickel, and selenium in total recoverable forms. The Calleguas Creek Watershed Metals and Selenium TMDL assigns the following interim and final wasteload allocations as receiving water allocations.

1. Interim Wasteload Allocations:

Interim Limits for Calleguas and Conejo Creek (µg/L)

Constituent	Dry Weather Daily Maximum	Dry Weather Monthly Average	Wet Weather Daily Maximum
Copper	23	19	204
Nickel	15	13	(a)
Selenium	(b)	(b)	(b)

Table Notes

- (a) The current loads do not exceed the TMDL under wet conditions; interim limits are not required.
- (b) Selenium allocations have not been developed for this reach as it is not on the 303(d) list.
- (c) Attainment of interim limits will be evaluated in consideration of background loading data, if available consistent with USEPA's 2016 Recommended Aquatic Life Ambient Water Quality Criterion for Selenium in Freshwater

Interim Limits for Revlon Slough (µg/L)

Constituent	Dry Weather Daily Maximum	Dry Weather Monthly Average	Wet Weather Daily Maximum
Copper	23	19	204
Nickel	15	13	(a)
Selenium	14 (c)	13 (c)	(b)

Table Notes

- The current loads do not exceed the TMDL under wet conditions; interim limits are not required.
- Selenium allocations have not been developed for this reach as it is not on the 303(d) list.
- Attainment of interim limits will be evaluated in consideration of background loading data, if available consistent with USEPA's 2016 Recommended Aquatic Life Ambient Water Quality Criterion for Selenium in Freshwater.

2. Final Wasteload Allocations for Total Recoverable Copper, Nickel, and Selenium

Final wasteload allocations where Q is the Daily Storm Volume and WER is the Water Effects Ratio.

Dry Weather Final Wasteload Allocation in Water Column: Calleguas and Conejo Creeks (total recoverable in pounds per day)

Metal	Low Flow	Average Flow	Elevated Flow
Copper	$0.04 \times \text{WER} - 0.02$	$0.12 \times \text{WER} - 0.02$	$0.18 \times \text{WER} - 0.03$
Nickel	0.100	0.120	0.440
Selenium	Blank cell	Blank cell	Blank cell

Dry Weather Final Wasteload Allocation in Water Column: Revlon Slough (total recoverable in pounds per day)

Metal	Low Flow	Average Flow	Elevated Flow
Copper	$0.03 \times \text{WER} - 0.01$	$0.06 \times \text{WER} - 0.03$	$0.13 \times \text{WER} - 0.02$
Nickel	0.050	0.069	0.116
Selenium	0.004	0.003	0.004

Wet Weather Final Wasteload Allocations: Calleguas Creek and Revlon Slough (total recoverable, pounds per day)

Metal	Calleguas Creek	Revlon Slough
Copper ¹	$(0.00054 \times Q^2 + 0.032 \times Q - 0.17) \times \text{WER} - 0.06$	$(0.0002 \times Q^2 + 0.0005 \times Q) \times \text{WER}$
Nickel ²	$0.014 \times Q^2 + 0.82 \times Q$	$0.027 \times Q^2 + 0.47 \times Q$

Metal	Calleguas Creek	Revolon Slough
Selenium	Note ^(a)	$0.027*Q^2+0.47*Q$

Table Legend and Notes

Q: Daily storm volume in cubic feet per second

¹ WER: Water effects ratio of 1.51 is used to calculate the assigned wasteload allocations for discharges to Calleguas and Conejo Creek.

² Current loads for nickel do not exceed loading capacity during wet weather. Sum of all loads cannot exceed loads presented in the table

(a) Selenium allocations have not been developed for this reach as it is not on the 303(d) list.

3. Interim and Final Wasteload Allocations for Mercury in Suspended Sediment

Final wasteload allocations 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 1993-2003.²²

Calleguas Creek - Interim and Final Wasteload Allocations for Mercury in Suspended Sediment (pounds per year)

Flow Range (million gallons per year)	Interim	Final
0-15,000	3.3	0.4
15,000-25,000	10.5	1.6
Above 25,000	64.6	9.3

Revolon Slough - Interim and Final Wasteload Allocations for Mercury in Suspended Sediment (pounds per year)

Flow Range (million gallons per year)	Interim	Final
0-15,000	1.7	0.1
15,000-25,000	4	0.7
Above 25,000	10.2	1.8

Final Compliance Deadline: Achievement of final wasteload allocations for copper, nickel, mercury and selenium March 27, 2022. If the deadline has not been met, the Permittee may request a time schedule order from the

²² FORTRAN (HSPF), [USEPA Executive Summary](#)

Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.10 *San Gabriel River and Impaired Tributaries Metals and Selenium*

Description: USEPA established the TMDL on March 26, 2007, and approved the revision on May 11, 2017. San Jose Creek Reach 1 and 2 (a tributary to San Gabriel River) exceed water quality objectives for selenium. Municipal stormwater has been identified as a source.

Responsible Permittees: California State Polytechnic University, Pomona.

Wasteload Allocations: The San Gabriel River Metals and Selenium TMDL assigns wasteload allocations to urban runoff in San Jose Creek, tributaries to the San Gabriel River for entities within the city of Pomona, which includes California State Polytechnic University, Pomona. Therefore, only wasteload allocations assigned to San Jose Creek Reach 1 and Reach 2 are included in this Order.

Dry Weather Selenium Allocation for San Jose Creek Reach 1 and Reach 2

Municipal Stormwater (as total recoverable metals): 5 micrograms per liter²³

Final Compliance Deadline: By September 30, 2026, the Permittee shall demonstrate that it is meeting the wasteload allocation.

A13.4.11 *Los Angeles River Nitrogen Compounds and Related Effects TMDL*

Description: USEPA approved the TMDL on March 18, 2004 and an amended TMDL on August 7, 2014. Los Angeles River is impaired for nitrogen compounds and related effects, and the TMDL identifies municipal stormwater runoff as a minor source of these pollutants.

Responsible Permittees: California State University Los Angeles and California State University Northridge.

Wasteload Allocations: Permittees are assigned the following Wasteload Allocations (wasteload allocations):

²³ USEPA , [TMDL for Metals and Selenium, San Gabriel River and Impaired Tributaries](#), Section 6.3, Table 6-7 Selenium allocations for San Jose Creek Reach 1 and Reach 2 (total recoverable metals)

Los Angeles River Nitrogen and Related Effects Wasteload Allocations for California State University Los Angeles and California State University Northridge (milligrams per liter)

Waterbodies	Ammonia 1-hour Average	Ammonia 30-day Average	Nitrate- Nitrogen 30-day average	Nitrite- Nitrogen 30-day average	Nitrate- Nitrogen + Nitrite- Nitrogen 30-day average
Los Angeles River above Los Angeles-Glendale Water Reclamation Plant	4.7	2.4	8.0	1.0	8.0
Los Angeles River below Los Angeles-Glendale Water Reclamation Plant	8.7	2.4	8.0	1.0	8.0
Los Angeles River Tributaries	10.1	2.3	8.0	1.0	8.0

The highest four-day average within a 30-day period shall not exceed 2.5 times the 30-day average wasteload allocation.

Final Compliance Deadline: The TMDL specifies that the target date to achieve the wasteload allocations assigned to Small MS4 Permittees is March 23, 2004. The allocations are therefore effective immediately. If the deadline has not been met, the Permittee may request a time schedule order from the Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.12 Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation TMDL

Description: USEPA approved the TMDL on March 14, 2006. Eleven of fourteen reaches in the Calleguas Creek watershed are impaired due to elevated levels of organochlorine pesticides and/or polychlorinated biphenyls (PCBs) in water, sediment, and/or fish tissue. Urban runoff is considered as minor sources of organochlorine pesticides and PCBs

Responsible Permittees: Naval Base Ventura County, includes Port Hueneme and Point Mugu; and California State University Channel Islands.

Wasteload Allocations: The TMDL assigns the following interim and final wasteload allocations as receiving water allocations.

Interim Wasteload Allocations in Sediment Calleguas Creek (nanograms per gram)

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

Compliance with sediment based wasteload allocations is measured as an in-stream annual average at the base of each subwatershed where the discharges are located.

Final Wasteload Allocations in Sediment Annual Average at Base of Watershed (nanograms per gram):

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

Compliance with sediment based wasteload allocations is measured as an in-stream annual average at the base of each subwatershed where the discharges are located.

Siltation Wasteload Allocation

2,496 tons per year reduction in yield to Mugu Lagoon.

Final Compliance Deadline: The TMDL specifies that the final wasteload allocations are to be achieved 20 years after the effective date of the TMDL (March 24, 2006). Therefore, the final wasteload allocations shall be achieved by March 24, 2026. If the deadline has not been met, the Permittee may request a time schedule order from the Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.13 Ballona Creek Estuary Toxic Pollutants TMDL

Description: USEPA approved the Ballona Creek Estuary Toxic Pollutants TMDL on December 22, 2005, and the revision on October 26, 2015.

Ballona Creek Estuary is impaired for cadmium, copper, lead, silver, zinc, chlordane, dichlorodiphenyltrichloroethane (DDT), polychlorinated biphenyls (PCBs), and toxicity in sediments. The following beneficial uses are impaired by these toxic pollutants: water contact recreation; non-contact water recreation; estuarine habitat; marine habitat; wildlife habitat; rare and threatened or endangered species; migration of aquatic organisms; reproduction and early development of fish; commercial and sport fishing; and shellfish harvesting. Urban stormwater has been identified as a source.

Responsible Permittees: University of California, Los Angeles; and Veterans Affairs Greater Los Angeles Healthcare System.

Wasteload Allocations: wasteload allocations are expressed as shared allocations amongst the MS4 Permittees in the Ballona Creek watershed.

Metals Wasteload Allocations for Stormwater (kilograms per year)

Cadmium	8.0
Copper	227.3
Lead	312.3
Silver	6.69
Zinc	1003

Organics Wasteload Allocations for Stormwater (grams per year)

Chlordane	8.69
DDT	12.70
Total PCB:	21.40

Final Compliance Deadline: The TMDL specifies that the final wasteload allocations shall be achieved by January 11, 2021. If the deadline has not been met, the Permittee may request a time schedule order from the Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.14 Dominguez Channel and Greater Los Angeles and Long Beach Harbor Toxic Pollutants TMDL

Description: USEPA approved the TMDL on March 23, 2012. The waters of Dominguez Channel and the Greater Los Angeles and Long Beach Harbor areas are impaired by heavy metals and organic pollutants, which impair the designated beneficial uses. Stormwater and urban runoff

discharges are sources of pollutants. Point sources include stormwater and urban runoff from MS4s and other NPDES discharges

Responsible Permittees: Federal Correction Institution, Terminal Island; and California State University, Dominguez Hills

Wasteload Allocations: Final wasteload allocations are assigned to stormwater dischargers, as follows.

1. Dominguez Channel Freshwater Allocations in Wet Weather

Toxicity 1 Chronic Toxicity Units (TUc)

2. Mass-based Dominguez Channel Wet Weather Final Allocations

Mass-based wasteload allocation is shared and divided between MS4 Permittees and Caltrans.

Total Copper 32.3 grams per day

Total Lead 142.6

Total Zinc 232.6

3. Metals and Polyaromatic Hydrocarbon (PAH) Compounds Wasteload Allocations for Greater Harbor Waters (kilograms per year)

Waterbodies	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
Los Angeles River Estuary	35.3	65.7	242.0	2.31

4. Sediment Wasteload Allocations for Dominguez Channel Estuary, Consolidated Slip and Fish Harbor (milligrams per kilogram dry sediment):

Cadmium: 1.2 milligrams per kilogram dry sediment

Chromium: 81

Mercury: 0.15

5. Mass-Based Allocations for Total DDT and Total PCBs (grams per year)

Waterbodies	Total DDT	Total PCBs
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

Final Compliance Deadline: The TMDL specifies that the final wasteload allocations are to be achieved 20 years after the effective date (March 23, 2012) of the TMDL. Therefore, the final wasteload allocations shall be achieved by March 23, 2032.

A13.4.15 Calleguas Creek Watershed Toxicity TMDL

Description: USEPA approved the TMDL on March 14, 2006. Calleguas Creek, its tributaries, and Mugu Lagoon are impaired for chlorpyrifos, diazinon, other pesticides and/or other toxicants, which can cause aquatic life toxicity. Source analysis determined that agricultural and urban uses are the largest sources of chlorpyrifos and diazinon in the watershed. Urban use of diazinon and chlorpyrifos is unlikely to be a long-term source to the Calleguas Creek Watershed as both of these pesticides have been banned for sale for non-agricultural uses on December 31, 2005, by federal regulation. The TMDL identifies discharge from the Small MS4s as a minor source.

Responsible Permittees: Naval Base Ventura County, including Port Hueneme and Point Mugu; and California State University, Channel Islands.

Final Wasteload Allocations: The Calleguas Creek Watershed Toxicity TMDL assigns the following wasteload allocations for minor sources as in-stream receiving water limits at the base of each subwatershed.

1. Wasteload Allocation for Toxicity

Toxicity 1.0 Chronic Toxicity Units (TUc)

2. Final Chronic Wasteload Allocations for Chlorpyrifos and Diazinon

Chlorpyrifos, chronic 0.014 micrograms/liter

Diazinon, acute and chronic 0.10 micrograms/liter

Final Compliance Deadline: The TMDL specifies the final deadline for achievement of final wasteload allocations for stormwater Permittees as two years after the effective date of the TMDL. Therefore, the final compliance date is March 14, 2008. If the deadline has not been met, the Permittee may request a time schedule order from the Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.16 *Ballona Creek Trash TMDL*

Description: USEPA approved the Ballona Creek Trash TMDL on August 1, 2002, and the revision on June 30, 2016. Ballona Creek is impaired for trash, which is causing impairment of recreational, habitat, spawning and other beneficial uses. The TMDL specifies that stormwater discharges are a major source of trash in Ballona Creek.

Responsible Permittees: University of California, Los Angeles; and Veterans Affairs, Greater Los Angeles Healthcare System.

Wasteload Allocations: The TMDL requires phased reductions of trash over a period of 10 years to a final wasteload allocation of zero of the baseline load²⁴. The allocation is a group or shared allocation for municipal stormwater permittees.

Final Compliance Deadline: The TMDL specifies that the final wasteload allocation (0% of the baseload discharged) is to be achieved by September 30, 2015. The wasteload allocation is therefore effective immediately. If the deadline has not been met, the Permittee may request a time schedule order from the Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.17 *Los Angeles River Trash TMDL*

Description: USEPA approved the Los Angeles River Trash TMDL on July 24, 2008, and the revision on June 30, 2016. The TMDL specifies that stormwater discharges are the major source of trash in the river.

²⁴ Los Angeles Water Board, [Basin Plan](#), Chapter 7, Table 7-3.2 Ballona Creek Watershed Trash TMDL: Implementation Schedule, (Baseline Wasteload Allocations expressed as cubic feet of uncompressed trash and % reduction.)

Responsible Permittees: California State University, Los Angeles and California State University, Northridge.

Final Wasteload Allocations: The TMDL requires phased reductions over a period of 9 years, from existing baseline loads to zero trash.²⁵

Final Compliance Deadline: The TMDL specifies that the final wasteload allocation (0% of the baseload discharged) is to be achieved eight years after by September 30, 2016. The wasteload allocation is therefore effective immediately. If the deadline has not been met, the Permittee may request a time schedule order from the Los Angeles Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.4.18 Ventura River Estuary Trash TMDL

Description: USEPA approved the Ventura River Estuary Trash TMDL on February 27, 2008. The 2008 levels of trash discharges into the Ventura River Estuary violate water quality objectives and are impairing beneficial uses. Relevant water quality objectives include Floating Material and Solid, Suspended, or Settleable Materials. Point sources such as storm drains are sources of trash discharged to the Ventura River Estuary.

Responsible Permittees: Ventura County Fairgrounds (Seaside Park and Ventura County Fairgrounds).

Wasteload Allocations: Installation of Full Capture Systems or other measures to achieve 100% reduction of trash from baseline wasteload allocations.

Final Compliance Deadline: The TMDL specifies that the final wasteload allocation is to be achieved by March 6, 2016. The final wasteload allocation therefore is effective immediately.

²⁵ Los Angeles Water Board, [Basin Plan](#), Chapter 7, Table 7-2.2 Los Angeles River Watershed Trash TMDL: Implementation Schedule, (Baseline Wasteload Allocations expressed as cubic feet of uncompressed trash and % reduction.)

A13.5 CENTRAL VALLEY WATER BOARD TMDLS

Information in the following subsections has been summarized from the applicable TMDLs in the [Revised February 2019 Central Valley Water Board's Basin Plan](#).

A13.5.1 *Lower San Joaquin River Diazinon and Chlorpyrifos TMDL*

Description: USEPA approved the TMDL for Lower San Joaquin River Diazinon and Chlorpyrifos on December 20, 2006. The Lower San Joaquin River is impaired by organophosphate pesticides (diazinon and chlorpyrifos) used on crops in the San Joaquin Valley. The level of pesticides found in the Lower San Joaquin River is toxic to aquatic life.

Responsible Permittees: City of Patterson

Wasteload Allocations: 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 related to the attainment of these wasteload allocations, the Central Valley 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.

Final Compliance Deadline: The final compliance was December 1, 2010. If the deadline has not been met, the Permittee may request a time schedule order from the Central Valley Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

On August 31, 2020, the Central Valley Water Board determined that the Permittee has demonstrated attainment of the diazinon and chlorpyrifos wasteload allocations. Further monitoring and reporting by the Permittee is no longer required. The Permittee must continue to implement existing and appropriate BMPs in their stormwater programs to eliminate diazinon and chlorpyrifos in municipal stormwater discharges. and comply with Section 6, Effluent Limits, of the Order.

A13.5.2 Sacramento-San Joaquin Delta Diazinon and Chlorpyrifos TMDL

Description: USEPA approved the Sacramento and San Joaquin Delta Diazinon and Chlorpyrifos TMDL on October 10, 2007. The Sacramento-San Joaquin Delta Waterways is impaired by pesticides (diazinon and chlorpyrifos) runoff from orchards and fields.

Responsible Permittees: City of Lathrop, City of Lodi, City of Manteca, City of Rio Vista, City of Tracy, City of West Sacramento

Wasteload Allocations: 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:

- CD = diazinon concentration in micrograms per liter of point source discharge
- CC = 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 6, Effluent Limits, 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.

Final Compliance Deadline: The final compliance deadline was December 1, 2011. If the deadline has not been met, the Permittee may

request a time schedule order from the Central Valley Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

On September 10, 2020, the Central Valley Water Board determined that the Permittees have demonstrated attainment of the diazinon and chlorpyrifos wasteload allocations. Further monitoring and reporting by the Permittee are no longer required. The Permittees must continue to implement existing and appropriate BMPs in their stormwater programs to eliminate diazinon and chlorpyrifos in municipal stormwater discharges and comply with Section 6, Effluent Limits, of the Order.

A13.5.3 TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers

Description: USEPA approved the TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers on August 11, 2008. The Sacramento and Feather Rivers are impaired by pesticides (diazinon and chlorpyrifos).

Responsible Permittees: 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

Wasteload Allocations: 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:

- CD = diazinon concentration in micrograms per liter of point source discharge
- CC = 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 6, Effluent Limits, 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.

Demonstration of Attainment of Diazinon and Chlorpyrifos Wasteload Allocations for 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 wasteload allocation .
- b. Attainment of wasteload allocations 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.

Permittees that have not demonstrated achievement of the wasteload allocations by the attainment date (August 11, 2008) may request a Time Schedule Order from the Central Valley Water Board. The request for a Time Schedule Order must include implementation of BMPs consistent with a Central Valley Water Board 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 wasteload allocations is required. The Central Valley Water Board's issuance of a Time Schedule Order may establish an implementation schedule for the Permittee to comply with the TMDL requirements and will supersede the deadlines referenced in this Order.

Final Compliance Deadline: The final compliance deadline was August 11, 2008. If the deadline has not been met, the Permittees may request a time schedule order from the Central Valley Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

On September 10, 2020, the Central Valley Water Board determined that the Permittees have demonstrated attainment of the diazinon and chlorpyrifos wasteload allocations. Further monitoring and reporting by the Permittees are no longer required. The Permittees must continue to implement existing and appropriate BMPs in their stormwater programs to eliminate diazinon and chlorpyrifos in municipal stormwater discharges and comply with Section 6, Effluent Limits, of the Order.

A13.5.4 TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel

Description: USEPA approved the TMDL for Low Dissolved Oxygen in the San Joaquin River on February 27, 2007. The Stockton Deep Water Ship Channel portion of the San Joaquin River is impaired by low dissolved oxygen, which can affect aquatic life.

Responsible Permittees: City of Atwater, City of Ceres, City of Escalon, City of Hughson, City of Lathrop, City of Livingston, City of Los Banos, City of Manteca, City of Merced, City of Newman, City of Oakdale, City of Patterson, City of Ripon, City of Riverbank, City of Turlock, County of Merced, County of Stanislaus

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 January 28, 2005. On January 28, 2005, the 2003 Phase II Small MS4 permit stated the following for effluent limitations in Section 6 of the Order. Effluent Limitations: Permittees must implement BMPs that reduce pollutants in stormwater to the technology-based standard of Maximum Extent Practicable. This Order applies these limitations to discharges from MS4s maintained by the Identified Phase II Permittees listed above. In determining compliance with permit requirements related to attainment of these wasteload allocations, credit will be given for control measures implemented after July 12, 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.

Demonstration of Compliance with Effluent Limitations Associated with Wasteload Allocations for Oxygen Demanding Substances and Their Precursors:

Compliance with the effluent limitations in Section 6 of the Order associated with the wasteload allocations for oxygen demanding substances and their precursors may be demonstrated by any one of the following methods:

1. Receiving water monitoring and/or other information, as authorized by the Central Valley Water Board Executive Officer, that reasonably demonstrates attainment with the wasteload allocations .
2. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

Final Compliance Deadline: The final compliance deadline was December 31, 2011. If the deadline has not been met, the Permittee may request a time schedule order from the Central Valley Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

On June 7, 2021, the Central Valley Water Board determined that the Permittees have demonstrated attainment of the dissolved oxygen wasteload allocations. Permittees must continue to implement existing and appropriate BMPs in their stormwater programs to eliminate causes and contributions to organic enrichment and low dissolved oxygen in municipal stormwater discharges and comply with Attachment G of this Order. Should operations of the Aeration Facility cease, its effectiveness be reduced, or the Basin Plan water quality objectives otherwise not be met, the Permittees will be required to implement additional monitoring, reporting, and/or controls to maintain Permit compliance.

A13.5.5 *Sacramento-San Joaquin Delta Methylmercury TMDL*

Description: USEPA approved the Sacramento-San Joaquin Delta Methylmercury TMDL on October 20, 2011.

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, wastewater 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 wastewater 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.

Responsible Permittees: City of Lathrop, City of Lodi, City of Rio Vista, City of Tracy, City of West Sacramento, County of Yolo.

Wasteload Allocations: The methylmercury wasteload allocations are as follows:

**Sacramento-San Joaquin Delta Methylmercury TMDL : 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

Demonstration of Attainment of Methylmercury Wasteload Allocations:

Compliance with the effluent limitations in Section 6 of this Order associated with methylmercury wasteload allocations may be demonstrated by any one of the following methods:

1. 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 wasteload allocations 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 wasteload allocations .
2. Receiving water monitoring and/or other information, as authorized by the Executive Officer, that reasonably demonstrates attainment with the wasteload allocations .
3. Attainment of wasteload allocations within the discharge (monitoring representative of the MS4 discharge may be used with Executive Officer approval).

4. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

Final Compliance Deadline: The final compliance deadline is December 31, 2030.

A13.5.6 Clear Lake Nutrients TMDL

Description: USEPA approved the Clear Lake Nutrients TMDL on September 21, 2007.

The Clear Lake Nutrients TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Responsible Permittees: City of Clearlake, County of Lake, City of Lakeport

Wasteload Allocations: The Permittees have a combined wasteload allocation of 2,000 kilograms phosphorus per year, as an average annual load (five year rolling average).

Demonstration of Compliance with Effluent Limitations Associated with Phosphorus Wasteload Allocations:

Compliance with the effluent limitations for phosphorus wasteload allocations may be demonstrated by any one of the following methods:

1. Receiving water monitoring and/or other information, as authorized by the Executive Officer, that reasonably demonstrates attainment with the wasteload allocations .
2. Attainment of wasteload allocations within the discharge (monitoring representative of the MS4 discharge may be used with Executive Officer approval).
3. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

Final Compliance Deadline: The final compliance deadline was June 19, 2017. On December 12, 2019, the Central Valley Water Board issued Time Schedule Order R5-2019-1005 that establishes an implementation schedule for the Permittee to return to compliance with the TMDL requirements. On 30 November 2020, the Central Valley Water Board adopted Order [R5-2020-0902](#), which amended the compliance deadlines to 2020.

A13.5.7 TMDL for Pyrethroid Pesticides in Sacramento and San Joaquin River Basin

Description: USEPA approved the TMDL for Pyrethroid Pesticides in Sacramento and San Joaquin River Basin ([Resolution R5-2017-0057](#)) on

April 22, 2019. The TMDL has been incorporated into the Central Valley Water Board [Basin Plan](#). Urban runoff has been identified as a source.

Responsible Permittees: City of Roseville

Wasteload Allocations: Wasteload allocations shall be equal to the loading capacity as shown under the Numeric Triggers (i.e., Additive Numeric Targets), below:

Numeric Triggers for Pyrethroid Pesticides (including all stereoisomers)²⁶

The pyrethroid triggers are intended to be used to indicate when pyrethroid management plans need to be developed and management practices are to be implemented by the discharger. When the triggers are exceeded in monitoring or as part of a toxicity evaluation, the discharger may be required to initiate trend monitoring. These actions will provide information on achievability and costs to the Board to inform future evaluation of potential water quality objectives. The pyrethroid triggers are not for use as numeric water quality-based effluent limitations or for reasonable potential analysis.

Pyrethroid Concentration Calculation

Concentrations of pyrethroid pesticides must be above reporting limits (limits of quantitation) to be included; concentrations reported as not-detected or as below the limit of quantitation will be considered as zero (0) in the below formulas. Guidance on acceptable analytical methods is given in the Basin Plan's Surveillance and Monitoring chapter under the header Pyrethroid Pesticides Discharges ([Basin Plan](#) page 5-12).

The pyrethroid triggers are intended to be used to indicate when pyrethroid management plans need to be developed and management practices are to be implemented by the discharger. When the triggers are exceeded in monitoring or as part of a toxicity evaluation, the discharger may be required to initiate trend monitoring. These actions will provide information on achievability and costs to the Board to inform future evaluation of potential water quality objectives. The pyrethroid triggers are not for use as numeric water quality-based effluent limitations or for reasonable potential analysis.

Freely dissolved pyrethroid concentrations may be used in the below formulas to determine the sum of acute and chronic additive concentration goal units (CGUs). The freely dissolved concentration of each quantified pyrethroid pesticide in a sample may be directly measured or estimated using partition coefficients. Methods for direct measurement must be approved by the Executive Officer before they are used to determine the freely dissolved pyrethroid concentrations that are used for determining exceedances of the pyrethroid pesticides numeric triggers. To estimate the freely dissolved

²⁶ See Table 4-2, Numeric Triggers for Pyrethroid Pesticides, [Central Valley Water Board Basin Plan](#)

concentration of a pyrethroid pesticide with partition coefficients, the following equation shall be used:

$$C_{dissolved} = \frac{C_{total}}{1 + (K_{OC} \times [POC]) + (K_{DOC} \times [DOC])}$$

Where:

$C_{dissolved}$ = concentration of an individual pyrethroid pesticide that is in the freely dissolved phase (ng/L),

C_{total} = total concentration of an individual pyrethroid pesticide in water (ng/L),

K_{OC} = organic carbon-water partition coefficient for the individual pyrethroid pesticide (L/kg),

$[POC]$ = concentration of particulate organic carbon in the water sample (kg/L), which can be calculated as $[POC] = [TOC] - [DOC]$,

K_{DOC} = dissolved organic carbon-water partition coefficient (L/kg),

$[DOC]$ = concentration of dissolved organic carbon in the sample (kg/L).

Site-specific or alternative study-based partition coefficients approved by the Executive Officer may be used in the above equation. If site-specific or alternative study-based partition coefficients are not available or have not been approved, the following partition coefficients shall be used in the above equation:

Pyrethroid Pesticide	Ambient Waters		Wastewater Effluents	
	KOC (L/kg)	KDOC (L/kg)	KOC (L/kg)	KDOC (L/kg)
Bifenthrin	4,228,000	1,737,127	15,848,932	800,000
Cyfluthrin	3,870,000	2,432,071	3,870,000	2,432,071
Cypermethrin	3,105,000	762,765	6,309,573	200,000
Esfenvalerate	7,220,000	1,733,158	7,220,000	1,733,158
Lambda-cyhalothrin	2,056,000	952,809	7,126,428	200,000
Permethrin	6,075,000	957,703	10,000,000	200,000

Acute Pyrethroid Trigger

The acute additive pyrethroid pesticides numeric trigger is equal to one (1) acute additive concentration goal unit (CGU) not to be exceeded

more than once in a three year period. The CGUs are calculated as the sum of individual measured pyrethroid concentration-to-acute concentration goal ratios, as defined in the following formula. For calculation of CGUs, available samples collected within the applicable averaging period for the numeric trigger will be used to determine exceedances of the trigger. Freely dissolved pyrethroid concentrations may be used in the numerator of each ratio if appropriate data are available, as described in the equation to calculate freely dissolved concentrations given above.

$$CGU_{acute} = \frac{C_{bif}}{ACG_{bif}} + \frac{C_{cyf}}{ACG_{cyf}} + \frac{C_{cyp}}{ACG_{cyp}} + \frac{C_{esf}}{ACG_{esf}} + \frac{C_{lcy}}{ACG_{lcy}} + \frac{C_{per}}{ACG_{per}}$$

Where:

- C_{bif} = Average concentration of bifenthrin in ng/L from a 1-hour averaging period,
- C_{cyf} = Average concentration of cyfluthrin in ng/L from a 1-hour averaging period,
- C_{cyp} = Average concentration of cypermethrin in ng/L from a 1-hour averaging period,
- C_{esf} = Average concentration of esfenvalerate in ng/L from a 1-hour averaging period,
- C_{lcy} = Average concentration of lambda-cyhalothrin in ng/L from a 1-hour averaging period,
- C_{per} = Average concentration of permethrin in ng/L from a 1-hour averaging period,
- ACG_{bif} = Bifenthrin acute concentration goal of 0.8 ng/L,
- ACG_{cyf} = Cyfluthrin acute concentration goal of 0.8 ng/L,
- ACG_{cyp} = Cypermethrin acute concentration goal of 1 ng/L,
- ACG_{esf} = Esfenvalerate acute concentration goal of 2 ng/L,
- ACG_{lcy} = Lambda-cyhalothrin acute concentration goal of 0.7 ng/L,
- ACG_{per} = Permethrin acute concentration goal of 6 ng/L,
- CGU_{acute} = *The sum of measured pyrethroid concentration-to-acute concentration goal ratios, rounded to one significant figure. A sum exceeding one (1) indicates an exceedance of the acute additive pyrethroid pesticides numeric trigger.*

Chronic Pyrethroid Trigger

The chronic additive pyrethroid pesticides numeric trigger is equal to one (1) chronic additive concentration goal unit not to be exceeded more than once in a three year period. The chronic CGUs are calculated as the sum of individual measured pyrethroid concentration-to-chronic concentration goal ratios, as defined in the following formula. For calculation of CGUs, available samples collected within the applicable averaging period for the numeric trigger will be used to determine exceedances of the trigger. Freely dissolved pyrethroid concentrations may be used in the numerator of each ratio if appropriate data are available, as described in the equation to calculate freely dissolved concentrations given above.

$$CGU_{chronic} = \frac{C_{bif}}{CCG_{bif}} + \frac{C_{cyf}}{CCG_{cyf}} + \frac{C_{cyp}}{CCG_{cyp}} + \frac{C_{esf}}{CCG_{esf}} + \frac{C_{lcy}}{CCG_{lcy}} + \frac{C_{per}}{CCG_{per}}$$

Where:

- C_{bif}* = Average concentration of bifenthrin in ng/L from a 4-day averaging period,
- C_{cyf}* = Average concentration of cyfluthrin in ng/L from a 4-day averaging period,
- C_{cyp}* = Average concentration of cypermethrin in ng/L from a 4-day averaging period,
- C_{esf}* = Average concentration of esfenvalerate in ng/L from a 4-day averaging period,
- C_{lcy}* = Average concentration of lambda-cyhalothrin in ng/L from a 4-day averaging period,
- C_{per}* = Average concentration of permethrin in ng/L from a 4-day averaging period,
- CCG_{bif}* = Bifenthrin chronic concentration goal of 0.1 ng/L,
- CCG_{cyf}* = Cyfluthrin chronic concentration goal of 0.2 ng/L,
- CCG_{cyp}* = Cypermethrin chronic concentration goal of 0.3 ng/L,
- CCG_{esf}* = Esfenvalerate chronic concentration goal of 0.3 ng/L,
- CCG_{lcy}* = Lambda-cyhalothrin chronic concentration goal of 0.3 ng/L,
- CCG_{per}* = Permethrin chronic concentration goal of 1 ng/L,
- CGU_{chronic}* = The sum of measured pyrethroid concentration-to-chronic concentration goal ratios, rounded to one significant figure. A sum exceeding one (1) indicates

an exceedance of the chronic additive pyrethroid pesticides numeric trigger.

Demonstration of Compliance with Effluent Limitations Associated with Pyrethroids Pesticides Wasteload Allocations

Compliance with the Effluent Limitations in Section 6 of this Order associated with the pyrethroid pesticides wasteload allocation may be demonstrated by any one of the following methods:

1. Receiving water monitoring and/or other information, as authorized by the Central Valley Water Board Executive Officer, that reasonably demonstrates attainment with the wasteload allocations.
2. Attainment of wasteload allocations within the discharge (monitoring representative of the MS4 discharge may be used with Central Valley Water Board Executive Officer approval).
3. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.
4. Submit a progress report with the Annual Report to document the management practices that have been implemented, evaluate progress towards attainment of the wasteload allocations, and identify effective actions to be taken in the future. If the management practices do not result in attainment of the wasteload allocations, the Permittee shall either modify the Pyrethroid Management Plan to identify reasonable and feasible additional/alternative practices for implementation or provide a justification for why current practices will result in attainment by the compliance date.

Final Compliance Deadline: The final compliance deadline is February 29, 2039.

A13.6 LAHONTAN WATER BOARD TMDLS

Information in the following subsection has been summarized from the applicable TMDL in the [Lahontan Water Board's Basin Plan](#).

A13.6.1 TMDL for Sediment in the Middle Truckee River Watershed, Placer, Nevada and Sierra Counties

Description: USEPA approved the Middle Truckee River Watershed Sediment TMDL on September 16, 2009. The Middle Truckee River Watershed is impaired by sediment and is impacting aquatic life protection. One of the primary sources of suspended sediment concentrations is urban stormwater runoff.

Responsible Permittees: County of Placer, and Town of Truckee

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.

Final Compliance Deadline: 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).

A13.8 SANTA ANA WATER BOARD TMDLS

Information in the following subsections has been summarized from the applicable TMDLs in the [Santa Ana Water Board Basin Plan](#) and [USEPA-established TMDLs](#).

A13.8.1 *San Diego Creek, Upper and Lower Newport Bay, Revised Organochlorine Compounds TMDL*

Description: USEPA approved the TMDL on July 31, 2013. The watershed is impaired by organochlorine compounds and the effect to beneficial uses include water recreation, aquatic and wildlife habitat, and endangered species. Stormwater runoff has been identified as a source.

Responsible Permittees: Orange County Fair & Event Center and University of California, Irvine

Wasteload Allocations: The wasteload allocations for this TMDL are as follows:

Urban Runoff Wasteload Allocations for San Diego Creek, Upper and Lower Newport Bay (expressed on a “daily” basis with units in average grams per day)

Waterbody	Total DDT	Chlordane	Total PCBs	Toxaphene
San Diego Creek	0.35	Blank cell	Blank cell	0.005
Upper Newport Bay	0.14	0.08	0.08	Blank cell
Lower Newport Bay	0.05	0.03	0.21	Blank cell

Urban Runoff Wasteload Allocations for San Diego Creek, Upper and Lower Newport Bay (expressed on an “annual” basis with units in grams per year)

Waterbody	Total DDT	Chlordane	Total PCBs	Toxaphene
San Diego Creek	128.3	Blank cell	Blank cell	1.9
Upper Newport Bay	51.8	30.1	29.8	Blank cell
Lower Newport Bay	19.1	11.0	78.1	Blank cell

Final Compliance Deadline: The final compliance deadline was December 31, 2020. If the deadline has not been met, the Permittee may request a time schedule order from the Santa Ana Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.8.2 Lake Elsinore and Canyon Lake Nutrient TMDL

Description: USEPA approved the Lake Elsinore and Canyon Lake Nutrient TMDL on September 30, 2005. Lake Elsinore and Canyon Lake are impaired by excessive nutrients (nitrogen and phosphorus) and the TMDL has identified urban stormwater runoff as a primary source of nutrients.

Responsible Permittees: March Air Reserve Base

Wasteload Allocations: The final wasteload allocations, which are expressed as a 10-year rolling average, are shared for all urban discharges as follows:

Lake Elsinore:

Total Phosphorus – 124 kilograms per year
Total Nitrogen – 349 kilograms per year

Canyon Lake:

Total Phosphorus – 306 kilograms per year
Total Nitrogen – 3,974 kilograms per year

Final Compliance Deadline: The final compliance deadline was December 31, 2020. If the deadline has not been met, the Permittee may request a time schedule order from Santa Ana Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

A13.8.3 Middle Santa Ana River Watershed Bacterial Indicator TMDL

Description: USEPA approved the Middle Santa Ana River Watershed Bacterial Indicator TMDL on May 16, 2007. The watershed is impaired by fecal coliform bacteria, and urban runoff is identified as a contributing source of impairment.

Responsible Permittees: California Institute for Men; California Institute for Women; California Rehabilitation Center; University of California, Riverside

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.

1. Dry Season (April 1 through October 31) to be achieved by December 31, 2015:
 - a. Fecal coliform – 5–sample/30–day Logarithmic Mean less than 180 organisms/100 mL, and not more than 10% of the samples exceed 360 organisms/100 mL for any 30–day period.

- b. *E. coli* – 5–sample/30–day Logarithmic Mean less than 113 organisms/ 100 mL, and not more than 10% of the samples exceed 212 organisms/100 mL for any 30–day period.
- 2. Wet Season (November 1 through March 31) to be achieved by December 31, 2025:
 - a. Fecal coliform – 5–sample/30–day Logarithmic Mean less than 180 organisms/100 mL, and not more than 10% of the samples exceed 360 organisms/100 mL for any 30–day period.
 - b. *E. coli* – 5–sample/30–day Logarithmic Mean less than 113 organisms/ 100 mL, and not more than 10% of the samples exceed 212 organisms/100 mL for any 30–day period.

Final Compliance Deadline: The final compliance deadline for the dry season wasteload allocation was December 31, 2015. If the deadline has not been met for achieving the dry season wasteload allocation, the Permittee may request a time schedule order from the Santa Ana Water Board Executive Officer, which may establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order. The final compliance deadline for the wet season wasteload allocation is December 31, 2025.

A13.8.4 San Diego Creek and Upper Newport Bay Diazinon and Chlorpyrifos TMDL

Description: USEPA established the San Diego Creek and Upper Newport Bay Diazinon and Chlorpyrifos TMDL on June 14, 2002. The watershed is impaired by organophosphate pesticides, causing adverse impacts to the waterbody beneficial uses. The TMDL states that a source of these pollutants is stormflow.²⁷ The Basin Plan states that the “*The TMDL allocates wasteloads to all dischargers in the watershed. Since the TMDL is concentration-based, these wasteloads are expressed as concentration limits. The concentration limits will be incorporated into existing and future discharge permits in the watershed.*”

Responsible Permittees: Orange County Fair & Event Center; University of California, Irvine

Wasteload Allocations: The following wasteload allocations are assigned to San Diego Creek and Upper Newport Bay.

²⁷ USEPA TMDLs for Toxic Pollutants San Diego Creek and Newport Bay, June 14, 2002, page 26. Contact the [Santa Ana Water Board](#) for a copy of the TMDL

Diazinon and Chlorpyrifos Wasteload Allocations (nanograms per liter)

Location	Diazinon Acute	Diazinon Chronic	Chlorpyrifos Acute	Chlorpyrifos Chronic
San Diego Creek	72	45	18	12.6
Upper Newport Bay			18	8.1

Final Compliance Deadline: The final compliance deadline was December 1, 2007. If the deadline has not been met, the Permittee may request a time schedule order from the Santa Ana Board Executive Officer, which will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order. The TMDL was delisted April 6, 2018.

A13.8.5 San Diego Creek and Newport Bay Toxic Pollutants (Metals) TMDL

Description: The *San Diego Creek and Newport Bay Toxic Pollutants (Metals) TMDL* was established by USEPA on June 14, 2002. San Diego Creek and Newport Bay are impaired by dissolved metals. Urban runoff is identified as a contributing source of metals and the Santa Ana Water Board Basin Plan states “*The TMDL allocates wasteloads to all dischargers in the watershed.*”

Responsible Permittees: Orange County Fair & Event Center; University of California, Irvine

Wasteload Allocations: The assigned wasteload allocations are provided in the table below, as follows:

Metals Wasteload Allocations (micrograms per liter) Based on Flow Tiers for San Diego Creek in Cubic Feet per Second (cfs)

Dissolved Metal	Base Flows (<20 cfs) hardness at 400 mg/L Acute	Base Flows (<20 cfs) hardness at 400 mg/L Chronic	Small Flows (21-181 cfs) hardness at 322 mg/L Acute	Small Flows (21-181 cfs) hardness at 322 mg/L Chronic	Medium Flows (182-815 cfs) hardness at 236 mg/L Acute	Medium Flows (182-815 cfs) hardness at 236 mg/L Chronic	Large Flows (>815 cfs) at 197 mg/L
Cadmium	19.1	6.2	15.1	5.3	10.8	4.2	8.9
Copper	50	29.3	40	24.3	30.2	18.7	25.5
Lead	281	10.9	224	8.8	162	6.3	134
Zinc	379	382	316	318	243	244	208

Mass-based Wasteload Allocation for Metals in Newport Bay
(units in pounds per year)

Type	Copper	Zinc	Lead	Cadmium*
Urban runoff	3,043	174,057	17,638	9,589

Concentration-Based Dissolved Metal Wasteload Allocations for Newport Bay
(units in micrograms per liter)

Metal	Dissolved saltwater acute TMDLs and allocations (µg/L)	Dissolved saltwater chronic TMDLs and allocations (µg/L)
Cadmium*	42	9.3
Copper	4.8	3.1
Lead	210	8.1
Zinc	90	81

Table Notes

- * Cadmium values apply to Upper Bay only (estimated as 40% of Newport Bay volume)

Final Compliance Deadline: A final compliance deadline is not provided in the adopted TMDL.

A13.8.8 Selenium TMDLs in Freshwater for Newport Bay Watershed

Description: USEPA approved the Selenium TMDL for the Newport Bay Watershed on June 20, 2019. The beneficial uses affected by selenium bioaccumulation include warm freshwater habitat, estuarine habitat, marine habitat, preservation of biological habitats of special significance, wildlife habitat, rare, threatened or endangered species, and spawning, reproduction, and development. Urban runoff is identified as a source of selenium.²⁸

Responsible Permittees: Orange County Fair & Event Center and University of California, Irvine.

Wasteload Allocations: Wasteload allocations are applied at the following for discharge locations and gauge stations:

Stormwater Runoff Discharges to Newport Bay at Costa Mesa Channel.
Discharges of selenium in the permittee's runoff to Newport Bay at Costa

²⁸ [Santa Ana Water Board Basin Plan, Chapter 6, TMDLS](#), Newport Bay Watershed, section 4.c

Mesa Channel must not exceed concentrations of 5 µg Se/L in the water column:

1. This wasteload allocation is derived from the California Toxics Rule expressed as an arithmetic mean that is calculated semi-annually. The first semi-annual period used to calculate the arithmetic mean is April 1 through September 30. The second semi-annual period is October 1 through March 31.
2. This wasteload allocation applies to dry-weather conditions and wet-weather runoff produced by up to but excluding 0.1 inches of rain. Rainfall is measured at the Tustin-Irvine Ranch Rain Gauge Station.

Stormwater Runoff Discharges to San Diego Creek. The permittee's discharges of selenium to San Diego Creek must not exceed 10 µg Se/L in the water column.

1. This wasteload allocation is based on probable water column concentrations that are expected to achieve tissue-based numeric TMDL targets.
2. This wasteload allocation applies to dry-weather conditions and wet-weather runoff produced by up to but excluding 0.1 inches of rain. Rainfall is measured at the Tustin-Irvine Ranch Rain Gauge Station.

Stormwater Runoff Discharges to Santa Ana-Delhi Channel. The permittee's discharges of selenium to the Santa Ana-Delhi Channel must not exceed 11 µg Se/L in the water column.

1. This wasteload allocation is based on probable water column concentrations that are expected to achieve tissue-based numeric TMDL targets.
2. This wasteload allocation applies to dry weather conditions and wet weather runoff produced by up to but excluding 0.1 inches of rain. Rainfall is measured at the Tustin-Irvine Ranch Rain Gauge Station.

Stormwater Runoff Discharges to Big Canyon Wash. The permittee's discharges of selenium to Big Canyon Wash must not exceed 1 µg Se/L in the water column.

1. This wasteload allocation is based on probable water column concentrations that are expected to achieve tissue-based numeric TMDL targets.
2. This wasteload allocation applies to dry-weather conditions and wet-weather runoff produced by up to but excluding 0.1 inches of rain. Rainfall is measured at the Tustin-Irvine Ranch Rain Gauge Station.

Final Compliance Deadline: Final compliance deadline is June 20, 2049, which is 30 years after the TMDL effective date.

A13.9 SAN DIEGO WATER BOARD TMDLS

Information in the following two subsections has been summarized from the applicable TMDLs in the [San Diego Water Board's Basin Plan](#).

A13.9.1 TMDL for Sediment in Los Peñasquitos Lagoon

Description: USEPA approved the Los Peñasquitos Lagoon Sediment TMDL on October 30, 2014. The Los Peñasquitos Lagoon is impaired by sediment. Anthropogenic disturbances have accelerated the natural processes of erosion and sedimentation in the watershed. Urban stormwater discharge has been identified as a contributing source of sediment discharge to this water body.

Responsible Permittees: Marine Corps Air Station Miramar; North County Transit District; University of California, San Diego; Veterans Affairs San Diego Healthcare System

Wasteload Allocations: The Los Peñasquitos Lagoon TMDL has assigned interim and final wasteload allocations to all identified responsible parties. Wasteload allocations are expressed in effluent limitations. Responsible parties are jointly responsible for meeting these wasteload reduction allocations. As such, Permittees within the Los Peñasquitos watershed are required to either reduce site sediment loads to the receiving water body or demonstrate that the site discharges are not causing exceedances of the water quality-based effluent limitations. Permittees 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.

Interim Wasteload Allocations: Interim wasteload allocations are provided in the following table:

Interim Water Quality Based Effluent Sediment Limitations Expressed as a Wet Season Load in MS4 Discharges from the Watershed to Los Peñasquitos Lagoon

Type of Limitation	Wasteload Allocation*
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

Table Notes

- * 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.

Final Wasteload Allocations: The final Watershed Wasteload Allocation 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 Wasteload Allocation requires a 67% total load reduction of sediment from the watershed.

Final Compliance Deadline: The Los Peñasquitos Lagoon Sediment TMDL final compliance deadline is July 14, 2034.

A13.9.2 TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region

Description: USEPA approved the TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region on June 22, 2011. The twenty beaches and creeks are impaired by bacteria that have accumulated on land surfaces due to various anthropogenic land uses and natural processes. Urban stormwater discharge has been identified as a contributing source of washing off bacteria from land surfaces and into the water bodies.

Responsible Permittees: 22nd District Agricultural Association; California State University, San Marcos; Camp Pendleton; Miramar Marine Corps Air Station; North County Transit District; San Diego Metropolitan Transit System; San Diego State University; University of California, San Diego; Veterans Affairs San Diego Healthcare System

Wasteload Allocations: The allowable wasteload allocations consist of two parts:

Dry Weather Wasteload Allocations:

The table below identifies the shared dry weather wasteload allocations assigned to Phase II Small MS4 Permittees within the impaired water quality segments. For dry weather days, there is no maximum allowable exceedance and it is set at 0 percent.

Wet Weather Wasteload Allocations:

The table below identifies the shared wet weather wasteload allocations assigned to Phase I and for Phase II Small MS4 Permittees within the impaired water quality segments. Wet weather days are the days with rainfall events of 0.2 inches or greater and the following 72 hours.

Prioritized List of Impaired Beaches and Creeks: The table following the wasteload allocations is a prioritized list for implementing those wasteload allocations.

Twenty Beaches and Creeks Wasteload Allocations (Billion Most Probable Number per Year)

Watershed	Fecal Coliform Wet Weather	Fecal Coliform Dry Weather	<i>Enterococcus</i> Wet Weather	<i>Enterococcus</i> Dry Weather	Total Coliform Wet Weather	Total Coliform Dry Weather
San Joaquin Hills/ Laguna Beach Hydrologic Subareas (901.11 and 901.12)	37,167	227	66,417	40	880,652	1,134
Aliso (Hydrologic Subarea 901.13)	477,069	242	735,490	40	8,923,264	1,208
Dana Point Hydrologic Subarea (901.14)	152,446	92	219,528	16	3,404,008	462
Lower San Juan Hydrologic Subarea (901.27)	1,156,419	1,665	1,385,094	275	16,093,160	8,342
San Clemente Hydrologic Area (901.30)	192,653	192	295,668	33	3,477,739	958
San Luis Rey Hydrologic Unit (903.00)	914,026	1,058	1,300,235	185	14,373,954	5,289
San Marcos Hydrologic Area (904.50)	6,558	26	23,771	5	298,430	129

Watershed	Fecal Coliform Wet Weather	Fecal Coliform Dry Weather	<i>Enterococcus</i> Wet Weather	<i>Enterococcus</i> Dry Weather	Total Coliform Wet Weather	Total Coliform Dry Weather
San Dieguito Hydrologic Unit (905.50)	798,175	1,293	1,763,603	226	16,660,538	6,468
Miramar Reservoir Hydrologic Area (906.10)	6,703	7	8,109	1	171,436	36
Scripps Hydrologic Area (906.30)	101,253	119	232,035	21	3,447,764	594
Tecolote Hydrologic Area (906.5)	126,806	234	471,211	39	5,136,598	1,171
Mission San Diego/Santee Hydrologic Subareas (907.11 and 907.12)	221,117	1,506	890,617	248	10,790,520	7,529
Chollas Hydrologic Subarea (908.22)	252,479	398	802,918	66	9,880,784	1,991

Twenty Beaches and Creeks Prioritized List of Impaired Beaches and Creeks for Wasteload Allocation Implementation

Priority	Watershed	Waterbody	Segment or Area
1	San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Cameo Cove at Irvine Cove Dr. – Riviera Way
1	San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	at Heisler Park – North
1	San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	at Main Laguna Beach
1	San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Laguna Beach at Ocean Avenue
1	San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Laguna Beach at Laguna Avenue
1	San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Laguna Beach at Cleo Street
1	San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Arch Cove at Bluebird Canyon Road
1	San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Laguna Beach at Dumond Drive
1	Aliso (Hydrologic Subarea 901.13)	Pacific Ocean Shoreline	Laguna Beach at Lagunita Place/Blue Lagoon Place at Aliso Beach
3	Aliso (Hydrologic Subarea 901.13)	Aliso Creek	The entire reach (7.2 miles) and associated tributaries Aliso Hills Channel, English Canyon Creek, Dairy Fork Creek, Sulphur Creek, and Wood Canyon Creek
3	Aliso (Hydrologic Subarea 901.13)	Aliso Creek (mouth)	At creek mouth
1	Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	Aliso Beach at West Street

Priority	Watershed	Waterbody	Segment or Area
1	Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	Aliso Beach at Table Rock Drive
1	Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	1000 Steps Beach at Pacific Coast Hwy at Hospital (9th Avenue)
1	Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	1000 Steps Beach at Pacific Coast Hwy at Salt Creek (large outlet)
2	Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	Salt Creek Beach at Salt Creek service road
2	Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	Salt Creek Beach at Dana Strand Road
1	Lower San Juan Hydrologic Subarea (901.27)	Pacific Ocean Shoreline	At San Juan Creek
3	Lower San Juan Hydrologic Subarea (901.27)	San Juan Creek	Lower 1 mile
1	Lower San Juan Hydrologic Subarea (901.27)	San Juan Creek (mouth)	At creek mouth
1	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	at Poche Beach (large outlet)
1	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	Ole Hanson Beach Club Beach at Pico Drain
1	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at Linda Lane
1	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente State Beach at Riviera Beach
2	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at Mariposa Street
2	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at Cypress Shores

Priority	Watershed	Waterbody	Segment or Area
2	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at Lifeguard Headquarters
2	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	Under San Clemente Municipal Pier
2	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at El Portal Street Stairs
2	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at South Linda Lane
2	San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)
2	San Luis Rey Hydrologic Unit (903.00)	Pacific Ocean Shoreline	at San Luis Rey River Mouth
1	San Marcos Hydrologic Area (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach
1	San Dieguito Hydrologic Unit (905.50)	Pacific Ocean Shoreline	at San Dieguito Lagoon Mouth
1	Miramar Reservoir Hydrologic Area (906.10)	Pacific Ocean Shoreline	Veterans Pines State Beach at Del Mar (Anderson Canyon)
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at Caminito Del Oro
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at Vallecitos
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at Avenue de la Playa
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	at Casa Beach, Children's Pool
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	South Casa Beach at Coast Blvd.
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Whispering Sands Beach at Ravina Street

Priority	Watershed	Waterbody	Segment or Area
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Windansea Beach at Vista de la Playa
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Windansea Beach at Bonair Street
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Windansea Beach at Playa del Norte
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Windansea Beach at Palomar Avenue.
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	at Tourmaline Surf Park
1	Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Pacific Beach at Grand Avenue.
1	Tecolote Hydrologic Area (906.5)	Tecolote Creek	The entire reach and associated tributaries
3	Mission San Diego/Santee Hydrologic Subareas (907.11 and 907.12)	San Diego River, Lower	Lower 6 miles
3	Mission San Diego/Santee Hydrologic Subareas (907.11 and 907.12)	Pacific Ocean Shoreline	At San Diego River Mouth at Dog Beach
3	Mission San Diego/Santee Hydrologic Subareas (907.11 and 907.12)	Forrester Creek	Lower 1 mile
3	Chollas Hydrologic Subarea (908.22)	Chollas Creek	Bottom 1.2 miles

Twenty Beaches and Creeks Receiving Water Limitations for Beaches

Indicator Bacteria	Wet Weather Numeric Objective (MPN/100 mL)	Wet Weather Allowable Exceedance Frequency	Dry Weather Numeric Objective (MPN/100 mL)	Dry Weather Allowable Exceedance Frequency
Fecal Coliform	400	22%	200	0%

Indicator Bacteria	Wet Weather Numeric Objective (MPN/100 mL)	Wet Weather Allowable Exceedance Frequency	Dry Weather Numeric Objective (MPN/100 mL)	Dry Weather Allowable Exceedance Frequency
Total Coliform	10,000	22%	1,000	0%
<i>Enterococcus</i>	104	22%	35	0%

Twenty Beaches and Creeks Receiving Water Limitations for Creeks

Indicator Bacteria	Wet Weather Numeric Objective (MPN/100 mL)	Wet Weather Allowable Exceedance Frequency	Dry Weather Numeric Objective (MPN/100 mL)	Dry Weather Allowable Exceedance Frequency
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	61	22%	33	0%

Final Compliance Deadline: The final deadlines for compliance with the wasteload allocations are as shown in the table, below. The wet weather compliance deadline (in parenthesis in the table) applies if the applicable Stormwater 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.

Twenty Beaches and Creeks Final Dry Weather and Wet Weather Compliance Deadlines

Constituent	Dry Weather Compliance Deadline	Wet Weather Compliance Deadline
Total Coliform; Fecal Coliform; <i>Enterococcus</i>	April 4, 2021	April 4, 2031 (April 4, 2021)

ATTACHMENT B – REGULATED SMALL MS4 PERMITTEES

B0 OVERVIEW

This Attachment lists the Permittees regulated under this Order. For readability and document navigation, the Permittees are separated into tables for each Regional Water Board and further separated into tables for subregional offices for the Central Valley Region.

The tables indicate whether the listed Permittee is a Renewal or New Permittee. Renewal Permittees are those that were regulated under the previous permit. New Permittees are those newly designated under this Order.

The Executive Director may amend the lists of designated small MS4 Permittees consistent with this Order's designation criteria.

B0.1 Census Designated Places, Parks, and Other Specified Locations

This Order requires that the designated Permittee perform the following for any Census Designated Places, parks, or other specified locations listed with the Permittee's entry in the tables below:

- Identify the corresponding Census Designated Places, parks, or other specified locations in the Permittee's Notice of Intent, and
- Implement the requirements of this Order within Census Designated Places, parks, or other specified locations in addition to any portion of urban areas with population of 50,000 or more people within the Permittee's jurisdiction.

B0.2 Key to Table Abbreviations

Region

- 1 – North Coast Region
- 2 – San Francisco Bay Region
- 3 – Central Coast Region
- 4 – Los Angeles Region
- 5 – Central Valley Region
 - 5R – Central Valley Region, Redding Office
 - 5S – Central Valley Region, Sacramento Office
 - 5F – Central Valley Region, Fresno Office
- 6 – Lahontan Region
 - 6SLT – Lahontan Region, South Lake Tahoe Office
 - 6V – Lahontan Region, Victorville Office
- 7 – Colorado River Region
- 8 – Santa Ana Region
- 9 – San Diego Region

Type

- T – Traditional Permittee
- NT – Non-traditional Permittee

Additional Requirements

- A dash indicates that the permittee is not subject to ASBS or TMDL requirements.
- ASBS indicates the Permittee is subject to additional requirements per the Areas of Special Biological Significance Special Protections in Attachment F.
- TMDL indicates the Permittee is named in a TMDL in Attachment G. There may or may not be additional requirements or monitoring for each TMDL.

B1 NORTH COAST REGION PERMITTEES TABLE

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
1	T	Arcata, City of	2003	Renewal	-
1	T	Crescent City, City of	2013	Renewal	-
1	T	Eureka, City of	2003	Renewal	-
1	T	Fort Bragg, City of	2003	Renewal	-
1	T	Fortuna, City of	2003	Renewal	TMDL
1	T	Humboldt, County of including the following Census Designated Places: • Bayview, • Cutten, • Garberville • Humboldt Hill • McKinleyville, • Myrtle town, • Pine Hills, • Redway, • Ridgewood Heights, • Rosewood, and • Shelter Cove.	2013	Renewal	ASBS
1	T	Mendocino, County of	2003	Renewal	-
1	T	Trinidad, City of	2013	Renewal	ASBS
1	T	Willits, City of	2026	New	-
1	T	Yreka, City of	2013	Renewal	TMDL
1	NT	California Department of Parks and Recreation (California State Parks) including the following parks: • Del Norte Coast Redwoods State Park, • Jug Handle State Natural Reserve, • Prairie Creek Redwoods State Park, • Salt Point State Park (including Gerstle Cove Campground), and • Trinidad State Beach.	2013	Renewal	ASBS
1	NT	California State Polytechnic University, Humboldt (formerly Humboldt State University)	2013	Renewal	-
1	NT	Petaluma Coast Guard Training Center	2013	Renewal	-
1	NT	Sonoma-Marin Area Rail Transit (SMART)	2026	New	-
1	NT	Sonoma State University	2013	Renewal	-

B2 SAN FRANCISCO BAY REGION PERMITTEES TABLE

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
2	T	American Canyon, City of	2003	Renewal	TMDL
2	T	Belvedere, City of	2003	Renewal	TMDL
2	T	Benicia, City of	2003	Renewal	TMDL
2	T	Calistoga, City of	2003	Renewal	TMDL
2	T	Corte Madera, Town of	2003	Renewal	TMDL
2	T	Fairfax, Town of	2003	Renewal	TMDL
2	T	Larkspur, City of	2003	Renewal	TMDL
2	T	Marin, County of including McNears Beach Park and the following Census Designated Places: • Black Point-Green Point, • Kentfield, • Lucas Valley-Marinwood, • Strawberry, • Tamalpais-Homestead Valley, and • Woodacre	2003	Renewal	ASBS, TMDL
2	T	Mill Valley, City of	2003	Renewal	TMDL
2	T	Napa, City of	2003	Renewal	TMDL
2	T	Napa, County of	2003	Renewal	TMDL
2	T	Novato, City of	2003	Renewal	TMDL
2	T	Petaluma, City of	2003	Renewal	TMDL
2	T	Ross, Town of	2003	Renewal	TMDL
2	T	San Anselmo, Town of	2003	Renewal	TMDL
2	T	San Francisco, City of (Port of San Francisco)	2003	Renewal	TMDL
2	T	San Francisco, City of (San Francisco Public Utilities Commission)	2003	Renewal	TMDL
2	T	San Rafael, City of	2003	Renewal	TMDL
2	T	Sausalito, City of	2003	Renewal	TMDL
2	T	Solano, County of (R2)	2003	Renewal	TMDL
2	T	Sonoma County Water Agency	2003	Renewal	TMDL
2	T	Sonoma, City of	2003	Renewal	TMDL
2	T	Sonoma, County of	2003	Renewal	TMDL
2	T	St. Helena, City of	2003	Renewal	TMDL
2	T	Tiburon, Town of	2003	Renewal	TMDL
2	T	Yountville, City of	2003	Renewal	TMDL
2	NT	25 th District Agricultural Association - Napa County Exposition	2013	Renewal	-
2	NT	4 th District Agricultural Association - Sonoma-Marin Fair	2013	Renewal	-

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
2	NT	Agnews Developmental Center East and West	2013	Renewal	-
2	NT	Alameda Coast Guard Integrated Support Command	2013	Renewal	-
2	NT	Bay Area Rapid Transit	2013	Renewal	-
2	NT	California Department of Parks and Recreation (California State Parks) including the following parks: • Candlestick Point State Recreation Area, and • Montara State Beach.	2013	Renewal	TMDL, ASBS
2	NT	California High Speed Rail Authority	2013	Renewal	-
2	NT	California State University Maritime Academy	2013	Renewal	-
2	NT	California State University, East Bay including the following locations: • Concord Campus, and • Hayward Campus.	2013	Renewal	-
2	NT	CalTrain	2013	Renewal	-
2	NT	Federal Correctional Institution, Dublin	2013	Renewal	-
2	NT	Golden Gate Bridge, Highway and Transportation District	2013	Renewal	-
2	NT	Golden Gate National Recreation Area - Presidio of San Francisco	2026	New	TMDL
2	NT	Port of Oakland	2013	Renewal	TMDL
2	NT	Port of Redwood City	2013	Renewal	-
2	NT	San Jose Airport	2013	Renewal	-
2	NT	San José State University	2013	Renewal	-
2	NT	San Quentin State Prison	2013	Renewal	-
2	NT	Santa Clara Valley Transportation Authority - Valley Transit Authority (VTA)	2013	Renewal	-
2	NT	Sonoma Developmental Center	2003	Renewal	-
2	NT	Sonoma-Marin Area Rail Transit (SMART)	2026	New	-
2	NT	Sonoma Water (formerly Sonoma County Water Agency)	2003	Renewal	TMDL
2	NT	Travis Air Force Base	2013	Renewal	TMDL
2	NT	University of California, Berkeley	2013	Renewal	-
2	NT	University of California, San Francisco	2013	Renewal	-

B3 CENTRAL COAST REGION PERMITTEES TABLE

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
3	T	Arroyo Grande, City of	2003	Renewal	-
3	T	Atascadero, City of	2003	Renewal	-

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
3	T	Buellton, City of	2003	Renewal	-
3	T	Capitola, City of	2003	Renewal	TMDL
3	T	Carmel-by-the-Sea	2003	Renewal	ASBS
3	T	Carpinteria, City of	2013	Renewal	TMDL
3	T	Del Rey Oaks, City of	2003	Renewal	-
3	T	El Paso de Robles (Paso Robles), City of	2003	Renewal	-
3	T	Gilroy, City of	2003	Renewal	TMDL
3	T	Goleta, City of	2003	Renewal	-
3	T	Gonzalez, City of	2013	Renewal	-
3	T	Greenfield, City of	2013	Renewal	-
3	T	Grover Beach, City of	2003	Renewal	-
3	T	Guadalupe, City of	2013	Renewal	TMDL
3	T	Hollister, City of	2003	Renewal	TMDL
3	T	King, City of	2003	Renewal	-
3	T	Lompoc, City of	2003	Renewal	-
3	T	Marina, City of	2003	Renewal	-
3	T	Monterey, City of	2003	Renewal	ASBS
3	T	Monterey, County of including the following Census Designated Places: • Aromas, • Boronda, • Carmel Valley Village, • Castroville, • Elkhorn, • Las Lomas, • Moss Landing, • Pajaro, • Pine Canyon, and • Prunedale.	2003	Renewal	ASBS, TMDL
3	T	Morgan Hill, City of	2003	Renewal	TMDL
3	T	Morro Bay, City of	2003	Renewal	TMDL
3	T	Pacific Grove, City of	2003	Renewal	ASBS
3	T	Pismo Beach, City of	2003	Renewal	-
3	T	San Luis Obispo, City of	2003	Renewal	TMDL

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
3	T	San Luis Obispo, County of including the Towns of Cambria and San Miguel and the following Census Designated Places: • Avila Beach, • Blacklake, • Callendar, • Cayucos, • Edna, • Garden Farms, • Lake Nacimiento, • Los Berros, • Los Ranchos, • Nipomo, • Oceano, • Santa Margarita, • Shandon, • Templeton, and • Woodlands.	2003	Renewal	TMDL
3	T	Sand City	2003	Renewal	-
3	T	Santa Barbara, City of	2003	Renewal	-
3	T	Santa Barbara, County of including the following Census Designated Places: • Hope Ranch, • Isla Vista, • Los Olivos, • Mission Canyon, • Mission Hills, • Montecito, • Orcutt, • Santa Ynez, • Summerland, • Toro Canyon, and • Vandenberg Village.	2003	Renewal	TMDL
3	T	Santa Clara, County of including the following Census Designated Places: • San Martin	2003	Renewal	TMDL
3	T	Santa Cruz, City of	2003	Renewal	TMDL

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
3	T	Santa Cruz, County of, including the following Census Designated Places: • Aptos, • Ben Lomond, • Interlaken, • Live Oak, • Pleasure Point, • Rio del Mar, and • Soquel.	2003	Renewal	TMDL
3	T	Santa Maria, City of	2003	Renewal	TMDL
3	T	Scotts Valley, City of	2003	Renewal	TMDL
3	T	Seaside City, City of	2003	Renewal	-
3	T	Soledad, City of	2003	Renewal	-
3	T	Solvang, City of	2003	Renewal	-
3	T	Watsonville, City of	2003	Renewal	TMDL
3	NT	14 th District Agricultural Association - Santa Cruz County Fairgrounds	2013	Renewal	TMDL
3	NT	16 th District Agricultural Association - Mid-State Fairgrounds	2013	Renewal	-
3	NT	19 th District Agricultural Association - Earl Warren Showgrounds (National Horse Show)	2013	Renewal	-
3	NT	37 th District Agricultural Association - Santa Maria Fairpark	2013	Renewal	-
3	NT	7 th District Agricultural Association - Monterey County Fairgrounds	2013	Renewal	-
3	NT	California Men's Colony	2013	Renewal	-
3	NT	California Polytechnic State University, San Luis Obispo	2013	Renewal	TMDL
3	NT	California Department of Parks and Recreation (California State Parks) including the following parks: • Año Nuevo State Park, • Asilomar State Beach, • Carmel River State Beach, • Julia Pfeiffer Burns State Park, • Oceano Dunes State Vehicular Recreational Area, • Pismo State Beach, and • Point Lobos State Natural Reserve.			ASBS
3	NT	California State University, Monterey Bay	2013	Renewal	-
3	NT	Federal Correctional Institution, Lompoc	2013	Renewal	-

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
3	NT	Los Osos Community Services District	2003	Renewal	TMDL
3	NT	Templeton Community Services District	2003	Renewal	-
3	NT	United States Army Presidio of Monterey including the Defense Language Institute	2013	Renewal	-
3	NT	University of California, Santa Barbara	2003	Renewal	-
3	NT	University of California, Santa Cruz	2003	Renewal	-
3	NT	Vandenberg Space Force Base	2003	Renewal	ASBS

B4 LOS ANGELES REGION PERMITTEES TABLE

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
4	T	Avalon, City of	2013	Renewal	TMDL
4	NT	31 st District Agricultural Association - including Seaside Park and Ventura County Fairgrounds	2013	Renewal	TMDL
4	NT	California State Polytechnic University, Pomona	2013	Renewal	TMDL
4	NT	California State University, Channel Islands	2013	Renewal	TMDL
4	NT	California State University, Dominguez Hills	2013	Renewal	TMDL
4	NT	California State University, Long Beach	2013	Renewal	TMDL
4	NT	California State University, Los Angeles	2013	Renewal	TMDL
4	NT	California State University, Northridge	2013	Renewal	TMDL
4	NT	Federal Correctional Institution, Terminal Island	2013	Renewal	TMDL
4	NT	Long Beach Veterans Affairs Medical Center	2013	Renewal	TMDL
4	NT	Naval Base Ventura County, including Port Hueneme and Point Mugu	2013	Renewal	TMDL
4	NT	University of California, Los Angeles	2013	Renewal	TMDL
4	NT	Veterans Affairs Greater Los Angeles Healthcare System (GLA)	2013	Renewal	TMDL

B5 CENTRAL VALLEY REGION PERMITTEES TABLES

B5.R Central Valley Region – Redding Office Permittees Tables

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
5R	T	Anderson, City of	2013	Renewal	TMDL
5R	T	Butte County	2003	Renewal	-
5R	T	Chico, City of	2003	Renewal	-
5R	T	Oroville, City of	2013	Renewal	-
5R	T	Paradise, Town of	2003	Renewal	-
5R	T	Red Bluff, City of	2013	Renewal	TMDL

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
5R	T	Redding, City of	2013	Renewal	TMDL
5R	T	Shasta Lake, City of	2013	Renewal	-
5R	T	Shasta, County of	2013	Renewal	TMDL
5R	NT	3 rd District Agricultural Association - Silver Dollar Fairgrounds	2013	Renewal	-
5R	NT	27 th District Agricultural Association - Shasta County Fairgrounds	2013	Renewal	-
5R	NT	California State University, Chico	2013	Renewal	-

B5.S Central Valley Region – Sacramento Office Permittees Tables

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
5S	T	Amador, County of	2013	Renewal	-
5S	T	Auburn, City of	2003	Renewal	-
5S	T	Calaveras, County of	2003	Renewal	-
5S	T	Ceres, City of	2003	Renewal	TMDL
5S	T	Clearlake, City of	2003	Renewal	TMDL
5S	T	Colusa, County of	2013	Renewal	TMDL
5S	T	Davis, City of	2003	Renewal	-
5S	T	Dixon, City of	2003	Renewal	-
5S	T	El Dorado, County of	2003	Renewal	-
5S	T	Escalon, City of	2013	Renewal	TMDL
5S	T	Grass Valley, City of	2003	Renewal	-
5S	T	Hughson, City of	2003	Renewal	TMDL
5S	T	Lake County Watershed Protection District	2013	Renewal	-
5S	T	Lake, County of	2003	Renewal	TMDL
5S	T	Lakeport, City of	2003	Renewal	TMDL
5S	T	Lathrop, City of	2003	Renewal	TMDL
5S	T	Lincoln City	2003	Renewal	-
5S	T	Live Oak, City of	2016	Renewal	-
5S	T	Lodi, City of	2003	Renewal	TMDL
5S	T	Loomis, Town of	2003	Renewal	-
5S	T	Manteca, City	2003	Renewal	TMDL
5S	T	Marysville, City of	2003	Renewal	TMDL
5S	T	Mountain House, City of	2003	Renewal	-
5S	T	Newman, City of	2013	Renewal	TMDL
5S	T	Oakdale, City of	2003	Renewal	TMDL
5S	T	Patterson, City of	2003	Renewal	TMDL
5S	T	Placer, County of (R5)	2003	Renewal	-
5S	T	Placerville, City of	2003	Renewal	-

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
5S	T	Rio Vista, City of	2003	Renewal	TMDL
5S	T	Ripon, City of	2003	Renewal	TMDL
5S	T	Riverbank, City of	2003	Renewal	TMDL
5S	T	Rocklin, City of	2003	Renewal	-
5S	T	Roseville, City of	2003	Renewal	TMDL
5S	T	Solano, County of (R5)	2003	Renewal	-
5S	T	Stanislaus, County of including the following Census Designated Places: • Bret Harte, • Empire, • Keyes, • Salida, and • West Modesto.	2003	Renewal	TMDL
5S	T	Sutter, County of	2003	Renewal	TMDL
5S	T	Tracy, City of	2003	Renewal	TMDL
5S	T	Turlock, City of	2003	Renewal	TMDL
5S	T	Vacaville, City of	2003	Renewal	-
5S	T	West Sacramento, City of	2003	Renewal	TMDL
5S	T	Woodland, City of	2003	Renewal	-
5S	T	Yolo, County of including the following Census Designated Places: • University of California-Davis	2003	Renewal	TMDL
5S	T	Yuba, City of	2003	Renewal	TMDL
5S	T	Yuba, County of including the following Census Designated Places: • Linda, and • Olivehurst.	2003	Renewal	TMDL
5S	NT	2 nd District Agricultural Association - San Joaquin County Fairgrounds	2013	Renewal	-
5S	NT	13 th District Agricultural Association - Sutter County Fairgrounds	2013	Renewal	-
5S	NT	23 rd District Agricultural Association - Contra Costa County Fairgrounds	2013	Renewal	-
5S	NT	38 th District Agricultural Association - Stanislaus County Fairgrounds	2013	Renewal	-
5S	NT	40 th District Agricultural Association - Yolo County Fairgrounds	2013	Renewal	-
5S	NT	California Exposition and State Fair	2003	Renewal	-
5S	NT	California Medical Facility	2013	Renewal	-

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
5S	NT	California Military Department	2013	Renewal	-
5S	NT	California Department of Parks and Recreation (California State Parks) including Carnegie State Vehicular Recreation Area	2013	Renewal	-
5S	NT	California State Prison, Sacramento	2013	Renewal	-
5S	NT	California State Prison, Solano County	2013	Renewal	-
5S	NT	California State University, Sacramento	2003	Renewal	-
5S	NT	California State University, Stanislaus	2013	Renewal	-
5S	NT	Cosumnes Community Services District	2003	Renewal	-
5S	NT	Deuel Vocational Institution	2013	Renewal	-
5S	NT	Elk Grove Unified School District	2003	Renewal	-
5S	NT	Folsom State Prison	2013	Renewal	-
5S	NT	Mule Creek State Prison	2019	Renewal	-
5S	NT	Rancho Murieta Community Services District	2003	Renewal	-
5S	NT	University of California, Davis	2003	Renewal	-

B5.F Central Valley Region – Fresno Office Permittees Tables

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
5F	T	Atwater, City of	2003	Renewal	TMDL
5F	T	Chowchilla, City of	2013	Renewal	-
5F	T	Coalinga, City of	2013	Renewal	-
5F	T	Delano, City of	2013	Renewal	-
5F	T	Dinuba, City of	2013	Renewal	-
5F	T	Exeter, City of	2003	Renewal	-
5F	T	Farmersville, City of	2003	Renewal	-
5F	T	Hanford, City of	2003	Renewal	-
5F	T	Kings, County of	2003	Renewal	-
5F	T	Kingsburg, City of	2003	Renewal	-
5F	T	Lemoore, City of	2003	Renewal	-
5F	T	Livingston, City of	2003	Renewal	TMDL
5F	T	Los Banos, City of	2003	Renewal	TMDL
5F	T	Madera, City of	2003	Renewal	-

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
5F	T	Madera, County of including the following Census Designated Places: • Bonadelle Ranchos-Madera Ranchos, and • Madera Acres.	2003	Renewal	-
5F	T	Mendota, City of	2013	Renewal	-
5F	T	Merced, City of	2003	Renewal	TMDL
5F	T	Merced, County of including the following Census Designated Places: • Delhi, • Franklin, and • Winton.	2003	Renewal	TMDL
5F	T	Parlier, City of	2013	Renewal	-
5F	T	Porterville, City of	2003	Renewal	-
5F	T	Reedley, City of	2003	Renewal	-
5F	T	Sanger, City of	2013	Renewal	-
5F	T	Selma, City of	2003	Renewal	-
5F	T	Tehachapi, City of	2013	Renewal	-
5F	T	Tulare, City of	2003	Renewal	-
5F	T	Tulare, County of including the following Census Designated Places: • East Porterville, • Goshen, and • Strathmore.	2003	Renewal	-
5F	T	Visalia, City of	2003	Renewal	-
5F	T	Wasco, City of	2013	Renewal	-
5F	NT	15 th District Agricultural Association - Kern County Fairgrounds	2013	Renewal	-
5F	NT	21A District Agricultural Association - Madera County Fairgrounds	2013	Renewal	-
5F	NT	21 st District Agricultural Association - The Big Fresno Fair	2013	Renewal	-
5F	NT	24A District Agricultural Association - Kings County Fairgrounds	2013	Renewal	-
5F	NT	24 th District Agricultural Association - Tulare County Fairgrounds	2013	Renewal	-
5F	NT	35 th District Agricultural Association - Merced County Fairgrounds	2013	Renewal	-
5F	NT	California High Speed Rail Authority	2013	Renewal	-
5F	NT	California State University, Bakersfield	2013	Renewal	-

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
5F	NT	Lemoore Naval Air Station	2013	Renewal	-
5F	NT	Porterville Developmental Center	2013	Renewal	-
5F	NT	United States Penitentiary, Atwater	2013	Renewal	-
5F	NT	University of California, Merced	2013	Renewal	-

B6 LAHONTAN REGION PERMITTEES TABLE

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
6SLT	T	Placer, County of (R6)	2003	Renewal	TMDL
6SLT	T	Susanville, City of	2013	Renewal	-
6SLT	T	Truckee, Town of	2003	Renewal	TMDL
6V	T	Apple Valley Town	2003	Renewal	-
6V	T	Barstow, City of	2013	Renewal	-
6V	T	Hesperia, City of	2003	Renewal	-
6V	T	San Bernardino, County of	2003	Renewal	-
6V	T	Victorville, City of	2003	Renewal	-
6V	NT	28 th District Agricultural Association - San Bernardino County Fairgrounds	2013	Renewal	-
6V	NT	Federal Correctional Institution, Victorville	2013	Renewal	-

B7 COLORADO RIVER REGION PERMITTEES TABLE

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
7	T	Brawley, City of	2003	Renewal	-
7	T	Calexico, City of	2003	Renewal	-
7	T	El Centro, City of	2003	Renewal	-
7	T	Imperial, City of	2003	Renewal	-
7	T	Imperial, County of	2003	Renewal	-

B8 SANTA ANA REGION PERMITTEES TABLE

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
8	NT	California Institution for Men	2013	Renewal	TMDL
8	NT	California Institution for Women	2013	Renewal	TMDL
8	NT	California Rehabilitation Center	2013	Renewal	TMDL
8	NT	California Department of Parks and Recreation (California State Parks) including Crystal Cove State Park	2013	Renewal	ASBS
8	NT	California State University, Fullerton	2013	Renewal	-

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
8	NT	California State University, San Bernardino	2013	Renewal	-
8	NT	Fairview Developmental Center	2013	Renewal	-
8	NT	Jerry L. Pettis Memorial Veterans Affairs Medical Center	2013	Renewal	-
8	NT	Joint Forces Training Base (JFTB) Los Alamitos	2013	Renewal	-
8	NT	March Air Force Base	2013	Renewal	TMDL
8	NT	Orange County Fair & Event Center	2013	Renewal	TMDL
8	NT	University of California, Irvine	2013	Renewal	TMDL
8	NT	University of California, Riverside	2013	Renewal	TMDL

B9 SAN DIEGO REGION PERMITTEES TABLE

Region	Type	Permittee	Year of Designation	Status	Additional Requirements
9	NT	22 nd District Agricultural Association - Del Mar Fairgrounds	2003	Renewal	TMDL
9	NT	California Department of Parks and Recreation (California State Parks) including Old Town San Diego State Historic Park	2013	Renewal	
9	NT	California State University, San Marcos	2013	Renewal	TMDL
9	NT	Camp Pendleton	2013	Renewal	TMDL
9	NT	Marine Corps Air Station Miramar	2013	Renewal	TMDL
9	NT	Marine Corps Recruit Depot San Diego	2018	Renewal	
9	NT	North County Transit District (NCTD)	2013	Renewal	TMDL
9	NT	R J Donovan Correctional Facility at Rock Mountain	2013	Renewal	
9	NT	San Diego Metropolitan Transit System	2018	Renewal	TMDL
9	NT	San Diego State University	2013	Renewal	TMDL
9	NT	University of California, San Diego	2013	Renewal	TMDL
9	NT	Veterans Affairs San Diego Healthcare System	2013	Renewal	TMDL

ATTACHMENT C – NOTICE OF INTENT AND WAIVER REQUIREMENTS

OVERVIEW

This Attachment includes requirements for submitting a Notice of Intent and a waiver certification application. Information on separate implementing entities, individual stormwater permits, and regional stormwater permits is also included.

C1. REQUIREMENTS WHEN DESIGNATION OCCURS AFTER ADOPTION DATE

Permittees designated by a Regional Water Board after the Adoption Date of this Order shall submit their Notice of Intent, appropriate technical information, and fee within 180 days of designation.

C2. NOTICE OF INTENT REQUIREMENTS FOR NEW AND RENEWAL PERMITTEES

Unless a waiver or coverage under an individual or regional stormwater Order is approved by the applicable Regional Water Board, the entities listed in Attachment B of this Order shall submit applications for new or renewal of coverage by the effective date of this Order. Census designated places are covered under the corresponding county's Notice of Intent.

New and renewal Permittees shall submit the Notice of Intent information through SMARTS, including the required attachments, and pay the required fees.

New and renewal Permittees shall submit the information specified in items 1 through 6, below. Coverage under this Order will start upon the State Water Board's receipt of the following or upon the effective date of this Order, whichever is later.

1. Notice of Intent

Enter or confirm the following information directly into SMARTS:

Organization and Business Details:

- a. Waste Discharge Identification Number (WDID)
- b. Permittee Name
- c. Address
- d. Address Line 2 (if applicable)
- e. City, State, and Zip Code
- f. Business Type

- g. Federal Tax ID (if applicable)

Permittee Contact Information:

- a. Contact First Name
- b. Contact Last Name
- c. Contact Title (if applicable)
- d. Contact Phone number
- e. Contact Email

Additional Information:

- a. Indicate if the Permittee had coverage under the previous Phase II Small MS4 Permit (2013-0001-DWQ and amendments).
- b. Provide the population served by the jurisdiction.
- c. Indicate if the permittee is Traditional or Non-Traditional.
- d. Legally responsible party Phone number
- e. Legally responsible party Email

Billing Information:

- a. Billing Name
- b. Street Address
- c. Address Line 2 (if applicable)
- d. City, State, and Zip Code
- e. Billing Email
- f. Billing Contact First Name
- g. Billing Contact Last Name
- h. Title (if applicable)
- i. Phone number

2. Separate Implementing Entity

If the Permittee intends to share responsibilities for implementing one or more Order obligation with one or more other municipalities or entities (Separate Implementing Entity), the Permittee's Notice of Intent must describe which obligations each will be responsible for implementing.

3. Identification of Census Designated Places

Census designated places do not file a separate Notice of Intent or pay separate fees. The counties listed in Attachment B, Table B.2, shall identify the corresponding census designated places in the county's Notice of Intent and shall pay the fees.

4. Fees

Submit the annual fee according to the current California Code of Regulations, title 23, chapter 9 fee schedule for NPDES stormwater permits. The current fee schedule is available on the State Water Board web page under the section titled [NPDES Stormwater Fees](#).

5. Boundary Map

Submit a complete boundary map through SMARTS that delineates jurisdictions listed in items a through f, below.

a. Boundaries

The map defines the boundaries of the regulated Small MS4 storm sewer system, including all areas that drain into the storm sewer system, such as roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, storm drains, and other structures designed or used for collecting and conveying stormwater to the MS4. The applicable Regional Water Board may require revisions to boundary maps that do not sufficiently delineate the regulated MS4.

- 1) For cities, towns, and other incorporated areas; the boundary includes the incorporated area and the MS4's jurisdictional boundary. This includes the MS4's storm sewer system and all areas, appurtenances, and structures that drain into the MS4.
- 2) For counties; boundaries include any portion of urban areas with a population of at least 50,000 based on the 2020 census and places identified in Attachment B for coverage by counties. Boundaries must be proposed in the boundary map and may be developed in conjunction with the applicable Regional Water Board
- 3) For Non-Traditional Permittees; the boundary includes the extent of the MS4 system. For military installations, this Order applies to areas where the activities and population density resemble that of a Traditional Small MS4. For Department of Corrections and Rehabilitation Permittees, this Order applies to facilities that are in active operation (i.e., it does not apply to closed facilities lacking management oversight).

- b. City and county boundaries,
- c. Main arterial streets,
- d. Highways,
- e. Waterways, and
- f. Labels identifying adjacent MS4s.

6. Guidance Document

Permittees must submit a storm water program Guidance Document through SMARTS during its Notice of Intent process. The Department of Defense and Department of Corrections are exempt from submitting the Guidance Document. The Guidance Document is the Permittee's plan for its stormwater program compliance process. The Guidance Document may be in spreadsheet, tabular or narrative format. The Permittee shall submit the Guidance Document that includes the following topics:

- a. Overall program planning.
- b. Identification of all Order requirements and responsible implementing entity.
- c. Renewal Permittees only: A brief description of each best management practice and its associated effectiveness included in the Permittee's stormwater management plan, developed under the prior permit, that establishes the specific local or tailored level of implementation that may be more protective of water quality than the minimum requirements of this Order.
- d. Renewal Permittees only: Identification of whether the Permittee will maintain, reduce, or cease implementation of any locally tailored best management practice that is more protective of water quality than the best management practices required by this Order.
- e. Renewal Permittees only: For any more protective, locally tailored best management practice which the renewal Permittee will reduce or cease implementation, the renewal Permittee must demonstrate to the Executive Officer of the applicable 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 best management practices. In no instance may the renewal Permittee reduce or cease a best management practice if it is required by the minimum standards set by this Order.

C3. SUBMIT AN ELECTRONIC MS4 SERVICE AREA BOUNDARY MAP

The Permittee shall submit geospatial data detailing the locations of the Permittee's regulated MS4 boundary, as follows:

- a. For Renewal and New Permittees listed in Attachment B: submit geospatial MS4 service area boundary details starting on January 1, 2028, and no later than December 31, 2028:
- b. For New Permittees enrolled after the adoption date of this Order – submit geospatial MS4 service area boundary details starting no earlier than January 1, 2028, or within 12 months of the Notice of Intent submittal date, whichever date is later.

C4. WAIVER OPTIONS, APPLICATIONS, AND WAIVER RECERTIFICATION REQUIREMENTS

There are three waiver options: Waiver Option 1, Waiver Option 2, and Waiver Option 3 that are further defined below.

A Permittee must submit a Waiver Application to be considered for a waiver. All Waiver Applications, and the annual recertifications (for all three waiver options), must be submitted to the applicable Regional Water Board Executive Officer and uploaded to SMARTS. Annual waiver fees must be submitted to the State Water Board Fee Branch.¹

1. Once approved, a Waiver will only remain in effect provided that the Permittee submits its annual renewal fee, any applicable surcharge, and annual certification demonstrating continued eligibility.
2. Denial of a Waiver Request and Dispute Resolution
If a Permittee is not satisfied with a waiver denial, it may dispute that determination in compliance with the Dispute Resolution provision of this Order.

C4.1 Three Waiver Options

This Order includes three waiver options. To apply for a waiver, the Permittee must submit the following information, including a description of the basis for the information, to the applicable Regional Water Board Executive Officer:

1. The population served by the MS4;
2. Any physically interconnected regulated MS4s through which the Permittee's

¹ Email questions for the Fee Branch to FeeBranch@waterboards.ca.gov

MS4 discharges;

3. The receiving waters to which the MS4 discharges, either directly or through a physically interconnected regulated MS4;
4. The impairment status of the receiving waters to which the MS4 discharges, including identification of the impairment constituents;
5. TMDLs that apply to the receiving waters to which the MS4 discharges;
6. A demonstration that its discharges do not cause or contribute to, or do not reasonably have the potential to cause or contribute to, a water quality impairment, including the following information, including information on the presence of impairment pollutants in the Permittee's discharges and the measures taken by the Permittee to ensure that it is not or will not cause or contribute to a water quality impairment; and
7. A demonstration that the Permittee satisfies the conditions of one of the Waiver Options below.

C4.1.1 Waiver Option 1²

1. Waiver Option 1 applies where the following criteria are met:
 - a. The population served by the Permittee's MS4 is less than 1,000;
 - b. The Permittee's system is not contributing substantially to the pollutant loadings of a physically interconnected MS4 that is regulated by the NPDES storm water program. In general, if the Permittee's discharge makes up more than ten percent of the interconnected MS4's total storm water volume, then the Permittee is presumed to be a significant contributor of pollutants to the interconnected MS4. The Permittee, interconnected MS4, or third parties may show that this presumption is inappropriate; and
 - c. If the Permittee 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 wasteload allocations that are part of a USEPA approved or established TMDL that addresses the pollutant(s) of concern. Where there is no TMDL that addresses the pollutant(s) of concern, the Permittee may not be granted this waiver unless it can demonstrate that it does not discharge the pollutant(s) of concern.

² 40 C.F.R. § 122.32(d)

C4.1.2 Waiver Option 2³

1. Waiver Option 2 applies where the following criteria are met:
 - a. The population served by the system is less than 10,000;
 - b. The Regional Water Board has evaluated all waters of the U.S., including small streams, tributaries, lakes, and ponds, that receive a discharge from the MS4. For all such waters, the Regional Water Board has determined that stormwater best management practices are not needed based on either:
 - 1) Wasteload allocations that are part of a USEPA approved or established TMDL that addresses the pollutant(s) of concern or,
 - 2) A TMDL-equivalent analysis that determines sources and allocations for the pollutant(s) of concern, if a TMDL has not been developed or approved;
 - c. For Waiver Option 2, pollutants of concern include biochemical oxygen demand, sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the Permittee's MS4;
 - d. The Regional Water Board has determined that current and future discharges from the MS4 do not have the potential to result in exceedance of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts;

C4.1.3 Waiver Option 3

1. Waiver Option 3 applies where the following criteria are met:
 - a. The Permittee's MS4 is not located within any urban areas with a population of at least 50,000 based on the 2020 census,
 - b. The population served by the system is 20,000 or less, and
 - c. The Permittee's population has an annual median household income that is less than 80 percent of the statewide annual median household income.

C4.2 Annual Waiver Recertifications

Annual waiver recertifications must address all the elements of the initial waiver

³ 40 C.F.R. § 122.32(e)

application. The Permittee must provide any updates to any of its prior answers or demonstrations. The recertification must demonstrate that the Permittee continues to meet the conditions for the waiver, including by demonstrating that it does not or does not have the potential to cause or contribute to a water quality impairment and that it continues to meet the conditions of the applicable waiver.

The applicable Regional Water Board Executive Officer or designee shall review the annual waiver recertifications and respond with an approval or denial of continued waiver coverage.

The annual waiver recertification and review required by this Order satisfies the requirement in 40 C.F.R. 123.35(d)(6) to review Option 2 waivers once at least every five years.

C4.3 When Conditions of Waiver Application or Recertification of a Waiver Option Are Not Met

If the Waiver Application is denied or conditions have changed so that the Waiver Option selected is no longer applicable, the Permittee must apply for coverage under this Order or an individual NPDES permit. A failure to pay annual waiver fees, submit an annual waiver recertification, or provide updated information may result in waiver revocation following notice by the State Water Board Executive Director or applicable Regional Water Board Executive Officer. Either the State Water Board Executive Director or applicable Regional Water Board Executive Officer may notify the Permittee of its obligation to apply for Order coverage when appropriate.

ATTACHMENT D – PROVISIONS FOR TRADITIONAL PERMITTEES

OVERVIEW

This attachment describes the requirements with which Traditional MS4s, identified in Attachment A, Table A6.1, must comply.

D1. PROGRAM MANAGEMENT

D1.1 Legal Authority – Renewal and New Permittees

Within 1 year of the effective date of this Order, Renewal Small MS4 Permittees shall review and revise, as necessary, relevant ordinances, policies or other regulatory mechanisms, or adopt any new relevant ordinances, policies, or other regulatory mechanisms, to obtain legal authority, to the extent allowable under state or local law, to control, reduce, or eliminate pollutant discharges into and from its MS4 pursuant to the requirements of this Order. New Permittees shall do so within 2 years of the effective date of this Order or of the Permittee's effective date of designation, whichever is later.

These ordinances, policies or other regulatory mechanisms shall include authority to:

1. Prohibit dumping or disposal of materials other than stormwater and authorized non-stormwater discharges into the Permittee's MS4;
2. Effectively prohibit unauthorized non-stormwater discharges through the MS4. Detect and eliminate unauthorized non-stormwater discharges (illicit discharges) and illegal connections to the Permittee's MS4;
3. Respond to the discharge of spills into the MS4 or spills that may discharge into the MS4;
4. Require parties responsible for discharges in excess of incidental runoff from landscaped areas to implement actions necessary to prevent recurring discharges;
5. Require operators of construction sites, new development or redevelopment projects, and industrial and commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of best management practices consistent with the current

California Stormwater Quality Association Best Management Practice Handbooks or equivalent;

6. Require information 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;
7. Review designs and proposals for new development and redevelopment to determine whether adequate best management practices will be installed, implemented, and maintained during construction and after final stabilization (post-construction);
8. Enter private property for the purpose of inspecting, at reasonable times, any facilities, equipment, practices, or operations for active or potential stormwater discharges, or non-compliance with local ordinances/standards or requirements in this Order, as consistent with any applicable state and federal laws and regulations;
9. Require responsible parties to promptly cease and desist discharging and cleanup and abate actual and threatened discharges, including the ability to:
 - a. Require responsible parties to abate and clean-up their illicit discharge or spill no later than within 72 hours of notification and to expedite clean-up of high-risk illicit discharges or spills;
 - b. Require abatement within 30 days of notification of uncontrolled sources of pollutants that could pose an environmental threat;
 - c. Perform clean-up and abatement work and bill the responsible party, if necessary;
 - d. Order the cessation of activities until activities resulting in pollutant discharges are adequately addressed or abated;
 - e. Require a revised timeframe when all parties agree that clean-up activities cannot be completed within the required timeframe. The responsible party shall provide written notification to the appropriate Regional Water Board within five business days of the determination that the timeframe requires revision.
10. Levy citations or administrative fines against responsible parties;
11. Require recovery and remediation costs from responsible parties; and

12. 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 for persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm.

D1.2 Certification

The Permittee's authorized signatory or duly authorized representative shall certify that the Permittee has and will maintain full legal authority to implement and enforce each of the requirements contained in this Order. Renewal permittees shall submit a certification statement in their first annual report. New permittees shall submit a certification statement in their second annual report. The Permittee shall update its certification statement as necessary.

The Permittee's certification statement shall include the following:

1. Identification of all departments within the Permittee's jurisdiction that conduct stormwater-related activities and their roles and responsibilities under this Order;
2. Citation of the Permittee's stormwater runoff-related ordinances or regulatory mechanisms, and identification of the requirements of this Order that correspond with each ordinance or regulatory mechanism;
3. Identification of the local administrative and legal procedures available to mandate compliance with stormwater-related ordinances and therefore with the conditions of this Order;
4. A description of the procedures to review, update, and implement stormwater-related ordinances and other regulatory mechanisms;
5. A statement that the Permittee will implement enforcement actions consistent with its Enforcement Response Plan; and
6. A statement that the Permittee has adequate legal authority to comply with all Order requirements.

D1.3 Enforcement Response Plan and Enforcement Tracking

1. Within 1 year of the effective date of this Order, each Renewal Permittee shall review and revise as necessary its existing Enforcement Response Plan. Each New Permittee shall develop and implement an Enforcement Response plan within 2 years of their effective date of designation.

Enforcement Response Plans shall contain the following:

- a. Enforcement procedures and responses to violations; and
 - b. Procedures to address repeat and continuing violations by implementing progressively stricter responses as needed to achieve compliance.
2. The Enforcement Response Plan shall describe the procedures the Permittee will implement for each of the following types of enforcement responses based on the type and severity of violation:
- a. Verbal Warnings – Verbal warnings are primarily consultative. At a minimum, verbal warnings shall specify the nature of the violation and required corrective action;
 - b. Written Notices – Written notices shall include the nature of the violation and the required corrective action, with deadlines for taking such action;
 - c. Escalated Enforcement Measures – Escalated enforcement responses shall be employed alone or in combination where necessary to correct persistent non-compliance, repeated or escalating violations, or incidents of major environmental harm:
 - 1) Citations with Fines – Monetary fines may include civil and administrative penalties;
 - 2) Withholding of Plan Approvals or Other Authorizations – Where a facility is in non-compliance, the Permittee's own approval or authorization processes that affect the facility's ability to discharge to the storm drain system may be used to abate the violation;
 - 3) Stop Work Orders – The Permittee may issue stop work orders that require construction activity to be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate best management practices; and
 - 4) Additional Measures – Other escalated measures the Permittee may employ under its local legal authorities.
3. The Permittee shall track instances of non-compliance and enforcement responses either electronically or via hard-copy files. The enforcement tracking documentation shall include, at a minimum, the following:
- a. Name and contact information of owner/operator;

- b. Location of facility, project, or activity requiring enforcement;
- c. Description of violation(s), including photos of the violations, when possible;
- d. Recommended corrective actions;
- e. Required schedule for returning to compliance;
- f. Records of communication with the owner/operator regarding the violation and requirements;
- g. 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;
- h. Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violations);
- i. Any referrals to different departments or agencies.

4. Recidivism Reduction

The Permittee shall identify chronic violators of any local ordinance or regulation related to the requirements of this Order and shall develop incentives or disincentives or increase inspection frequency at the operator's sites to prevent chronic violations.

5. NPDES Permit Referrals

For those construction projects or industrial facilities subject to the State Water Board Statewide General Permit for Stormwater Discharges Associated with Construction Activities (Construction General Permit) or Statewide General Permit for Stormwater Discharges Associated with Industrial Activities (Industrial General Permit), the Permittee shall:

- a. Refer to [SMARTS](https://smarts.waterboards.ca.gov/smarts) for current filing status of construction projects or industrial facilities (<https://smarts.waterboards.ca.gov/smarts>)
- b. Refer non-filers (i.e., those facilities that cannot demonstrate that they obtained appropriate permit coverage) to the appropriate Regional Water Board within 30 days of the Permittee's determination that permit coverage would be appropriate. Non-filers include the following:

- 1) Owners of regulated construction projects that have neither filed a Construction General Permit Notice of Intent nor have received a Construction General Permit erosivity waiver; and
 - 2) Owner/operators of regulated industrial facilities that have not filed an Industrial General Permit Notice of Intent, a No Exposure Certification, or a Notice of Non-Applicability.
- c. Refer owner/operators with suspected ongoing violations of the Construction General Permit or Industrial General Permit to the appropriate Regional Water Board. This referral must be made within 30 days of the Permittee's determination that violations may be ongoing;
 - d. Refer owner/operators with ongoing violations of the Permittee's own ordinances to the appropriate Regional Water Board provided the Permittee has made a good faith effort to achieve compliance using Escalated Enforcement Measures described in the Enforcement Response Plan; and
 - e. In making the referrals described above, the Permittee shall include the following documentation:
 - 1) Name and contact information of owner/operator;
 - 2) Construction project or industrial facility location;
 - 3) Estimated construction project size or industrial activity type (including Standard Industrial Classification Code or North American Industry Classification System Code, if known);
 - 4) Description of violations
 - 5) Records of communication with the owner/operator regarding filing requirements or ongoing violations; and
 - 6) Any enforcement tracking documentation the Permittee has regarding the site or facility.

D1.4 Guidance Document Implementation

During the course of implementing the requirements of this Order, the Permittee shall reference the Guidance Document submitted with their Notice of Intent (per Section C2.6 of this Order) and note any changes to the Guidance Document (for example, changes to the responsible

implementing entity or changes to any locally-tailored best management practices carried over from a stormwater management plan developed under WQO 2003-0005). If changes are made, the Permittee shall submit the updated Guidance Document with the Annual Report.

D2. PUBLIC EDUCATION, OUTREACH, INVOLVEMENT, AND PARTICIPATION PROGRAM

D2.1 Implementation Options

1. Within 1 year of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall select one or more of the public education program implementation options, as follows:
 - a. Individually fulfill public education and public participation program requirements within its jurisdictional boundaries;
 - b. Contribute to a countywide stormwater program which conducts education and outreach on behalf of its members; or
 - c. Contribute to a regional outreach and education collaborative effort which shall include members completing the following:
 - 1) Define a uniform and consistent message(s);
 - 2) Determine the best methods to communicate the message(s); and
 - 3) Collaboratively apply what is learned through local jurisdiction groups.
2. If selecting either option 1.b. or 1.c, above, within 1 year of the beginning of its involvement or contribution, the Permittee shall obtain documentation, such as a written agreement, letter, or similar document, which confirms involvement in or contribution to a countywide stormwater program or regional outreach and education collaborative effort . Provide documentation in the annual report per section D10.

D2.2 Development and Implementation

1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement or review, update as necessary, and implement a written public

education strategy to attain the following goals related to stormwater pollution prevention and using stormwater as a resource:

- a. Identify who is responsible for implementing specific tasks and create a schedule for task implementation;
- b. Identify the Permittee's target audiences;
- c. Encourage public input (e.g., the opportunity for public comment, or public meetings) in the development of the public education program;
- d. Develop and disseminate educational materials (e.g., printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites) to targeted audiences, including multiple languages as appropriate, that address the following topics:
 - 1) Local pollutants of concern and regional water quality issues;
 - 2) Benefits of water-efficient and stormwater-friendly landscaping (e.g., [Surfrider's Ocean Friendly Gardens Program](#) and the California Department of Water Resources' [Water Efficient Landscape Ordinance](#)),
 - 3) Proper application of pesticides, herbicides, and fertilizers;
 - 4) Best management practices to reduce or eliminate illicit discharges from organized car washes (e.g., see the [Sacramento Stormwater Quality Partnership River Friendly Carwash Program](#)), mobile cleaning and pressure washing operations, and landscape irrigation; and
 - 5) Illicit discharge awareness and illicit discharge and spill reporting including promotion of the Permittee's illicit discharge reporting hotline per the Illicit Discharge and Spill Response Plan
- e. Provide pet waste management messaging by completing the following:
 - 1) The Permittee shall maintain information on the Permittee's website about proper pet waste management and the impact of improperly deposited waste on water quality and public health;

- 2) Annual messaging to residents, reminding them to cleanup accumulated pet waste in their yards that could otherwise get washed into streams and beaches; and
 - 3) Messaging regarding pet waste management and associated impacts to the beaches and their catchments.
- f. As applicable within the Permittee's jurisdiction, make available to independent, parochial, and public schools materials to educate school-age children about the effects of pollutants in stormwater discharge, the actions the Permittee is taking to protect stormwater quality, and the actions school-age children can do to help protect receiving water quality in their local area. The Permittee is encouraged to use environmental and place-based experiential learning materials that are integrated into school curricula and school facility management. The Permittee may refer to [Sac Splash](https://www.sacsplash.org) (<https://www.sacsplash.org>), the [Effie Yeaw Nature Center](http://www.sacnaturecenter.net) (www.sacnaturecenter.net), or The [California Education and Environment Initiative's Curriculum](http://www.californiaeei.org) (<http://www.californiaeei.org>) for examples.
2. Construction and Post-Construction Education – The Permittee shall develop and implement a strategy to educate project proponents, designers, and implementors of Construction and Post-Construction projects regulated by the Permittee. This shall include providing information to key stakeholders, including developers, contractors, construction site operators, and owner/builders, on the Permittee's post-construction requirements and permitting process. Information shall be provided early in the planning process and as appropriate to ensure understanding and proper implementation of best management practices.

D2.3 Public Participation Program

The Permittee shall involve the public in the development and implementation of its stormwater management program. At a minimum, within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall:

1. Create opportunities for the public to participate in the implementation of stormwater pollution prevention activities by sponsoring Permittee-led activities or supporting privately-led activities.

2. Create opportunities for public comment and input on policy related to the Permittee's stormwater management program.
3. Develop electronic, paper, or other communication techniques to ensure the public can easily find information about the Permittee's stormwater management program and opportunities to participate.

D3. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Permittee shall implement an Illicit Discharge Detection and Elimination Program to detect, investigate, and eliminate illicit discharges, including illegal dumping, into its storm drain system pursuant to the following requirements.

D3.1 Illicit Discharge and Spill Response Plan

Within 1 year of the effective date of this Order or the effective date of the Permittee's Designation, whichever is later, the Permittee shall develop and implement or review, update as necessary, and implement an Illicit Discharge and Spill Response Plan that, at a minimum, includes the following elements:

1. A publicly accessible method or methods to receive illicit discharge and spill notifications 24 hours a day (e.g., 24-hour hotline, internet complaint website). Anonymous reporting shall be accommodated by at least one reporting method. The Permittee is encouraged to accommodate electronic photo submittals;
2. An illicit discharge and spill response process that provides the following:
 - a. Material characterization, source identification, containment, abatement, and recovery;
 - b. Ability to respond to a reported emergency illicit discharge and conduct assessment and clean-up and abatement, 24-hours-a-day;
 - c. Receiving water impact assessment, including visual observation and water quality sampling, as appropriate.¹ The Permittee may reference indicator parameters and action level concentrations found in the Center

¹ These requirements may be satisfied through collaboration with neighboring Permittees, particularly where a discharge passes through a neighboring Permittee's MS4 prior to reaching receiving waters.

for Watershed Protection's [Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assistance](#);

- d. Identification of the responsible party, as applicable;
 - e. A protocol for identifying various illicit discharge and spill levels, such as nuisance, immediate response, and emergency and hazardous material spills, and the associated response actions for each including response timelines for illicit discharges and spills that are based upon threats to water quality and human health as follows:
 - 1) Illicit discharges and spills known or suspected of being either sanitary sewage, hazardous, significantly contaminated, or likely to cause significant harm shall be investigated as soon as possible, but no later than 24 hours of the Permittee becoming aware of the discharge.
 - 2) The Permittee shall investigate any suspected illicit discharge or spill not meeting the above criteria within 72 hours of becoming aware of the suspected illicit discharge or spill.
 - 3) For investigations that require more than 72 hours to fully resolve, the Permittee shall identify the actions being taken to complete material characterization, source identification, containment, abatement, and recovery.
 - f. Roles and responsibilities of responding parties (both internal and external departments, agencies, etc) for all times of day, including illicit discharge and spill response referral process (e.g., transfer of incident command) and notification to appropriate federal, state, and local agencies. Identification of departments responsible for responding to each level of illicit discharge or spill (e.g., County Department of Environmental Health, local police and fire departments, Certified Unified Program Agency); and
 - g. A description of who, how, and what is used to clean-up and verify clean-up of illicit discharges and spills, for both hazardous and non-hazardous substances, including storm drain system cleaning;
3. A protocol to track and query the following:
- a. Details of illicit discharge and spill notifications and responses, including, but not limited to, time of notification, location of illicit discharge or spill,

responsible party or parties, quantity and type of material, and whether actual or potential illicit discharges and spills are abated;

- b. Responding parties;
 - c. Response time to abate illicit discharges and spills;
 - d. Inspection report(s);
 - e. History of prior illicit discharges and spills; and
 - f. Follow-up actions, including but not limited to, re-inspections, receipt of compliance documentation, referrals to other divisions or agencies, cost recovery, fines, and other enforcement actions.
4. Procedures for reporting a spill or illicit discharge, including relevant contact information, shall be included in each of the Permittee's fleet vehicles that are used by field staff.

D3.2 Outfall Mapping

1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall create and 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. Renewal Permittees that have an existing up-to-date outfall map that includes the minimum requirements specified in Section D3.2 are not required to recreate the outfall map.
2. The Outfall Map shall include the following:
 - a. The location of all outfalls that are operated by the Permittee within the Permittee's regulated MS4 boundary, drainage areas, and land use(s) contributing to those outfalls. Outfalls shall be located using coordinates obtained from a global positioning system (GPS) when possible, or located with estimated coordinates by using such as tools other maps or satellite images.
 - b. The location and name, if known by the Permittee, of all waterbodies receiving direct discharges from those outfall pipes;
 - c. Any locations where the Permittee discharges stormwater into another MS4;

- d. Field sampling stations if applicable; and
- e. The permittee's regulated MS4 boundary.

D3.3 Labeling Storm Drain Inlets

1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, New Permittees shall ensure each storm drain inlet in high foot traffic areas includes a legible stormwater awareness message (e.g., a label, stencil, marker, or pre-cast message such as "drains to the creek" or "only rain in the drain"). Permittees pursuing more permanent messaging methods (for example all pre-cast instead of glued labels) may propose an alternative schedule, subject to Executive Officer approval.
2. After storm drain inlets have been labeled (under this or any previous Orders), inlets with illegible or missing labels shall be recorded and relabeled within one month of inspection, notification, or identification of a missing label.

D3.4 Illicit Discharge Priority Area Inspections

1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement or review, update as necessary, and then implement written procedures to identify and abate sources of potential or actual illicit discharges in Priority Areas.

The procedures shall document the Illicit Discharge Priority Areas designated by the Permittee. Priority Areas shall include:

- a. Areas with a history of past illicit discharges;
- b. Areas with a history of illegal dumping including from encampments;
- c. Areas with onsite sewage disposal systems;
- d. Areas with infrastructure more likely to have illegal connections;
- e. Areas with a history of sanitary sewer overflows;
- f. Areas with commercial, industrial, or other types of activities determined by the Permittee as an illicit discharge risk;
- g. Areas upstream of sensitive waterbodies; and

- h. Other areas determined by the Permittee as likely to have illicit discharges.
2. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall create or review and update as necessary, a map or maps which may be in hard copy, electronic, or geographic information system (GIS) form and which shall include the following:
 - a. The Outfall Map developed pursuant to Order Provision D3.2;
 - b. All areas identified as Illicit Discharge Priority Areas;
 3. The maps shall be reviewed annually at minimum and updated as necessary.
 4. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall begin an Illicit Discharge Priority Area Inspection Program. At a minimum, the Program must include:
 - a. Visual inspections of all Priority Areas at least every two years. The visual inspections must be preceded by at least 72 hours of dry weather.
 - b. Observations for improperly maintained, improperly followed, or absent illicit discharge prevention best management practices; and
 - c. Observations for evidence of unauthorized discharges, illegal connections, and potential discharge of pollutants to stormwater
 - d. Investigation of dry weather flows. Upon observing any dry weather flows, the Permittee shall track the flow back to its source. If the source cannot be identified, water quality testing shall be performed. Sampling shall include the indicator parameters in Table D3.1 Indicator Parameters and Action Level Concentrations and any other parameters of concern based on observation of the flow and other relevant information.

The Permittee shall compare the sample analysis results to the Action Level Concentrations contained in Table D3.1 and conduct a follow-up investigation if action level concentrations are exceeded, and the source of the illicit discharge has not been identified and eliminated. The Permittee may reference the Center for Watershed Protection's 2004 document titled "[Illicit Discharge Detection and Elimination, A Guidance](#)

[Manual for Program Development and Technical Assessments](#)” for appropriate field test methods;

- e. Illicit discharge response. Dry weather flows determined to be illicit discharges shall be investigated, abated, and documented according to the procedures in the Illicit Discharge and Spill Response Plan (D3.1).

Table D3.1 Indicator Parameters and Action Level Concentrations

Indicator Parameter	Action Level Concentration
Ammonia	Greater than or equal to 50 milligrams per liter
Color	Greater than or equal to 500 color units
Conductivity	Greater than or equal to 2,000 microsiemens per centimeter
Hardness	Less than or equal to 10 milligrams per liter as CaCO_3 or greater than or equal to 2,000 milligrams per liter as CaCO_3
pH	Less than or equal to 5 or greater than or equal to 9
Potassium	Greater than or equal to 20 milligrams per liter
Turbidity	Greater than or equal to 1,000 Nephelometric Turbidity Units

5. Documentation of Priority Area Inspections shall include the following at a minimum:
 - a. The area inspected
 - b. The dates of inspections,
 - c. Identification of any dry weather flows and their source,
 - d. Determination of whether the observed flows were illicit discharges or authorized non-stormwater discharges,
 - e. Results of any water quality monitoring conducted during the inspection; and
 - f. Locations and descriptions of any missing or inadequate best management practices observed during the inspection.

D3.5 Illicit Discharge Detection and Elimination Staff Training

Within 3 years of the effective date of Order or the Permittee's effective date of designation, whichever is later, the Permittee shall implement a biennial training program for all Permittee staff who, as part of their normal job responsibilities, may be notified of, come into contact with, conduct inspections, or otherwise observe a spill, illicit discharge, or illegal connection to the storm drain system. The training program shall include, at a minimum:

1. Identification of an illicit discharge or illegal connection;
2. Lessons learned from historical spills and illicit discharges;
3. Proper procedures for reporting and responding to the spill, illicit discharge or illegal connection;
4. Follow-up training as needed to address changes in regulations, procedures, techniques, or staffing;
5. An assessment of trained staff's knowledge of identifying, reporting, and responding to illicit discharges and revisions to the training as needed;
6. Training for new staff no later than six months after the start of employment; and

D4. POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM

The Permittee shall develop and implement a Pollution Prevention and Good Housekeeping for Permittee Operations Program to prevent or reduce the amount of pollutant runoff from Permittee operations. The Permittee shall implement appropriate best management practices for preventing or reducing the amount of stormwater pollution generated by Permittee operations.

D4.1 Inventory of Permittee-Owned or Operated Facilities

1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop or review and update as necessary, an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality. The inventory shall include Permittee-owned or operated facilities within their jurisdiction that are potential sources of pollution in stormwater, including the following:

- a. Airports;
 - b. Animal control facilities;
 - c. Chemical storage facilities;
 - d. Composting facilities;
 - e. Equipment storage and maintenance facilities (including landscape-related operations);
 - f. Fuel farms;
 - g. Fire stations and training facilities;
 - h. Hazardous waste disposal facilities;
 - i. Hazardous waste handling and transfer facilities;
 - j. Incinerators;
 - k. Landfills;
 - l. Materials storage yards;
 - m. Pesticide storage facilities;
 - n. Public parking lots;
 - o. Public golf courses;
 - p. Public swimming pools;
 - q. Public parks and recreation areas;
 - r. Public works yards;
 - s. Public marinas;
 - t. Recycling facilities;
 - u. Salt or de-icing storage facilities and snow storage facilities;
 - v. Solid waste handling and transfer facilities;
 - w. Transportation hubs (e.g., bus transfer stations);
 - x. Vehicle storage and maintenance areas;
 - y. Vehicle fueling facilities; and
 - z. Other (as directed by the appropriate Regional Water Board)
2. The inventory shall include the following for each facility:
 - a. Name and type of facility;
 - b. The facility manager's name, title, and contact information;
 - c. Decimal latitude-longitude coordinates of the facility's main access point and physical address, if applicable;
 - d. Date of last assessment or inspection;
 - e. Industrial General Permit Waste Discharge Identification Number if applicable; and
 - f. Whether the facility was identified as a hotspot as required in the section Identification of Pollutant Hotspots.

D4.2 Map of Permittee-Owned and/or Operated Facilities

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall create or review and

update as necessary, a map or maps of the Permittee-owned or operated facilities identified in section D4.1. The map(s) shall include the following:

1. The location of the facilities;
2. The stormwater drainage system serving the facilities, including drain inlets and outfalls;
3. The receiving waters to which these facilities discharge or identification of neighboring MS4 where a discharge passes through a neighboring MS4 prior to reaching receiving waters; and
4. Identification of hotspot facilities as required in the section Identification of Pollutant Hotspots.

D4.3 Identification of Pollutant Hotspots

1. Within 3 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall conduct an initial inspection and assessment of all facilities in the inventory (created per section D4.1). Facilities inspected under the previous Order and facilities subject to the Industrial General Permit, including those with No Exposure Certifications, do not need an initial inspection.. The inspections shall identify actual or potential pollutant discharge and Hotspot Facilities using the Center for Watershed Protection's guide on Urban Subwatershed and Site Reconnaissance, or equivalent. See Chapter 4 of the [Center for Watershed Protection's Unified Subwatershed and Site Reconnaissance: A User's Manual](#). Among the factors to be considered in identifying hotspot facilities are:
 - a. The type and volume of pollutants stored at the site;
 - b. The presence of improperly stored materials;
 - c. Outdoor material handling and equipment maintenance activities
 - d. Disturbed or erodible soils;
 - e. Proximity to water bodies;
 - f. History of poor housekeeping practices or deficient pollution prevention best management practice implementation; and
 - g. History of illicit discharges.
2. Hotspots shall include, at a minimum, the following:
 - a. The Permittee's maintenance and corporation yards;

- b. Vehicle storage, maintenance, washing areas;
 - c. Hazardous waste facilities;
 - d. Bulk fuel storage locations;
 - e. Vehicle fueling locations;
 - f. Airports;
 - g. Marinas; and
 - h. Any other facilities at which chemicals or other materials are likely to be discharged in stormwater.
3. The Permittee shall document initial inspection and assessment procedures and results of site evaluation checklists used to conduct the initial inspection and assessment.
4. The Permittee shall update the inventory of Permittee-owned or operated facilities annually, as needed. Permittees shall conduct the initial inspection and assessment of a facility within one year of it being added to the inventory.

D4.4 Hotspot Facility Stormwater Pollution Prevention Plan

1. Within 4 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, for each hotspot facility identified per the section Identification of Pollutant Hotspots, the Permittee shall develop or update as needed, and implement a written site-specific Stormwater Pollution Prevention Plan that identifies existing stormwater best management practices installed, implemented, and maintained and also identifies additional best management practices that are needed to minimize the discharge of pollutants to protect water quality.
2. The Stormwater Pollution Prevention Plan(s) shall be kept on-site at each of the Permittee-owned or operated facilities' offices for which it was completed and shall be updated as necessary.
3. At a minimum, the Stormwater Pollution Prevention Plan will include the following:
- a. Facility address;
 - b. Purpose of the document;
 - c. Key contacts at the facility;
 - d. Site map with drainage and discharge locations identified;

- e. Types and location of pollutant generating materials that are handled and stored at the facility that may be exposed to stormwater;
 - f. Facility stormwater best management practices;
 - g. Spill control and cleanup procedures including spill kit location;
 - h. Spill notification procedures (e.g., fire department, Certified Unified Program Agencies);
 - i. Estimated or approximate dates of scheduled quarterly and annual inspections per the section Hotspot Facility Inspections, Visual Monitoring and Remedial Action; and
 - j. Inspection procedures and checklist for inspections conducted to ensure proper selection, implementation, and maintenance of all best management practices.
4. The Hotspot Stormwater Pollution Prevention Plan requirement is satisfied by an Industrial General Permit Stormwater Pollution Prevention Plan. Industrial General Permit facilities with No Exposure Certifications in good standing with the State Water Board do not need to prepare a Hotspot Stormwater Pollution Prevention Plan.
5. The Stormwater Pollution Prevention Plan requirements may be satisfied by existing documents such as the Hazardous Materials Business Plan, or other equivalent document if all minimum requirements are included.

D4.5 Hotspot Facility Inspections, Visual Monitoring and Remedial Action

Within 4 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, New Permittees shall implement an inspection program of Permittee-owned or operated hotspot facilities per the requirements of this section. Renewal Permittees shall continue their existing hotspot facility inspection programs and review and make any necessary updates for compliance with this section within 3 years of the effective date of this Order. The inspections performed as a part of Stormwater Pollution Prevention Plan implementation for facilities covered under the Industrial General Permit can be counted towards the facility inspection requirements in this section. Facilities with Industrial General Permit No Exposure Certifications in good standing do not need to conduct Hotspot facility inspections.

1. Inspection Frequency - The Permittee shall conduct quarterly best management practice implementation inspections and an annual Comprehensive Inspection.

2. Hotspot Facility Quarterly Best Management Practice Implementation Inspections - The Permittee shall conduct quarterly best management practice Implementation Inspections that include the following elements, at a minimum:
 - a. Observation of facility discharge locations for stormwater and non-stormwater discharges. Where discharges are observed, identify any observed problems (e.g., color, foam, sheen, turbidity) associated with pollutant sources or best management practices;
 - b. An inspection of all areas of pollutant generating activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the stormwater conveyance system;
 - c. Inspection of best management practices to identify implementation deficiencies and determine the need for maintenance or follow-up; and
 - d. Identification of any deficiencies and a schedule of follow-up actions that will be completed to correct deficiencies as soon as practicable.
3. Hotspot Facility Annual Comprehensive Inspections - Once per year concurrent with one of the quarterly inspections, the Permittee shall conduct a review of the Stormwater Pollution Prevention Plan and effectiveness of all best management practices and their implementation to ensure pollutants are not being discharged.
4. The Permittee shall document all inspection dates, inspection results, and corrective actions. Facilities shall maintain a log of inspection reports with their procedures.

D4.6 Permittee Operations and Maintenance Activities

Within 3 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall assess its operation and maintenance activities for potential to discharge pollutants in stormwater. Assessments shall be conducted pursuant to the following requirements:

1. The Permittee shall conduct an assessment to identify operation and maintenance activities that have a potential to discharge pollutants in stormwater including but not limited to the following:
 - a. Road and parking lot maintenance, including sidewalk repair, curb and gutter repair, pothole repair, pavement marking, sealing, and re-paving;

- b. Bridge maintenance, including re-chipping, grinding, saw cutting, and painting;
 - c. Cold weather operations, including plowing, sanding, and application of deicing compounds and maintenance of snow disposal areas;
 - d. Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation;
 - e. Material stockpiling (e.g., asphalt and concrete grindings, construction debris, soil);
 - f. Permittee-sponsored or sanctioned events such as large outdoor festivals, parades, or street fairs;
 - g. Green waste deposited in the street;
 - h. Graffiti removal; and
 - i. Hydrant flushing.
2. The Permittee shall identify all materials that could be discharged from each of these operation and maintenance activities, and the pollutant characteristics of the materials.
3. The Permittee shall develop, implement, and document best management practices that, when applied during Permittee operation and maintenance activities, will reduce or eliminate pollutants in stormwater and non-stormwater discharges. The Permittee shall refer to the California Stormwater Quality Association Municipal Handbook or equivalent when developing the best management practices.
4. The Permittee shall annually evaluate all best management practices implemented during operation and maintenance activities for effectiveness and revise as necessary.
5. The Permittee shall maintain a procedure to dewater and dispose of materials extracted from its storm drain system. This procedure shall ensure that water and waste materials removed during the cleaning process will not reenter the MS4.

D4.7 Water Quality and Habitat Enhancement in Flood Management Facilities

Within 3 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement a process or review, update, and implement existing processes as necessary to incorporate water quality and habitat enhancement features in the

design of all new and rehabilitated flood management projects that discharge to the storm drain system.

D4.8 Landscape Design and Maintenance

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement a landscape design and maintenance program or review, update, and implement existing programs to reduce the amount of water, pesticides, herbicides, and fertilizers applied during Permittee operations and activities.

The program shall address the following requirements:

1. The Permittee shall evaluate pesticides, herbicides, and fertilizers used and application activities performed and identify pollution prevention and source control opportunities.
2. The Permittee shall implement landscape management measures that rely on non-chemical solutions to reduce the discharge of pesticides, herbicides, and fertilizers including the following:
 - a. Follow drought-tolerant landscape management practices;
 - b. Use native or climate appropriate plants;
 - c. Practice grasscycling on decorative turf landscapes;
 - d. Keep grass clippings and leaves away from waterways and out of the street using mulching or composting;
 - e. Prevent application of pesticides, herbicides, and fertilizers during irrigation or within 48 hours of predicted rainfall with greater than 50 percent probability as predicted by National Oceanic and Atmospheric Administration (NOAA); and
 - f. Limit or replace herbicide and pesticide use (e.g., conducting manual weed and insect removal).
3. The Permittee shall collect and properly dispose of unused pesticides, herbicides, and fertilizers.
4. The Permittee shall minimize irrigation run-off such as by using an evapotranspiration-based irrigation schedule and rain sensors.

5. The Permittee shall maintain an inventory of each pesticide, herbicide and fertilizer used during Permittee operations and activities in the permit area. The inventory shall include the following:
 - a. Name and type of each pesticide, herbicide, and fertilizer; and
 - b. Approximate annual usage (e.g., gallons per year, cubic feet per year) of each pesticide, herbicide, and fertilizer.

D4.9 Routine Storm Drain Inspection and Maintenance

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall ensure their maintenance program includes the following, at a minimum:

1. Storm drain inspections – A strategy to inspect storm drains within the Permittee's jurisdiction. At a minimum, Permittees shall inspect all high priority catch basins annually, prior to the rainy season. High priority catch basins include the following:
 - a. Catch basins known to accumulate a significant amount of sediment, trash, and/or debris;
 - b. Catch basins collecting large volumes of runoff;
 - c. Catch basins collecting runoff from areas that do not receive regular street sweeping;
 - d. Catch basins collecting runoff from drainage areas with exposed or disturbed soil; and
 - e. Catch basins that receive citizen complaints or reports.
2. Storm drain cleaning – A strategy to clean catch basins and other system components. If the entire system is not cleaned annually, cleaning frequencies shall be based on priority areas, with higher priority areas receiving more frequent maintenance.
3. 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.

D4.10 Long-Term Asset Maintenance, Rehabilitation, and Replacement

1. Condition Assessments

- a. Within 3 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall incorporate Condition Assessments into all inspections of Permittee-owned hard assets within the Permittee's storm drain system.
- b. Hard assets include the following:
 - Outfalls, as defined and inventoried per Section D3.2;
 - Catch basins and other elements of the storm drain system inspected per Section D4.9;
 - Post-construction structural controls installed per Section D6;
 - Any structural control devices installed to comply with ASBS requirements per Attachment F;
 - Any structural controls installed to comply with TMDLs per Attachment G;
 - Trash control devices installed per Attachment H; and
 - Any other permanent structural controls installed to serve a water quality function to comply with this Order.
- c. Condition Assessments shall be used to proactively identify maintenance needs beyond routine maintenance and cleaning for the hard assets to maintain their intended function and effectively implement the requirements of this Order. This may include enhanced maintenance, rehabilitation, and replacement as necessary.
- d. Condition Assessments may be tracked in a single master inventory or database, or be incorporated into existing inventories or maintenance plans and shall be updated as inspections and maintenance are conducted. Condition Assessments records shall be made available upon request by the State or Regional Water Boards.

2. Long-Term Asset Operation and Improvement Plan

- a. Within 5 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall

develop of a Long-term Asset Operation and Improvement Plan. The Plan shall be developed using data obtained through Condition Assessments performed per Section D4.10.1 and shall include the following:

1. List of known infrastructure repairs or improvements needed (e.g., deteriorated infrastructure, routinely flooded areas),
 2. Deferred maintenance needs (e.g., structural controls with deferred maintenance);
 3. List of any hard assets in need of replacement in the following five years; and
 4. Estimates of costs for the repairs and maintenance.
- b. The initial Long-Term Asset Operation and Improvement Plan shall include data available based on inspections that have been completed with the Condition Assessment element at that time. The plan shall be updated every two years.
- c. The Long-Term Asset Operation and Improvement Plan shall account for liabilities, risks, and stressors to the MS4 resulting from climate change that may impact the desired function of its hard assets including impacts of shifting precipitation patterns, sea level rise, and warming temperatures.

D4.11 Alternative and Existing Asset Management Programs

A Permittee may propose, for Regional Water Board Executive Officer approval, an alternative or existing approach to comply with Section D4.10 (Long-Term Asset Maintenance, Rehabilitation, and Replacement), provided the Permittee demonstrates the approach includes elements equivalent to the requirements in this Order.

D4.12 Pollution Prevention and Good Housekeeping Staff Training

The Permittee shall train staff involved in implementing pollution prevention and good housekeeping practices in this section. The training shall occur at least once every two years and include at a minimum:

1. A general stormwater education component;
2. Training on the applicable permit requirements including clear guidance on appropriate stormwater best management practices to use at municipal facilities and during typical operation and maintenance activities;

3. Follow-up training, as needed, to address changes in procedures, techniques, or staffing;
4. Assessment of trained staff's knowledge of pollution prevention and good housekeeping and revisions to the training as needed; and
5. Training for new staff who will be involved in implementing pollution prevention and good housekeeping practices no later than six months after the start of employment.

D4.13 Third Party Activities

The Permittee shall require that any contractors hired by the Permittee to perform operation and maintenance activities shall be contractually required to comply with all the stormwater best management practices, good housekeeping practices, and standard operating procedures described above. The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate best management practices, good housekeeping practices and following standard operating procedures.

D4.14 Pet Waste Pollution Prevention and Control

The Permittee shall implement pet waste pollution prevention and control measures to prevent pathogen discharges to receiving waters.

1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall identify and create a pet waste hotspot inventory. The inventory shall include locations owned and operated by the Permittee with high potential for dog or other pet waste accumulation.
 - a. The pet waste hotspot inventory shall include the following information for each site:
 - 1) Site name (park name, trail name, or other geographic identifier);
 - 2) Description of BMPs currently employed at the site (e.g., signage, waste bag dispensers, trash bins) and the maintenance schedule for those BMPs;
 - 3) Identification of sites with improper pet waste disposal determined by at least one site visit by Permittee staff. The site visit may be conducted as part of other routine maintenance or inspections;

- 4) Date and findings of site visit(s);
- 5) Description of any proposed BMPs or increased maintenance necessary to prevent improper disposal of pet waste at the site.
- b. Locations to be documented in the pet waste hotspot inventory include but are not limited to the following:
 - 1) Dog parks;
 - 2) Recreational areas where dogs are allowed such as trails.
- c. The inventory shall be reviewed annually at a minimum.

D4.15 Snow Removal and Traction Application Operations Pollution Prevention and Control

- 1. This section is not applicable to Permittees with the majority of permitted area below 3,000 feet in elevation or infrequent snow management needs. Upon including a statement as such in their annual report, compliance with section D4.15 is not required for those permittees.
- 2. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement a street sweeping and snow removal operation BMP and maintenance program or review, update, and implement existing programs to reduce the amount of traction sand applied during Permittee operations, fugitive dust, roadway sediment, and trash accumulation and discharges to receiving waters. The program shall address the following requirements:
 - a. The Permittee shall evaluate volumes and locations of traction sand application and identify application reduction, pollution prevention and source control opportunities. The Permittee shall record road abrasive and deicer applications, including location, date, time, and application rate. This evaluation shall prioritize street sweeping activities for roadways and paved surfaces with greater pollutant load and proximity to or discharging to waterbodies or other environmentally sensitive areas.
 - b. The Permittee shall evaluate effective street sweeping schedules and develop a maintenance plan to sweep deposited traction sand to roadways within 72 hours of dry roadways, periods of dry weather, and prior to rain events.

- c. The Permittee shall implement effective street sweeping, roadway sediment, and traction sand discharge mitigation BMPs, including the following:
 - 1) Select traction sand that contains no fine sediment particles and resists pulverization to fines.
 - 2) Street sweeping of tracked sediment on paved public roads and associated stormwater conveyance infrastructure (e.g. curb and gutter) shall be implemented to prevent sediment from entering a stormwater conveyance system and/or receiving waters.
 - 3) Street sweeping activities shall utilize one of the following sweeper types:
 - i. Mechanical sweeper followed by a vacuum-assisted sweeper.
 - ii. Vacuum-assisted, dry, waterless sweeper.
 - iii. Regenerative sweeper.
 - 4) To mitigate the potential of excessive dust generation, kick brooms and/or sweeper attachments shall not be used for street sweeping.
 - 5) The generation of dust during street sweeping operations shall be kept to a minimum. The application of water for dust control or a vacuum shall be implemented to mitigate the potential of excessive dust generation.
 - 6) If freezing conditions are anticipated, and the application of dust control water during the sweeping process is considered hazardous, street sweeping shall be implemented in an appropriate manner to mitigate the potential of excessive dust generation including:
 - i. Utilizing a vacuum-assisted, dry, waterless sweeper (or functional equivalent).
 - ii. Utilizing a regenerative sweeper (or functional equivalent).
 - iii. Conducting street sweeping operations during periods of the day when temperatures are above freezing, and dust control water can be applied safely.

- 7) Remove collected material, including sediment, trash and debris, from paved shoulders, drainage inlets, curbs, dikes, and other drainage areas.
 - 8) Adjust street sweeper brooms frequently to maximize sweeping operations efficiency.
 - 9) Sweeper material shall be disposed of in compliance with all applicable local, state, and federal requirements.
 - 10) Implement traction sand traps or other similar permanent stormwater BMPs to reduce sediment and traction sand discharges in areas where traction sand must be repeatedly applied for public safety, where other BMPs are not sufficient to control discharges, and in areas close to waterbodies or other sensitive environments.
- d. The Permittee shall evaluate volumes and location of high pollutant loaded snow and identify pollution prevention and source control opportunities. This evaluation shall prioritize snow removal and storage activities for roadways and paved surfaces with greater pollutant load and proximity to or directly discharging to waterbodies or other environmentally sensitive areas.
- e. The Permittee shall implement effective snow removal and storage BMPs, including:
- 1) Prevent discharges of excess pollutants to waterbodies from snow removal and storage practices.
 - 2) Do not store snow near or within drainage ways, including surface waters, ephemeral drainages, permanent stormwater BMPs, and stormwater infrastructure, unless a berm or other BMP has been constructed to protect sensitive areas.
 - 3) Snow storage areas must be paved, sited and sized to accommodate the expected volume of snow, visibly delineated, and with appropriate BMPs installed to minimize pollutant and runoff impacts. If a storage area cannot be paved, BMPs must be implemented to prevent soil disturbance and compaction.
 - 4) Inspect and maintain designated snow storage areas to ensure effective infiltration rates and remove accumulated traction sand, trash, and debris.

D5. CONSTRUCTION SITE STORMWATER RUNOFF 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 must include the following elements:

D5.1 Construction Site Stormwater Runoff Control Legal Authority

1. Applicability - Regulated Construction Projects are defined as follows:
 - a. Projects required to be enrolled in the Construction General Permit including those with erosivity waivers;
 - b. Construction projects disturbing less than one acre that are subject to a municipal grading or building permit;
2. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, New Permittees shall develop and adopt, and Renewal Permittees shall review, and as necessary revise and adopt, an enforceable construction site stormwater runoff control ordinance that applies to all Regulated Construction Projects. The ordinance shall require a site-specific and seasonally appropriate combination of the following pollution prevention measures, at a minimum:
 - a. Erosion controls;
 - b. Sediment controls;
 - c. Soil stabilization;
 - d. Dewatering pollution controls;
 - e. Source controls;
 - f. Prevention of unauthorized non-stormwater discharges,
 - g. Good housekeeping practices, and
 - h. Other pollution prevention measures as appropriate.

D5.2 Construction Site Inventory and Tracking

1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop or review and update as necessary, a construction site inventory. The Permittee shall maintain the inventory to track the following elements for each Regulated

Construction Project having received a grading or building permit or similar discretionary approval. The inventory shall include the following:

- a. Relevant contact information for each project including name, address, phone, email, for the landowner and primary contractor or developer;
- b. Project location (address, if applicable and geographic coordinates);
- c. Area of soil disturbance;
- d. Project receiving waters;
- e. Identification of downstream waterbodies that are impaired by sediment-related pollutants or 303(d)-listed for sediment or turbidity;
- f. Current construction phase (e.g., construction not initiated, staging, clearing and grubbing, mass grading, utilities, streets, vertical, exterior finishing, interior finishing);
- g. Construction General Permit Risk Level;
- h. Site priority based on the subsection Prioritization under Construction Site Inspection (D5.4);
- i. Required inspection frequency;
- j. Date of last completed inspection;
- k. Date of approval for construction (e.g., grading or building permit);
- l. Unresolved follow-up enforcement actions and date of violation;
- m. The project start and completion dates or anticipated dates; and
- n. The date the Permittee approved the site-specific construction Erosion and Sediment Control Plan in accordance with this Provision.

D5.3 Construction Plan Review and Approval Procedures

The Permittee shall:

1. Require that a site-specific construction Erosion and Sediment Control Plan be submitted for all Regulated Construction Projects.
2. Review and provide written approval of construction Erosion and Sediment Control Plans prior to issuing a grading or building permit. If an approved Erosion and Sediment Control Plan is revised, the Permittee shall require the submittal of the revisions and review and provide written approval for the revised Erosion and Sediment Control Plan.

3. Conduct and document a review of each site-specific construction Erosion and Sediment Control Plan using a checklist or similar process.
4. The construction Erosion and Sediment Control Plan shall include at a minimum:
 - a. All measures necessary to be consistent with the Permittee's construction site stormwater ordinance(s).
 - b. Site-specific best management practice rationale, including supporting soil loss or other design calculations as appropriate, to ensure best management practices are properly sized, located, and effective for the season during which construction will occur.
 - c. The Permittee shall ensure the Applicant uses appropriate site-specific construction site best management practices based on the CASQA Construction Best Management Practice Handbook or equivalent or other best management practices approved by the Permittee. The practices shall include the following:
 - 1) Erosion control best management practices;
 - 2) Sediment control best management practices;
 - 3) Dewatering best management practices;
 - 4) Source control best management practices;
 - 5) Unauthorized non-stormwater discharge best management practices;
 - 6) Good housekeeping best management practices; and
 - 7) Other pollution prevention best management practices.
 - d. A list of state and federal permits that impose conditions on the soil-disturbing and dewatering elements of the Regulated Construction Project, including, but not limited to, the Construction General Permit, 401 Water Quality Certification, U.S. Army Corps 404 permit, California Department of Fish and Wildlife 1600 Agreement, and dewatering permits required by the Regional or State Water Board.
5. The Permittee shall include as a condition of the grading or building permit that the operator submit evidence to the Permittee that all applicable permits directly associated with the grading activity and dewatering activity

(including all state and federal permits listed above) have been obtained prior to commencing the soil disturbing activities or dewatering activities.

6. For projects where a Stormwater Pollution Prevention Plan is developed pursuant to the Construction General Permit, it may be accepted by the Permittee as the Erosion and Sediment Control Plan. The Permittee is responsible for reviewing applicable portions of the Stormwater Pollution Prevention Plan for compliance with the Permittee's construction site stormwater runoff control ordinance and this Order.

D5.4 Construction Site Inspection and Enforcement

1. Construction Inspection Procedures
Within 1 year of the effective date of this Order or the Permittee's effective date of designation, whichever is later, New Permittees shall develop and implement procedures for inspecting Regulated Construction Projects, and Renewal Permittees shall review, and revise as necessary, procedures for inspecting Regulated Construction Projects. The procedures must rely on adequate legal authority to inspect public and private construction projects to verify compliance with the Permittee's construction site stormwater control ordinance(s) and conduct enforcement if necessary.
2. Inspection Prioritization
The Permittee shall develop and implement a procedure to identify priority Regulated Construction Projects for inspection.
 - a. Regulated Construction Projects with Construction General Permit Risk Level and Linear Utility Project Type two or three shall be considered priority Regulated Construction Projects.
 - b. The Permittee shall consider the following criteria based on threats to water quality in establishing its prioritization criteria:
 - 1) Soil erosion potential—sites with easily erodible soils present a greater water quality risk;
 - 2) Area and volume of disturbed soil—sites with large areas or piles of disturbed soil present a greater water quality risk;
 - 3) Site slopes—erosion potential increases with increasing slope;
 - 4) Proximity to receiving waterbodies—sites adjacent to or that discharge directly to creeks, lakes, wetlands, and other water bodies present a greater water quality risk;

- 5) Sensitivity of receiving water bodies—sensitive water bodies include those designated as impaired under section 303(d) of the Clean Water Act and those with designated beneficial uses of COLD, SPAWN, and MIGRATORY;
 - 6) Planned Dewatering discharges—sites that require groundwater or stormwater dewatering that may require prior Regional Water Board approval;
 - 7) History of non-compliance from the site operator—Site operators with a history of stormwater violations may necessitate a greater level of Permittee oversight;
 - 8) Active soil disturbance during periods of precipitation or saturated soil conditions (i.e. snow melt runoff); and
 - 9) Projects exceeding one acre that have obtained a Construction General Permit erosivity waiver.
 - 10) Other Regulated Construction Projects the Permittee or Regional Water Board staff determines as significant threats to water quality shall be designated as priority sites.
- c. The Permittee shall evaluate and document (e.g., site evaluation checklists used to conduct the prioritization) the review of each Regulated Construction Project based on its prioritization criteria and assign an inspection frequency.
3. Construction Site Inspection
- The Permittee shall inspect Regulated Construction Projects and enforce the Permittee's stormwater ordinance(s). The inspection procedures shall be consistent with the Construction Program Requirements of this Order.
- a. Inspections shall verify at a minimum:
- 1) Proper installation of best management practices consistent with Permittee approved construction site stormwater pollution control plan;
 - 2) Adequate best management practice maintenance;
 - 3) Best management practice effectiveness; and
 - 4) Pollutants of concern are not discharging or have potential to discharge from the Regulated Construction Project.

- b. At a minimum, the Permittee shall inspect priority Regulated Construction Projects at the following intervals:
 - 1) At least once prior to the rainy season;
 - 2) At least once during the rainy season from October 1 through April 30.
 - c. The Permittee may temporarily reduce inspection frequency for inactive Regulated Construction Projects that the Permittee has verified are stabilized and do not present a threat to water quality and Construction General Permit projects with inactive status approved by the Regional Water Board.
 - d. At the conclusion of a Regulated Construction Project, the Permittee shall inspect to ensure that all areas of disturbed soil have been stabilized and that all temporary erosion and sediment control measures have been removed.
4. Alternative Construction Site Oversight
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.

D5.5 Permittee Construction Staff Training

- 1. The Permittee shall ensure that Permittee and Third-Party Plan Reviewers, Stormwater Inspectors, and Code Enforcement and Permitting staff, implementing the construction site stormwater runoff control program are adequately trained to:
 - a. Perform technical reviews of local site-specific construction Erosion and Sediment Control Plans;
 - b. Evaluate and identify proper control measure selection, installation, implementation, and maintenance;
 - c. Implement administrative requirements such as inspection reporting and tracking and
 - d. Implement the Permittee's Enforcement Response Plan.

2. All staff conducting Regulated Construction Project inspections shall be trained to identify pollutants of concern and identify actual and potential illicit discharges.
3. The Permittee shall maintain at least one designated staff member certified pursuant to a State Water Board sponsored program for the following roles:
 - a. A Qualified Stormwater Pollution Prevention Plan Developer (QSD) to supervise plan review; and
 - b. A Qualified Stormwater Pollution Prevention Plan Practitioner (QSP) to supervise inspection operations.

D5.6 Construction Site Operator Outreach and Education

The Permittee shall develop and distribute educational materials to construction site operators, project applicants proposing or operating Regulated Construction Projects within the MS4's jurisdiction. Renewal Permittees shall continue their existing construction outreach programs and New Permittees shall begin their construction outreach programs within 3 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later. The construction outreach program shall include the following:

1. Develop or utilize existing outreach materials (e.g., brochures, posters) that provide education on appropriate selection, installation, implementation, and maintenance of stormwater best management practices, as well as overall compliance with the Permittee's construction site stormwater runoff control ordinance.
2. Distribute appropriate outreach materials through Permittee permitting and inspection processes. The Permittee's contact information and website shall be included in these materials.
3. Update the existing stormwater website, as necessary, to include information on appropriate selection, installation, implementation, and maintenance of stormwater best management practices.

D6 POST-CONSTRUCTION STORMWATER MANAGEMENT PROGRAM

D6.1 Post-Construction Program Adoption and Initiation Timeline

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall adopt, update, or

reference Low Impact Development performance criteria required by this Order and require the Post-Construction Stormwater Management Program be applied to applicable Regulated Projects and Small Projects.

D6.2 Effective Date for Applicability

1. The Permittee shall comply with the post-construction requirements of this Order for all public and private projects under the Permittee's jurisdiction, to the extent allowable by law, that meet any of the approval milestones, as follows.
 - a. Discretionary projects that have not yet been deemed complete for processing.
 - b. Projects that have received discretionary approval but that have been subsequently modified to include additional impervious area through a process such as a tentative map extension, where changes are allowed by law.
 - c. Projects that do not require discretionary approval and that have not received ministerial approval.
 - d. Public projects that require no ministerial or discretionary approval and have not yet received approval of their governing body or designee for the initiation of the project.

D6.3 Enforceable Mechanisms

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop or review and update as necessary, enforceable mechanisms that will implement the requirements in the Post-Construction Stormwater Management Program (section D6) of this Order and may include municipal codes, regulations, standards, and specifications. The Permittee shall:

1. 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.
2. Approve new and/or modified enforceable mechanisms that resolve regulatory conflicts and implement the Post-Construction Stormwater Management Program (section D6) requirements if necessary.

3. Apply new and/or modified enforceable mechanisms to Regulated Projects and Small Projects.

D6.4 Small Projects

1. Small Projects include all projects that create and/or replace (including projects with no net increase in impervious footprint) 2,500 square feet or more but less than 5,000 square feet of impervious surface and are not part of a larger plan of development.
2. Small projects do not include linear utility projects or road projects.
3. The Permittee shall require Small Projects to implement applicable Source Control Measures and at least one Site Design Measure listed in section D6.8.4. Opportunities to implement Site Assessment Methods shall also be considered.
4. Small Projects shall submit a checklist or otherwise indicate as part of their permit application which Source Control Measures, Site Assessment Methods, and Site Design Measures will be used in the project.

D6.5 Regulated Projects

1. Regulated Projects are projects on public or private land that create 5,000 square feet or more of impervious surface (collectively over the entire project site) and that are subject to the planning authority or building authority of the Permittee.
2. The Permittee shall require Regulated Projects to implement low impact development design standards per the Low Impact Development Design Standards section.
3. The Permittee shall develop and implement an equivalent process for reviewing and implementing these requirements for both public and private development projects.

D6.6 Regulated Project Categories

1. Development Projects
 - a. Development Projects include both new development and redevelopment. New development projects involve no alteration of existing impervious surface. Redevelopment projects may either entirely involve alteration of existing impervious surface or some alteration of

existing impervious surface alongside addition of new impervious surface.

b. Associated Public Infrastructure Improvements

- 1) Regulated Projects that include public infrastructure improvements associated with private development projects shall include the public infrastructure improvement in the overall LID design of the associated project (i.e. include the new or replaced impervious area of the infrastructure when sizing Permanent Structural Controls).
- 2) Due to the difficulty in segregating the drainage from right of way improvements from the remainder of the existing street, runoff from associated public infrastructure improvements may:
 - a) Be treated within a different Drainage Management Area (DMA) at the Regulated Project (i.e. runoff from the public infrastructure may be rerouted to another DMA); or
 - b) Follow USEPA Green Street guidance for public infrastructure improvements where the runoff cannot be treated within a DMA at the existing project.

c. Site Redevelopment

- 1) Where a redevelopment project results in either:
 - a) Alteration of 50 percent or more of the impervious surface of a previously existing development, or
 - b) An increase of 50 percent or more of the impervious surface of a previously existing development,the project's stormwater controls (i.e., Permanent Stormwater Control Measures) shall be designed and sized to treat stormwater runoff from the entire redevelopment project consisting of all existing, new, and replaced impervious surfaces.
Otherwise, the project's stormwater controls may be designed and sized to treat only the new and/or replaced impervious surface of the project .
- 2) Where a redevelopment project is redeveloping impervious areas that are being treated by Permanent Stormwater Control Measures installed pursuant to Order WQ 2013-001-DWQ (the previous Small MS4 Order), that area may be counted as treated in the stormwater control design as long as the previous control is maintained.

d. Specific exclusions to this category are:

- 1) Interior remodels; and

- 2) Routine maintenance or repair such as:
 - a) Roof or exterior wall surface replacement;
 - b) Pavement resurfacing within the existing footprint that does not expose the underlying soil or pervious subgrade; and
 - c) Full-depth reclamation that does not change the pre-project drainage patterns and is not associated with non-excluded new or redevelopment projects.

2. Road and Linear Utility Projects

Regulated Projects include any of the following types of road projects and linear utility projects that create and/or replace 5,000 square feet or more of impervious surface and that fall under the jurisdictional authority, planning authority, or building authority of a Permittee:

- a. New development of streets or roads.
- b. Redevelopment of streets or roads.
 - 1) Where a redevelopment project results in either:
 - a) Alteration of 50 percent or more of the impervious surface of an existing street or road, or
 - b) An increase of 50 percent or more of the impervious surface of a previously existing street or road,

The project's stormwater controls (i.e., Permanent Stormwater Control Measures) shall be designed and sized to treat stormwater runoff from the entire redevelopment project consisting of all existing, new, and replaced impervious surfaces.

Otherwise, the project's stormwater controls may be designed and sized to treat only the new and/or replaced impervious surface of the project.

- c. Linear utility projects that create and/or replace more than 5,000 square feet of contiguous impervious surface.
- d. The following road and linear utility projects are excluded from the above requirements and are not considered new development or redevelopment projects unless they are associated with non-excluded new or redevelopment projects:
 - 1) Trenching, excavation, and resurfacing associated with linear utility projects;
 - 2) Full-depth reclamation that does not change pre-project drainage patterns;

- e. The following road and linear utility projects are excluded from the above requirements and are not considered new or redevelopment projects:
 - 1) Pavement grinding and resurfacing of existing roadways and parking lots that does not expose the underlying soil or pervious subgrade; and
 - 2) Routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway.

D6.7 Source Control Measures

- 1. Regulated Projects and Small Projects with pollutant-generating activities and sources shall be required to implement standard source control measures, as applicable.
- 2. Measures for 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. At a minimum, Regulated Projects and Small Projects shall include the following source controls as applicable:
 - a. Minimization of stormwater pollutants of concern in urban runoff through measures that may include plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's regulations and standards:
 - 1) Discharges from floor mat, equipment, or hood filter wash racks;
 - 2) Dumpster drips from covered trash, food waste, and compactor enclosures;
 - 3) Discharges from covered outdoor wash areas for vehicles, equipment, and accessories;
 - 4) Swimming pool water, if discharge to onsite vegetated areas is not a feasible option; and
 - 5) Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option;
 - b. Properly designed covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas;
 - c. Properly designed trash storage areas;
 - d. Landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and

incorporates other appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping;

- e. Efficient irrigation systems; and
- f. Storm drain system stenciling or signage.

D6.8 Low Impact Development Design Standards

D6.8.1 Low Impact Development for Stormwater

1. The Permittee shall adopt and implement requirements and standards to ensure design and construction of Regulated Projects that achieve low impact development design standards to reduce runoff, treat stormwater, and provide baseline hydromodification management to meet the requirements of this section.

2. Stormwater Control Measure Design Process

During the planning and development of Regulated Projects, implementation opportunities for each of the Low Impact Development measures listed below and described in detail in subsequent sections shall be considered. These are listed in order of generally increasing complexity of both design and maintenance needs and each step may need to be considered iteratively until a final design is reached:

- a. Site Assessment Methods to minimize the creation of impervious area;
- b. Site Design Measures to maximize the infiltration, capture, and use of stormwater; and
- c. Permanent Stormwater Control Measures to treat and infiltrate stormwater not managed through Site Assessment or Site Design Measures.

Permanent Stormwater Control Measures are engineered technologies designed to remove pollutants from site runoff. Permanent Stormwater Control Measures may include, but are not limited to: bioretention planters, vegetated filter strips and swales, infiltration trenches and basins, sand filters, detention basins and select proprietary devices.

3. Target Pollutants of Concern

Permanent Stormwater Control Measures shall be selected and designed to treat the following pollutants of concern: dissolved and particulate metals, pathogens, nutrients, sediment, hydrocarbons, trash, and fine sediment. This requirement may be met by directing flow into a Permanent Stormwater Control Measure or multiple Permanent Stormwater Control

Measures that control these pollutants. Other site-specific, TMDL, and 303(d)-listed pollutants shall also be identified and treated to the maximum extent practicable.

D6.8.2 Site Assessment Methods

1. 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 reducing runoff, infiltrating runoff, capturing and using runoff, or treating runoff and assuring these goals are incorporated into the project design. The Permittee may adopt or reference an existing low impact development site assessment methodology.
2. The Permittee shall require Regulated Projects to consider optimizing the site layout using the following Site Assessment methods:
 - a. Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed;
 - b. Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration;
 - c. Limit overall impervious coverage of the site;
 - d. Employ development setbacks from creeks, wetlands, and riparian habitats;
 - e. Preserve healthy, vigorous, and mature trees when feasible;
 - f. Conform the site layout along natural landforms;
 - g. Avoid excessive grading and disturbance of vegetation and soils; and
 - h. Replicate the site's natural drainage patterns.

D6.8.3 Drainage Management Areas

1. A Drainage Management Area is the area draining to a single discharge location or Permanent Stormwater Control Measure.
2. The Permittee shall require each Regulated Project to provide a map or diagram delineating the discrete Drainage Management Areas within the developed portions of the project site and demonstrate how stormwater from each Drainage Management Area will be managed to meet the Low Impact Development Design standards.

3. If the Regulated Project is changing the configuration or number of drainage points (and thus the configuration or number of Drainage Management Areas) at the site as part of the project, the project proponent shall provide both pre-project and post-project maps of Drainage Management Areas.
4. Permanent Stormwater Control Measures shall be sized to manage the runoff from the entire Drainage Management Area, including all new, replaced, and existing areas draining to the Permanent Stormwater Control Measure.

D6.8.4 Site Design Measures

Site Design Measures are less complex measures that reduce the amount of stormwater runoff from a site and reduce the area required for control by more complex, engineered treatment controls such as bioretention or flow-through treatment devices.

Site Design Measures include Impervious Connection to Vegetated Areas, Interceptor Trees, Pervious Pavement, and Green Roofs, as described in the following sections.

D6.8.4.1 Impervious Connection to Vegetated Areas

Impervious Connection to Vegetated Areas utilizes properly-configured vegetated areas that intercept, slow, and allow infiltration of stormwater runoff from directly connected impervious areas while allowing sediment and other pollutants to settle and infiltrate. Vegetated areas may receive stormwater runoff from impervious areas such as driveways, roads, roof downspouts, and parking lots.

D6.8.4.2 Interceptor Tree Planting and Preservation

Interceptor trees are evergreen or deciduous trees that intercept rainwater on their leaves and branches. Intercepted water is held within the tree canopy and runs down the branches and trunk of the tree where it may infiltrate into the soil at an enhanced rate. Interceptor trees may be either planted or preserved trees.

D6.8.4.3 Pervious Pavement Systems

Pervious Pavement Systems include systems consisting of permeable interlocking concrete pavement; pervious or permeable concrete unit pavers; pervious grid pavements; pervious concrete; porous asphalt; turf block; grasscrete; and bricks and stones, set on a gravel base with gravel joints, which stores and infiltrates rainfall. Pervious Pavement Systems require regular maintenance to maintain their infiltration capacity.

D6.8.4.4 Green Roofs

Green roofs are roofs that are entirely or partially covered with vegetation and soils. Green roofs reduce runoff and function as a soil and plant-based filtration feature that removes pollutants through a variety of natural physical, biological, and chemical treatment processes prior to discharge.

D6.8.4.5 Rainwater Capture and Use

Rainwater capture and use involves collecting stormwater runoff in tanks (e.g., rain barrels and cisterns) to allow for use of the collected runoff. Collected runoff may be used for irrigation, greywater systems, or other uses. Tanks can be installed above or below ground depending upon design requirements and site conditions.

D6.8.5 Numeric Sizing Criteria for Stormwater Treatment, Retention, and Peak Flow Control

1. Stormwater Treatment Measures and Baseline Hydromodification Management Measures

The Permittee shall require all Regulated Projects be designed to treat, retain, infiltrate, and/or capture and use stormwater to meet at least one of the following hydraulic sizing design criteria:

a. Volumetric Criteria:

- 1) The maximized stormwater capture 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
- 2) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in the most recent version of CASQA's Development Best Management Practice Handbook, using local rainfall data; or

b. Flow-based Criteria:

- 1) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or
- 2) 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.

2. Peak Flow (Hydromodification) Control Measures

- a. Regulated Projects that create and/or replace one acre or more of impervious surface shall implement peak flow controls based on their geomorphic province per Figure D.1 as follows:

1) Post-project peak flows discharged from the site shall not exceed estimated pre-project peak flows for the 2-year, 24-hour storm in the following geomorphic provinces (Figure D.1):

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

2) Post-project peak flows discharged from the site shall not exceed estimated pre-project peak flows for the 10- year, 24-hour storm in the following geomorphic provinces (Figure D.1):

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



Figure D.1. California Geomorphic Provinces

- b. Peak flow controls may be designed such that they meet the requirements of both the sections Stormwater Treatment Measures and Baseline Hydromodification Management Measures and Peak Flow Control Measures, thus not requiring two separate control measures.

- c. 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.
- d. The following projects are not subject to the Peak Flow (Hydromodification) Requirements:
 - 1) Regulated Projects that do not increase impervious area over the pre-project condition; or
 - 2) Regulated Projects located in catchments that drain entirely to a hardened (e.g., continuously lined with concrete) engineered channel or channels or enclosed pipes, which extend continuously to a bay, delta, ocean, or flow-controlled reservoir.

D6.8.6 Selection of Permanent Stormwater Control Measures for Stormwater Treatment

1. Baseline Bioretention Stormwater Control Measure Parameters

After implementation of Site Design Measures per Section D6.8.4, 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 D6.8.5. The facilities must be demonstrated to be at least as effective as a bioretention system with the following design parameters.

- a. 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.
- b. Minimum surface reservoir volume equal to surface area times a depth of 6 inches.
- c. 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.

- d. Subsurface drainage/storage (gravel) layer with an area equal to the surface area and having a minimum depth of 12 inches.
- e. Underdrain with discharge elevation at top of gravel layer. 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.
- f. No compaction of soils beneath the facility, or ripping/loosening of soils if compacted.
- g. No liners or other barriers interfering with infiltration.
- h. Appropriate plant palette for the specified soil mix and maximum available water use.

2. Alternative Design Effectiveness Equivalency

Facilities, or a combination of facilities, of a different design than in Section D6.8.6.1 may be permitted if all of the following measures of equivalent effectiveness are demonstrated:

- a. Equal or greater amount of runoff infiltrated or evapotranspired;
- b. Equal or lower pollutant concentrations in runoff that is discharged after biotreatment;
- c. Equal or greater protection against shock loadings and spills;
- d. Equal or greater accessibility and ease of inspection and maintenance.

3. Exceptions for Special Site Conditions

Contingent on a demonstration that use of bioretention or a Permanent Stormwater Control Measure 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:

- a. 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;
- b. Permanent Stormwater Control Measures receiving runoff solely from existing (pre-project) impervious areas; and

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

4. Alternatives to Onsite Retention and Peak Flow Control Requirements

Permittees may allow Regulated Projects to fulfill all or a portion of its retention or peak flow requirements at an offsite location on a site-for-site basis or through an approved watershed or regional plan in accordance with the following:

a. Site-for-Site Substitution

The Permittee may allow a Regulated Project to offset retention and/or peak flow requirements at an offsite location only when all of the following are satisfied:

- 1) Forgoing onsite retention and peak flow control will not result in significant impacts to receiving waters, such as bank erosion or channel incision.
- 2) Untreated stormwater is not being conveyed through a water body.
- 3) The offsite offset project provides hydraulically sized retention and peak flow control (per Section D6.8.5.2 Peak Flow (Hydromidification) Control Measures) of stormwater runoff that meets or exceeds the foregone amount from the applicable Regulated Project.
- 4) Offsite offset project(s) are within the same watershed as the Regulated Project, or the offsite offset project site(s) located outside the watershed have prior approval of the Regional Board Executive Officer.
- 5) Offsite offset projects shall be completed as soon as practicable and no longer than three years from the date of the applicable Regulated Project's completion unless a longer period is otherwise authorized by the Regional Water Board Executive Officer.

b. Approved Watershed or Regional Plan

Watershed or Regional Plans are plans that present a coordinated strategy to mitigate specific development impacts using regional and watershed-scale stormwater control measures. A project or projects from an approved Watershed or Regional Plan may be used to offset the Regulated Project's required retention or peak flow requirements.

Proposed Watershed or Regional Plans shall be subject to the prior review and approval of the Regional Board Executive Officer and shall include, at a minimum:

- 1) Demonstration that implementation of projects per the Watershed or Regional Plan will be as effective in meeting the applicable section Permanent Stormwater Control and Sizing requirements as meeting them on site.
- 2) Quantitative analysis (e.g., calculations and modeling) used to evaluate offsite compliance.
- 3) A demonstration that forgoing onsite retention and peak flow control will not result in significant impacts to receiving waters, such as bank erosion or channel incision.
- 4) A description of proposed offset project(s). The proposed offset projects may include existing facilities or prospective projects.
- 5) The location of the proposed offset project(s), which shall be within the same watershed as the Regulated Project. Offset project sites located outside the watershed are subject to the approval of the Regional Board Executive Officer.
- 6) Offset projects shall be completed as soon as practicable and no longer than three years from the date of the applicable Regulated Project's completion unless a longer period is authorized by the Regional Water Board Executive Officer.

D6.9 Operation and Maintenance of Post-Construction Stormwater Control Measures

D6.9.1 Operation and Maintenance Plans

The Permittee shall ensure that operation and maintenance plans exist for all Permanent Stormwater Control Measures in its MS4 boundary as Regulated Projects are approved. The Permittee shall:

1. Require Regulated Project proponents and their successors to develop and implement an adequate Operations and Maintenance Plan.
2. Require at least one of the following from all Regulated Project proponents and their successors in control of the project or successors in fee title:

- a. The project proponent's signed statement accepting responsibility for the operation and maintenance of Permanent Stormwater Control Measures until such responsibility is legally transferred to another entity;
 - b. Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the operation and maintenance of the installed Permanent Stormwater Control Measures (if any) until such responsibility is legally transferred to another entity;
 - c. 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 operation and maintenance of the installed Permanent Stormwater Control Measures (if any) until such responsibility is legally transferred to another entity; or
 - d. Any other legally enforceable agreement or mechanism, such as recordation in the property deed, which assigns the operation and maintenance responsibility for the installed Permanent Stormwater Control Measures (if any) to the project owner(s) or the Permittee.
3. Develop and implement a written plan that describes operation, maintenance, and inspection of all Permittee-owned or operated Permanent Stormwater Control Measures.
4. Coordinate with the appropriate mosquito and vector control agency to establish a protocol for notification of installed Permanent Stormwater Control Measures. By October 15th of every year, the Permittee shall submit a list of Permanent Stormwater Control Measures installed within the reporting year to the local mosquito and vector control agency. This list shall include the facility locations and a brief description of the Permanent Stormwater Control Measures.
5. Submit requests for a Deferred Maintenance Exemption to the appropriate Regional Water Board when the following conditions are met:
 - a. The Permanent Stormwater Control Measure responsible party has worked diligently and in good faith with the appropriate state and federal agencies and the Permittee to obtain approvals necessary to complete deferred maintenance activities; and
 - b. Approvals are not granted because maintenance would result in significant impacts to waters of the state.

D6.9.2 Maintenance Assessment and Inspection

The Permittee shall ensure that all Regulated Project Permanent Stormwater Control Measures are properly operated and maintained for the life of the projects. The Permittee shall implement an Operations and Maintenance Verification Program (Verification Program) to verify that all Permanent Stormwater Control Measures are maintained at a level to meet the requirements of this Order. At a minimum, the Verification Program shall include the following elements:

1. Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that require the granting of site access to all Permittee representatives for the purpose of performing operation and maintenance inspections of the installed Permanent Stormwater Control Measures.
2. A database or equivalent tabular format inventory of all Regulated Projects (public and private) that have installed Permanent Stormwater Control Measures. This Post-Construction Inventory shall include the following information for each Regulated Project:
 - a. Name and address of the Regulated Project;
 - b. Specific description of the location (or a map showing the location) of the installed Permanent Stormwater Control Measures;
 - c. Installation date(s) of the Permanent Stormwater Control Measures;
 - d. Description of the type and size of the installed Permanent Stormwater Control Measures;
 - e. Responsible operator(s) of Permanent Stormwater Control Measures;
 - f. Dates and findings of Permittee inspections (routine and follow-up) of the Permanent Stormwater Control Measures; and
 - g. Corrective and enforcement actions taken.
3. A process for Permittee verification of the relative maintenance condition of Permanent Stormwater Control Measures. Maintenance conditions shall be determined using one of the following options:
 - a. Self-Certification Program – The Permittee shall implement a program that includes:
 - 1) Requirement that authorized parties demonstrate proper maintenance and operations by submitting self-certification annual reports that include:
 - a) Documentation of field observations to determine the Permanent Stormwater Control Measures are functioning as designed.

- b) Certification that the Operation and Maintenance Plan developed per D6.9.1 is being followed and any proposed changes to the plan.
- 2) An inventory and map of existing Permanent Stormwater Control Measures, in GIS if available.
- 3) Permittee assessments of the self-certification program annual reports. The assessment shall include verification that the control measures are operating to remove pollutants as designed. In assessing the self-certifications, the Permittee may prioritize control measures for Permittee inspections conducted per D6.9.2.3.4 below. Regional Permanent Stormwater Control Measures should receive higher priority than lot-scale Permanent Stormwater Control Measures, and Permanent Stormwater Control Measures designed to remove pollutants for which the receiving water is impaired should receive priority attention over other Permanent Stormwater Control Measures.
- 4) The Permittee shall conduct onsite inspections of at least one-half of all Permanent Stormwater Control Measures every five years. The inspections shall:
 - a) Identify whether the Permanent Stormwater Control Measure is functioning as designed;
 - b) Include a review of the owner's operations and maintenance actions and documentation to verify conformance with the Operation and Maintenance Plan; and
 - c) Identify maintenance actions needed and timeline for their implementation.
 - d) Determine whether self-certification reports reflect actual site conditions.
 - e) Documentation of the inspection.
- b. Permittee-Led Inspection Program - Permittees shall develop and implement an annual inspection program to verify Permanent Stormwater Control Measures are properly maintained and operated. The inspection program shall include the following:
 - 1) An inventory and map of existing Permanent Stormwater Control Measures, in GIS if available.
 - 2) Permittee inspection of all Permanent Stormwater Control Measures, at a minimum of once every five years, or more frequently as appropriate based on inspection results. Inspections shall include:

- a) Field inspection of the facility;
 - b) Identify whether the Permanent Stormwater Control Measure is functioning as designed;
 - c) Identify maintenance actions needed and timeline for their implementation.
 - d) Review of the owner's operations and maintenance actions and documentation to verify conformance with the Operation and Maintenance Plan; and
 - e) Documentation of the inspection.
4. Implementation of the Permittee's Enforcement Response Plan, including escalating enforcement actions to ensure proper maintenance of Permanent Stormwater Control Measures.

D6.9.3 Field Verification

1. The Permittee shall establish and implement a mechanism (a checklist or other tools) to verify that Permanent Stormwater Control Measures are constructed as designed and approved in accordance with these Permanent Stormwater Management Requirements.
2. Prior to temporary and final occupancy of each Regulated Project, the Permittee shall field verify that any Source Control, Site Design Measures, and Permanent Stormwater Control Measures have been implemented in accordance with these Post-Construction Requirements. The Permittee may accept third-party verification of Permanent Stormwater Control Measures conducted and endorsed by a registered professional engineer, geologist, architect or landscape architect.

D6.10 Planning and Development Review Process

1. The Permittee shall incorporate into their entitlement process standard procedures that require consideration of potential stormwater quality impacts early in the planning process of any project that meets the criteria of this Order for new development and redevelopment projects. Each Permittee shall clearly demonstrate the developer and Permittee considered stormwater quality site issues before the projects reached final design. The Permittee shall demonstrate review in the conceptual design of stormwater quality protection at the earliest possible stage in the project planning and discretionary or ministerial permitting process:
2. The Permittee shall establish a plan review and approval process for public and private regulated projects that includes an organizational structure for communication, coordination, and delineated authority between and among

municipal departments that have jurisdiction over project review, plan approval, and project construction.

3. For each Regulated Project subject to the Low Impact Development requirements, the Permittee shall require the Project Applicant to provide a Post-Construction Stormwater Control Plan that includes the following and other necessary information to show how the proposed project will comply with the requirements.
 - a. Project name, application number, and location including address and assessor's parcel number;
 - b. Name of applicant;
 - c. Project phase number (if project is being constructed in phases);
 - d. Project type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description;
 - e. Total project site area;
 - f. Total new and replaced impervious surface area;
 - g. Summary of Site Assessment Methods;
 - h. Map of Drainage Management Areas, including both pre-and post-development maps if modifications are being made to the discharge locations for any Drainage Management Areas;
 - i. Summary of proposed stormwater controls for each Drainage Management Area for each of the following categories:
 - 1) Source Controls;
 - 2) Site Design Measures; and
 - 3) Permanent Stormwater Control Measures.
 - j. Justification wherever 1) exceptions for special site conditions are used and 2) Alternatives to Onsite Retention and Peak Flow Control Requirements are used to meet retention and peak flow requirements. The justification(s) shall cite relevant portions of the Order allowing selection of lower priority Permanent Stormwater Control Measures and allowance of the offsite projects; and
 - k. Supporting calculations that document proper design and sizing of Site Design Measures and Permanent Stormwater Control Measures used to comply with the applicable requirements.
4. The Permittee shall not grant approval for construction of impervious surfaces until the Post-Construction Stormwater Control Plan for the Regulated Project sufficiently demonstrates the Regulated Project design meets the Low Impact Development Design Requirements.

D6.11 Alternative Post-Construction Stormwater Management Requirements Based on Assessment and Maintenance of Watershed Processes

1. In areas where the Regional Water Board has adopted alternative post-construction stormwater management requirements per this section, the Permittee shall comply with those alternative standards in lieu of Sections D6.1 through D6.9 and D10.7 (Post-Construction Program Reporting).
2. The Regional Water Board may adopt alternative post-construction stormwater management requirements to replace those set forth in Sections D6.1 through D6.9 and D10.7 (Post-Construction Program Reporting) of this Order. The alternative standards shall be based on a watershed-process approach that includes the following:
 - a. Completion of a comprehensive assessment of dominant watershed processes affected by urban stormwater.
 - b. Low impact development Site Design Measures, numeric runoff treatment and retention controls, and hydromodification controls that will maintain watershed processes and protect water quality and beneficial uses.
 - c. A process by which Regional Board staff will actively engage Permittees to adaptively manage requirements as determined by the assessment of watershed processes.
 - d. An annual reporting program that involves Regional Water Board staff and State Water Board staff to inform statewide watershed process-based criteria.
3. The regional watershed-process based approach shall be approved by the Regional Water Board following a public process. Alternative post-construction stormwater management requirements implemented through this process under the previous Order (Order WQ 2013-0001-DWQ) can continue implementation without an additional board approval and public process.

D6.12 Alternative Post-Construction Stormwater Management Multiple Benefit Projects

1. A Permittee may propose alternative post-construction measures in lieu of some or all of section Post-Construction Stormwater Management Program requirements for multiple benefit projects.

2. Multiple Benefit Projects

- a. Multiple benefit projects include projects that address any of the following, in addition to water quality:
 - 1) Water supply;
 - 2) Flood control;
 - 3) Habitat enhancement;
 - 4) Open space preservation;
 - 5) Recreation; and
 - 6) Climate change.
 - b. Multiple benefit projects may be applied at various scales including project site, municipal or sub-watershed level.
 - c. Multiple benefit projects may include, but are not limited to, projects developed under Watershed Improvement Plans (Water Code §16100 et seq.), Stormwater Resource Plans, Integrated Regional Water Management Plan implementation and green infrastructure projects.
3. Alternative post-construction measures for multiple benefit projects shall be equally or more protective of water quality than equivalent requirements it is replacing.
4. If the Regional Water Board or Executive Officer finds, after an opportunity for public comments, that the alternative measures are consistent with the maximum extent practicable standard, alternative post-construction measures for multiple benefit projects, as described above, may be implemented.

D6.13 Post-Construction Outreach and Education

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and make available to the public specific guidance for the Permittee's plan review process and low impact development, Permanent Stormwater Control Measures, and best management practice design.

D6.14 Statewide Infiltration Policy

All stormwater best management practices must comply with any requirements that may apply if the State Water Board adopts a Statewide Infiltration Policy.

D7. TMDL DEMONSTRATION OF COMPLIANCE REPORT AND REQUEST FOR TIME SCHEDULE ORDER

Attachment G contains a list of TMDL-specific responsible Permittees and implementation, monitoring, and reporting requirements, which are applicable to identified responsible Permittees. The sections TMDL Demonstration of Compliance Report and Request for Time Schedule Order, below, provide the reporting requirements for TMDL demonstration of compliance.

D7.1 TMDL Demonstration of Compliance Report

For purposes of this section, the wasteload allocations specified in the applicable TMDLs (as identified in the Fact Sheet) are incorporated by reference. Permittees shall submit a TMDL Demonstration of Compliance Report, as follows:

1. Submit the Report to SMARTS and the applicable Regional Water Board Executive Officer for review and consideration of approval.
2. Prior to the deadline to comply with the final wasteload allocation, a Permittee may demonstrate compliance with the applicable TMDL wasteload allocations by reporting and substantiating that it is timely implementing all best management practices, maintenance, and other requirements specified in Attachment G for that TMDL. Alternatively, the Permittee may make a demonstration of compliance in accordance with subsection D7.1.3.
3. On or after the deadline to attain the final wasteload allocation, a Permittee shall demonstrate compliance with the applicable TMDL wasteload allocations by meeting one or more of the criteria in subsections (a) through (g), as follows:
 - a. Receiving Water Quality Monitoring. 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. Loads from Other Sources. 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. Concentrations. Where the wasteload allocation, or alternative indicator as described in Attachment G, is expressed as a concentration (e.g., micrograms per liter, parts per billion, milligrams per liter, colony forming units per 100 milliliters, and similar), 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. Mass-Based Wasteload. Where a mass-based wasteload (i.e., total mass of a pollutant over a specific time period, for example, pounds per day or kilograms per year) 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. Allowable Exceedance Days. 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. No Discharge. 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. Other Factors. The Permittee demonstrates the attainment of the wasteload allocation through other factors as described by the specific TMDL(s) and as approved by the Regional Water Board or its designee.

D7.2 Request for Time Schedule Order

In some cases, Attachment G includes dates that have already passed or fall outside the term of this Order. Compliance deadlines for wasteload allocations and other permit requirements that exceed the term of this Order become enforceable in the event that this Order is administratively extended. Some wasteload allocation compliance deadlines have already passed and are enforceable on the effective date of this Order.

1. Requests for Extensions and Time Schedule Orders

Where a final deadline to comply with a wasteload allocation has passed and the Permittee has not demonstrated compliance, the Permittee may seek a time schedule order pursuant to Water Code section 13300 from the Regional Water Board. Permittees may request a time schedule order individually or together with other Permittees subject to the TMDL. Permittees may also request time schedule orders where the Permittee has not timely complied with a best management practice-based water quality-based effluent limit or other TMDL-related permit requirement.

A Permittee's request to the applicable Regional Water Board for a time schedule order shall include the following information:

- a. Available data demonstrating the current quality of the MS4 discharge(s) in terms of the applicable wasteload allocation units (i.e., concentration 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.

D8. WATER QUALITY MONITORING

D8.1 Regional Monitoring Programs

1. Upon approval by the applicable Regional Water Board Executive Officer, Permittees may participate in a Regional Water Board approved monitoring program (e.g., Delta Monitoring Program, San Francisco Bay Regional Monitoring Program) in lieu of all or a portion of the Water Quality Monitoring section.
2. As part of its approval, the applicable Regional Water Board Executive Officer shall determine that the Regional Water Board approved monitoring program adequately substitutes for the requirements of the Water Quality Monitoring section for which it is being substituted.
3. All Permittees participating in an approved regional monitoring program at the time of the Order effective date shall consult with the Regional Water Board within 1 year of the effective date of the permit to assess which elements of this Order's Water Quality Monitoring section are adequately addressed by the approved monitoring program and which elements the Permittees should continue to implement.
4. Permittees participating in a regional monitoring program shall complete a memorandum of agreement to participate in the program within 1 year of the effective date of this Order or the Permittee's effective date of Designation, whichever is later.
5. Where a regional monitoring group has initiated plans before the effective date of this Order to conduct monitoring that achieves compliance with the Water Quality Monitoring section, the Permittee may request the Executive Officer of the applicable Regional Water Board tailor compliance dates in this permit to synchronize with the monitoring program. Additionally, existing regional monitoring efforts shall be reviewed and approved by a Regional Water Board Executive Officer.
6. Where a Permittee receives grant funding to conduct monitoring that achieves compliance with the Water Quality Monitoring section, the Permittee may request the Regional Water Board Executive Officer tailor compliance dates in this permit to synchronize with the monitoring program.

D8.2 Areas of Special Biological Significance Monitoring

All Permittees that discharge to an ASBS and are covered by an Ocean Plan exception shall comply with the monitoring requirements described in Attachment F.

D8.3 TMDL Monitoring

Permittees shall implement monitoring requirements assigned to them in Attachment G.

D8.4 303(d) Monitoring

Within 1 year of the effective date of this Order or the Permittee's effective date of designation, whichever is later, Permittees that discharge to waterbodies listed as impaired on the 2026 303(d) list (see the State Water Board's [Surface Water Quality Assessment web page](https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/#impaired) (https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/#impaired)) shall consult with the Regional Water Board to assess whether new or continued monitoring is necessary and if so, determine the monitoring study design and a monitoring implementation schedule. Permittees shall implement monitoring as specified by the Regional Water Board Executive Officer. Permittees are encouraged to consider participation in regional monitoring efforts to satisfy monitoring requirements for 303(d) impaired water bodies. The Permittee does not need to consult with the Regional Water Board or conduct additional monitoring for pollutant/waterbody combinations already covered by a TMDL.

D8.5 Additional Monitoring

The State Water Board or the Regional Water Boards may order additional monitoring as necessary to demonstrate compliance with this Order per Water Code section 13383.

D8.6 Quality Assurance Project Plans

For all monitoring, the Permittee shall prepare, maintain, and implement a Quality Assurance Project Plan (QAPP). Monitoring samples shall be collected and analyzed according to the QAPP developed for the purpose of compliance with this Order. Quality assurance guidance is available on the [Surface Water Ambient Monitoring Program Quality Assurance web page](https://www.waterboards.ca.gov/water_issues/programs/swamp/quality_assura) at https://www.waterboards.ca.gov/water_issues/programs/swamp/quality_assura

nce.html and the [Water Boards QA/QC website on Developing a QAPP](https://www.waterboards.ca.gov/water_issues/programs/quality_assurance/qapp.html):
https://www.waterboards.ca.gov/water_issues/programs/quality_assurance/qapp.html.

D8.7 Data Submittal

Water quality data shall be uploaded to SMARTS and shall conform to the California Environmental Data Exchange Network "[CEDEN Minimum Data Templates](http://ceden.org/)" format, available at <http://ceden.org/>.

D9. PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT

D9.1 Program Effectiveness Assessment and Improvement Plan

1. The Permittee shall develop and implement a Program Effectiveness Assessment and Improvement Plan that quantifies annual and long-term effectiveness of the stormwater program.
2. Permittees that have a Program Effectiveness Assessment and Improvement Plan, or equivalent, approved by the applicable Regional Water Board, or that have a schedule approved by the applicable Regional Water Board to develop and implement such a Plan, shall update the approved Plan or schedule as necessary to comply with this section.
3. The Program Effectiveness Assessment and Improvement Plan shall include the following elements, at a minimum:
 - a. Quantification of stormwater runoff volumes, pollutant loads, and pollutant load reductions achieved by the entire program.
 - b. Assessment of best management practice performance at achieving outcome levels
 - c. Assessment of pollutant source reductions achieved by individual best management practices.
 - d. MS4 discharge volumes and quality, including analysis of the data on a catchment scale. Where monitoring data is not available, rather than attempting to model multiple pollutant types, tools available for estimating runoff volumes and pollutant loads may use credible and effective proxies (e.g., Total Suspended Solids and Runoff Volume) to create a ranking of catchments in terms of relative risk to the receiving water.
 - e. Receiving water quality data, including analysis of the data

- f. Identification of long-term effectiveness assessment, to be implemented beyond the permit term.
 - g. Identification of overall program goals including pollutants of concern and prioritized best management practices.
 - h. Documentation of the level of implementation of stormwater program elements
 - i. Identification and targeting of target audience(s)
 - j. The strategy the Permittee will use to assess the effectiveness of the program,
 - k. How the Permittee will use the information obtained through effectiveness assessment to modify individual best management practices and the entire program to increase short and long-term effectiveness.
- 4. The Program Effectiveness Assessment and Improvement Plan shall assess and generate results of best management practice and program effectiveness in terms of the following Outcome Levels:
 - a. Stormwater program activities
 - b. Awareness
 - c. Behavior
 - d. Pollutant load reductions
 - e. MS4 discharge quality (where assessment is supported by MS4 discharge quality data)
 - f. Receiving water conditions
- 5. The Program Effectiveness Assessment and Improvement Plan shall identify assessment methods the Permittee will use to quantitatively assess best management practice performance at reducing pollutant loads for all best management practices where pollutant load reductions can be quantified, using one or more of the following or equivalent methods:
 - a. Direct quantitative measurement of pollutant load removal for best management practices that lend themselves to such measurement (e.g., measuring sediment collected through street-sweeping activities);
 - b. Science-based estimates of pollutant load removal for best management practices where direct measurement of pollutant removal is overly challenging (e.g., removal of heavy metals through a bioswale);

- c. Direct quantitative measurement of behaviors that serve as proxies of pollutant removal or reduction (e.g., the percentage of construction sites demonstrated to be in compliance with permit conditions via inspections); or
 - d. Visual comparison (e.g., using photographs to compare the amount of trash in a creek between one year and the next).
- 6. The Program Effectiveness Assessment and Improvement Plan shall ask and answer the following Management Questions for prioritized best management practices for which answers to management questions can be based on quantitative data appropriate to the question being answered. Prioritized best management practices include best management practices implemented based on pollutants of concern. Where pollutants of concern are unidentified, prioritized best management practices are based on common urban pollutants (i.e., sediment, bacteria, trash, metals, nutrients, petroleum hydrocarbons).
 - a. Were prioritized best management practices or group of best management practices implemented in accordance with the permit requirements? The Permittee shall develop quantitative data using the following or equivalent methods:
 - 1) Confirmation – Documenting whether an activity or task has been completed, expressed as positive or negative outcome (i.e., yes or no)
 - 2) Tabulation – Simple accounting expressed in absolute (e.g., number of people participating), or relative terms (e.g., percent increase in recycled household hazardous waste)
 - b. To what extent did prioritized best management practices or group of best management practices change the target audience’s behavior? The Permittee shall develop quantitative data using the following or equivalent methods:
 - 1) Surveys or interviews to discern knowledge, attitudes, awareness, behavior of specific population, etc.
 - 2) Interviews of site personnel to discern awareness and behavior.
 - 3) Inspections or site visits to directly observe or assess a practice.

- c. To what extent did prioritized best management practices or group of best management practices reduce pollutant loads from their sources to the storm drain system?
- 7. The Program Effectiveness Assessment and Improvement Plan shall include water quality monitoring data, where available, to answer the following long-term management questions.
 - a. To what extent did implementation of the best management practice, group of best management practices, or stormwater program enhance or change the urban runoff and discharge quality?
 - b. To what extent did implementation of the best management practice, group of best management practices, or stormwater program enhance or change receiving water quality?
 - c. Did exceedance(s) of water quality objectives or water quality standards persist notwithstanding implementation of the stormwater program?

D9.2 Stormwater Program Modifications

- 1. Within the fifth year of enrollment in this Order, the Permittee shall modify best management practices or the entire program to improve compliance with conditions of this Order and improve program effectiveness at reducing pollutant loads, achieving the maximum extent practicable standard, and protecting water quality. The Permittee shall identify and summarize best management practices and program modifications identified in priority program areas. Modifications shall include:
 - a. Improving upon best management practices that are underperforming.
 - b. Continuing and expanding upon best management practices that proved to be effective, including identifying new best management practices or modifications to existing best management practices designed to increase pollutant load reductions;
 - c. Discontinuing best management practices that may no longer be productive and replacing with more effective best management practices; and
 - d. Shifting priorities to make more effective use of resources.

2. The Permittee shall use information gained through the program effectiveness assessment and MS4 discharge and receiving water monitoring to identify priority areas for program improvement.
3. The Permittee shall consult with the applicable Regional Water Board in setting expectations for the scope, timing, and frequency of best management practice modifications.

D10. ANNUAL REPORTING PROGRAM

D10.1 Annual Report and Annual Reporting Requirements

1. By October 15 of each year, the Permittee shall use the State Water Board's SMARTS to submit a summary of the past year's activities as well as a summary of activities to be undertaken during the next reporting period for each program element and certify compliance with all requirements of this Order. If a Permittee is unable to certify compliance with a requirement, the Permittee shall 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.
2. Permittees shall complete and retain all Annual Report information on the previous fiscal year beginning July 1 and ending June 30. 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 otherwise agreed to by the applicable Regional Water Board's Executive Officer.
3. 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 this attachment. The detailed Annual Report shall clearly refer to the requirements of this Order and describe in quantifiable terms the status of activities undertaken to comply with each requirement.
4. Each Permittee must submit an annual report and respond to all applicable questions in SMARTS. Permittees involved in regional programs may coordinate with the members to develop reports. One report may be developed on behalf of Permittees involved in a regional program and shall 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. Then each Permittee may use the co-developed report to fill out their individual annual report in SMARTS.

D10.2 Program Management Reporting

In addition to annually reporting on compliance with each individual permit element, below are additional specific reporting items to be included in the Permittee's annual reports:

D10.2.1 One-Time Per Permit Term Reporting Items

1. In Year 1 for Renewal Permittees and Year 2 for New Permittees, the Permittee shall submit a certification statement per the section Program Management and subsection Certification.
2. In Year 1 for Renewal Permittees and Year 2 for New Permittees, the Permittee shall submit a copy of the enforcement response plan per the section Enforcement Response Plan and Enforcement Tracking.

D10.2.2 Annual Reporting Items

1. In Year 1, and annually thereafter, report the total number of actions taken within each category of enforcement (verbal warnings, written notices, escalated enforcement actions) and, of those, identify the following:
 - a. Number of corrective actions resolved within permitted time frame; and
 - b. Number of cleanup and abatement actions performed or contracted by the Permittee for discharges not generated by Permittee.
2. In Year 1, and annually thereafter, submit a list of chronic violators including identification information per the Legal Authority section item number 3.
3. In Year 1, and annually thereafter, submit a list of NPDES referrals including documentation information per the section Enforcement Response Plan and Enforcement Tracking, item number D1.3.5.e.
4. In Year 1, and annually thereafter if the Permittee has made any changes to their Guidance Document, the Permittee shall submit an updated Guidance Document per Section D1.4.

D10.3 Public Education and Outreach Reporting

D10.3.1 One-Time per Permit Term Reporting Items

1. In Year 1 report the implementation option selected per the Implementation Options section.
2. In Year 1 submit any necessary documentation for collaborative options per the Implementation Options section, item 2.
3. In Year 2 submit the public education strategy developed per the Development and Implementation section.

D10.3.2 Annual reporting items

In Year 2, and annually thereafter, submit a summary of all actions completed per the public education strategy and identify which are completed independently or by the group. At a minimum include:

1. List and description of public education and public participation and involvement activities conducted including delivery method, topic, and target audience.

D10.4 Illicit Discharge Detection and Elimination Program Reporting

D10.4.1 One-time Per Permit Term Reporting Items

1. In Year 1 submit Illicit Discharge and Spill Response Plan per the Illicit Discharge and Spill Response section.
2. In Year 2 submit an outfall map per the Outfall Mapping section.
3. In Year 2 submit procedures for Illicit Discharge Priority Area Inspections per the Illicit Discharge Priority Area Inspections section, item number 1.
4. In Year 2 submit Illicit Discharge Source Area map per the Illicit Discharge Priority Area Inspections section, item number 2.

D10.4.2 Annual Reporting Items

1. Beginning in Year 1, and annually thereafter, report the date of the most recent mapping of MS4 outfalls.

2. Beginning in Year 1, and annually thereafter, identify the Status of the Ordinance or Other Regulatory Mechanism to Prohibit Non-Stormwater Discharges into the Permittee's MS4 choosing from the following options:
 - In effect;
 - In effect, but needs to be updated to comply with the Reissuance (please provide explanation); or
 - Under Development (no existing ordinance from this or previous permit, please provide more explanation).
3. Beginning in Year 1, and annually thereafter, report number of complaints and notifications of illicit discharges and spills.
4. Beginning in Year 2, and annually thereafter, report findings of any dry weather flow investigations.
5. Beginning in Year 2, and annually thereafter, submit a summary of findings of inspections conducted per the Illicit Discharge Priority Area Inspection section.
6. Beginning in Year 3, and annually thereafter, submit documentation of the past year's staff training events including dates and locations of the training and list of staff trained per the Illicit Discharge Detection and Elimination Staff Training. section.

D10.5 Pollution Prevention and Good Housekeeping Program Reporting

D10.5.1 One-time per Permit Term Reporting Items

1. In Year 2 submit a copy of the inventory of Permittee-owned or operated facilities per section D4.1 including those identified as hotspots per section D4.3.
2. In Year 2 submit the map of permittee owned and operated facilities per section D4.2.
3. In Year 3 submit the documentation of Permittee Operation and Maintenance Activities and their corresponding best management practices as identified in section D4.6.
4. In Year 2, describe actions taken to comply with Provision D4.15 – Snow Removal and Traction Application Operations Pollution Prevention and

Control. Reporting shall either include a statement on non-applicability or identify the BMPs implemented per Section D4.15.

D10.5.2 Annual Reporting Items

1. In Year 1, and annually as changes are made, submit the updated MS4 Map per the MS4 Map section.
2. In Year 2, and annually thereafter, submit an asset inventory and map per the Stormwater Asset Management Inventory section.
3. In Year 2, and annually thereafter if changes are made, describe your storm drain system inspection, cleaning, and maintenance strategy per Section D4.9 Routine Storm Drain System Inspection and Maintenance.
4. In Year 5, and every two years thereafter, submit the Long-Term Asset Operation and Improvement Plan per Section D4.10 item 2.
5. In Year 1, and annually thereafter, report dates, content, and staff roster of staff training conducted per the Pollution Prevention and Good Housekeeping Staff Training section.
6. In Year 2, and annually thereafter, describe actions taken to comply with Section D4.14 – Pet Waste Pollution Prevention and Control. Reporting shall either include a statement on non-applicability or identify the BMPs implemented, and the numbers or frequency (as applicable) and locations of actions taken to reduce bacteria from domestic animal sources.

D10.6 Construction Site Stormwater Runoff Program Reporting

D10.6.1 One-time per permit term reporting items

In Year 1 upload the adopted ordinance that complies with this Order and errata sheet as necessary citing changes.

D10.6.2 Annual reporting items

1. Inventory and Tracking
 - a. Submit an updated Regulated Construction Project inventory.
 - b. Number of Priority Regulated Construction Projects
 - c. Number of Non-Priority Regulated Construction Projects

2. Construction Site Inspection and Enforcement

- a. Number of inspections performed; and
- b. Number of inspections leading to enforcement within each category, as follows:
 - Written notices; and
 - Escalated enforcement actions by category (citations/fines, plan review or other authorization withheld, stop work orders)

3. Permittee Construction Staff Training

List staff certified as Qualified Stormwater Pollution Prevention Plan Developer (QSD) and Qualified Stormwater Pollution Prevention Plan Practitioner (QSP).

4. Construction Site Operator Outreach and Education

Submit link to stormwater website containing materials used for outreach and education.

D10.7 Post-Construction Program Reporting

D10.7.1 One-time per permit term reporting items

1. In Year 2– New Permittees – Report/Verify mechanism for requiring these post-construction requirements (Upload a copy of the Legal Authority).
2. In Year 1, the Permittee shall identify if they will be using a self-certification or Permittee-led post-construction inspection and verification program.

D10.7.2 Annual reporting items

1. Small Projects
 - a. Number of projects that have received permits for construction; and/or
 - b. Number of projects that have received discretionary/ministerial approval.

2. Regulated Projects

For each Regulated Project approved during the reporting period, the following information shall be reported electronically in tabular form:

- a. Project name;
- b. Location;

- b. Project type (e.g., commercial, residential, mixed use, industrial, recreational);
 - c. Project watershed;
 - d. Total project site area and total area of land disturbed;
 - e. Total new impervious surface area and total replaced impervious surface area;
 - f. Total pre-project impervious surface area and total post-project impervious surface area;
 - g. Discretionary or ministerial project approval;
 - h. Status of project (i.e., initial application submittal, tentative and final approval, Post-Construction Stormwater Control Plan approved (Y/N), construction commenced (Y/N), construction completed);
 - i. Specific Site Design Measures used;
 - j. Are peak flow controls required per section D6.7.5.3? (Y/N);
 - k. Where are Post-Construction stormwater control systems for the regulated project installed? Onsite, at a shared stormwater treatment facility, or at an offsite location?;
 - l. Post-Construction Operation and Maintenance responsible party;
 - m. Post-Construction Operation and Maintenance Plan provided (Y/N)?;
 - n. Stormwater Retention and Treatment sizing criteria used (i.e., flow or volume-based); and
 - o. Date of as-built field verification.
3. Operations and Maintenance:
- a. Total Number of sites with installed stormwater control measures;
 - b. Number of Permittee-led inspections performed;
 - c. Number of Enforcement Actions taken and what those actions were, or number of inspections resulting in a) no further action and b) further action required; and
 - d. Number of Self-Certification annual reports received.
4. Post-Construction Stormwater Control Measure Field Verification and Long-Term Maintenance Assessment
- a. Number of projects field-verified by Permittee staff; and
 - b. Number of projects field-verified by a third party.

D10.8 Annual TMDL Compliance Report

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:

1. A description of best management practices implemented, including types, number, and locations; and
2. All supplemental information and reports required under the specific TMDL implementation requirements in Attachment G; and
3. An assessment of the effectiveness of implemented best management practices in progressing towards attainment of wasteload allocations within the TMDLs' specified timeframes; and
4. All monitoring data, including a statistical analysis of the data to assess progress towards attainment of wasteload allocations within the TMDLs' specified timeframes; and
5. Based on results of the effectiveness assessment and monitoring, a description of the additional best management practices that will be implemented to attain wasteload allocations within the TMDLs specified timeframes.

D10.9 Water Quality Monitoring Reporting

D10.9.1 One-Time per Permit Term Reporting Items

1. In Year 1, Permittees participating in a regional monitoring program shall upload a statement of commitment to that program per the requirements in the Regional Monitoring Programs section.

D10.9.2 Annual Reporting Items

In Year 2, and annually thereafter, Permittees conducting monitoring shall submit a report of the results of monitoring activities for the reporting year.

D10.10 Program Effectiveness Assessment and Improvement Reporting

D10.10.1 One-Time per Permit Term Reporting Items

1. In Year 2, the Permittee shall submit the Program Effectiveness Assessment and Improvement Plan.
2. In Year 5, the Permittee shall submit an analysis of the effectiveness of modifications made at improving best management practice or program effectiveness.
3. In Year 5 the Permittee shall submit the list of best management practice or program modifications the Permittee will make for priority program areas as specified in the Stormwater Program Modifications section, item 1, including:
 - a. Identification of priority program areas; and
 - b. The schedule the Permittee will follow to complete identified modifications during the next permit term.

D10.10.2 Annual Reporting Items

1. Beginning in Year 3, and annually thereafter, the Permittee shall describe implementation of the Program Effectiveness Assessment and Improvement Plan that includes:
 - a. Summarized data obtained through quantitative best management practice performance assessments;
 - b. The short and long-term progress of the stormwater program; and
 - c. An analysis of the data to improve program effectiveness, to achieve the Maximum Extent Practicable standard, and protect water quality.

D11. COST REPORTING PROGRAM

Traditional Phase II Permittees shall report all expenditures incurred while implementing activities required by this Order.

D11.1 Cost Categories

1. The Permittee shall report their expenditures using all cost categories described below.

1. Overall Program Management and Administration: Permit compliance administration and management activities, reporting, general coordination.
 2. Capital Costs: Development of new structural stormwater control measures or other tangible assets required to comply with this Order.
 3. Minimum Control Measures: Routine operational and maintenance activities, including minimum control measures implementation required by this Order.
 4. Water Quality Monitoring: All water quality monitoring activities required by this Order.
 5. Miscellaneous Costs: Anything not identified or directly related to the other cost categories.
2. Alternatively, the Permittee may use the Phase I MS4 cost categories described in the Stormwater Cost Policy to report expenditures (see Stormwater Cost Policy Section 5.1 - Cost Categories for Phase I MS4 Permittees, and Table 1: List of standardized categories and subcategories for reporting cost of Phase I Permit implementation.).

D11.2 Cost Accounting

1. Within 1 year of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall track all expenditures directly related to Permit implementation activities for each fiscal year beginning July 1 and ending June 30.
2. The Permittee shall treat standardized cost categories as mutually exclusive. Similarly, if an activity or a project is a collaboration among multiple Permittees or co-Permittees, each jurisdiction shall only report their portion of the cost. The sum of all reported costs shall be the total cost of implementing such an activity or program.
3. For activities that serve purposes in addition to stormwater management, Permittees shall estimate a percentage of expenditures that can be directly attributed to Permit implementation. The cost estimation of these activities shall be informed by feedback from staff performing those activities. Best Professional Judgement shall be used when estimating personnel costs for staff who are also assigned job responsibilities beyond stormwater Permit implementation.

4. The Permittee may attribute expenditures incurred while performing routine activities that are part of municipal operations required by an MS4 Permit (e.g., street sweeping, storm drain cleaning) entirely to the MS4 program, when conducted as frequently as required by this Order. Costs incurred past the Permit-required frequency shall not be included. Routine activities shall be considered Permit-required if performed in a manner or frequency necessary to meet a specific requirement in the MS4 Permit or to meet a commitment the Permittee has made in a Permit-required stormwater program plan. Permittees shall include relevant details of street sweeping, including curb-miles swept and volume or weight of debris collected.
5. The Permittee shall track portions of Permit-implementation costs recuperated by a cost recovery program (e.g., one time or recurring fees). Permittees shall track the sources of funds and relative contribution (in percentage) associated with each source to implement their MS4 permits
6. The Permittee shall develop and maintain supporting documentation explaining their cost estimation process, when applicable. Such documents shall be retained by the Permittees for at least five years beyond permit expiration and provided to the applicable Regional Water Board or State Water Board upon request.

D11.3 Optional Cost Reporting

1. The Permittee may report stormwater program management expenditures for activities not required by this Order. Reporting such costs is voluntary and does not replace any mandatory cost reporting requirements established by this Order. Optional costs shall be reported separately and shall be distinct from cost reporting requirements described in section D11.1.
2. When reporting expenditures consistent with D11.1, The Permittee shall describe the cost incurred and justify its relevance to stormwater program management.

D11.4 Cost Report Submittal

1. The Permittee shall document and submit total MS4 Permit-related expenditures annually, within the same timeframe as the annual reporting required by the Permittee's MS4 permit. The submission shall contain expenditure information from the previously concluded fiscal year, beginning July 1 and ending June 30.

2. The Permittee shall report on the overall sources of funds used to implement this Order. Category-specific reporting for sources of funds is not required.
3. A Duly Authorized Representative shall submit required reporting on behalf of the Permittee.
4. Annual expenditure Reports for MS4 Permit implementation shall be submitted electronically using the MS4 Cost Data Portal. Each submission shall be certified electronically in the manner specified by the State Water Board.
5. Submitted cost information shall be in a format consistent with this Order and shall be verifiable using supporting documentation retained by the Permittee. The Permittee shall retain supporting documentation for at least five years after permit expiration and make such supporting information available upon request within a timely manner.

ATTACHMENT E – PROVISIONS FOR NON-TRADITIONAL PERMITTEES

OVERVIEW

This attachment describes the requirements with which Non-Traditional MS4s, identified in Attachment A Table A6.3, must comply.

E1. PROGRAM MANAGEMENT

E1.1 Legal Authority – Renewal and New Permittees

Within 1 year of the effective date of this Order, Renewal Small MS4 Permittees shall review and revise as necessary relevant ordinances, policies, contractual provisions, tenant and lease agreements, base orders, conditions of lease, resolutions or other regulatory mechanisms, or adopt any new relevant ordinances, policies, or other regulatory mechanisms, to obtain legal authority, to the extent allowable under state or local law, to reduce or eliminate pollutants discharging from its storm drain system pursuant to the requirements of this Order. New Permittees shall do so within 2 years of the effective date of this Order or of the Permittee's effective date of designation, whichever is later. These ordinances, policies or other regulatory mechanisms shall include authority to:

1. Prohibit dumping or disposal of materials other than stormwater and authorized non-stormwater discharges-into the Permittee's MS4;
2. Effectively prohibit unauthorized non-stormwater discharges through the MS4. Detect and eliminate unauthorized non-stormwater discharges (illicit discharges) and illegal connections to the Permittee's MS4;
3. Respond to the discharge of spills into the MS4 or spills that may discharge into the MS4;
4. Require parties responsible for discharges in excess of incidental runoff from landscaped areas to implement actions necessary to prevent recurring discharges;
5. Require operators of construction sites, new development or redevelopment projects, and industrial and commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of best management practices consistent with the current California Stormwater Quality Association Best Management Practice Handbooks or equivalent;
6. Require information 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;

7. Review designs and proposals for new development and redevelopment to determine whether adequate best management practices will be installed, implemented, and maintained during construction and after final stabilization (post-construction);
8. Enter private property for the purpose of inspecting, at reasonable times, any facilities, equipment, practices, or operations for active or potential stormwater discharges, or non-compliance with local ordinances/standards or requirements in this Order, as consistent with any applicable state and federal laws;
9. Require responsible parties to promptly cease and desist discharging and cleanup and abate actual and threatened discharges, including the ability to:
 - a. Require the responsible parties to abate and clean-up their illicit discharge or spill no later than within 72 hours of notification and to expedite clean-up of high-risk illicit discharges or spills;
 - b. Require abatement within 30 days of notification of uncontrolled sources of pollutants that could pose an environmental threat;
 - c. Perform clean-up and abatement work and bill the responsible party, if necessary;
 - d. Order the cessation of activities until activities resulting in pollutant discharges are adequately addressed or abated;
 - e. Require a revised timeframe when all parties agree that clean-up activities cannot be completed within the required timeframe. The responsible party shall provide written notification to the appropriate Regional Water Board within five business days of the determination that the timeframe requires revision.
10. Levy citations or administrative fines against responsible parties; and
11. Require recovery and remediation costs from responsible parties.

E1.2 Certification

The Permittee's authorized signatory or duly authorized representative shall certify that the Permittee has and will maintain full legal authority to implement and enforce each of the requirements contained in this Order. Renewal Permittees shall submit a certification statement in their first annual report. New Permittees shall submit a certification statement in their second annual report.

The Permittee shall update its certification statement as necessary. The Permittee's certification statement shall include the following:

1. Identification of all departments within the Permittee's jurisdiction that conduct stormwater-related activities and their roles and responsibilities under this Order;
2. Citation of the Permittee's stormwater runoff related regulatory mechanisms, and identification of the requirements of this Order that correspond with each regulatory mechanism;
3. Identification of the local administrative and legal procedures available to mandate compliance with stormwater related ordinances and therefore with the conditions of this Order;
4. A description of the procedures to review, update, and implement stormwater-related ordinances and other regulatory mechanisms;
5. A statement that the Permittee will implement enforcement actions consistent with its adopted ordinances, relevant policies, contractual provisions, base orders, resolutions, or other regulatory mechanisms; and
6. A statement that the Permittee has adequate legal authority to comply with all Order requirements.

E1.3 NPDES Permit Referrals

For those construction projects or industrial facilities subject to the State Water Board Construction General Permit or Industrial General Permit, the Permittee shall:

1. Refer to [SMARTS](https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.xhtml) for current filing status of construction projects or industrial facilities
(<https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.xhtml>);
2. Refer non-filers (i.e., those facilities that cannot demonstrate that they obtained appropriate permit coverage) to the appropriate Regional Water Board within 30 days of the Permittee's determination that permit coverage would be appropriate. Non-filers include the following:
 - a. Owners of regulated construction projects that have either not filed a Construction General Permit Notice of Intent or have not received a Construction General Permit erosivity waiver; and
 - b. Owner/operators of regulated industrial facilities that have not filed either an Industrial General Permit Notice of Intent, No Exposure Certification, or Notice of Non-Applicability.

3. Refer owner/operators with suspected ongoing violations of the Construction General Permit or Industrial General Permit known by the Permittee to the appropriate Regional Water Board. This referral must be made within 30 days of the Permittee's determination that violations may be ongoing; and
4. In making the referrals, the Permittee shall include the following documentation:
 - a. Name and contact information of owner/operator;
 - b. Construction project or industrial facility location;
 - c. Estimated construction project size or industrial activity type (including Standard Industrial Classification Code or North American Industry Classification System Code, if known);
 - d. Records of communication with the owner/operator regarding filing requirements or ongoing violations; and
 - e. Any enforcement tracking documentation the Permittee has regarding the site or facility.

E1.4 Guidance Document Implementation

During the course of implementing the requirements of this Order, the Permittee shall reference the Guidance Document submitted with their Notice of Intent (per Section C2.6 of this Order) and note any changes to the Guidance Document (for example, changes to the responsible implementing entity or changes to any locally-tailored best management practices carried over from a stormwater management plan developed under WQO 2003-0005). If changes are made, the Permittee shall submit the updated Guidance Document with the Annual Report.

E2. PUBLIC EDUCATION, OUTREACH, INVOLVEMENT, AND PARTICIPATION PROGRAM

E2.1 Definition of Public

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

1. Faculty
2. Inmates
3. Military personnel
4. Residents

5. Students
6. Staff
7. Visitors
8. Contractors
9. Tenants

E2.2 Implementation Options

1. Within 1 year of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall select one public education program implementation option below:
 - a. Individually fulfill public education and public participation program requirements within its jurisdictional boundaries;
 - b. Contribute to a countywide stormwater program which conducts education and outreach on behalf of its members; or
 - c. Contribute to a regional outreach and education collaborative effort which shall include members completing the following:
 - 1) Define a uniform and consistent message(s);
 - 2) Determine the best methods to communicate the message(s); and
 - 3) Collaboratively apply what is learned through local jurisdiction groups.
2. If selecting either option 1.b. or 1.c, above, within 1 year of the beginning of its involvement or contribution, the Permittee shall obtain documentation, such as a written agreement, letter, or similar document, which confirms any involvement in or contribution to a countywide stormwater program or regional outreach and education collaborative effort. Provide documentation in the annual report per section E10.

E2.3 Development and Implementation

1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement or review, update as necessary, and implement a written public education strategy to attain the following goals related to stormwater pollution prevention and using stormwater as a resource:
 - a. Identify who is responsible for implementing specific tasks and create a schedule for task implementation;
 - b. Identify the Permittee's target audiences;

- c. Encourage public input (e.g., the opportunity for public comment, or public meetings) in the development of the public education program;
- d. Develop and disseminate educational materials (e.g., printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites) to targeted audiences, including multiple languages as appropriate that address the following topics as applicable:
 - 1) Local pollutants of concern and regional water quality issues;
 - 2) Benefits of water-efficient and stormwater-friendly landscaping (e.g., [Surfrider's Ocean Friendly Garden Program](#) and the California Department of Water Resources' [Water Efficient Landscape Ordinance](#));
 - 3) Proper application of pesticides, herbicides, and fertilizers;
 - 4) Best management practices to reduce or eliminate illicit discharges from organized car washes (e.g., see the [Sacramento Stormwater Quality Partnership's River Friendly Carwash Program](#)), mobile cleaning and pressure washing operations, and landscape irrigation; and
 - 5) Illicit discharge awareness and illicit discharge and spill reporting including promotion of the Permittee's illicit discharge reporting hotline per the Illicit Discharge and Spill Response Plan.
- e. Pet waste management, including the following:
 - 1) The Permittee shall maintain information on the Permittee's website about proper pet waste management and the impact of improperly deposited waste on water quality and public health.;
 - 2) Annual messaging to residents, reminding them to cleanup accumulated pet waste in their yards that could otherwise get washed into streams and beaches; and
 - 3) Messaging regarding pet waste management and associated impacts to the beaches and their catchments.
- f. As applicable within the Permittee's jurisdiction, make available to independent, parochial, and public schools with materials to educate school-age children about the effects of pollutants in stormwater discharge, the actions the Permittee is taking to protect/enhance stormwater quality, and the actions school-age children can do to help protect receiving water quality in their local area. The Permittee is

encouraged to use environmental and place-based experiential learning materials that are integrated into school curricula and school facility management. The Permittee may refer to [Sac Splash](http://www.sacsplash.org) (www.sacsplash.org) , the [Effie Yeaw Nature Center](http://www.sacnaturecenter.net) (www.sacnaturecenter.net), or [California's Education and Environment Initiative Curriculum](http://www.californiaeei.org) (<http://www.californiaeei.org>) for examples.

E2.4 Public Participation Program

The Permittee shall involve the public in the development and implementation of its stormwater management program. At a minimum, within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall:

1. Create opportunities for the public to participate in the implementation of stormwater pollution prevention activities.
2. Develop electronic, paper, or other communication techniques to ensure the public can easily find information about the Permittee's stormwater management program and opportunities to participate.

E3. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Permittee shall implement an Illicit Discharge Detection and Elimination Program to detect, investigate, and eliminate illicit discharges, including illegal dumping, into its storm drain system pursuant to the following requirements.

E3.1 Illicit Discharge and Spill Response Plan

Within 1 year of the effective date of this Order or the effective date of the Permittee's Designation, whichever is later, the Permittee shall develop and implement or review, update as necessary, and implement an Illicit Discharge and Spill Response Plan that, at a minimum, includes the following elements:

1. A publicly accessible method or methods to receive illicit discharge and spill notifications 24 hours a day (e.g., 24-hour hotline, internet complaint website). Anonymous reporting shall be accommodated by at least one reporting method. The Permittee is encouraged to accommodate electronic photo submittals;
2. An illicit discharge and spill response process that provides the following:
 - a. Material characterization, source identification, containment, abatement, and recovery;

- b. Ability to respond to a reported emergency illicit discharge and conduct assessment and clean-up and abatement, 24-hours-a-day;
- c. Receiving water impact assessment, including visual observation and water quality sampling, as appropriate.¹ The Permittee may reference indicator parameters and action level concentrations found in the Center for Watershed Protection's [Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assistance](#)
- d. Identification of responsible party, as applicable;
- e. A protocol for identifying various illicit discharge and spill levels, such as nuisance, immediate response, and emergency and hazardous material spills, and the associated response actions for each including response timelines for illicit discharges and spills that are based upon threats to water quality and human health as follows:
 - 1) Illicit discharges and spills known or suspected of being either sanitary sewage, hazardous, significantly contaminated, or likely to cause significant harm shall be investigated as soon as possible, but no later than 24 hours of the Permittee becoming aware of the discharge.
 - 2) The Permittee shall investigate any suspected illicit discharge or spill not meeting the above criteria within 72 hours of becoming aware of the suspected illicit discharge or spill.
 - 3) For investigations that require more than 72 hours to fully resolve, the Permittee shall identify the actions being taken to complete material characterization, source identification, containment, abatement, and recovery.
- f. Roles and responsibilities of responding parties (both internal and external departments, agencies, etc) for all times of day, including illicit discharge and spill response referral process (e.g., transfer of incident command) and notification to appropriate federal, state, and local agencies. Identification of departments responsible for responding to each level of illicit discharge or spill (e.g., County Department of Environmental Health, local police and fire departments, Certified Unified Program Agency);

¹ These requirements may be satisfied through collaboration with neighboring Permittees, particularly where a discharge passes through a neighboring Permittee's MS4 prior to reaching receiving waters.

- g. A description of who, how, and what is used to clean-up and verify clean-up of illicit discharges and spills, for both hazardous and non-hazardous substances, including storm drain system cleaning; and
 - h. If applicable, any entities responsible for enforcement and when they take enforcement action.
- 3. A protocol to track and query the following:
 - a. Details of illicit discharge and spill notifications and responses, including, but not limited to, time of notification, location of illicit discharge or spill, responsible party or parties, quantity and type of material, and whether actual or potential illicit discharges and spills are abated;
 - b. Responding parties;
 - c. Response time to abate illicit discharges and spills;
 - d. Inspection report(s);
 - e. History of prior illicit discharges and spills; and
 - f. Follow-up actions, including but not limited to, re-inspections, receipt of compliance documentation, referrals to other divisions or agencies, cost recovery, fines, and other enforcement actions.
- 4. Procedures for reporting a spill or illicit discharge, including relevant contact information, shall be included in each of the Permittee's fleet vehicles that are used by field staff.

E3.2 Outfall Mapping

- 1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall create and 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. Renewal Permittees that have an existing up-to-date outfall map that includes the minimum requirements specified in Section E3.2 are not required to recreate the outfall map.
- 2. The Outfall Map shall include the following:
 - a. The location of all outfalls that are operated by the Permittee within the Permittee's regulated MS4 boundary, drainage areas, and land use(s) contributing to those outfalls. Outfalls shall be located using coordinates obtained from a global positioning system (GPS) when

possible, or located with estimated coordinates by using tools such as other maps or satellite images.

- b. The location (and name, if known by the Permittee) of all waterbodies receiving direct discharges from those outfall pipes;
- c. Any locations where the Permittee discharges stormwater into another MS4;
- d. Field sampling stations if applicable; and
- e. The permittee's regulated MS4 boundary.

E3.3 Labeling Storm Drain Inlets

- 1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, New Permittees shall ensure each storm drain inlet in high foot traffic areas includes a legible stormwater awareness message (e.g., a label, stencil, marker, or pre-cast message such as "drains to the creek" or "only rain in the drain").
- 2. After storm drain inlets have been labeled (under this or any previous Orders), inlets with illegible or missing labels shall be recorded and relabeled within one month of inspection, notification, or identification of a missing label.

E3.4 Illicit Discharge Priority Area Inspections

- 1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement or review, update as necessary, and then implement written procedures to identify and abate sources of potential or actual illicit discharges in Priority Areas.

The procedures shall document the Illicit Discharge Priority Areas designated by the Permittee. Priority Areas shall include:

- a. Areas with a history of past illicit discharges;
- b. Areas with a history of illegal dumping including from encampments;
- c. Areas with onsite sewage disposal systems;
- d. Areas with infrastructure more likely to have illegal connections;
- e. Areas with a history of sanitary sewer overflows;
- f. Areas with commercial, industrial, or other types of activities determined by the Permittee as an illicit discharge risk;
- g. Areas upstream of sensitive waterbodies; and

- h. Other areas determined by the Permittee as likely to have illicit discharges.
- 2. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall create or review and update as necessary, a map or maps which may be in hard copy, electronic, or geographic information system (GIS) form and which shall include the following:
 - a. The Outfall Map developed pursuant to Order Provision E3.2; and
 - b. All areas identified as Illicit Discharge Priority Areas.
- 3. The maps shall be reviewed annually at minimum and updated as necessary.
- 4. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall begin an Illicit Discharge Priority Area Inspection Program. At a minimum, the Program must include:
 - a. Visual inspections of all Priority Areas at least every two years. The visual inspections must be preceded by at least 72 hours of dry weather.
 - b. Observations for improperly maintained or absent illicit discharge prevention best management practices; and
 - c. Observations for evidence of unauthorized discharges, illegal connections, and potential discharge of pollutants to stormwater;
 - d. Investigation of dry weather flows. Upon observing any dry weather flows, the Permittee shall track the flow back to its source. If the source cannot be identified, water quality testing shall be performed.

Sampling shall include the indicator parameters and actions levels in Table E3.1 Indicator Parameters and Action Level Concentrations, below, and any other parameters of concern based on observation of the flow and other relevant information.

The Permittee shall compare the sample analysis results to the Action Level Concentrations contained in Table E3.1 and conduct a follow up investigation if action level concentrations are exceeded and the source of the illicit discharge has not been identified and eliminated. The Permittee may reference the Center for Watershed Protection's 2004 document titled "[Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments](https://www3.epa.gov/npdes/pubs/idde_manualwithappendices.pdf)" for appropriate field test methods (https://www3.epa.gov/npdes/pubs/idde_manualwithappendices.pdf);

- e. Illicit discharge response. Dry weather flows determined to be illicit discharges shall be investigated, abated, and documented according to the procedures in the Illicit Discharge and Spill Response Plan (E3.1).

Table E3.1 Indicator Parameters and Action Level Concentrations

Indicator Parameter	Action Level Concentration
Ammonia	Greater than or equal to 50 milligrams per liter
Color	Greater than or equal to 500 color units
Conductivity	Greater than or equal to 2,000 microsiemens per centimeter
Hardness	Less than or equal to 10 milligrams per liter as CaCO ₃ or greater than or equal to 2,000 milligrams per liter as CaCO ₃
pH	Less than or equal to 5 or greater than or equal to 9
Potassium	Greater than or equal to 20 milligrams per liter
Turbidity	Greater than or equal to 1,000 Nephelometric Turbidity Units

5. Documentation of Priority Area Inspections shall include the following at a minimum:
 - a. The area inspected
 - b. The dates of inspections,
 - c. Identification of any dry weather flows and their source,
 - d. Determination of whether the observed flows were illicit discharges or authorized non-stormwater discharges,
 - e. Results of any water quality monitoring conducted during the inspection; and
 - f. Locations and descriptions of any missing or inadequate best management practices observed during the inspection.

E3.5 Illicit Discharge Detection and Elimination Staff Training

Within 3 years of the effective date of Order or the Permittee's effective date of designation, whichever is later, the Permittee shall implement a biennial training program for all Permittee staff who, as part of their normal job

responsibilities, may be notified of, come into contact with, conduct inspections, or otherwise observe a spill, illicit discharge or illegal connection to the storm drain system. The training program shall include, at a minimum:

1. Identification of an illicit discharge or illegal connection;
2. Lessons learned from historical spills and illicit discharges;
3. Proper procedures for reporting and responding to the spill, illicit discharge or illegal connection;
4. Follow-up training as needed to address changes in regulations, procedures, techniques, or staffing;
5. An assessment of trained staff's knowledge of identifying, reporting, and responding to illicit discharges and revisions to the training as needed;
6. Training for new staff no later than six months after the start of employment; and

E4. POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM

The Permittee shall develop and implement a pollution prevention and good housekeeping for Permittee operations program to prevent or reduce the amount of pollutant runoff from Permittee operations. The Permittee shall implement appropriate best management practices for preventing or reducing the amount of stormwater pollution generated by Permittee operations.

E4.1 Inventory of Permittee-Owned and Operated Facilities

1. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop or review and update as necessary an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality. The inventory shall include Permittee-owned or operated facilities within their jurisdiction that are potential sources of pollution in stormwater, including the following:
 - a. Airports;
 - b. Animal control facilities;
 - c. Chemical storage facilities;
 - d. Composting facilities;
 - e. Equipment storage and maintenance facilities (including landscape-related operations);
 - f. Fuel farms;

- g. Fire stations and training facilities;
 - h. Hazardous waste disposal facilities;
 - i. Hazardous waste handling and transfer facilities;
 - j. Incinerators;
 - k. Landfills;
 - l. Materials storage yards;
 - m. Pesticide storage facilities;
 - n. Public parking lots;
 - o. Public golf courses;
 - p. Public swimming pools;
 - q. Public parks and recreation areas;
 - r. Public works yards;
 - s. Public marinas;
 - t. Recycling facilities;
 - u. Salt or de-icing storage facilities and snow storage facilities;
 - v. Solid waste handling and transfer facilities;
 - w. Transportation hubs (e.g., bus transfer stations);
 - x. Vehicle storage and maintenance areas;
 - y. Vehicle fueling facilities; and
 - z. Other (as directed by the appropriate Regional Water Board).
2. The inventory shall include the following for each facility:
- a. Name and type of facility;
 - b. The facility manager's name, title, and contact information;
 - c. Decimal latitude-longitude coordinates of the facility's main access point and physical address, if applicable;
 - d. Date of last assessment or inspection;
 - e. Industrial General Permit Waste Discharge Identification Number if applicable; and
 - f. Whether the facility was identified as a hotspot as required in the section Identification of Pollutant Hotspots.

E4.2 Map of Permittee-Owned and Operated Facilities

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall create or review and update as necessary a map or maps of the Permittee-owned or operated facilities identified in section E4.1. The map(s) shall include the following:

- 1. The location of the facilities;

2. The stormwater drainage system serving the facilities, including drain inlets and outfalls;
3. The receiving waters to which these facilities discharge or identification of neighboring MS4 where a discharge passes through a neighboring MS4 prior to reaching receiving waters; and
4. Identification of hotspot facilities as required in the section Identification of Pollutant Hotspots.

E4.3 Identification of Pollutant Hotspots

1. Within 3 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall conduct an initial inspection and assessment of all facilities in the inventory (created per section E4.1). Facilities inspected under the previous Order and facilities subject to the Industrial General Permit, including those with No Exposure Certifications, do not need an initial inspection. The inspections shall identify actual or potential pollutant discharge and Hotspot Facilities using the Center for Watershed Protection's guide on Urban Subwatershed and Site Reconnaissance, or equivalent. See Chapter 4 of the [Center for Watershed Protection's Unified Subwatershed and Site Reconnaissance: A User's Manual](#). Among the factors to be considered in identifying hotspot facilities are:
 - a. The type and volume of pollutants stored at the site;
 - b. The presence of improperly stored materials;
 - c. Outdoor material handling and equipment maintenance activities;
 - d. Disturbed or erodible soils;
 - e. Proximity to water bodies;
 - f. History of poor housekeeping practices or deficient pollution prevention best management practice implementation; and
 - g. History of illicit discharges.
2. Hotspots shall include, at a minimum, the following:
 - a. The Permittee's maintenance and corporation yards;
 - b. Vehicle storage, maintenance, washing areas;
 - c. Hazardous waste facilities;
 - d. Bulk fuel storage or dispensing locations;

- e. Vehicle fueling locations; and
 - f. Any other facilities at which chemicals or other materials are likely to be discharged in stormwater.
- 3. The Permittee shall document initial inspection and assessment procedures and results of site evaluation checklists used to conduct the initial inspection and assessment.
 - 4. The Permittee shall update the inventory of Permittee-owned or operated facilities annually as needed. Permittees shall conduct the initial inspection and assessment of a facility within one year of it being added to the inventory.

E4.4 Hotspot Facility Stormwater Pollution Prevention Plan

- 1. Within 4 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, for each hotspot facility identified per section Identification of Pollutant Hotspots, the Permittee shall develop or update as needed and implement a written site-specific Stormwater Pollution Prevention Plan that identifies existing stormwater best management practices installed, implemented, and maintained and also identifies additional best management practices that are needed to minimize the discharge of pollutants to protect water quality.
- 2. The Stormwater Pollution Prevention Plan(s) shall be kept on-site at each of the Permittee-owned or operated facilities' offices for which it was completed and shall be updated as necessary.
- 3. At a minimum the Stormwater Pollution Prevention Plan will include the following:
 - a. Facility address;
 - b. Purpose of the document;
 - c. Key contacts at the facility;
 - d. Site map with drainage and discharge locations identified;
 - e. Types and location of pollutant generating materials that are handled and stored at the facility that may be exposed to stormwater;
 - f. Facility stormwater best management practices;
 - g. Spill control and cleanup procedures including spill kit location;
 - h. Spill notification procedures (e.g., fire department, Certified Unified Program Agency);

- i. Estimated or approximate dates of scheduled quarterly and annual inspections per section Hotspot Facility Inspections, Visual Monitoring and Remedial Action; and
 - j. Inspection procedures and checklist for inspections conducted to ensure proper selection, implementation, and maintenance of all best management practices.
4. The Hotspot Stormwater Pollution Prevention Plan requirement is satisfied by an Industrial General Permit Stormwater Pollution Prevention Plan. Industrial General Permit facilities with No Exposure Certifications in good standing with the State Water Board do not need to prepare a Hotspot Stormwater Pollution Prevention Plan.
5. The Stormwater Pollution Prevention Plan requirements may be satisfied by existing documents such as the Hazardous Materials Business Plan, or other equivalent document if all minimum requirements are included.

E4.5 Hotspot Facility Inspections, Visual Monitoring and Remedial Action

Within 4 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, New Permittees shall implement an inspection program of Permittee-owned or operated hotspot facilities per the requirements of this section. Renewal Permittees shall continue their existing hotspot facility inspection programs and review and make any necessary updates for compliance with this section within 3 years of the effective date of this Order. The inspections performed as a part of Stormwater Pollution Prevention Plan implementation for facilities covered under the Industrial General Permit can be counted towards the facility inspection requirements in this section. Facilities with Industrial General Permit No Exposure Certifications in good standing do not need to conduct Hotspot facility inspections.

1. Inspection Frequency - The Permittee shall conduct quarterly best management practice implementation inspections and an annual Comprehensive Inspection.
2. Hotspot Facility Quarterly Best Management Practice Implementation Inspections - The permittee shall conduct quarterly best management practice Implementation Inspections that include the following elements, at a minimum:
 - a. Observation of facility discharge locations for stormwater and non-stormwater discharges. Where discharges are observed, identify any observed problems (e.g., color, foam, sheen, turbidity) associated with pollutant sources or best management practices;

- b. An inspection of all areas of pollutant generating activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the stormwater conveyance system;
 - c. Inspection of best management practices to identify implementation deficiencies and determine the need for maintenance or follow-up; and
 - d. Identification of any deficiencies and a schedule of follow-up actions that will be completed to correct deficiencies as soon as practicable.
3. Hotspot Facility Annual Comprehensive Inspections - Once per year concurrent with one of the quarterly inspections, conduct a review of the Stormwater Pollution Prevention Plan and effectiveness of all best management practices and their implementation to ensure pollutants are not being discharged.
4. The Permittee shall document all inspection dates, inspection results, and corrective actions. Facilities shall maintain a log of inspection reports with their procedures.

E4.6 Permittee Operations and Maintenance Activities

Within 3 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall assess its operation and maintenance activities for potential to discharge pollutants in stormwater. Assessments shall be conducted pursuant to the following requirements:

1. The Permittee shall conduct an assessment to identify operation and maintenance activities that have a potential to discharge pollutants in stormwater including but not limited to the following:
 - a. Road and parking lot maintenance, including sidewalk repair, curb and gutter repair, pothole repair, pavement marking, sealing, and re-paving;
 - b. Bridge maintenance, including re-chipping, grinding, saw cutting, and painting;
 - c. Cold weather operations, including plowing, sanding, and application of deicing compounds and maintenance of snow disposal areas;
 - d. Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation;
 - e. Material stockpiling (e.g., asphalt and concrete grindings, construction debris, soil);
 - f. Permittee-sponsored or sanctioned events such as large outdoor festivals, parades, or street fairs;

- g. Green waste deposited in the street;
 - h. Graffiti removal; and
 - i. Hydrant flushing.
- 2. The Permittee shall identify all materials that could be discharged from each of these operation and maintenance activities, and the pollutant characteristics of the materials.
- 3. The Permittee shall develop, implement, and document best management practices that, when applied during Permittee operation and maintenance activities, will reduce or eliminate pollutants in stormwater and non-stormwater discharges. The Permittee shall refer to the California Stormwater Quality Association Municipal Handbook or equivalent when developing the best management practices.
- 4. The Permittee shall annually evaluate all best management practices implemented during operation and maintenance activities for effectiveness and revise as necessary.
- 5. The Permittee shall maintain a procedure to dewater and dispose of materials extracted from its storm drain system. This procedure shall ensure that water and waste materials removed during the cleaning process will not reenter the MS4.

E4.7 Water Quality and Habitat Enhancement in Flood Management Facilities

Within 3 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement a process or review, update, and implement existing processes as necessary to incorporate water quality and habitat enhancement features in the design of all new and rehabilitated flood management projects that discharge to the storm drain system.

E4.8 Landscape Design and Maintenance

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement a landscape design and maintenance program or review, update, and implement existing programs to reduce the amount of water, pesticides, herbicides and fertilizers applied during Permittee operations and activities. The program shall address the following requirements:

- 1. The Permittee shall evaluate pesticides, herbicides and fertilizers used and application activities performed and identify pollution prevention and source control opportunities.

2. The Permittee shall implement landscape management measures that rely on non-chemical solutions to reduce the discharge of pesticides, herbicides and fertilizers including the following:
 - a. Follow drought-tolerant landscape management practices;
 - b. Use native or climate appropriate plants;
 - c. Practice grass cycling on decorative turf landscapes;
 - d. Keep grass clippings and leaves away from waterways and out of the street using mulching or composting;
 - e. Prevent 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); and
 - f. Limit or replace herbicide and pesticide use (e.g., conducting manual weed and insect removal); and
3. The Permittee shall collect and properly dispose of unused pesticides, herbicides, and fertilizers.
4. The Permittee shall minimize irrigation run-off such as by using an evapotranspiration-based irrigation schedule and rain sensors.
5. The Permittee shall maintain an inventory of each pesticide, herbicide and fertilizer used during Permittee operations and activities in the permit area. The inventory shall include the following:
 - a. Name and type of each pesticide, herbicide and fertilizer; and
 - b. Approximate annual usage (e.g., gallons/year, cubic feet/year) of each pesticide, herbicide, and fertilizer.

E4.9 Routine Storm Drain System Inspection and Maintenance

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall ensure their maintenance program includes the following at a minimum:

1. Storm drain systems inspections – A strategy to inspect storm drains within the Permittee's jurisdiction. At a minimum, Permittees shall inspect all high priority catch basins annually, prior to the rainy season. High priority catch basins include the following:
 - a. Catch basins known to accumulate a significant amount of sediment, trash, and/or debris;

- b. Catch basins collecting large volumes of runoff;
 - c. Catch basins collecting runoff from areas that do not receive regular street sweeping;
 - d. Catch basins collecting runoff from drainage areas with exposed or disturbed soil; and
 - e. Catch basins that receive citizen complaints/reports.
- 2. Storm drain cleaning – A strategy to clean catch basins and other system components. If the entire system is not cleaned annually, cleaning frequencies shall be based on priority areas, with higher priority areas receiving more frequent maintenance.
 - 3. 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.
 - 4. Disposal of waste materials - 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.

E4.10 Long-Term Asset Maintenance, Rehabilitation, and Replacement

- 1. Condition Assessments
 - a. Within 3 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall incorporate Condition Assessments into all inspections of Permittee-owned hard assets within the Permittee's storm drain system.
 - b. Hard assets include the following:
 - Outfalls as defined and inventoried per Section E3.2;
 - Catch basins and other elements of the storm drain system inspected per Section E4.9;
 - Post-construction structural controls installed per Section E6;
 - Any structural control devices installed to comply with ASBS requirements per Attachment F;
 - Any structural controls installed to comply with TMDLs per Attachment G;

- Trash control devices installed per Attachment H; and
 - Any other permanent structural controls installed to serve a water quality function to comply with this Order.
- c. Condition Assessments shall be used to proactively identify maintenance needs beyond routine maintenance and cleaning for the hard assets to maintain their intended function and effectively implement the requirements of this Order. This may include enhanced maintenance, rehabilitation, and replacement as necessary.
- d. Condition Assessments may be tracked in a single master inventory or database, or be incorporated into existing inventories or maintenance plans and shall be updated as inspections and maintenance are conducted. Condition Assessments records shall be made available upon request by the State or Regional Water Boards.
2. Long-Term Asset Operation and Improvement Plan
- a. Within 5 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop of a Long-term Asset Operation and Improvement Plan. The Plan shall be developed using data obtained through Condition Assessments performed per Section E4.10.1 and shall include the following:
1. List of known infrastructure repairs or improvements needed (e.g., deteriorated infrastructure, routinely flooded areas),
 2. Deferred maintenance needs (e.g., structural controls with deferred maintenance);
 3. List of any hard assets in need of replacement in the following five years; and
 4. Estimates of costs for the repairs and maintenance.
- b. The initial Long-Term Asset Operation and Improvement Plan shall include data available based on inspections that have been completed with the Condition Assessment element at that time. The plan shall be updated every two years.
- c. The Long-Term Asset Operation and Improvement Plan shall account for liabilities, risks, and stressors to the MS4 resulting from climate change that may impact the desired function of its hard assets including impacts of shifting precipitation patterns, sea level rise, and warming temperatures.

E4.11 Alternative and Existing Asset Management Programs

A Permittee may propose, for Regional Water Board Executive Officer approval, an alternative or existing approach for stormwater asset management and planning, provided the Permittee demonstrates the approach includes elements equivalent to the requirements in this Order.

E4.12 Pollution Prevention and Good Housekeeping Staff Training

The Permittee shall train staff involved in implementing pollution prevention and good housekeeping practices as specified in this section. The training shall occur at least once every two years and include at a minimum:

1. A general stormwater education component;
2. Training on the applicable permit requirements including clear guidance on appropriate stormwater best management practices to use at municipal facilities and during typical operation and maintenance activities;
3. Follow-up training as needed to address changes in procedures, techniques, or staffing;
4. Assessment of trained staff's knowledge of pollution prevention and good housekeeping and revisions to the training as needed; and
5. Training for new staff who will be involved in implementing pollution prevention and good housekeeping practices no later than six months after the start of employment.

E4.13 Third Party Activities

The Permittee shall require that any contractors hired by the Permittee to perform operation and maintenance activities shall be contractually required to comply with all the stormwater best management practices, good housekeeping practices, and standard operating procedures described above. The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate best management practices, good housekeeping practices and following standard operating procedures.

E4.14 Pet Waste Pollution Prevention and Control

The Permittee shall implement pet waste pollution prevention and control measures to prevent pathogen discharges to receiving waters.

1. Permittees without significant outdoor pet populations or pet waste management issues may make a statement to that effect. Part 2 of this section is not required for those permittees.

2. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall identify and create a pet waste hotspot inventory. The inventory shall include locations owned and operated by the Permittee with high potential for dog or other pet waste accumulation.
 - a. The pet waste hotspot inventory shall include the following information for each site:
 - 1) Site name (park name, trail name, or other geographic identifier);
 - 2) Description of BMPs currently employed at the site (e.g., signage, waste bag dispensers, trash bins) and the maintenance schedule for those BMPs;
 - 3) Identification of sites with improper pet waste disposal determined by at least one site visit by Permittee staff. The site visit may be conducted as part of other routine maintenance or inspections.
 - 4) Date and findings of site visit(s).
 - 5) Description of any proposed BMPs or increased maintenance necessary to prevent improper disposal of pet waste at the site.
 - b. Locations to be documented in the pet waste hotspot inventory include but are not limited to the following:
 - 1) Dog parks
 - 2) Recreational areas where dogs are allowed such as trails.
 - c. The inventory shall be reviewed annually at a minimum.

E4.15 Snow Removal and Traction Application Operations Pollution Prevention and Control

1. This section is not applicable to Permittees with the majority of permitted area below 3,000 feet in elevation or infrequent snow management needs. Upon including a statement as such in their annual report, compliance with section E4.15 is not required for those permittees.
2. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement a street sweeping and snow removal operation BMP and maintenance program or review, update, and implement existing programs to reduce the amount of traction sand applied during Permittee operations, fugitive dust, roadway sediment, and trash accumulation and discharges to receiving waters. The program shall address the following requirements:

- a. The Permittee shall evaluate volumes and locations of traction sand application and identify application reduction, pollution prevention and source control opportunities. The Permittee shall record road abrasive and deicer applications, including location, date, time, and application rate. This evaluation shall prioritize street sweeping activities for roadways and paved surfaces with greater pollutant load and proximity to or discharging to waterbodies or other environmentally sensitive areas.
- b. The Permittee shall evaluate effective street sweeping schedules and develop a maintenance plan to sweep deposited traction sand to roadways within 72 hours of dry roadways, periods of dry weather, and prior to rain events.
- c. The Permittee shall implement effective street sweeping, roadway sediment, and traction sand discharge mitigation BMPs, including the following:
 - 1) Select traction sand that contains no fine sediment particles and resists pulverization to fines.
 - 2) Street sweeping of tracked sediment on paved public roads and associated stormwater conveyance infrastructure (e.g. curb and gutter) shall be implemented to prevent sediment from entering a stormwater conveyance system and/or receiving waters.
 - 3) Street sweeping activities shall utilize one of the following sweeper types:
 - i. Mechanical sweeper followed by a vacuum-assisted sweeper.
 - ii. Vacuum-assisted, dry, waterless sweeper.
 - iii. Regenerative sweeper.
 - 4) To mitigate the potential of excessive dust generation, kick brooms and/or sweeper attachments shall not be used for street sweeping.
 - 5) The generation of dust during street sweeping operations shall be kept to a minimum. The application of water for dust control or a vacuum shall be implemented to mitigate the potential of excessive dust generation.
 - 6) If freezing conditions are anticipated, and the application of dust control water during the sweeping process is considered hazardous, street sweeping shall be implemented in an appropriate manner to mitigate the potential of excessive dust generation including:

- i. Utilizing a vacuum-assisted, dry, waterless sweeper (or functional equivalent).
 - ii. Utilizing a regenerative sweeper (or functional equivalent).
 - iii. Conducting street sweeping operations during periods of the day when temperatures are above freezing, and dust control water can be applied safely.
- 7) Remove collected material, including sediment, trash and debris, from paved shoulders, drainage inlets, curbs, dikes, and other drainage areas.
- 8) Adjust street sweeper brooms frequently to maximize sweeping operations efficiency.
- 9) Sweeper material shall be disposed of in compliance with all applicable local, state, and federal requirements.
- 10) Implement traction sand traps or other similar permanent stormwater BMPs to reduce sediment and traction sand discharges in areas where traction sand must be repeatedly applied for public safety, where other BMPs are not sufficient to control discharges, and in areas close to waterbodies or other sensitive environments.
- d. The Permittee shall evaluate volumes and location of high pollutant loaded snow and identify pollution prevention and source control opportunities. This evaluation shall prioritize snow removal and storage activities for roadways and paved surfaces with greater pollutant load and proximity to or directly discharging to waterbodies or other environmentally sensitive areas.
- e. The Permittee shall implement effective snow removal and storage BMPs, including:
 - 1) Prevent discharges of excess pollutants to waterbodies from snow removal and storage practices.
 - 2) Do not store snow near or within drainage ways, including surface waters, ephemeral drainages, permanent stormwater BMPs, and stormwater infrastructure, unless a berm or other BMP has been constructed to protect sensitive areas.
 - 3) Snow storage areas must be paved, sited and sized to accommodate the expected volume of snow, visibly delineated, and with appropriate BMPs installed to minimize pollutant and runoff impacts. If a storage

area cannot be paved, BMPs must be implemented to prevent soil disturbance and compaction.

- 4) Inspect and maintain designated snow storage areas to ensure effective infiltration rates and remove accumulated traction sand, trash, and debris.

E5. CONSTRUCTION SITE STORMWATER RUNOFF 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 must include the following elements:

E5.1 Construction Site Stormwater Runoff Control Legal Authority

1. Applicability – Regulated Construction Projects are defined as follows:
 - a. All land disturbances required to be enrolled in the Construction General Permit including those with erosivity waivers;
 - b. All land disturbances less than 1 acre that aren't activities covered by best management practices in E4 or elsewhere in this Order (e.g. maintenance activities that already have sediment and erosion control best management practices identified and implemented through E4.6);
2. Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop and implement contract language, and in-house policies/procedures (e.g. ordinances, contractual provisions, base orders, resolutions, condition of lease provisions, tenant improvement agreements, specifications or other regulatory mechanisms) to ensure the Permittee's in-house construction operators and outside contractors implement the following pollution prevention measures, at a minimum, for all Regulated Construction Projects:
 - a. Erosion controls;
 - b. Sediment controls;
 - c. Soil stabilization;
 - d. Dewatering pollution controls;
 - e. Source controls;
 - f. Prevention of unauthorized non-stormwater discharges;
 - g. Good housekeeping practices; and
 - h. Other pollution prevention measures as appropriate.

E6 POST-CONSTRUCTION STORMWATER MANAGEMENT PROGRAM

E6.1 Post-Construction Program Adoption and Initiation Timeline

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall adopt, update, or reference Low Impact Development performance criteria required by this Order and require the Post Construction Stormwater Management Program be applied on applicable Regulated Projects and Small Projects.

E6.2 Effective Date for Applicability

1. All public and private projects under the Permittee's jurisdiction, to the extent allowable by law, that meet any of the below approval milestones shall comply with the post-construction requirements of this Order.
 - a. Discretionary projects that have not yet been deemed complete for processing.
 - b. Projects that have received discretionary approval but that have been subsequently modified to include additional impervious area through a process such as a tentative map extension, where changes are allowed by law.
 - c. Projects that do not require discretionary approval and that have not received ministerial approval.
 - d. Public projects that require no ministerial or discretionary approval and have not yet received approval of their governing body or designee for the initiation of the project.

E6.3 Enforceable Mechanisms

Within 2 years of the effective date of this Order or the Permittee's effective date of designation, whichever is later, the Permittee shall develop or review and update as necessary, enforceable mechanisms that will implement the requirements in the Post-Construction Stormwater Management Program (Section E6) of this Order and may include municipal codes, regulations, standards, and specifications. The Permittee shall:

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

2. Approve new or modified enforceable mechanisms that resolve regulatory conflicts and implement the Post-Construction Stormwater Management Program (Section E6) requirements if necessary.
3. Apply new or modified enforceable mechanisms to Regulated Projects and Small Projects.

E6.4 Small Projects

1. Small Projects include all projects that create and/or replace (including projects with no net increase in impervious footprint) 2,500 square feet or more but less than 5,000 square feet of impervious surface and not part of a larger plan of development.
2. Small projects do not include linear utility projects or road projects.
3. The Permittee shall require Small Projects to implement applicable Source Control Measures and at least one Site Design Measure listed in section E6.8.4. Opportunities to implement Site Assessment Methods shall also be considered.
4. Small Projects shall submit a checklist or otherwise indicate as part of their permit application which Source Control Measures, Site Assessment Methods, and Site Design Measures will be used in the project.

E6.5 Regulated Projects

1. Regulated Projects are projects on public or private land that create 5,000 square feet or more of impervious surface (collectively over the entire project site) and that are subject to the planning authority or building authority of the Permittee.
2. The Permittee shall require Regulated Projects to implement low impact development design standards per the Low Impact Development Design Standards section.
3. The Permittee shall develop and implement an equivalent process for reviewing and implementing these requirements for both public and private development projects.

E6.6 Regulated Project Categories

1. Development Projects
 - a. Development Projects include both new development and redevelopment. New development projects involve no alteration of existing impervious surface. Redevelopment projects may either entirely

involve alteration of existing impervious surface or some alteration of existing impervious surface alongside addition of new impervious surface.

b. Associated Public Infrastructure Improvements

- 1) Regulated Projects that include public infrastructure improvements associated with private development projects shall include the public infrastructure improvement in the overall LID design of the associated project (i.e. include the new or replaced impervious area of the infrastructure when sizing Permanent Structural Controls).
- 2) Due to the difficulty in segregating the drainage from right of way improvements from the remainder of the existing street, runoff from associated public infrastructure improvements may:
 - a) Be treated within a different Drainage Management Area (DMA) at the Regulated Project (i.e. runoff from the public infrastructure may be rerouted to another DMA); or
 - b) Follow USEPA Green Street guidance for public infrastructure improvements where the runoff cannot be treated within a DMA at the existing project.

c. Site Redevelopment

- 1) Where a redevelopment project results in either:
 - a) Alteration of 50 percent or more of the impervious surface of a previously existing development, or
 - b) An increase of 50 percent or more of the impervious surface of a previously existing development,the project's stormwater controls (i.e., Permanent Stormwater Control Measures) shall be designed and sized to treat stormwater runoff from the entire redevelopment project consisting of all existing, new, and replaced impervious surfaces.

Otherwise, the project's stormwater controls may be designed and sized to treat only the new and/or replaced impervious surface of the project .
- 2) Where a redevelopment project is redeveloping impervious areas that are being treated by Permanent Stormwater Control Measures installed pursuant to Order WQ 2013-001-DWQ (the previous Small MS4 Order), that area may be counted as treated in the stormwater control design as long as the previous control is maintained.

d. Specific exclusions to this category are:

- 1) Interior remodels; and
- 2) Routine maintenance or repair such as:
 - a) Roof or exterior wall surface replacement;
 - b) Pavement resurfacing within the existing footprint that does not expose the underlying soil or pervious subgrade; and
 - c) Full-depth reclamation that does not change the pre-project drainage patterns and is not associated with non-excluded new or redevelopment projects.

2. Road and Linear Utility Projects

Regulated Projects include any of the following types of road projects and linear utility projects that create and/or replace 5,000 square feet or more of impervious surface and that fall under the jurisdictional authority, planning authority, or building authority of a Permittee:

- a. New development of streets or roads.
- b. Redevelopment of streets or roads.
 - 1) Where a redevelopment project results in either:
 - a) Alteration of 50 percent or more of the impervious surface of an existing street or road, or
 - b) An increase of 50 percent or more of the impervious surface of a previously existing street or road,

The project's stormwater controls (i.e., Permanent Stormwater Control Measures) shall be designed and sized to treat stormwater runoff from the entire redevelopment project consisting of all existing, new, and replaced impervious surfaces.

Otherwise, the project's stormwater controls may be designed and sized to treat only the new and/or replaced impervious surface of the project.

- c. Linear utility projects that create and/or replace more than 5,000 square feet of contiguous impervious surface.
- d. The following road and linear utility projects are excluded from the above requirements and are not considered new development or redevelopment projects unless they are associated with non-excluded new or redevelopment projects:
 - 1) Trenching, excavation, and resurfacing associated with linear utility projects;
 - 2) Full-depth reclamation that does not change pre-project drainage patterns;

- e. The following road and linear utility projects are excluded from the above requirements and are not considered new or redevelopment projects:
 - 1) Pavement grinding and resurfacing of existing roadways and parking lots that does not expose the underlying soil or pervious subgrade; and
 - 2) Routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway.

E6.7 Source Control Measures

- 1. Regulated Projects and Small Projects with pollutant-generating activities and sources shall be required to implement standard permanent and operation source control measures as applicable.
- 2. 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. At a minimum, Regulated Projects and Small Projects shall include the following source controls as applicable:
 - a. Minimization of stormwater pollutants of concern in urban runoff through measures that may include plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's regulations and standards:
 - 1) Discharges from indoor floor mat, equipment, or hood filter wash racks or covered outdoor wash racks for restaurants;
 - 2) Dumpster drips from covered trash, food waste, and compactor enclosures;
 - 3) Discharges from covered outdoor wash areas for vehicles, equipment, and accessories;
 - 4) Swimming pool water, if discharge to onsite vegetated areas is not a feasible option; and
 - 5) Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option;
 - b. Properly designed covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas;
 - c. Properly designed trash storage areas;
 - d. Landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and

incorporates other appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping;

- e. Efficient irrigation systems; and
- f. Storm drain system stenciling or signage.

E6.8 Low Impact Development Design Standards

E6.8.1 Low Impact Development for Stormwater

1. The Permittee shall adopt and implement requirements and standards to ensure design and construction of Regulated Projects that achieve low impact development design standards to reduce runoff, treat stormwater, and provide baseline hydromodification management to meet the requirements of this section.

2. Stormwater Control Measure Design Process

During the planning and development of Regulated Projects, implementation opportunities for each of the Low Impact Development measures listed below and described in detail in subsequent sections shall be considered. These are listed in order of generally increasing complexity of both design and maintenance needs and each step may need to be considered iteratively until a final design is reached:

- a. Site Assessment Methods to minimize the creation of impervious area;
- b. Site Design Measures to maximize the infiltration, capture, and use of stormwater; and
- c. Permanent Stormwater Control Measures to treat and infiltrate stormwater not managed through Site Assessment or Site Design Measures.

Permanent Stormwater Control Measures are engineered technologies designed to remove pollutants from site runoff. Permanent Stormwater Control Measures may include, but are not limited to: bioretention planters, vegetated filter strips and swales, infiltration trenches and basins, sand filters, detention basins and select proprietary devices.

3. Target Pollutants of Concern

Permanent Stormwater Control Measures shall be selected and designed to treat the following pollutants of concern: dissolved and particulate metals, pathogens, nutrients, sediment, hydrocarbons, trash, and fine sediment. This requirement may be met by directing flow into a Permanent Stormwater Control Measure or multiple Permanent Stormwater Control

Measures that control these pollutants. Other site-specific, TMDL, and 303(d)-listed pollutants shall also be identified and treated to the maximum extent practicable.

E6.8.2 Site Assessment Methods

1. 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 reducing runoff, infiltrating runoff, capturing and using runoff, or treating runoff and assuring these goals are incorporated into the project design. The Permittee may adopt or reference an existing low impact development site assessment methodology.
2. The Permittee shall require Regulated Projects to consider optimizing the site layout using the following Site Assessment methods:
 - a. Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed;
 - b. Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration;
 - c. Limit overall impervious coverage of the site;
 - d. Employ development setbacks from creeks, wetlands, and riparian habitats;
 - e. Preserve healthy, vigorous, and mature trees when feasible;
 - f. Conform the site layout along natural landforms;
 - g. Avoid excessive grading and disturbance of vegetation and soils; and
 - h. Replicate the site's natural drainage patterns.

E6.8.3 Drainage Management Areas

1. A Drainage Management Area is the area draining to a single discharge location or Permanent Stormwater Control Measure.
2. The Permittee shall require each Regulated Project to provide a map or diagram delineating the discrete Drainage Management Areas within the developed portions of the project site and demonstrate how stormwater from each Drainage Management Area will be managed to meet the Low Impact Development Design standards.
3. If the Regulated Project is changing the configuration or number of drainage points (and thus the configuration or number of Drainage Management

Areas) at the site as part of the project, the project proponent shall provide both pre-project and post-project maps of Drainage Management Areas.

4. Permanent Stormwater Control Measures shall be sized to manage the runoff from the entire Drainage Management Area, including all new, replaced, and existing areas draining to the Permanent Stormwater Control Measure.

E6.8.4 Site Design Measures

Site Design Measures are less complex measures that reduce the amount of stormwater runoff from a site and reduce the area required for control by more complex, engineered treatment controls such as bioretention or flow-through treatment devices.

Site Design Measures include Impervious Connection to Vegetated Areas, Interceptor Trees, Pervious Pavement, and Green Roofs, as described in the following sections.

E6.8.4.1 Impervious Connection to Vegetated Areas

Impervious Connection to Vegetated Areas utilizes properly configured vegetated areas that intercept, slow, and allow infiltration of stormwater runoff from directly connected impervious areas while allowing sediment and other pollutants to settle and infiltrate. Vegetated areas may receive stormwater runoff from impervious areas such as driveways, roads, roof downspouts, and parking lots.

E6.8.4.2 Interceptor Tree Planting and Preservation

Interceptor trees are evergreen or deciduous trees that intercept rainwater on their leaves and branches. Intercepted water is held within the tree canopy and runs down the branches and trunk of the tree where it may infiltrate into the soil at an enhanced rate. Interceptor trees may be either planted or preserved trees.

E6.8.4.3 Pervious Pavement Systems

Pervious Pavement Systems include systems consisting of permeable interlocking concrete pavement; pervious or permeable concrete unit pavers; pervious grid pavements; pervious concrete; porous asphalt; turf block; grasscrete; and bricks and stones, set on a gravel base with gravel joints, which stores and infiltrates rainfall. Pervious Pavement Systems require regular maintenance to maintain their infiltration capacity.

E6.8.4.4 Green Roofs

Green roofs are roofs that are entirely or partially covered with vegetation and soils. Green roofs function as a soil and plant-based filtration feature that removes pollutants through a variety of natural physical, biological, and chemical treatment processes prior to discharge.

E6.8.4.5 Rainwater Capture and Use

Rainwater capture and use involves collecting stormwater runoff in tanks (e.g., rain barrels and cisterns) to allow for use of the collected runoff. Collected runoff may be used for irrigation, greywater systems, or other uses. Tanks can be installed above or below ground depending upon design requirements and site conditions.

E6.8.5 Numeric Sizing Criteria for Stormwater Treatment, Retention and Peak Flow Control

1. Stormwater Treatment Measures and Baseline Hydromodification Management Measures

The Permittee shall require all Regulated Projects be designed to treat, retain, infiltrate, and/or capture and use stormwater to meet at least one of the following hydraulic sizing design criteria:

a. Volumetric Criteria:

- 1) The maximized storm water capture 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
- 2) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in the most recent version of CASQA's Development Best Management Practice Handbook, using local rainfall data; or

b. Flow-based Criteria:

- 1) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or
- 2) The flow of runoff produced from a rain event equal to at least 2times the 85th percentile hourly rainfall intensity as determined from local rainfall records.

2. Peak Flow (Hydromodification) Control Measures

- a. Regulated Projects that create and/or replace greater than one acre or more of impervious surface shall implement peak flow controls based on their geomorphic province per Figure E.1 as follows:

1) Post-project peak flows discharged from the site shall not exceed estimated pre-project peak flows for the 2-year, 24-hour storm in the following geomorphic provinces (Figure E.1):

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

2) Post-project peak flows discharged from the site shall not exceed estimated pre-project peak flows for the 10- year, 24-hour storm in the following geomorphic provinces (Figure E.1):

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



Figure E.1. California Geomorphic Provinces

- b. Peak flow controls may be designed such that they meet the requirements of both the sections Stormwater Treatment Measures and Baseline Hydromodification Management Measures and the Peak Flow Control Measures, thus not requiring two separate control measures.

- c. 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.
- d. The following projects are not subject to the Peak Flow (Hydromodification) Requirements:
 - 1) Regulated Projects that do not increase impervious area over the pre-project condition; or
 - 2) Regulated Projects located in a catchment that drains to a hardened (e.g., continuously lined with concrete) engineered channel or channels or enclosed pipes, which extend continuously to a bay, delta, ocean, or flow-controlled reservoir.

E6.8.6 Selection of Permanent Stormwater Control Measures for Stormwater Treatment

1. Baseline Bioretention Stormwater Control Measure Parameters

After implementation of Site Design Measures per Section E6.8.4, 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 E6.8.5. The facilities must be demonstrated to be at least as effective as a bioretention system with the following design parameters.

- a. 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.
- b. Minimum surface reservoir volume equal to surface area times a depth of 6 inches.
- c. 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.
- d. Subsurface drainage/storage (gravel) layer with an area equal to the surface area and having a minimum depth of 12 inches.

- e. Underdrain with discharge elevation at top of gravel layer. 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.
- f. No compaction of soils beneath the facility, or ripping/loosening of soils if compacted.
- g. No liners or other barriers interfering with infiltration.
- h. Appropriate plant palette for the specified soil mix and maximum available water use.

2. Alternative Design Effectiveness Equivalency

Facilities, or a combination of facilities, of a different design than in Section E6.8.6.1 may be permitted if all of the following measures of equivalent effectiveness are demonstrated:

- a. Equal or greater amount of runoff infiltrated or evapotranspired;
- b. Equal or lower pollutant concentrations in runoff that is discharged after biotreatment;
- c. Equal or greater protection against shock loadings and spills;
- d. Equal or greater accessibility and ease of inspection and maintenance.

3. Exceptions for Special Site Conditions

Contingent on a demonstration that use of bioretention or a Permanent Stormwater Control Measure 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:

- a. 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;
- b. Permanent Stormwater Control Measures receiving runoff solely from existing (pre-project) impervious areas; and
- c. Historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

4. Alternatives to Onsite Retention and Peak Flow Control Requirements

Permittees may allow Regulated Projects to fulfill all or a portion of its retention or peak flow requirements at an offsite location on a site-for-site

basis or through an approved watershed or regional plan in accordance with the following:

a. Site-for-Site Substitution

The Permittee may allow a Regulated Project to offset retention and/or peak flow requirements at an offsite location only when all of the following are satisfied:

- 1) Forgoing onsite retention and peak flow control will not result in significant impacts to receiving waters, such as bank erosion or channel incision.
- 2) Untreated stormwater is not being conveyed through a water body.
- 3) The offsite offset project provides hydraulically sized retention and peak flow control (per Section D6.8.5.2 Peak Flow (Hydromidification) Control Measures) of stormwater runoff that meets or exceeds the foregone amount from the applicable Regulated Project.
- 4) Offsite offset project(s) are within the same watershed as the Regulated Project, or the Offsite offset project site(s) located outside the watershed have prior approval of the Regional Board Executive Officer.
- 5) Offsite offset projects shall be completed as soon as practicable and no longer than three years from the date of the applicable Regulated Project's completion unless a longer period is otherwise authorized by the Regional Water Board Executive Officer.

b. Approved Watershed or Regional Plan

Watershed or Regional Plans are plans that present a coordinated strategy to mitigate specific development impacts using regional and watershed-scale stormwater control measures. A project or projects from an approved Watershed or Regional Plan may be used to offset the Regulated Project's required retention or peak flow requirements. Proposed Watershed or Regional Plans shall be subject to the prior review and approval of the Regional Board Executive Officer and shall include, at a minimum:

- 1) Demonstration that implementation of projects per the Watershed or Regional Plan will be as effective in meeting the applicable section Permanent Stormwater Control and Sizing requirements as meeting them on site.

- 2) Quantitative analysis (e.g., calculations and modeling) used to evaluate offsite compliance.
- 3) A demonstration that forgoing onsite retention and peak flow control will not result in significant impacts to receiving waters, such as bank erosion or channel incision.
- 4) A description of proposed offset project(s). The proposed offset projects may include existing facilities or prospective projects.
- 5) The location of the proposed offset project(s), which shall be within the same watershed as the Regulated Project. Offset project sites located outside the watershed are subject to the approval of the Regional Board Executive Officer.
- 6) Offset projects shall be completed as soon as practicable and no longer than three years from the date of the applicable Regulated Project's completion unless a longer period is authorized by the Regional Water Board Executive Officer.

E6.9 Operations and Maintenance of Post-Construction Stormwater Control Measures

E6.9.1 Operation and Maintenance Plan

The Permittee shall ensure that operation and maintenance plans exist for all Permanent Stormwater Control Measures in its MS4 boundary as Regulated Projects are approved. The Permittee shall:

1. Require Regulated Project proponents and their successors to develop and implement an adequate Operations and Maintenance Plan.
2. Require at least one of the following from all Regulated Project proponents and their successors in control of the project or successors in fee title:
 - a. The project proponent's signed statement accepting responsibility for the operation and maintenance of Permanent Stormwater Control Measures until such responsibility is legally transferred to another entity;
 - b. Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the operation and maintenance of the installed Permanent Stormwater Control Measures (if any) until such responsibility is legally transferred to another entity;

- c. 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 operation and maintenance of the installed Permanent Stormwater Control Measures (if any) until such responsibility is legally transferred to another entity; or
 - d. Any other legally enforceable agreement or mechanism, such as recordation in the property deed, which assigns the operation and maintenance responsibility for the installed Permanent Stormwater Control Measures (if any) to the project owner(s) or the Permittee.
3. Develop and implement a written plan that describes operation, maintenance, and inspection of all Permittee-owned or operated Permanent Stormwater Control Measures.
4. Coordinate with the appropriate mosquito and vector control agency to establish a protocol for notification of installed Permanent Stormwater Control Measures. By October 15th of every year, the Permittee shall submit a list of Permanent Stormwater Control Measures installed within the reporting year to the local mosquito and vector control. This list shall include the facility locations and a brief description of the Permanent Stormwater Control Measures.
5. Submit requests for a Deferred Maintenance Exemption to the appropriate Regional Water Board when the following conditions are met:
 - a. The Permanent Stormwater Control Measure responsible party has worked diligently and in good faith with the appropriate state and federal agencies and the Permittee to obtain approvals necessary to complete deferred maintenance activities; and
 - b. Approvals are not granted because maintenance would result in significant impacts to waters of the state.

E6.9.2 Maintenance Assessment and Inspection

The Permittee shall ensure that all Regulated Project Permanent Stormwater Control Measures are properly operated and maintained for the life of the projects. The Permittee shall implement an Operations and Maintenance Verification Program (Verification Program) to verify that all Permanent Stormwater Control Measures are maintained at a level to meet the requirements of this Order. At a minimum, the Verification Program shall include the following elements:

1. Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that require the granting of site access to all Permittee representatives for the purpose of performing operation and maintenance inspections of the installed Permanent Stormwater Control Measures.
2. A database or equivalent tabular format inventory of all Regulated Projects (public and private) that have installed Permanent Stormwater Control Measures. This Post-Construction Inventory shall include the following information for each Regulated Project:
 - a. Name and address of the Regulated Project;
 - b. Specific description of the location (or a map showing the location) of the installed Permanent Stormwater Control Measures;
 - c. Installation date(s) of the Permanent Stormwater Control Measures;
 - d. Description of the type and size of the installed Permanent Stormwater Control Measures;
 - e. Responsible operator(s) of Permanent Stormwater Control Measures;
 - f. Dates and findings of Permittee inspections (routine and follow-up) of the Permanent Stormwater Control Measures; and
 - g. Corrective and enforcement actions taken.
3. A process for Permittee verification of the relative maintenance condition of Permanent Stormwater Control Measures. Maintenance conditions shall be determined using the following process:
 - a. Permittee Maintenance and Inspection Program - Permittees shall develop and implement an annual inspection program to verify Permanent Stormwater Control Measures are properly maintained and operated. The inspection program shall include the following:
 - 1) An inventory and map of existing Permanent Stormwater Control Measures, in GIS if available.
 - 2) Permittee inspection of all Permanent Stormwater Control Measures, at a minimum of once every five years, or more frequently as appropriate based on inspection results. Inspections shall include:
 - a) Field inspection of the facility;
 - b) Identify whether the Permanent Stormwater Control Measure is functioning as designed;

- c) Identify maintenance actions needed and timeline for their implementation;
- d) Review of the owner's operations and maintenance actions and documentation to verify conformance with the Operation and Maintenance Plan; and
- e) Documentation of the inspection.

E6.9.3 Field Verification

1. The Permittee shall establish and implement a mechanism (a checklist or other tools) to verify that Permanent Stormwater Control Measures are constructed as designed and approved in accordance with these Permanent Stormwater Management Requirements.
2. Prior to temporary and final occupancy of each Regulated Project, the Permittee shall field verify that any Source Control, Site Design Measures, and Permanent Stormwater Control Measures have been implemented in accordance with these Post-Construction Requirements. The Permittee may accept third-party verification of Permanent Stormwater Control Measures conducted and endorsed by a registered professional engineer, geologist, architect or landscape architect.

E6.10 Planning and Development Review Process

1. The Permittee shall incorporate into their planning and project initiation process standard procedures that require consideration of potential stormwater quality impacts early in the planning process of any project that meets the criteria of this Order for new development and redevelopment projects. Each Permittee shall clearly demonstrate the developer and Permittee considered stormwater quality site issues before the projects reached final design. The Permittee must demonstrate review in the conceptual design of stormwater quality protection at the earliest possible stage in the project planning, initiation, and similar discretionary or ministerial approval process:
2. The Permittee shall establish a plan review and approval process for regulated projects that includes an organizational structure for communication, coordination, and delineated authority between and among departments that have jurisdiction over project review, plan approval, and project construction to ensure all required post-construction measures are designed to meet this order.

3. For each Regulated Project subject to the Low Impact Development requirements, the Permittee shall develop a Post-Construction Stormwater Control Plan that includes the following and other necessary information to show how the proposed project will comply with the requirements:
 - a. Project name, application number, and location including address and assessor's parcel number;
 - b. Name of applicant;
 - c. Project phase number (if project is being constructed in phases);
 - d. Project type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description;
 - e. Total project site area;
 - f. Total new and replaced impervious surface area;
 - g. Summary of Site Assessment Methods;
 - h. Map of Drainage Management Areas, including both pre-and post-development maps if modifications are being made to the discharge locations for any Drainage Management Areas;
 - i. Summary of proposed stormwater controls for each Drainage Management Area for each of the following categories:
 - 1) Source Controls;
 - 2) Site Design Measures; and
 - 3) Permanent Stormwater Control Measures.
 - j. Justification wherever 1) exceptions for special site conditions are used and 2) Alternatives to Onsite Retention and Peak Flow Control Requirements are used to meet retention and peak flow requirements. The justification(s) shall cite relevant portions of the Order allowing selection of lower priority Permanent Stormwater Control Measures and allowance of the offsite projects; and
 - k. Supporting calculations that document proper design and sizing of Site Design Measures and Permanent Stormwater Control Measures used to comply with the applicable requirements.
4. The Permittee shall not begin construction of impervious surfaces, until the Post-Construction Stormwater Control Plan for the Regulated Project sufficiently demonstrates the Regulated Project design meets the Low Impact Development Design Requirements.

E6.11 Alternative Post-Construction Stormwater Management Requirements Based on Assessment and Maintenance of Watershed Processes

1. In areas where the Regional Water Board has adopted alternative post-construction stormwater management requirements per this section, the Permittee shall comply with those alternative standards in lieu of Sections E6.1 through E6.9 and E10.7 (Post-Construction Program Reporting).
2. The Regional Water Board may adopt alternative post-construction stormwater management requirements to replace those set forth in Sections E6.1 through E6.9 and E10.7 (Post-Construction Program Reporting) of this Order. The alternative standards shall be based on a watershed-process approach that includes the following:
 - a. Completion of a comprehensive assessment of dominant watershed processes affected by urban stormwater.
 - b. Low impact development Site Design Measures, numeric runoff treatment and retention controls, and hydromodification controls that will maintain watershed processes and protect water quality and beneficial uses.
 - c. A process by which Regional Board staff will actively engage Permittees to adaptively manage requirements as determined by the assessment of watershed processes.
 - d. An annual reporting program that involves Regional Water Board staff and State Water Board staff to inform statewide watershed process-based criteria.
3. The regional watershed-process based approach shall be approved by the Regional Water Board following a public process. Alternative post-construction stormwater management requirements implemented through this process under the previous Order (Order WQ 2013-0001-DWQ) can continue implementation without an additional board approval and public process.

E6.12 Alternative Post-Construction Stormwater Management Program

1. A Permittee may propose alternative post-construction measures in lieu of some or all of section Post-Construction Stormwater Management Program requirements for multiple benefit projects.
2. Multiple Benefit Projects
 - a. Multiple benefit projects include projects that address any of the following, in addition to water quality:

- 1) Water supply;
 - 2) Flood control;
 - 3) Habitat enhancement;
 - 4) Open space preservation;
 - 5) Recreation; and
 - 6) Climate change.
- b. Multiple benefit projects may be applied at various scales including project site, municipal or sub-watershed level.
 - c. Multiple benefit projects may include, but are not limited to, projects developed under Watershed Improvement Plans (Water Code section 16100 et seq.), Stormwater Resource Plans, Integrated Regional Water Management Plan implementation and green infrastructure projects.
3. Alternative post-construction measures for multiple benefit projects must be equally or more protective of water quality than equivalent requirements it is replacing.
 4. If the Regional Water Board or Executive Officer finds, after an opportunity for public comments, that the alternative measures are consistent with the maximum extent practicable standard, alternative post-construction measures for multiple benefit projects, as described above, may be implemented.

E6.13 Statewide Infiltration Policy

All stormwater best management practices must comply with any requirements that may apply if the State Water Board adopts a Statewide Infiltration Policy.

E7. TMDL DEMONSTRATION OF COMPLIANCE AND TIME SCHEDULE ORDERS

Attachment G contains a list of TMDL-specific responsible Permittees and implementation, monitoring, and reporting requirements, which are applicable to identified responsible Permittees. The sections TMDL Demonstration of Compliance Report and Request for Time Schedule Order, below, provide the reporting requirements for TMDL demonstration of compliance.

E7.1 TMDL Demonstration of Compliance Report

For purposes of this section, the wasteload allocations specified in the applicable TMDLs (as identified in the Fact Sheet) are incorporated by reference. Permittees shall submit a TMDL Demonstration of Compliance Report, as follows:

1. Submit the Report to SMARTS and the applicable Regional Water Board Executive Officer for review and consideration of approval.
2. Prior to the deadline to comply with the final wasteload allocation, a Permittee may demonstrate compliance with the applicable TMDL wasteload allocations by reporting and substantiating that it is timely implementing all best management practices, maintenance, and other requirements specified in Attachment G for that TMDL. Alternatively, the Permittee may make a demonstration of compliance in accordance with subsection E7.1.3.
3. On or after the deadline to attain the final wasteload allocation, a Permittee shall demonstrate compliance with the applicable TMDL wasteload allocations by meeting one or more of the criteria in subsections (a) through (g), as follows:
 - a. Receiving Water Quality Monitoring. 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. Loads from Other Sources. 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. Concentrations. Where the wasteload allocation, or alternative indicator as described in Attachment G, is expressed as a concentration (e.g., micrograms per liter, parts per billion, milligrams per liter, colony forming units per 100 milliliters, and similar), 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. Mass-Based Wasteload. Where a mass-based wasteload (i.e., total mass of a pollutant over a specific time period, for example, pounds per day or kilograms per year) 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. Allowable Exceedance Days. 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. No Discharge. 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. Other Factors. The Permittee demonstrates the attainment of the wasteload allocation through other factors as described by the specific TMDL(s) and as approved by the Regional Water Board or its designee.

E7.2 Request for Time Schedule Order

In some cases, Attachment G includes dates that fall outside the term of this Order. Compliance deadlines for wasteload allocations and other permit requirements that exceed the term of this Order become enforceable in the event that this Order is administratively extended. Some wasteload allocation compliance deadlines have already passed and are enforceable on the effective date of this Order.

1. Requests for Extensions and Time Schedule Orders

Where a final deadline to attain a wasteload allocation has passed and the Permittee has not demonstrated compliance, the Permittee may seek a time schedule order pursuant to Water Code section 13300 from the Regional Water Board. Permittees may request a time schedule order individually or together with other Permittees subject to the TMDL. Permittees may also request time schedule orders where the Permittee has not timely complied with a best management practice-based water quality based effluent limits or other TMDL-related permit requirement.

A request to the applicable Regional Water Board for a time schedule order shall include the following information:

- a. Available data demonstrating the current quality of the MS4 discharge(s) in terms of the applicable wasteload allocation units (i.e., concentration 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.

E8. WATER QUALITY MONITORING

E8.1 Regional Monitoring Programs

1. Upon approval by the applicable Regional Water Board Executive Officer, Permittees may participate in a Regional Water Board approved monitoring program (e.g., Delta Monitoring Program, San Francisco Bay Regional Monitoring Program) in lieu of all or a portion of the Water Quality Monitoring section.
2. As part of its approval, the applicable Regional Water Board Executive Officer shall determine that the Regional Water Board approved monitoring program adequately substitutes for the requirements of the Water Quality Monitoring section for which it is being substituted.
3. All Permittees participating in an approved regional monitoring program at the time of the Order effective date shall consult with the Regional Water Board within 1 year of the effective date of the permit to assess which elements of this Order's Water Quality Monitoring section are adequately addressed by the approved monitoring program and which elements the Permittees should continue to implement.
4. Permittees participating in a regional monitoring program shall complete a memorandum of agreement to participate in the program within 1 year of the Effective date of this Order or the Permittee's effective date of designation, whichever is later.

5. Where a regional monitoring group has initiated plans before the effective date of this Order to conduct monitoring that achieves compliance with the Water Quality Monitoring section, the Permittee may request the Executive Officer of the applicable Regional Water Board tailor compliance dates in this permit to synchronize with the monitoring program. Additionally, existing regional monitoring efforts shall be reviewed and approved by a Regional Water Board Executive Officer.
6. Where a Permittee receives grant funding to conduct monitoring that achieves compliance with the Water Quality Monitoring section, the Permittee may request the Regional Water Board Executive Officer tailor compliance dates in this permit to synchronize with the monitoring program.

E8.2 Areas of Special Biological Significance Monitoring

All Permittees that discharge to an ASBS and are covered by an Ocean Plan exception shall comply with the monitoring requirements described in Attachment F.

E8.3 TMDL Monitoring

Permittees shall implement monitoring requirements assigned to them in Attachment G.

E8.4 303(d) Monitoring

Within 1 year of the effective date of this Order or the Permittee's effective date of designation, whichever is later, Permittees that discharge to waterbodies listed as impaired on the 2026 303(d) list (see the State Water Board's [Surface Water Quality Assessment web page](https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/#impaired) (https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/#impaired)) shall consult with the Regional Water Board to assess whether new or continued monitoring is necessary and if so, determine the monitoring study design and a monitoring implementation schedule. Permittees shall implement monitoring as specified by the Regional Water Board Executive Officer. Permittees are encouraged to consider participation in regional monitoring efforts to satisfy monitoring requirements for 303(d) impaired water bodies. The Permittee does not need to consult with the Regional Water Board or conduct additional monitoring for pollutant/waterbody combinations already covered by a TMDL.

E8.5 Additional Monitoring

The State Water Board or the Regional Water Boards may order additional monitoring as necessary to demonstrate compliance with this Order per Water Code section 13383.

E8.6 Quality Assurance Project Plans

For all monitoring, the Permittee shall prepare, maintain, and implement a Quality Assurance Project Plan. Monitoring samples shall be collected and analyzed according to the Quality Assurance Project Plan developed for the purpose of compliance with this Order. Quality assurance guidance is available on the [Surface Water Ambient Monitoring Program Quality Assurance web page](https://www.waterboards.ca.gov/water_issues/programs/swamp/quality_assurance.html) at

https://www.waterboards.ca.gov/water_issues/programs/swamp/quality_assurance.html and the [Water Boards QA/QC website on Developing a QAPP](https://www.waterboards.ca.gov/water_issues/programs/quality_assurance/qapp.html): https://www.waterboards.ca.gov/water_issues/programs/quality_assurance/qapp.html.

E8.7 Data Submittal

Water quality data shall be uploaded to SMARTS and shall conform to the California Environmental Data Exchange Network “[CEDEN Minimum Data Templates](http://ceden.org/)” format, available at <http://ceden.org/>.

E9. PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT

E9.1 Program Effectiveness Assessment and Improvement Plan

1. Within 2 years of the effective date of this Order or the Permittee’s effective date of designation, whichever is later, New Permittees shall develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the stormwater program. Within 1 year of the effective date of this Order, Renewal Permittees shall update their existing Program Effectiveness and Assessment and Improvement Plans to be compliant with this section of this Order.
2. Permittees that have a Program Effectiveness Assessment and Improvement Plan, or equivalent, approved by the applicable Regional Water Board, or that have a schedule approved by the applicable Regional Water Board to develop and implement such a Plan, shall update the approved Plan or schedule as necessary to comply with this section.
3. The Program Effectiveness Assessment and Improvement Plan shall include the following elements, at a minimum as applicable:

- a. Description of 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).
 - b. Description of how permittee tracks short and long-term progress of the storm water program at implementation of storm water program elements
 - c. Identification and targeting of target audience(s)
4. Annually after development of the Program Effectiveness Assessment and Improvement Plan, the Permittee shall assess progress towards implementing the Program Effectiveness Assessment and present previous years short and long-term progress of the storm water program through an effectiveness assessment report. The effectiveness assessment report shall incorporate assessments of BMP performance to improve effectiveness. The effectiveness assessments shall build upon each other from one year to the next and shall identify modifications to the program the Permittee must undertake to improve effectiveness.

E9.2 Stormwater Program Modifications

1. Within the fifth year of enrollment in this Order, the Permittee shall modify best management practices or the entire program to improve compliance with conditions of this Order and improve program effectiveness at reducing pollutant loads, achieving the maximum extent practicable standard, and protecting water quality. The Permittee shall identify and summarize best management practices and program modifications identified in priority program areas. Modifications shall include:
 - a. Improving upon best management practices that are underperforming;
 - b. Continuing and expanding upon best management practices that proved to be effective, including identifying new best management practices or modifications to existing best management practices designed to increase pollutant load reductions;
 - c. Discontinuing best management practices that may no longer be productive and replacing with more effective best management practices; and
 - d. Shifting priorities to make more effective use of resources.

2. The Permittee shall use information gained through the program effectiveness assessment and MS4 discharge and receiving water monitoring to identify priority areas for program improvement.
3. The Permittee shall consult with the applicable Regional Water Board in setting expectations for the scope, timing, and frequency of best management practice modifications.

E10. ANNUAL REPORTING PROGRAM

E10.1 Annual Report and Annual Reporting Requirements

1. By October 15 of each year, the Permittee shall use the State Water Board's SMARTS to submit a summary of the past year activities as well as a summary of activities to be undertaken during the next reporting period for each program element and certify compliance with all requirements of this Order. If a Permittee is unable to certify compliance with a requirement, the Permittee shall 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.
2. Permittees shall complete and retain all Annual Report information on the previous fiscal year beginning July 1 and ending June 30. 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 otherwise agreed to by the applicable Regional Water Board's Executive Officer.
3. 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 this Attachment. The detailed Annual Report shall clearly refer to the requirements of this Order and describe in quantifiable terms, the status of activities undertaken to comply with each requirement.
4. Each Permittee must submit an annual report and respond to all applicable questions in SMARTS. Permittees involved in regional programs may coordinate with the members to develop reports. One report may be developed on behalf of Permittees involved in a regional program and shall 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. Then each Permittee may use the co-developed report to fill out their individual annual report in SMARTS.

E10.2. Program Management Reporting

In addition to annually reporting on compliance with each individual permit element, below are additional specific reporting items to be included in the Permittee's annual reports:

E10.2.1 One-Time Per Permit Term Reporting Items

1. In Year 1 for Renewal Permittees and Year 2 for New Permittees, the Permittee shall submit a certification statement per Certification section.

E10.2.2 Annual Reporting Items

1. In Year 1, and annually thereafter, report the total number of actions taken within each category of enforcement (verbal warnings, written notices, escalated enforcement actions) and, of those, identify the following:
 - a. Number of corrective actions resolved within permitted time frame; and
 - b. Number of cleanup and abatement actions performed or contracted by the Permittee for discharges not generated by Permittee.
2. In Year 1, and annually thereafter, submit a list of chronic violators including identification information.
3. In Year 1, and annually thereafter, submit a list of NPDES referrals including documentation information per section NPDES Permit Referrals.
4. In Year 1, and annually thereafter if the Permittee has made any changes to their Guidance Document, the Permittee shall submit an updated Guidance Document per Section E1.4.

E10.3 Public Education and Outreach Reporting

E10.3.1 One-Time per Permit Term Reporting Items

1. In Year 1, report the implementation option selected per Implementation Options section.
2. In Year 1, submit any necessary documentation for collaborative options per Implementation Options section, item 2.
3. In Year 2, submit the public education strategy developed per the Development and Implementation section.

E10.3.2 *Annual reporting items*

In Year 2, and annually thereafter, submit a summary of all actions completed per the public education strategy and identify which are completed independently or by the group. At a minimum include:

1. List and description of public education and public participation and involvement activities conducted.

E10.4 **Illicit Discharge Detection and Elimination Program Reporting**

E10.4.1 *One-time Per Permit Term Reporting Items*

1. In Year 1, submit Illicit Discharge and Spill Response Plan per the Illicit Discharge and Spill Response section.
2. In Year 2, submit an outfall map per the Outfall Mapping section.
3. In Year 2, submit procedures for Illicit Discharge Priority Area Inspections per the Illicit Discharge Priority Area Inspections section, item 1.
4. In Year 2, submit Illicit Discharge Source Area map per the Illicit Discharge Priority Area Inspections section, item 2.

E10.4.2 *Annual Reporting Items*

1. Beginning in Year 1, and annually thereafter, report the date of the most recent mapping of MS4 outfalls.
2. Beginning in Year 1, and annually thereafter, identify the Status of the Ordinance or Other Regulatory Mechanism to Prohibit Non-Stormwater Discharges into the Permittee's MS4 choosing from the following options:
 - In effect;
 - In effect, but needs to be updated to comply with the Reissuance (please provide explanation); or
 - Under Development (no existing ordinance from this or previous permit, please provide more explanation).
3. Beginning in Year 1, and annually thereafter, report number of complaints and notifications of illicit discharges and spills.
4. Beginning in Year 2, and annually thereafter, report findings of any dry weather flow investigations.

5. Beginning in Year 3, and annually thereafter, submit a summary of findings of inspections conducted per the Illicit Discharge Priority Area Inspection section.
6. Beginning in Year 3, and annually thereafter, submit documentation of the past year's staff training events including dates and locations of the training and list of staff trained per the Illicit Discharge Detection and Elimination Staff Training section.

E10.5 Pollution Prevention and Good Housekeeping Program Reporting

E10.5.1 One-time per Permit Term Reporting Items

1. In Year 2, submit the map of permittee owned and operated facilities per the Map of Permittee-Owned and Operated Facilities section.
2. In Year 2, submit a copy of the Inventory of Permittee-Owned or Operated Facilities including those identified as hotspots.
3. In Year 3, submit the documentation of Permittee Operation and Maintenance Activities and their corresponding best management practices as identified in the Permittee Operations and Maintenance Activities section.
4. In Year 2, describe actions taken to comply with Provision E4.15 – Snow Removal and Traction Application Operations Pollution Prevention and Control. Reporting shall either include a statement on non-applicability or identify the BMPs implemented per Section E4.15.

E10.5.2 Annual Reporting Items

1. In Year 1, and annually as changes are made, submit the updated MS4 Map per the MS4 Map section.
2. In Year 2, and annually thereafter, submit an asset inventory and map per the Stormwater Asset Management Inventory section.
3. In year 2, and annually thereafter if changes are made, describe your storm drain system inspection, cleaning, and maintenance strategy per Section E4.9 Routine Storm Drain System Inspection and Maintenance.
4. In Year 5, and every two years thereafter, submit the Long-Term Asset Operation and Improvement Plan per Section E4.10 item 2.
5. In Year 1, and annually thereafter, report dates, content, and staff roster of staff training conducted per the Pollution Prevention and Good Housekeeping Staff Training section.

6. In Year 2, and annually thereafter, describe actions taken to comply with Section E4.14 – Pet Waste Pollution Prevention and Control. Reporting shall either include a statement on non-applicability or identify the BMPs implemented, and the numbers or frequency (as applicable) and locations of actions taken to reduce bacteria from domestic animal sources.

E10.6 Construction Site Stormwater Runoff Program Reporting

E10.6.1 One-time per permit term reporting items

In Year 1, upload the adopted ordinance, policy, or other mechanism that complies with this Order and errata sheet as necessary citing changes or added language.

E10.7 Post-Construction Program Reporting

E10.7.1 One-time per permit term reporting items

1. In Year 2– New Permittees – Report/Verify mechanism for requiring these post-construction requirements (Upload a copy of the Legal Authority).

E10.7.2 Annual reporting items

1. Small Projects
 - a. Number of projects that have received approval.
2. Regulated Projects

For each Regulated Project approved during the reporting period, the following information shall be reported electronically in tabular form:

- a. Project name, Location;
- b. Project type (e.g., commercial, residential, mixed use, industrial, recreational);
- c. Project watershed;
- d. Total project site area and total area of land disturbed;
- e. Total new impervious surface area and total replaced impervious surface area;
- f. Total pre-project impervious surface area and total post-project impervious surface area;
- g. Discretionary or ministerial project approval;
- h. Status of project (i.e., initial application submittal, tentative and final approval, Post-Construction Stormwater Control Plan approved (y/n), construction commenced (y/n), construction completed);

- i. Specific Site Design Measures used;
 - j. Are peak flow controls required per section E6.8.5 item 2? (Y/N);
 - k. Where are Post-construction stormwater control systems for the regulated project installed? Onsite, at a shared stormwater treatment facility, or at an offsite location?;
 - l. Post-Construction Operation and Maintenance responsible party;
 - m. Post-construction Operation and Maintenance Plan provided (Y/N)?;
 - n. Stormwater Retention and Treatment sizing criteria used (i.e., flow or volume-based); and
 - o. Date of as built field verification.
3. Operations and Maintenance:
 - a. Total Number of sites with installed stormwater control measures.
 - b. Number of permittee-led inspections performed.
4. Post-Construction Stormwater Control Measure Field Verification and Long-Term Maintenance Assessment
 - a. Number of projects field verified by Permittee staff.
 - b. Number of projects verified by a third party.

E10.8 Total Maximum Daily Loads Compliance Reporting

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:

1. A description of best management practices implemented, including types, number, and locations; and
2. All supplemental information and reports required under the specific TMDL implementation requirements in Attachment G; and
3. An assessment of the effectiveness of implemented best management practices in progressing towards attainment of wasteload allocations within the TMDLs' specified timeframes; and
4. All monitoring data, including a statistical analysis of the data to assess progress towards attainment of wasteload allocations within the TMDLs' specified timeframes; and
5. Based on results of the effectiveness assessment and monitoring, a description of the additional best management practices that will be

implemented to attain wasteload allocations within the TMDLs specified timeframes.

E10.9 Water Quality Monitoring Reporting

E10.9.1 One-time per permit term reporting items

1. In Year 1, Permittees participating in a regional monitoring program shall upload statement of commitment to that program per the requirements in the Regional Monitoring Programs section.

E10.9.2 Annual reporting items

In Year 2, and annually thereafter, Permittees conducting monitoring shall submit a report of the results of monitoring activities for the reporting year.

E10.10 Program Effectiveness Assessment and Improvement Reporting

E10.10.1 One-time per permit term reporting items

1. In Year 2 submit the Program Effectiveness Assessment and Improvement Plan.
2. In Year 5 submit an analysis of the effectiveness of modifications made at improving best management practice or program effectiveness.
3. In Year 5 submit the list of best management practice or program modifications the Permittee will make for priority program areas as specified in the Stormwater Program Modifications section, item 1, including identification of priority program areas and the schedule the Permittee will follow to complete identified modifications during the next permit term.

E10.10.2 Annual reporting items

Beginning in Year 3, describe implementation of the Program Effectiveness Assessment and Improvement Plan. Summarize data obtained through quantitative best management practice performance assessments and the short and long-term progress of the stormwater program and provide an analysis of the data to improve program effectiveness, to achieve the Maximum Extent Practicable standard, and protect water quality.

ATTACHMENT F AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE IMPLEMENTATION REQUIREMENTS

OVERVIEW

The requirements in this Attachment implement State Water Board Resolution No. 2012-0012 (as amended by State Water Board Resolution No. 2012-0031), the General Exception to the California Ocean Plan for Selected Discharges into Areas of Special Biological Significance, Including Special Protections for Beneficial Uses ([General Exception](#)).

F1. SUBMITTALS

All reports and plans shall be uploaded to SMARTS under the “attachments” tab unless notified otherwise by the State Water Board Executive Director. In addition to SMARTS, reports and plans shall be submitted in writing to applicable Regional Water Board Executive Officer for review and consideration of approval.

F2. APPLICABLE PERMITTEES

Small MS4 Permittees granted an exception to the Ocean Plan and subject to the provisions of this attachment are listed below.

Table F2. Small MS4 Permittees Granted an Exception to the Ocean Plan

Regional Water Board	Applicable Small MS4 Permittee	ASBS
North Coast	City of Trinidad, Trinidad Head	Trinidad Head
North Coast	County of Humboldt, Shelter Cove Community Area	King Range
North Coast	California Department of Parks and Recreation, Gerstle Cove State Marine Conservation Area	Gerstle Cove
North Coast	California Department of Parks and Recreation, Jug Handle State Natural Reserve	Jug Handle Cove
North Coast	California Department of Parks and Recreation, Trinidad State Beach	Trinidad Head
North Coast	California Department of Parks and Recreation, Del Norte Coast Redwoods State Park and Prairie Creek Redwoods State Park	Redwoods State and National Park

Regional Water Board	Applicable Small MS4 Permittee	ASBS
San Francisco Bay	County of Marin, Duxbury Reef	Duxbury Reef
San Francisco Bay	California Department of Parks and Recreation, Montara State Beach	James V. Fitzgerald
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	California Department of Parks and Recreation, Año Nuevo State Park and Año Nuevo State Reserve	Año Nuevo
Central Coast	California Department of Parks and Recreation, Carmel River State Beach	Carmel Bay
Central Coast	California Department of Parks and Recreation, Julia Pfeiffer Burns State Park	Julia Pfeiffer Burns
Central Coast	California Department of Parks and Recreation, Point Lobos State Natural Reserve	Point Lobos
Central Coast	Pillar Point Air Force Station, Vandenberg Air Force Base (Department of Defense)	James V. Fitzgerald
Santa Ana	California Department of Parks and Recreation, Crystal Cove State Park	Irvine Coast

F3. DISCHARGE PROHIBITIONS

ASBS-specific prohibitions are provided in section 5.2 of this Order.

F4. UPDATED ASBS COMPLIANCE PLAN

Within 1 year of the effective date of this Order, the Permittee shall submit an updated ASBS Compliance Plan, including the monitoring plan.

The Permittee's updated ASBS Compliance Plan shall address the following requirements:

1. General

The updated ASBS Compliance Plan shall be submitted in track changes or as an addendum to the plan submitted under the previous permit. In either case, the ASBS Compliance Plan submitted under the previous permit must be included (either with the track changes or with the addendum).

2. Monitoring Plan

The Monitoring Plan shall include the following:

- a. Revisions to the monitoring plan for resampling in the event the Permittee has not completed required resampling for any exceedances of natural ocean water quality under the previous permit. Use the [flowchart](#) in this Attachment to determine an exceedance of natural ocean water quality.
- b. Revisions to the monitoring plan to continue Core and Receiving Water monitoring if the Executive Director of the State Water Board has not reduced or suspended monitoring once the storm runoff is fully characterized.
- c. An updated monitoring plan with a schedule for resampling the receiving water for constituent-location pairs that exceed the 85th percentile of reference sample concentrations.
 - 1) Include a schedule for pre-and post-storm monitoring of constituent-location pairs that exceed natural ocean water quality in receiving water.
 - 2) Include USEPA analytical methods and the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including stormwater effluent, reference samples, and ocean receiving water samples, shall be analyzed using Inductively Coupled Plasma/Mass Spectrometry or other approved method with the lowest minimum detection limit described in the Ocean Plan.

3. Best Management Practices

The following information shall be included to address the best management practices requirements:

- a. An updated best management practices map for the location and monitoring result pairs that indicate that discharges may be causing or contributing to alterations of natural ocean water quality, including priority discharge locations. Priority discharges are those that pose the greatest water quality threat and which are identified to require installation of structural BMPs.
 - 1) The map shall show surface drainage of stormwater runoff, areas of sheet flow of stormwater runoff, structural best management practices

already implemented, and any best management practices to be installed in the future to control the pollutants that are causing exceedance of the natural ocean water quality.

- 2) 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 Compliance Plan shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.¹
- b. A description of existing and planned non-structural best management practices, including those for any construction site activities, and a corresponding implementation schedule.
- c. A technical description of best management practices to control stormwater runoff (at the end-of-pipe) during a design storm designed to achieve on average of the following target levels:
 - 1) Instantaneous Maximum Water Quality Objectives in Chapter II, [Table 3](#), of the Ocean Plan; or
 - 2) A 90 percent reduction in pollutant loading during storm events, for the Permittee's total discharges.
4. Implementation Schedule

The Implementation Schedule shall include:

 - a. An updated implementation schedule for the type and installation date of structural best management practices and practices/measures. The best management practices shall be designed to either achieve and maintain natural ocean water quality or to ensure that the permittee's discharge is not causing or contributing to alterations of natural ocean water quality by either reducing flows from impervious surfaces, reducing pollutant loading, or a combination thereof. The implementation schedule shall be designed to bring the Permittee's discharges into compliance with the requirements of the General Exception as soon as is practicable. The Permittee shall include documentation verifying that selected structural best management practices are designed such that the effluent will meet the natural ocean water qualities in the receiving water.
 - b. Description of and an implementation schedule for any low impact development measures currently employed or planned. To control stormwater runoff discharges (at the end-of-pipe) during a design storm, the Permittee must first consider, and use where feasible, low impact

¹ [General Exception](#), Resolution 2012-0012, page 3.

development practices to infiltrate, use, or evapotranspire stormwater runoff on-site.

5. Include an Updated Description of the Following Requirements:

- a. Statement indicating whether the Permittee completed the core discharge monitoring, ocean receiving monitoring, and resampling that was required under the previous permit. If the Permittee concluded that all required resampling was completed, the Permittee shall provide details to support that conclusion.
- b. Table with post-storm receiving water samples that exceed the 85th percentile of reference sample concentrations for which best management practices were not installed under the previous permit. The table shall include the constituent-location pair, ASBS location name, and the ocean receiving water site identification number.
- c. Description of measures by which any non-authorized non-storm water discharges (e.g. dry weather flows) have been or will be eliminated, how these measures will be maintained over time, monitored, and documented.
- d. Description of stormwater outfall drains equal to or greater than 18 inches in diameter or width inspected once prior to the beginning of the rainy season and once during the rainy season.
- e. Description of how pollutant reductions in stormwater runoff will be achieved through best management practices to comply with the special conditions in the General Exception.
- f. Description of how to address erosion control and prevent anthropogenic sedimentation. The natural habitat conditions in the ASBS shall not be altered because of anthropogenic sedimentation.
- g. Description of the Permittee's strategy to ensure the discharges to the areas listed in the table required under section F4, item 5.b., above, comply with the special conditions in the General Exception, including the requirement to maintain natural ocean water quality in the affected ASBS.

F5. ADDITIONAL REQUIREMENTS FOR WATERFRONT AND MARINE OPERATIONS PERMITTEES

The following requirements are adapted from the General Exception, section III.

1. Any Permittee engaged in waterfront and marine operations shall update its Waterfront and Marine Operations Management Plan (updated Waterfront Plan) to include the updates identified below in paragraphs F5.1.a. through F5.1.d. Updates shall reflect any procedural changes since submittal of the

existing Waterfront Plan under the previous permit. Updates may be added in redline/strikethrough format or as an addendum to the existing Waterfront Plan. If submitting an addendum, the Permittee shall include the existing Waterfront Plan.

- a. Update the Management Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected, and natural water quality is maintained in the affected ASBS.
 - b. Update the appropriate Management Practices, described in [The Plan for California's Nonpoint Source Pollution Control Program](https://www.waterboards.ca.gov/water_issues/programs/nps/plans_policies.html), (https://www.waterboards.ca.gov/water_issues/programs/nps/plans_policies.html) for marinas and recreational boating activities, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.
 - c. Update the Management Practices to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in the General Exception, Special Protections (General Exception, B). The Management Practices shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.
 - d. Update the Management Practices to address the prohibition against trash discharges to ASBS. The Management Practices shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The updated Management Practices shall also include appropriate Management Practices to ensure that the receptacles are adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate Management Practices include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and routinely emptying the receptacles to prevent overflow.
2. Conditions for Waterfront and Marine Operations Permittees
- a. 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.
 - b. 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 2019 [Ocean Plan](#).

- c. 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.

F6. ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES – UPDATED ASBS COMPLIANCE PLAN

The following requirements are adapted from the General Exception, section III.

1. Any Permittee engaged in parks and recreation facilities shall provide an update, as applicable, to the requirements listed below in F6.1.a through F6.1.f. The Permittee shall include a section in the updated ASBS Compliance Plan to address any changes to stormwater runoff from parks and recreation facilities. Updates shall reflect any procedural changes to the existing ASBS Plan, which was submitted under the previous permit. Updates may be in redline/strikethrough format or as an addendum to the existing ASBS Compliance Plan. If submitting an addendum, the Permittee shall include the existing ASBS Compliance Plan. If no updates are made to the existing ASBS Compliance Plan, the Permittee shall send a letter to the State Water Board Executive Director and shall upload the letter to SMART as an attachment.
 - a. Update any newly identified pollutant sources, including sediment sources, which may result in waste entering stormwater 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.
 - b. Add new or revise existing best management practices that will be implemented to control soil erosion (both temporary and permanent erosion controls) and reduce or eliminate pollutants in stormwater runoff in order to achieve and maintain natural ocean water quality conditions in the affected ASBS. The updated plan shall include any revisions to best management practices to ensure that trails and culverts are maintained to prevent erosion and minimize waste discharges to ASBS.
 - c. Add new or revise existing best management practices to prevent the discharge of pesticides or other chemicals, including agricultural chemicals, in stormwater runoff to the affected ASBS.
 - d. Add new or revise existing best management practices that address public education and outreach. The goal of these best management 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 the General Exception. The update shall include any revisions to best management practices for 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.

- e. Add new or revise existing best management practices that address the prohibition against the discharge of trash to ASBS. The best management 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 routinely emptying the receptacles to prevent overflows.
- f. Add new or revise existing best management practices to address runoff from parking areas and other developed features to ensure that the runoff does not alter natural ocean water quality in the affected ASBS. Best management practices shall include measures to reduce pollutant loading in runoff to the ASBS through installation of natural area buffers (low impact development), treatment, or other appropriate measures.

F7. MONITORING REQUIREMENTS

F7.1 General Monitoring Requirements

1. A Monitoring Plan shall be submitted with the Updated ASBS Compliance Plan (see section F4, below).
2. The Permittees listed in Table F2 shall participate in the Core Discharge and Ocean Receiving Monitoring Program for at least one more year, regardless of monitoring status under the previous permit, with the exception of Pillar Point (see next section). Permittees may propose additional Reference Area Monitoring. If there are no exceedances found after one year of monitoring, Permittees may submit a request for reduction or suspension of monitoring. The permittee must clearly state the monitoring program for which the request is being submitted and the justification. Permittees shall continue with monitoring until any reduction or suspension in monitoring is submitted and approved by the State Water Board Executive Director.
3. Pillar Point received approval for a reduction in monitoring under the 2013 Permit and this approval remains valid. Thus, Pillar Point shall continue monitoring for constituents that did not receive approval for a reduction or

suspension.

4. Monitoring results shall be compared to chart F8, the Flow Chart to Determine Exceedance or Compliance: ASBS Special Protections. Monitoring results shall be reported in the Annual ASBS Compliance Status report, including clearly identifying exceedances (e.g., bold or italic font). For post-storm monitoring, results shall be tabulated to demonstrate that Permittees are not causing or contributing to alteration of natural ocean water quality for each location/parameter pair that exceed the 85th percentile of reference sample collections (see [Table F9](#)).
5. The Permittee shall repeat the procedure for continuing or recurring exceedance of natural ocean water quality conditions in accordance with the [General Exception](#), Attachment B, section I.A.2.h., unless the Permittee has complied with the procedures described below and is implementing an updated ASBS Compliance Plan according to the requirements of this Attachment.
6. Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State Water Board Executive Director if hazardous conditions prevail.

F7.2 Core Discharge Monitoring Program

Core Discharge Monitoring is ASBS monitoring of stormwater effluents from the stormwater outfalls at the priority discharge locations.

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 samples as described below.
2. Runoff Flow Measurements
 - a. For municipal stormwater outfalls in existence as of December 31, 2007, 18-inches (457 millimeters) 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 Regional Water Board Executive Officer.
 - b. Runoff flow measurements or calculations shall be reported annually for each precipitation season.
3. Runoff Samples – Storm Events

- a. For outfalls equal to or greater than 18 inches (0.46 meters) in diameter or width:
 - 1) Samples of stormwater runoff shall be analyzed for oil and grease; total suspended solids; and, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination; and
 - 2) Samples of stormwater 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.
- b. For outfalls equal to or greater than 36 inches (0.91 meters) in diameter or width:
 - 1) Samples of stormwater runoff shall be analyzed for oil and grease; total suspended solids; and, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination; and
 - 2) Samples of stormwater runoff shall be further analyzed for Ocean Plan Table 3 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 stormwater 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. If a Permittee has no outfall greater than 36 inches, then stormwater runoff from the Permittee's largest outfall shall be further analyzed during the same storm as receiving water samples for Ocean Plan Table 3 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).
- d. For a Permittee not participating in a regional monitoring program, 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 4](#) constituents, [Table 3](#) 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. The Executive Director of the State Water Board may require additional monitoring as appropriate.

F7.3 Ocean Receiving Water Monitoring Program: Choice of Individual Monitoring Program or Regional Integrated with Reference Area Monitoring Program

The following Ocean Receiving Water Monitoring is required if the Permittee has not completed this monitoring as required under the previous permit. In addition to performing the Core Discharge Monitoring Program, all Permittees 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 with reference area 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 shall be sampled and analyzed for 2019 Ocean Plan Table 4 constituents, Table 3 constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and 2019 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 stormwater 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 3 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 Permittee shall perform a survey 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 State Water Board Executive Director may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring.
2. Regional Integrated with Reference Area Monitoring Program:
- Permittees may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program described in section F6.2.1, above, 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 ocean 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 ocean 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 program approach above, if approved by the State Water Board's Division of Water Quality and the applicable 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-stormwater 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.

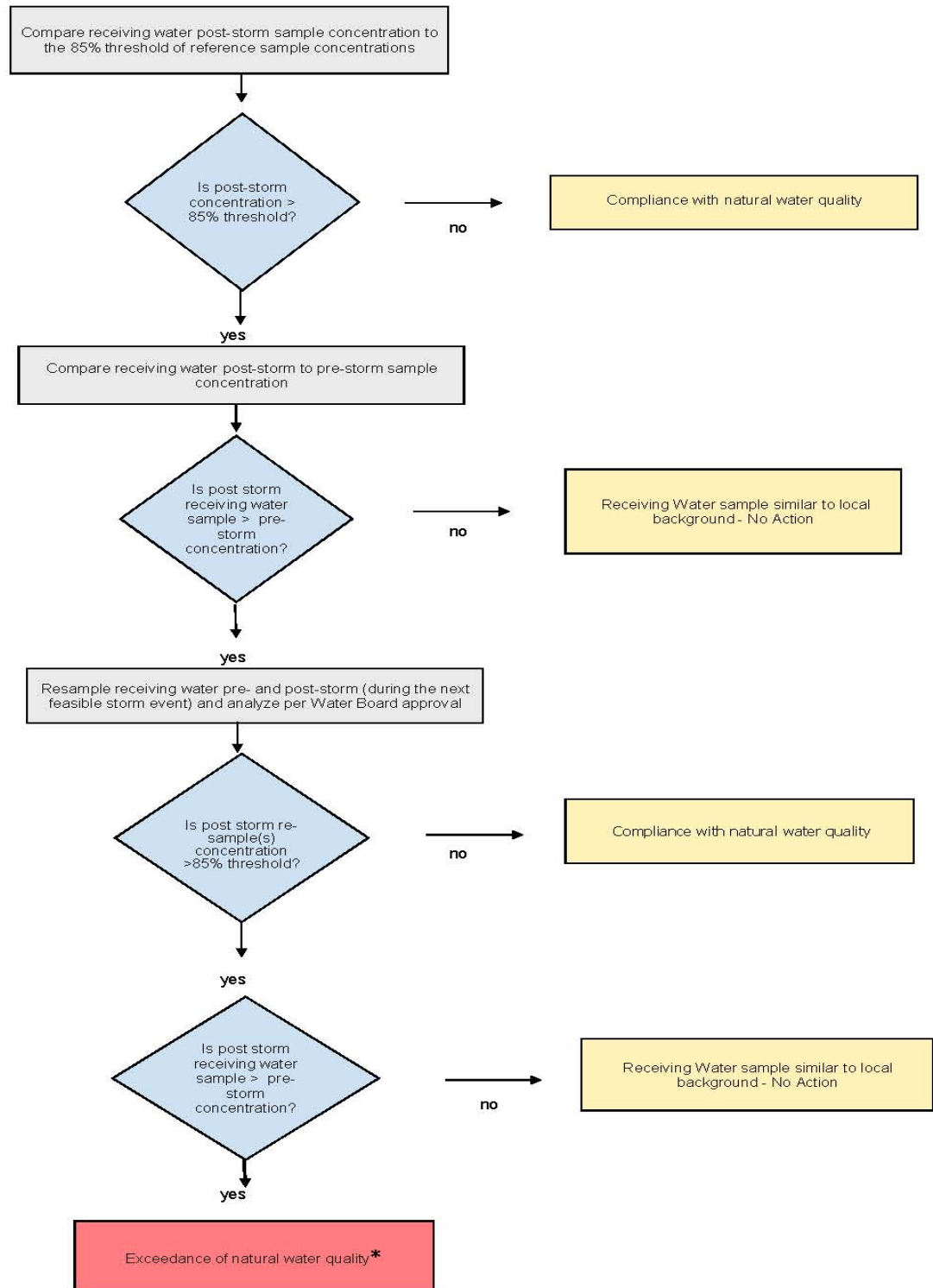
Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water 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 than 18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

- c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected when annual stormwater 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 stormwater 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 3 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, 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, above, for submitting reports, 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 3 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.

**F8. FLOWCHART TO DETERMINE EXCEEDANCE OR COMPLIANCE: ASBS
SPECIAL PROTECTIONS**



F9. TABLES

The Table of 85th Percentile of Natural Ocean Water Quality Values of All Reference Area Monitoring Sites (Regional Monitoring Program) provides the reference water quality data by sampling region. Under the previous permit, three regions were selected and monitored for reference area monitoring: North Coast, South Coast, and Central Coast. Ocean reference areas were located at in areas free of wastewater discharges, anthropogenic non-storm water runoff, and other requirements as provided in the Glossary definition for “Ocean Reference Area Sampling.” The Permittee shall use these values when assessing exceedances of 85th Percentile of Natural Ocean Water Quality for the given reference area monitoring site.

Table F9. Table of 85th Percentile of Natural Ocean Water Quality Values at Reference Area Monitoring Sites (for the Regional Integrated Monitoring Program*)

Constituent	Units	North Coast Monitoring Sites	South Coast Monitoring Sites	Central Coast Monitoring Sites
Arsenic	µg/L	1.76	1.8	1.6410
Cadmium	µg/L	0.055	0.15	0.0607
Chromium	µg/L	4.864	1.9	1.7450
Copper	µg/L	2.056	1.5	1.1115
Lead	µg/L	0.548	0.5	0.2194
Mercury	µg/L	0.006	0.0006	4.2275
Nickel	µg/L	4.605	1.3	1.6666
Selenium	µg/L	0.029	0.003	0.1135
Silver	µg/L	0.130	0.08	0.6000
Zinc	µg/L	8.479	18.6	2.6577
Total Suspended Solids	mg/L	50.816	48	24
Fecal Coliform	Most probable number per 100 milliliters	Not Applicable	Not Applicable	143
<i>Enterococcus</i>	Most probable number per 100 milliliters	Not Applicable	Not Applicable	229
<i>E. coli</i>	Most probable number per 100 milliliters	Not Applicable	Not Applicable	125.5
Urea	mg/L	Not Applicable	Not Applicable	10
Nitrate	mg/L	2.773	0.34	0.675
Orthophosphate	mg/L	0.09	0.100	0.08
Ammonia	mg/L	0.042	0.015	ND
Sum of PAHs	µg/L	0.047	0.0125	ND

Constituent	Units	North Coast Monitoring Sites	South Coast Monitoring Sites	Central Coast Monitoring Sites
Sum of OPs	µg/L	ND	0.0006	ND
Sum of Pyrethroids	µg/L	ND	0.00675	ND
Oil and Grease	mg/L	ND	0.5	ND

Table Notes:

* Indicates that this item is not for Permittees participating in individual monitoring programs.

µ/L is micrograms per liter.

mg/L is milligrams per liter.

ND is non-detect.

State Water Board interpreted 0 as non-detect.

2019 Ocean Plan Table 3 and Table 4

Best management practices installed to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average either of the following target levels:

1. Constituents listed below for Table 3 Instantaneous Maximum Water Quality Objectives in the 2019 Ocean Plan; or
2. A 90% reduction in pollutant loading during storm events, for the Permittee's total discharges.

2019 Ocean Plan Table 3: Monitoring Constituent List and Instantaneous Maximum Water Quality Objectives

Constituent	Units	Instantaneous Maximum Water Quality Objectives
Arsenic	µg/L	80
Cadmium	µg/L	10
Chromium (hexavalent)	µg/L	20
Copper	µg/L	30
Lead	µg/L	20
Mercury	µg/L	0.4
Nickel	µg/L	50
Selenium	µg/L	150
Silver	µg/L	7
Zinc	µg/L	200
Cyanide	µg/L	10
Total Chlorine Residual	µg/L	60
Ammonia (as Nitrogen)	µg/L	6000
Acute Toxicity	Acute Toxicity Units (Tua)	N/A

Constituent	Units	Instantaneous Maximum Water Quality Objectives
Chronic Toxicity	Chronic Toxicity Units (Tuc)	N/A
Phenolic Compounds (non-chlorinated)	µg/L	300
Chlorinated Phenolics	µg/L	10
Endosulfan	µg/L	0.027
Endrin	µg/L	0.006
Hexachlorocyclohexane (HCH)	µg/L	0.012

2019 Ocean Plan Table 4 Monitoring Constituent List

Constituent	Units
Grease and Oil	mg/L
Suspended Solids	mg/L
Settleable Solids	ml/L
Turbidity	Nephelometric Turbidity Unit (NTU)
pH	Unitless number

F10. REPORTING

Beginning with October 15 after the effective date of this Order and thereafter annually by October 15 of each year, the Permittee shall submit its Annual ASBS Compliance Status report. Each report shall cover the period of July 1 through June 30 of each year. The report shall be submitted through SMARTS. The report shall include:

1. Description and status of compliance with each of the requirements in this Attachment, as follows:
 - a. All Permittees shall report the status of compliance with sections F2 through F4, and F7.
 - 1) Waterfront and marine operations Permittees shall additionally report compliance with section F5.
 - 2) Parks and recreation facilities Permittees shall additionally report compliance with section F6.
2. Description of monitoring performed interpretation of sampling results, and status of compliance with applicable monitoring data in the 85th Percentile of Natural Ocean Water Quality Values of Reference Area Monitoring Sites (Regional Monitoring Program) table.

3. Description, location, and status of installation of best management practices required because of exceedance of applicable 85th Percentile of Natural Ocean Water Quality Values of Reference Area Monitoring Sites (Regional Monitoring Program) table.
4. Description, location, and purpose of any low impact development structures installed during the reporting period.
5. Tabulated monitoring results indicating the location ID; status of compliance with natural ocean water quality; resampling results; and plans/schedule for resampling when an exceedance is detected. Tabulated monitoring results shall include the following:
 - a. ASBS name and location number (e.g., Ano Nuevo (15)), monitoring location ID number.
 - b. Certified laboratory analysis shall be tabulated and reported as follows:
 - 1) The parameter
 - 2) The method used to analyze the parameter
 - 3) The method detection limit
 - 4) The Reporting Limit
 - 5) Units
 - 6) A column containing comparison values. For receiving water data, this shall be the applicable Natural Ocean Water Quality Reference data. For Core discharge monitoring, this shall be the instantaneous maximum water quality objective in Table 3 of the 2019 Ocean Plan.
 - 7) Analytical results. Results above the applicable comparison value shall be highlighted (e.g., bold font) to indicate an exceedance.
 - 8) Results detected above the method detection limit but below the reporting limit shall be reported as "DNQ" (detected but not quantified).
 - 9) DNQs shall be flagged with a "J" along with the estimated value, method detection limit, and reporting limit. Copies of certified analytical results shall be included as attachments.

ATTACHMENT G – TOTAL MAXIMUM DAILY LOAD IMPLEMENTATION, COMPLIANCE, AND REPORTING REQUIREMENTS

G1. OVERVIEW

This Attachment provides the implementation, compliance, and reporting requirements for the identified Permittee to comply with total maximum daily load (TMDL) requirements. The Permittee is identified in the TMDL as responsible for implementing the requirements in the TMDL. This Attachment includes the following:

1. Technical requirements for best management practices, and
2. TMDL implementation, monitoring, reporting, and compliance requirements.

Wasteload allocations, descriptions, responsible entities, and compliance deadlines for the applicable TMDLs are also summarized in Attachment B (Fact Sheet), which is incorporated by reference into this Attachment.

A [list of responsible permittees by TMDL](#) is found at the end of this section.

G2. TMDL REPORTING REQUIREMENTS

TMDL reporting requirements are provided below:

1. TMDL Annual Reporting. Each responsible Permittee shall annually report the status of its TMDL implementation in accordance with the sections titled Annual TMDL Compliance Reporting, Water Quality Monitoring, and Program Effectiveness in Attachments D or E (as applicable). Annual reports are due October 15 and cover the reporting period of the previous July 1 through June 30.
2. Regional Water Board-Specific Reports. For Regional Water Board-specific TMDL reports required under this Attachment, the responsible Permittee shall submit its reports for review and consideration of approval by the appropriate Regional Water Board Executive Officer in coordination with the State Water Board.
3. TMDL Demonstration of Compliance Report. The responsible Permittee shall report its compliance with TMDL wasteload allocations according to the requirements in the section TMDL Compliance Report in Attachments D or E, as applicable.
4. Time Schedule Order. If a responsible Permittee requires additional time to comply, the Permittee may seek a time schedule order according to the section Request for Time Schedule Order in Attachments D and E.

Requests for a time schedule order shall be submitted to the applicable Regional Water Board Executive Officer.

5. Cooperative Projects. Prior to implementation of projects pursuant to cooperative agreements or other agreements (e.g., regional, task force, local, watershed, and Regional Water Board agreements), the responsible Permittee shall submit its selected project for review and consideration of approval to the applicable Regional Water Board Executive Officer.

G3. OTHER FACTORS AFFECTING PROJECT IMPLEMENTATION

The responsible Permittee shall identify other factors (such as safety concerns and conflicting local permits) that may affect TMDL compliance project implementation. The Permittee shall include factors affecting TMDL compliance project implementation in its Annual Reports, TMDL Demonstration of Compliance Reports, and subsequent updates.

G4. TOTAL MAXIMUM DAILY LOAD REQUIREMENTS BY REGION

G4.1 NORTH COAST WATER BOARD

This Order implements two TMDLs for the North Coast Water Board: the Shasta River Watershed Temperature and Dissolved Oxygen TMDL and the Lower Eel River Temperature TMDL.

G4.1.1 Shasta River Watershed Temperature and Dissolved Oxygen TMDL

Responsible Permittee: City of Yreka

Impaired Water Body: Shasta River

TMDL Implementation Requirements: The City of Yreka shall continue to implement its existing TMDL implementation plan to minimize, control, and prevent discharges of fine sediment, nutrients and other oxygen-consuming materials, and elevated water temperature discharges from affecting wasters of the Shasta River and its tributaries. In 2013, the North Coast Water Board Executive Officer approved the City of Yreka's TMDL implementation plan.¹

Final Compliance Deadline: The final compliance deadline for attainment of the wasteload allocations is not specified in the TMDL. Therefore, this is an on-

¹ North Coast Water Board Basin Plan, Chapter 4, section 4.2.10, Table 4-14, [Action Plan for Shasta River Watershed](#).

going effort that is implemented throughout the term of this Order and any administrative extension.

TMDL Reporting Requirements: Submit annual reports per section G2, above.

G4.1.2 Lower Eel River Temperature and Sediment TMDL

Responsible Permittee: City of Fortuna (Fortuna)

Impaired Water Body: Lower Eel River

TMDL Implementation Requirements: The TMDL for temperature identifies municipal runoff from Fortuna as a source of diffuse heat to the Eel River. Per the TMDL, Fortuna's compliance with this Order is expected to control TMDL pollutant sources and prevent Fortuna's discharge from causing any net increase in receiving water temperatures and therefore will implement the Lower Eel River Temperature TMDL.²

The North Coast Water Board Sediment TMDL Implementation Plan states that control of sediment discharges shall be implemented through permits.³

Therefore, Fortuna shall comply with this Order to control sediment discharges to the Lower Eel River.

Final Compliance Deadline: The final compliance deadline for attainment of the wasteload allocations is not specified in the TMDL. Therefore, this is an ongoing effort that is implemented throughout the term of this Order and any administrative extension.

TMDL Reporting Requirements: Submit annual reports per section G2, above.

² See Table 12 of the [Lower Eel River Total Maximum Daily Loads for Temperature and Sediment](#).

³ North Coast Water Board Basin Plan, Section A, Sediment TMDL Implementation Policy.

G4.2 SAN FRANCISCO BAY WATER BOARD

This Order implements TMDLs for the San Francisco Bay Water Board, which includes pesticide, bacteria and pathogens, sediment, polychlorinated biphenyls, and mercury TMDLs. Sampling shall occur regardless of weather conditions, provided the conditions are safe for field staff to collect the samples. Should safety concerns preclude sampling during a qualifying storm such that a Permittee would not achieve the mandatory minimums set forth in the following requirements, the Permittee may certify that in their annual monitoring report and perform the missed samples events in the following water year.

G4.2.1 TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks

Responsible Permittees: City of American Canyon, City of Belvedere, City of Benicia, City of Calistoga, City of Larkspur, City of Mill Valley, City of Napa, City of Novato, City of Petaluma, Town of San Anselmo, City of San Rafael, City of Sausalito, City of Sonoma, City of St. Helena, County of Marin, County of Napa, County of Sonoma, Town of Corte Madera, Town of Fairfax, Town of Ross, Town of Tiburon, Town of Yountville

Impaired Water Bodies: Arroyo Corte Madera del Presidio, Calabazas Creek, Corte Madera Creek, Coyote Creek (Marin Co.), Gallinas Creek, Miller Creek, Napa River, Novato Creek, Petaluma River, San Antonio Creek, San Rafael Creek, Sulphur Springs Creek

Pesticides of Concern: Urban-use pesticides of concern to water quality include: diamides (chlorantraniliprole and cyantraniliprole); diuron, fipronil and its degradates; indoxacarb; organophosphorous insecticides (chlorpyrifos, diazinon, and malathion); pyrethroids (metofluthrin, bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, and permethrin); carbamates (e.g., carbaryl and aldicarb); and neonicotinoids (e.g., imidacloprid, acetamiprid, and dinotefuran).

TMDL Urban Creeks and Sediment Monitoring Requirements: Within 1 year of the effective date of this Order, the Permittee shall submit a monitoring plan. The Permittee shall conduct wet and dry weather monitoring of pesticides and toxicity in urban creeks and sediment.

1. Permittees may collaborate with the California Department of Pesticide Regulation for monitoring, data collection, and analysis.
 - a. The City of Benicia has the additional option to collaborate with Phase I MS4 Permittees in Fairfield and Vallejo.
 - b. For data collected through collaboration with Fairfield and Vallejo, California Department of Pesticide Regulation's standard operating

procedures and quality assurance/quality control methods may be used in place of the Surface Water Ambient Monitoring Program (SWAMP) comparability requirements for monitoring comply with this section, or

2. If a statewide coordinated pesticides and pesticides-related toxicity monitoring program begins collecting data on an ongoing basis during the Permit term, then Permittees may request the Regional Water Board Executive Officer modify, reduce, or eliminate monitoring requirements, provided the change would result in overall improvement of pesticide monitoring data collection.
3. Annual Dry Weather Urban Creek Monitoring - Toxicity in Water Column
 - a. Toxicity Field and Laboratory Methods – Permittees shall collect grab samples of Urban Creek water using applicable SWAMP-comparable methodology.
 - 1) Samples shall be analyzed for the test organisms and methods listed in Table G4.2.1.a., below.
 - 2) Toxicity shall be evaluated using the statistical approach, Test of Significant Toxicity (TST). Each sample shall be subject to determination of “Pass” or “Fail” and shall indicate “Percent Effect” from toxicity using non-diluted samples. TST statistical results shall be used for determining trends.
 - 3) The Test of Significant Toxicity null hypothesis shall be “mean sample response $\leq 0.75 \times$ mean control response.” A test result that rejects this null hypothesis shall be reported as “Pass.” A test result that does not reject this null hypothesis shall be reported as “Fail.” The relative “Percent Effect” of the sample is defined and reported as:

$$((\text{Mean control response} - \text{Mean sample response}) \div \text{Mean control response}) \times 100$$

Table G4.2.1.a. Test Species, Test Endpoints, Reporting, Analysis⁴ and Statistical Data Assessment⁵

Test Species	Test Endpoints	Reporting	USEPA Analytical Method and USEPA TST Method for Statistical Data Assessment
Pimephales promelas (Fathead Minnow)	Larval Survival and Growth	Pass or Fail using TST, % Effect	821-R-02-013 833-R10-003

⁴ Analytical method for Whole Effluent Toxicity, EPA 821-R-02-013.

⁵ Reporting of Statistical Data Assessment, [Test for Significant Toxicity](#) EPA 833-R10-003.

Test Species	Test Endpoints	Reporting	USEPA Analytical Method and USEPA TST Method for Statistical Data Assessment
<i>Ceriodaphnia dubia</i> (Freshwater Crustacean)	Survival ^a	Pass or Fail, % Effect 25% Fails	821-R-02-013 833-R-10-003
<i>Ceriodaphnia dubia</i> (Freshwater Crustacean)	Reproduction	Pass or Fail using TST, % Effect	821-R-02-013 833-R-10-003
<i>Selenastrum capricornutum</i> (Green Algae)	Growth	Pass or Fail using TST, % Effect	821-R-02-013 833-R-10-003
<i>Hyalella azteca</i> (Freshwater Amphipod)	Survival	Pass or Fail using TST, % Effect ^b	821-R-02-012 833-R-10-003
<i>Chironomus dilutus</i> (midge)	Survival	Pass or Fail using TST, % Effect ^b	821-R-02-012 833-R-10-003

Table G4.2.1.a Notes

TST: An abbreviation for the Test of Significant Toxicity statistical approach.

^a *Ceriodaphnia dubia* chronic toxicity test design for the survival endpoint is not amenable to the TST, Welch's t-test so the survival endpoint will be determined as a percent effect using the TST approach. A percent effect less than 25 percent will be considered a "pass," and a percent effect equal to or greater than 25 percent will be considered a "fail."

^b For *Hyalella* and *Chironomus* acute toxicity test methods, the test result will be considered a "pass," regardless of a TST determination of "fail" if the percent survival in the receiving water is equal to or greater than 90 percent. End Table Notes.

- b. Sample Locations – Permittee's sample locations may be selected based on where toxicity is likely, coincides with creek restoration sites, or a is a location where toxicity has been found in the past. Samples should be collected upstream of tidal influence.
- c. Frequency, Number of Sites, and Timeframe – If collecting samples cooperatively on a countywide basis, the countywide group shall collect samples in the dry season at the number of sample sites and frequencies shown in Table G4.2.1.b. If collecting samples independently, the Permittee shall collect one dry season sample every five years from one sample site.

Table G4.2.1.b. Annual Dry Weather Water Column Sampling - Minimum Number of Sample Sites and Events per Year for Countywide Monitoring Groups

County Where Countywide Monitoring Group is Located	Minimum Number of Sample Sites per Year	Minimum Number of Sampling Events
Marin County	1	1 per year
Napa County	1	3 per 5 years
Sonoma County	1	2 per 5 years
Solano County	1	1 per 5 years

4. Dry Weather Sediment Sampling for Toxicity, Pesticides, and Other Pollutants
 - a. Field and Laboratory Methods – The Permittee shall collect grab samples of urban creek sediment using applicable SWAMP-comparable collection methods.
 - b. Sediment samples shall be analyzed for the pollutants and organisms listed and by the methods in Table G4.2.1.c. Where no analytical method is listed in Table G4.2.1.c, the Permittee shall use USEPA methods listed in 40 C.F.R. subchapter D, part 136.

Table G4.2.1.c. Toxicity and Pollutants Analytical Procedures and TST Statistical Analysis

Pollutant	Units	USEPA/ASTM Analytical Method
Toxicity	Pass/Fail using TST, % Effect ^a	600/R-99-064
Pyrethroids: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin	ppb	3540C followed by 8270D by NCI-GCMS
Fipronil and its degradates (fipronil-sulfone, fipronil-desulfinyl, fipronil sulfide)	ppb	1699
Total Polyaromatic hydrocarbons	µg/L	8310
Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Zinc	µg/L	200.7/6010
Total organic carbon	mg/L	9060A
Grain size	grain-size diameters in millimeters and converted to phi units	ASTM D422

Table G4.2.1.c Notes

- a. Measured by *Hyaella azteca* and *Chironomus dilutes* survival. Test result will be considered a "pass," regardless of a TST determination of "fail" if the percent survival in the receiving water is equal to or greater than 90 percent. The false positive rate (beta error) is 0.05 and the negative rate (alpha error) is 0.25 for these test methods.
End of Table Notes.

- c. Sediment Sample Locations – Samples shall be collected at fine-grained depositional locations. Sample locations may be selected by the Permittee to monitor locations where toxicity is likely, coincides with bioassessment sites, or is a location where toxicity has been found in the past, for example.
- d. Annual Sediment Sampling, Number of Sites, Number of Samples, and Frequency – If choosing to collect samples cooperatively on a countywide basis, The countywide program shall collect at least the minimum number of sediment samples shown in Table G4.2.1.d. If the Permittee is collecting samples independently the Permittee shall collect 1 sample every 5 years at one sample site.

Table G4.2.1.d. – Annual Sediment Sampling: Minimum Number of Sites, Number of Samples, and Frequency for Countywide Monitoring Groups

County Where Countywide Monitoring Group is Located	Minimum Frequency	Minimum Number of Samples	Minimum Number Sites
Marin County	Once per year	1 per year	1
Napa County	Once per year	3 per 5 years	1
Sonoma County	Once per year	2 per 5 years	1
Solano County	Once per year	1 per 5 years	1

5. Wet Weather Urban Creek Monitoring for Pesticides and Toxicity

- a. Field and Laboratory Methods – Permittees shall collect water column samples and analyze using the methods specified in Tables G4.2.1.a and in G4.2.1.c for the following groups. For imidacloprid, Permittees shall specify an analytical method that achieves a reporting level of 0.01 ppb.
- 1) Pyrethroids: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin;
 - 2) Fipronil and its degradates fipronil-sulfone, fipronil-desulfinyl, fipronil sulfide and fipronil amide (amide is optional – perform if the laboratory offers the suite);
 - 3) Toxicity; and

- 4) Imidacloprid.
- b. Annual Urban Creek Monitoring Locations and Timing – Permittees shall collect samples during storm events. Samples should be timed to target the first runoff event of the year (i.e. a forecasted rain event with at least a 70% chance of precipitation equal to or greater than 0.1 inches). Sample locations shall be representative of urban watersheds (i.e., bottom of watershed locations).
- c. Annual Urban Creek Monitoring Frequency, Timeframe, and Number of Samples

If sampling is conducted cooperatively on behalf of all Permittees, a total of ten (10) samples shall be collected over each five-year period, with a minimum of six (6) samples collected by the end of the third water year of the permit term.

- 1) If sampling is conducted cooperatively on a countywide basis, the Permittees shall collect at least the minimum number of samples annually as shown in the table, below:

County Where Countywide Monitoring Group is Located	Minimum Number of Sampling Events
Marin County	1 per year
Napa County	3 per 5 years
Sonoma County	2 per 5 years
Solano County	1 per 5 years

- 2) If sampling independently, Permittees shall collect one sample every 5 years during the wet season.

TMDL Implementation Requirements: The Permittee may coordinate with the Bay Area Municipal Stormwater Collaborative, the Urban Pesticide Pollution Prevention Project, the Urban Pesticide Committee, and other agencies and organizations to carry out the TMDL implementation requirements. The Permittee shall implement the following requirements:

1. Continue to Maintain and Implement the Integrated Pest Management Policy or Ordinance and Standard Operating Procedures

The Permittee shall:

- a. Continue to implement its Integrated Pest Management policy or ordinances, and standard operating practices developed under the previous permit to ensure the use of pesticides does not cause or contribute to pesticide-related toxicity in receiving waters.

- b. Require municipal employees and contractors to adhere to its Integrated Pest Management policy or ordinance and standard operating procedures in all the Permittee's municipal operations and on all municipal property.
- c. Permittees that have not previously adopted an Integrated Pest Management Policy or ordinance shall do so within 18 months of effective date of this Order.

2. Train Municipal Employees

The Permittee shall ensure that all municipal employees who, within the scope of their duties, apply or use pesticides are trained annually in Integrated Pest Management practices and the Permittee's Integrated Pest Management policy and/or ordinance and standard operating procedures. This training may also include other training opportunities, such as the [ReScape California's Landscape Maintenance Qualification Training Program](#), provided both structural and landscape pest control training are offered.

3. Ensure Contractors Implement the Integrated Pest Management Policy

The Permittee shall:

- a. Include contract specifications requiring contractors to implement Integrated Pest Management so that all contractors practice Integrated Pest Management on municipal properties.
- b. Monitor contractor pesticide applications to ensure that contractors implement their contract specifications in accordance with the Permittee's Integrated Pest Management policies and/or ordinances and standard operating procedures. Contractor certification as a pest control advisor alone is not evidence of Integrated Pest Management implementation. Contractor Integrated Pest Management certifications awarded to a pest control company may not guarantee that an individual employee will always use Integrated Pest Management strategies.
- c. Periodically monitor its contractors' activities to verify full implementation of Integrated Pest Management techniques.
- d. Evaluate the contractors' lists of pesticides and amounts of active ingredient used.

4. Interface with County Agricultural Commissioners

The Permittee shall maintain communications with county agricultural commissioners to:

- a. Receive input and assistance on urban pest management practices and use of pesticides;
- b. Inform the County Agricultural Commissioner of water quality issues related to pesticides; and
- c. Report any observed or citizen-reported violations of pesticide regulations (e.g., illegal handling and applications of pesticides) associated with stormwater management, particularly the California Department of Pesticide regulations for [Surface Water Protection in Outdoor, Nonagricultural Settings](#) and the use of pyrethroid pesticides by any person performing pest control for hire

5. Conduct Public Outreach

The Permittee shall:

- a. Undertake outreach programs to 1) encourage communities within the Permittee's jurisdiction to reduce reliance on pesticides that threaten water quality; 2) encourage public and private landscape irrigation management that minimizes pesticide runoff; and 3) promote appropriate disposal of unused pesticides.
- b. Conduct Point of Purchase Outreach to Consumers:
 - 1) Provide targeted information on proper pesticide use and disposal, potential adverse impacts on water quality, and less toxic methods of pest prevention and control; and
 - 2) Participate in and provide resources for the [Our Water, Our World](#) program or a functionally equivalent pesticide use reduction outreach program.

c. Conduct Pest Control Contracting Outreach

The Permittee shall conduct outreach to residents who use or contract for structural pest control and landscape professionals by 1) explaining the links between pesticide usage and water quality; and 2) providing information about Integrated Pest Management in structural pest management certification programs and landscape professional trainings; and 3) disseminating tips for hiring structural pest control operators and landscape professionals, such as the tips prepared by the [University of California Extension Integrated Pest Management Program](#).

d. Conduct Outreach to Pest Control Professionals

The Permittee shall conduct outreach to pest control operators, urging them to promote Integrated Pest Management services to customers and to become Integrated Pest Management-certified by [EcoWise](#)

Certified or a functionally equivalent certification program. Permittee are encouraged to work with the Pesticide Applicators Professional Association; the California Association of Pest Control Advisors; California Department of Pesticide Regulation; county agricultural commissioners; University of California Extension Integrated Pest Management Program; [Bay Area Municipal Stormwater Collaborative](#); [California Stormwater Quality Association](#) (CASQA); [EcoWise Certified Program](#) (or functionally equivalent certification program); [Bio-Integral Resource Center](#) and others to promote Integrated Pest Management to pest control operators.

6. Evaluate Implementation of Pesticide Source Control Activities

The Permittee shall annually evaluate implementation of pesticide source control actions to gauge how effective its implementation actions are in achieving TMDL targets and avoiding future pesticide-related toxicity in urban creeks. Once during the permit term, the Permittee shall submit a cumulative evaluation of its Integrated Pest Management efforts for effectiveness, how improvements were made, and whether additional improvements could be made, as follows:

- a. Evaluate the effectiveness of the pesticide control measures implemented by its staff and contractors;
- b. Evaluate attainment of pesticide concentration and toxicity targets for water and sediment from monitoring data (collected by the Permittee, research agencies, and/or State agencies); and
- c. Identify additions and/or improvements to existing control measures needed to attain targets, with an implementation time schedule.

Final Compliance Deadline: The final compliance deadline for attainment of the wasteload allocations is not specified in the TMDL. Therefore, this is an on-going effort that is implemented throughout the term of this Order and any administrative extension.

TMDL Reporting Requirements: Submit the annual reports, due by October 15 of each year, and the TMDL Demonstration of Compliance Report per section G2, above. The Permittee shall report on the status of its implementation requirements for the TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks, as follows:

- a. In Year 2, the Permittee shall begin submitting its Annual Monitoring Reports

- 1) The Permittee shall submit to the California Data Exchange Network (CEDEN) all results from its monitoring conducted pursuant to Diazinon and Pesticides-Related Toxicity in Urban Creeks TMDL.
 - i. Data shall be submitted in CEDEN formats, including using the quality controls required by CEDEN.
 - ii. Data collected during the previous October 1-September 30 period shall be submitted by March 31 of each year.
- 2) With the 2032 annual report, the Permittee shall submit a monitoring report that includes the following information:
 - i. Summary tables that list the monitoring sites, with a row for each site. The table columns contain: Site ID; creek name; latitude; longitude; Permittee jurisdiction(s); water column toxicity (acute); water column toxicity (chronic); sediment toxicity (acute); sediment toxicity (chronic); and sediment chemistry.
 - ii. For each site, list the site information and check the parameters sampled at that site. Provide a statement of the data quality and an analysis of the data including:
 - (1) A discussion of monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the [San Francisco Bay Water Board Basin Plan](#), [California Ocean Plan](#), and [California Toxics Rule](#) (i.e., the Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California) and other applicable water quality control plans;
 - (2) Where appropriate, develop hypotheses to investigate pollutant sources, trends and BMP effectiveness;
 - (3) Identify and prioritize water quality impairments;
 - (4) Identify potential sources (and actual if known) of water quality impairments, and provide justification for naming those sources;
 - (5) Describe follow-up actions; and
 - (6) Evaluate the effectiveness of existing management actions and identify additional management actions need to address water quality impairments.
- b. Reporting for the Integrated Pest Management Program
Permittee shall:

- 1) In each Annual Report (see section G2, above) provide links to the Permittee's Integrated Pest Management policies or ordinances and Integrated Pest Management standard operating procedures.
 - 2) Certify they are implementing its Integrated Pest Management policy or ordinance and standard operating procedures and shall report in quantities and types of pesticide active ingredients used and explain any increases in use of pesticides of concern to water quality.
 - 3) Provide a brief description of one or two sentences of two Integrated Pest Management tactics or strategies implemented in the reporting year. Examples could include non-chemical strategies such as monitoring, mowing weeds, mulching, and redesign of problematic landscapes; preventive actions such as sealing holes and gaps in structures, improving sanitation, and outreach to employees about how their actions contribute to pest presence; and integration of several strategies, such as tackling a rat problem by educating building occupants, improving sanitation, trimming trees away from buildings, sealing holes in the structure, and trapping rodents. To the extent possible, different Integrated Pest Management actions should be described each year, so that a range of Integrated Pest Management actions is described over the permit term.
- c. Reporting for Training Municipal Employees
- 1) In each Annual Report, the Permittee shall report the percentage of municipal employees that apply pesticides who have received training in the Permittee's Integrated Pesticide Management policy and/or ordinance and Integrated Pesticide Management policy standard operating procedures within the reporting year. The report shall briefly describe the nature of the training, such as tailgate training provided by a Permittee's Integrated Pesticide Management coordinator, Integrated Pesticide Management training through the Pesticide Applicators Professional Association, etc.
 - 2) Upon request by the Regional Water Board or State Water Board staff, the Permittee shall submit training materials (e.g., course outline, date, and list of attendees).
- d. Reporting for Contractors' Implementation of the Integrated Pest Management Policy
- In each Annual Report, the Permittee shall describe how they verified contractor compliance with the Integrated Pest Management policies and any actions taken or needed to correct contractor performance.
- e. Reporting for Interface with County Agricultural Commissioners

In each Annual Report, the Permittee shall briefly describe any communications with county agricultural commissioners and report follow-up actions to correct violations of pesticide regulations.

f. Reporting on Public Outreach

In each Annual Report, the Permittee shall describe its actions taken in the three outreach categories above.

Outreach conducted at the county or regional level may be described in Annual Reports prepared at that respective level. Reports shall include a brief description of outreach conducted in each of the three categories, including level of effort, messages and target audience.

g. Reporting on Evaluation of Implementation of Pesticide Source Control Actions

With the Year 5 Annual Report, the Permittee shall submit its cumulative evaluation report. The evaluation shall include an assessment of the effectiveness of its Integrated Pest Managements efforts. The Permittee shall include the effectiveness of outreach efforts; a discussion of any improvements made in these efforts in the preceding five years; and any changes in water quality regarding pesticide toxicity in urban creeks. The Permittee's evaluation shall also include a brief description of one or more pesticide-related areas where the Permittee will focus on enhancement during the subsequent years of the permit term. Work conducted at the county or regional level may be evaluated at that respective level.

G4.2.2 General Approach for Controlling Bacteria in Permittee Discharges, San Francisco Bay Water Board Bacteria and Pathogen TMDLs

There are six bacteria and pathogen TMDLs for the San Francisco Bay Region. TMDL implementation includes both general approach requirements and TMDL-specific requirements.

The General Approach requirements in this section (G4.2.2) apply to all bacteria and pathogen TMDLs in the San Francisco Bay Water Board Region. TMDL-specific requirements are included in subsequent sections for each bacteria and pathogen TMDL.

Permittees subject to this Provision shall demonstrate compliance with bacteria related Receiving Water Limitations during this Permit term through the timely implementation of control measures and other actions to reduce bacteria discharges from their municipal separate storm sewer systems in accordance with the requirements of this Provision. Permittees shall implement the following actions and measures to reduce bacteria discharges:

1. Municipal Operations Bacteria Evaluation and Control

The Permittee shall:

- a. Evaluate the potential for municipal operations to generate and cause bacteria to be transported to surface waters. Where such potential is identified, the Permittee shall develop and implement best management practices to minimize the transport of bacteria.
- b. Develop and implement best management practices to minimize potential bacteria sources, including, but not limited to, trash, human and animal fecal sources, and excessive biofilm, for the following municipal operations:
 - 1) Street and road cleaning;
 - 2) Parks and municipal open space maintenance;
 - 3) Sidewalk, plaza, and pavement cleaning; and
 - 4) MS4 component maintenance, such as cleaning biofilm from catch basins, piping, and pump stations.

2. Industrial/Commercial Site Bacteria Control and Illicit Discharge Detection and Elimination

The Permittee shall:

- a. Train municipal inspection, illicit discharge detection, and enforcement staff to enhance its focus of potential bacteria sources at industrial and commercial site controls.
- b. Use its enforcement authorities to ensure bacteria sources are controlled.
- c. Enhance efforts, including where appropriate via implementation of the Illicit Discharge and Spill Response Plan, to prevent the transport to surface waters from the following potential bacteria sources:
 - 1) Roof and exterior washoff of commercial and industrial structures and surfaces, where these sources are likely to contain bacteria from rodent and bird wastes and are likely to be discharged to receiving water,
 - 2) Outdoor garbage and recycle bins,
 - 3) Outdoor floor-mat washoff,
 - 4) Portable toilets, and
 - 5) Illicit discharges to the MS4.

3. Control Bacteria Sources Related to Unsheltered Homeless Populations

The Permittee shall:

- a. Evaluate the potential for bacteria to transport to surface waters from areas inhabited by unsheltered homeless persons. Where the potential exists, develop and implement best management practices to minimize such bacteria sources and transport.
- b. Minimize the transport of bacteria from areas of unsheltered homeless persons by taking actions that include the following:
 - 1) Provide pump-out stations, mobile pumping services, or voucher programs for proper disposal of sanitary sewage where unsheltered homeless persons reside in recreational vehicles.
 - 2) Provide sanitation services, including access to running water, where feasible, at locations where unsheltered individuals live or congregate.
 - 3) Establish and update sidewalk, street, and/or plaza cleaning standards for the cleanup and appropriate disposal of human waste.
 - 4) Practices that harm or criminalize unsheltered residents, such as encampment sweeps, will not be recognized when considering compliance with this Order.

4. Pet and Livestock Bacteria Source Control

The Permittee shall:

- a. Evaluate the potential of domestic animal sources of bacteria (e.g., pet waste, kennels, horse boarding facilities, and trails) to generate and transport associated bacteria to surface waters. Where the potential exists, develop and implement best management practices to minimize sources and prevent bacteria transport.
- b. Minimize the transport of bacteria from domestic animal sources to surface waters by taking the following actions:
 - 1) Enhance the number and maintenance of pet waste stations.
 - 2) Implement a visual inspection and cleanup plan for high dog waste accumulation areas by 3 months after effective date of this Order.
 - 3) Inspect pet boarding facilities to ensure pet waste is managed to prevent offsite discharges.
 - 4) Inspect horse boarding facilities to ensure manure is managed to prevent offsite discharges. Notify the San Francisco Bay Water Board staff of facilities that should enroll in the Confined Animal Facility program.

5. Public Outreach on Bacteria Source Control

The Permittee shall:

- a. Educate the public regarding sources and health risks of fecal pathogens in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading. Evaluate public outreach currently conducted to encourage bacteria pollution prevention and determine how to improve this outreach (e.g., by focusing outreach on certain populations or at certain locations).
- b. Enhance public outreach where it is likely to improve human behavior concerning bacteria pollution prevention practices, including:
 - 1) Cleaning up and disposing of pet waste
 - 2) Eliminating litter
 - 3) Eliminating outdoor restaurant floor mat washdown
 - 4) Using proper best management practices for sidewalk cleaning
 - 5) Covering trash storage areas
 - 6) Maintaining porta-potties properly.

6. Coordination with Sanitary Sewerage System Entities

The Permittee shall, to the extent necessary and within its limits of authority:

- a. Collaborate with sanitary sewer system agencies to minimize overflows and leaks from the conveyance system. Overflows and leaks cause bacteria to be transported to MS4s, who are not responsible for maintenance and repair of the sanitary sewerage system.
- b. Collaborate with its counterparts who are responsible for maintenance of the sanitary sewerage system to assist with the following:
 - 1) Prioritize maintenance and repair in areas contributing to bacteria loads to surface waters with elevated bacteria levels.
 - 2) Ensure rapid and thorough response to cleanup of sanitary sewer system overflows.
 - 3) Develop lateral maintenance and replacement programs for consideration by the appropriate legal authority.

7. Prioritize Trash Removal to Control Bacteria Sources

The Permittee shall:

- a. Identify areas where trash generation likely contributes to bacteria exceedances in areas where trash control efforts are required.

- b. Evaluate the potential bacteria reduction benefit of reprioritizing trash control actions to areas identified in section 7.a.
- c. Note any trash control actions reprioritized or initiated based on the evaluation in section 7.b

8. Compliance With Wasteload Allocations

The Permittee shall:

- a. Determine whether discharges from its MS4 are causing or contributing to exceedances of bacteria receiving water standards. If discharges are causing or contributing to exceedances of bacteria water quality standards the Permittee shall submit a report that documents identified sources of bacteria, the controls that have been completed, and submit a plan for additional actions to reduce bacteria in discharges from the MS4 with the Year 5 Annual Report
- b. Provide a comprehensive assessment of bacteria sources and bacteria controls to demonstrate compliance with the wasteload allocations. The assessment shall describe additional control measures or increased levels of implementation for existing control measures, with an implementation schedule and proposed milestones that will be implemented to attain bacteria wasteload allocations within the following 5 year period.
 - 1) Mid-Permit Interpretive Report shall be submitted with the third year annual report.
 - a) All data collected through the third permit year and description of data validation and quality;
 - b) Description of progress towards answering questions in this section; and
 - c) Description of specific bacteria sources and specific geographic areas that receive implementation of existing control measures, as well as recommended new, modified, or enhanced controls that will be evaluated or implemented.
 - 2) A Final Interpretive Report shall be submitted with the Year 5 Annual Report.
 - a) All data collected through end of reporting Year 5 and description of data validation and quality;
 - b) Description of progress towards answering questions in the General Bacteria Control Section;

- c) Description of specific bacteria sources and/or specific geographic areas that received implementation of existing control measures, including the following: new, modified, or enhanced control that were evaluated or implemented;
- d) Determination if bacteria wasteload allocations have or will be met, by the end of reporting Year 5; and
- e) If discharges are causing or contributing to exceedances of bacteria receiving water quality standards met by the end of reporting Year 5, description of additional control measures or increased levels of implementation for existing control measures, with an implementation schedule, and proposed milestones, that will be implemented within the following 5-year period.

9. TMDL Reporting Requirements

Submit the annual reports and the TMDL Demonstration of Compliance Report per section G2, above. In each TMDL Annual Report required under section G2 (above) and the reporting sections of Attachments D and E (as applicable), the Permittee shall:

- a. Describe the best management practices, frequency and location for actions taken to reduce bacteria sources related to the following 1) Municipal operations; 2) Industrial and Commercial Site Bacteria Control/Illicit Discharge Detection and Elimination; and 3) pet and livestock bacteria source control.
- b. Describe the best management practices, numbers or frequency (as applicable), and locations of actions taken to reduce bacteria discharges from areas inhabited by unsheltered persons.
- c. Describe the outreach messages, methods of delivery, audiences, locations (as applicable) and number of repetitions.
- d. Describe the status of any actions taken to coordinate with the sanitary sewer entities.
- e. Starting with the Year 4 Annual Report, the Permittee shall describe how the bacteria-reduction benefit of focused trash-control efforts was evaluated, the conclusions reached, and any actions taken during the reporting period to reprioritize trash control areas.
- f. Describe participation in watershed or stakeholder groups, any TMDL water quality monitoring results, and progress made on implementation of TMDL-specific human and animal waste runoff reduction measures. This information shall be reported in a separate and dedicated section.

G4.2.3 Napa River Pathogens TMDL

Responsible Permittees: City of American Canyon, City of Calistoga, City of Napa, City of St. Helena, County of Napa, Town of Yountville

Impaired Water Body: Napa River

TMDL Implementation Requirements: The Permittee shall implement the actions described under section G4.2.2, the General Approach for Controlling Bacteria in MS4 Discharges, and shall continue to implement or enhance implementation of the following actions:

1. Pet Waste Management. Implement enforceable means of reducing/eliminating fecal pathogens loading from pet waste.
2. Illicit Discharge Detection and Elimination. Implement strategies to detect and eliminate Illicit discharges (whether mistaken or deliberate) of sewage to the Napa River.
3. Pollution Prevention and Good Housekeeping. Implement strategies to reduce/eliminate fecal pathogens loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal pathogens to the Napa River.

TMDL Monitoring Requirements: Participate in the Regional Water Board's stakeholder effort to conduct water quality monitoring at monitoring sites.

1. Conduct water quality monitoring to evaluate *E. coli* concentration trends in the Napa River and its tributaries. Conduct monitoring at the locations listed in Table G4.2.3.
 - a. Sample each location for *E. coli* ten times each year. Collect five samples weekly during one 30-day period in each wet season (November through March) and one 30-day period in each dry season (May through September).
 - b. Conduct additional monitoring as needed if funds are available.
 - c. Perform all water quality monitoring (including quality assurance and quality control procedures) according to the [State Water Board's Quality Assurance Management Plan for the Surface Water Ambient Monitoring Program](#).
 - d. In lieu of the monitoring of the Napa River Watershed Baseline Monitoring Sites shown in Table G4.2.3, one or more implementing parties may submit an alternative monitoring plan for Executive Officer approval.

Table G4.2.3. Napa River Watershed Baseline Monitoring Sites

Baseline Monitoring Sites (sites will be determined by Water Board staff in coordination with the Permittee)
Napa River at Third Street, Napa, City of
Napa River at Zinfandel Lane, St. Helena, City of
Napa River at Calistoga Community Center, Calistoga, City of
Browns Valley Creek at Browns Valley Road, Napa, City of
Browns Valley Creek at Borrette Lane, Napa, City of
Murphy Creek at Coombsville Road, Napa, County of
Murphy Creek at upstream location to be determined ^a .
Salvador Channel at Solano Avenue, Napa, County of
Salvador Channel at Dry Creek Road, Napa, County of
Four additional tributaries to be determined ^a , rotated each year

Table Legend

^a. Site will be determined by Water Board staff in coordination with stakeholders.

Final Compliance Deadline: The final compliance deadline for attainment of the wasteload allocations is not specified in the TMDL. Therefore, this is an on-going effort that is implemented throughout the term of this Order and any administrative extension.

TMDL Reporting Requirements: The Permittee shall report according to reporting requirements in the General Approach for Controlling Bacteria in MS4 Discharges (section G4.2.2.9 above). In the TMDL Annual Report (see section G2), the Permittee must demonstrate that it is in compliance with specified implementation measures.

G4.2.4 Sonoma Creek Pathogens TMDL

Responsible Permittees: City of Sonoma, County of Sonoma, Sonoma Water
Impaired Water Body: Sonoma Creek

TMDL Implementation Requirements for City of Sonoma and County of Sonoma: The City of Sonoma and County of Sonoma shall implement the General Approach for Controlling Bacteria in MS4 Discharges and shall continue to implement or enhance implementation of the following actions as described above in the General Approach for Controlling Bacteria in MS4 Discharges:

1. Pet Waste Management. Implement enforceable means of reducing and eliminating fecal coliform loading from pet waste.
2. Illicit Discharge Detection and Elimination. Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Sonoma Creek.
3. 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.

TMDL Monitoring Requirements for City of Sonoma and County of Sonoma: The City of Sonoma and County of Sonoma shall conduct water quality monitoring to evaluate *E. coli* concentration trends in Sonoma Creek and its tributaries. Table G4.2.4 presents locations for water quality monitoring.

1. Each site shall be sampled for *E. coli* ten times each year. Five samples shall be collected weekly during one 30-day period in each wet season (November through March) and one 30-day period in each dry season (May through September).
2. Additional monitoring shall be conducted as needed if funds are available.
3. All water quality monitoring (including quality assurance and quality control procedures) shall be performed pursuant to the State Water Board Quality Assurance Management Plan for the Surface Water Ambient Monitoring Program.

Table G4.2.4. Sonoma Creek Watershed Monitoring Sites

Sonoma Creek Watershed Monitoring Sites
Sonoma Creek at Highway 12
Sonoma Creek Below Kenwood
Sonoma Creek at Sonoma Developmental Center
Sonoma Creek at Maxwell Park
Sonoma Creek at Watmaugh Road
Nathanson Creek at Nathanson Park
Nathanson Creek at Watmaugh Road
Schell Creek at Highway 121

Final Compliance Deadline: The final compliance deadline for attainment of the wasteload allocations is not specified in the TMDL. Therefore, this is an on-going effort that is implemented throughout the term of this Order and any administrative extension.

TMDL Reporting Requirements for City of Sonoma and County of Sonoma: The City of Sonoma and County of Sonoma shall report according to requirements in section G4.2.2.9, the General Approach for Controlling Bacteria in MS4 Discharges. In the TMDL Annual Report (section G2), the Permittee must demonstrate compliance with specified implementation measures.

TMDL Implementation Requirements for Sonoma Water: Sonoma Water shall:

1. Continue to implement actions as specified in Sonoma Water's updated Storm Water Management Plan. A previous version was approved under the 2003 General Permit (State Water Board Order 2003-0005-DWQ).
2. Review annually and update the TMDL attainment actions, as necessary.

TMDL Reporting Requirements for Sonoma Water: Sonoma Water shall:

1. Report progress on TMDL implementation measures according to the TMDL Annual Reporting requirements in section G2, above.
2. Demonstrate compliance with the wasteload allocations per the requirements in the section G2, TMDL Demonstration of Compliance Report.

G4.2.5 Tomales Bay Watershed Pathogens TMDL

Responsible Permittee: County of Marin

Impaired Water Bodies: Lagunitas Creek, Olema Creek, Tomales Bay, Walker Creek.

TMDL Implementation Requirements: The Permittee shall implement the requirements in section G4.2.2, the General Approach for Controlling Bacteria in MS4 Discharges, and shall continue to implement or enhance implementation of the following actions:

1. **Public Participation and Outreach.** Educate the public regarding sources of fecal pathogens and associated health risks of fecal pathogens in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.
2. **Pet Waste Management.** Implement enforceable means of reducing/eliminating fecal pathogens loading from pet waste. Install and maintain new or additional dog waste cleanup signs, waste bag dispensers, and trash bins in a minimum of ten high dog waste accumulation areas by areas by the end of the first reporting year.
3. **Illicit Discharge Detection and Elimination.** Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Tomales Bay.
4. **Pollution Prevention and Good Housekeeping.** Implement strategies to reduce/eliminate fecal pathogens loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal pathogens to Tomales Bay.

Final Compliance Deadline: The final compliance deadline for attainment of the wasteload allocations is not specified in the TMDL. Therefore, this is an on-going effort that is implemented throughout the term of this Order and any administrative extension.

TMDL Reporting Requirements: The Permittee shall report according to reporting requirements in the General Approach for Controlling Bacteria in MS4 Discharges (section G4.2.2.9 above). In the TMDL Annual Report (section G2), the Permittee must demonstrate that it is in compliance with specified implementation measures. Report annually on water quality monitoring results and progress made on implementation of human and animal waste runoff reduction measures and compliance with specified implementation measures.

G4.2.6 Richardson Bay Pathogens TMDL

Responsible Permittees: City of Belvedere, City of Mill Valley, City of Sausalito, County of Marin, Town of Tiburon

Impaired Water Body: Richardson Bay

TMDL Monitoring Requirements: The Permittees shall continue to conduct or support bacteria water quality monitoring in Richardson Bay as conducted by the Richardson Bay Regional Agency.

TMDL Implementation Requirements: The Permittee shall implement the actions described under the General Approach for Controlling Bacteria in MS4 Discharges (section G4.2.2, above) and shall continue to implement or enhance implementation of the following actions:

1. Public Participation and Outreach – Educate the public regarding sources of fecal pathogens and associated health risks of fecal pathogen in surface waters. Educate the public, including the floating home and recreational and commercial vessel owners and operators, regarding actions that individuals can take to reduce pathogen loading.
2. Pet Waste Management – Implement enforceable means of reducing/eliminating fecal pathogens loading from pet waste. Install and maintain additional dog waste cleanup signs, waste bag dispensers, and trash bins in high dog waste accumulation areas by the end of the first reporting year.
3. Illicit Discharge Detection and Elimination – Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Richardson Bay.
4. Pollution Prevention and Good Housekeeping – Implement strategies to reduce/eliminate fecal pathogens loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal pathogens to Richardson Bay.

Final Compliance Deadline: The final compliance deadline for attainment of the wasteload allocations is not specified in the TMDL. Therefore, this is an on-going effort that is implemented throughout the term of this Order and any administrative extension.

TMDL Reporting Requirements: The Permittee shall report according to reporting requirements in the General Approach for Controlling Bacteria in MS4 Discharges (section G4.2.2.9 above). In the TMDL Annual Report (see section G2), the Permittee must demonstrate that they are in compliance with specified implementation measures.

G4.2.7 San Francisco Bay Beaches Bacteria TMDL

Responsible Permittees: Candlestick Point State Recreation Area, California State Parks and Recreation; County of Marin; Presidio of San Francisco; City of San Francisco (San Francisco Public Utilities Commission)

Impaired Beaches: Aquatic Park Beach, City of San Francisco; Jackrabbit, Sunnydale Cove, and Windsurfer beaches in Candlestick Point State, Recreation Area, San Francisco; Crissy Field Beach, San Francisco; and McNears Beach, County of Marin.

TMDL Implementation Requirements: The Permittee shall implement the actions described under section G4.2.2, above, the General Approach for Controlling Bacteria in MS4 Discharges.

Final Compliance Deadline: The final compliance deadline for attainment of the wasteload allocations is not specified in the TMDL. Therefore, this is an on-going effort that is implemented throughout the term of this Order and any administrative extension.

TMDL Reporting Requirements: The Permittee shall report according to reporting requirements in the General Approach for Controlling Bacteria in MS4 Discharges (section G4.2.2.9 above). In the TMDL Annual Report (see section G2), the Permittee must demonstrate that they are in compliance with specified implementation measures.

G4.2.8 Petaluma River Bacteria TMDL

Responsible Permittees: City of Novato, City of Petaluma, County of Marin, County of Sonoma

Impaired Water Bodies: Adobe Creek, Ellis Creek, Lichau Creek, Lynch Creek, Petaluma River, San Antonio Creek, Willow Brook

TMDL Monitoring Requirements: The Permittee shall submit a monitoring plan to the San Francisco Bay Water Board Executive Officer for review. The monitoring plan shall achieve the following goals: 1) better characterization of fecal indicator bacteria contributions from the Permittee's sources/jurisdictions, 2) assessment of best management practices effectiveness, and 3) assessment of progress towards attainment of its wasteload allocations.

TMDL Implementation Requirements: The Permittee shall implement the actions described in section G4.2.2, 1-7 above, the General Approach for Controlling Bacteria in MS4 Discharges.

To meet the municipal stormwater runoff TMDL wasteload allocations and prevent or reduce discharges of bacteria from the MS4, the Permittee shall implement or enhance implementation of the following actions.

1. Each year, ensure at least 20 percent of the stormwater system draining to the Petaluma River is evaluated for illicit connections. Evaluate the entire MS4 system draining to the Petaluma River watershed for sanitary discharges. The Permittee shall comply with this requirement by submitting the following:
 - a. A start date for evaluation of at least 20 percent of the storm sewer system draining to the Petaluma River watershed per year for illicit connections, illicit discharges and/or infiltration from the sanitary sewer collection system;
 - b. A map of the entire storm sewer system and the portions scheduled for inspection each year;
 - c. The timeline should include completion of this requirement no later than May 10, 2031.
2. Address potential pet waste discharges into the storm sewer system. Control of pet waste discharges into the storm sewer system that includes the following:
 - a. Specific actions before winter rains, when complying with Provision G4.2.2 Item #4; Pet and Livestock Bacteria Source Control
 - b. Inspect, evaluate, and improve the service frequency of dog waste bins, as needed; and
 - c. Starting in Year 1, implement a comprehensive pet waste public outreach and education campaign per G4.2.2 Item #5, Public Outreach on Bacteria Source Control, that considers the following:
 - 1) Establishment or support of a new public pet waste management stakeholder group (e.g., formal, or informal dog owners club), if one or more does not exist;
 - 2) Preparation and implementation of public service announcements regarding pet waste management and associated impacts to the Petaluma River and its tributaries to play on the local television station and to include in print ads in the local newspapers;
 - 3) Distribution of a mailer with an informational brochure to residents and businesses describing proper pet waste management, the linkage of the watershed to the Petaluma River and its tributaries,

- and the adverse impact on those water bodies and those recreating in them from improper pet waste management;
- 4) Add to or maintain on its website the information on the TMDL and the water quality monitoring and best management practices implementation activities, information about proper pet waste management, and the impact of improperly deposited waste on water quality of the Petaluma River and its tributaries and public health;
 - 5) Create and distribute a digital pre-rain pet waste cleanup email or social media (e.g., Nextdoor) alert to residents, reminding them to clean up accumulated pet waste in their yards that could otherwise get washed into the Petaluma River and its tributaries;
 - 6) Participate in local events and festivals to distribute pet waste management materials (educational fliers, dog waste bags, etc.); and
 - 7) No later than 90 days after the effective date of this Order, implement the pet waste public outreach and education campaign.
3. Control bacteria discharges and stormwater discharges from the Petaluma Marina, a facility owned and operated by the City of Petaluma, which includes the following:
 - a. “No dumping” education efforts to vessel owners, to occur no later than 180 days from the effective date of this Order;
 - b. Evaluation and assurance of adequacy and proper performance of sewage collection systems (sewage dump stations, sewage pumpout stations, sewer lines, etc.) for vessel marinas, by the end of Year 1; and
 - c. Installation, as needed, of additional sewage pumpout and dump stations by June 30, 2030.
 4. Control and effectively prohibit and prevent potential illicit discharges into the storm sewer system from homeless encampments’ human waste and the sanitary sewer collection system. Control discharges and stormwater discharges associated with unsheltered homeless populations, such as those living in tents, other outdoor shelters, and recreational vehicles, that are a potential source of the high bacteria levels in the watershed, The Permittee shall develop the following:
 - a. A timeline for the implementation of best management practices or appropriate control measures to control discharges of trash and human waste in areas where informal tent or small cabin encampments occur near streams;

- b. A timeline to implement trash pickup services, delivery and maintenance of porta potties or other sanitary services, and mobile pumpout services, as needed at informal tent encampments and recreational vehicles;
- c. A timeline for targeted stormwater channel cleanups; and
- d. A timeline for outreach to encampment residents and recreational vehicles occupants and owners.
- e. Within 5 years of the effective date of this Order, complete implementation of all items a – d, above.
- f. Practices that harm or criminalize unsheltered homeless residents, such as encampment sweeps, will not be recognized when considering compliance with this Order.

5. Monitoring Plans and Requirements

The Permittees are responsible for developing and implementing a comprehensive monitoring plan to accomplish the following goals: 1) better characterize fecal indicator bacteria contributions from its sources/jurisdictions, 2) assess best management practices (BMP) effectiveness, and 3) assess progress towards attainment of its respective wasteload allocations.⁶

- a. The City of Petaluma shall implement its long-term bacteria water quality monitoring plan as described in its “Short-Term Monitoring Summary and Long-Term Monitoring Proposal,” submitted on January 14, 2025, approved by the San Francisco Bay Regional Water Board staff on January 21, 2025, and summarized in Table G4.2.8 below.

⁶ San Francisco Bay Water Board Basin Plan, section 7.8.5.8 Water Quality Monitoring

Table G4.2.8. Summary of Sampling for City of Petaluma Long-Term Bacteria Monitoring Plan

Initial/Starting Timeline	Frequency	Sampling Method	Analysis	Location
Jan- April 2025	Once	Geomean ¹ ,	<i>E. coli</i>	Identify priority MS4 outfalls into Lynch & Washington creeks
Jan- April 2026	Every Other Year - wet & dry	Single Grab ² .	<i>E. coli</i> , MST *	Priority MS4 outfalls identified in row 1 of this table
Jan- April 2026	Every Other Year - wet & dry	Geomean	<i>E. coli</i> , MST**	206LYN262
Jan- April 2026	Every Other Year - wet & dry	Geomean	<i>E. coli</i> , MST**	206PET215
Jan- April 2030	Every 6 Years- wet & dry	Geomean	<i>E. coli</i> , MST**	CAP311
Jan- April 2030	Every 6 Years-wet & dry	Geomean	<i>E. coli</i> , MST**	ADO120
Jan- April 2026	Every Other Year - wet & dry	Geomean	<i>Enterococcus</i> , MST**	PET-Marina-Dock
Jan- April 2026	Every Other Year - wet & dry	Geomean	<i>Enterococcus</i> , MST**	206PET098
Jan- April 2026	Every Other Year - wet & dry	Geomean	<i>Enterococcus</i> , MST**	206PET205
Jan- April 2026	Every Other Year - wet & dry	Geomean	<i>E. coli</i> & <i>Enterococcus</i> , MST**	206PET310

Table G4.2.8 Legend

1. Geomean is a sampling method that is composed of samples taken 5 out of 6 weeks to calculate a geometric mean from the analytical results.
 2. A single grab sample is a discrete, single sample obtained from one specific location and time.
- Wet & Dry- Sampling events will be conducted in both wet and dry seasons.
- MST - Microbial Source Tracking is a group of advanced analytical methods and protocols specifically designed to identify sources of fecal contamination in surface water.
- MST* - Sampling will be performed dependent on the *E. coli* results.
- MST** - Sampling will be performed at least once in a 6-week sampling event, dependent on *E. coli/Enterococcus* results.

- b. The County of Sonoma shall implement its long-term bacteria water quality monitoring plan as described in its “Bacteria Monitoring Plan for the Sonoma County Phase II MS4 Permit Area with the Petaluma River Watershed” submitted on February 28, 2025, approved by the San Francisco Bay Water Board staff on June 26, 2025, and summarized in Table G4.2.9, below. In the 2025-2026 monitoring year Sonoma County will collect 55 *E. coli* samples, and 8 microbial source tracking samples. In the 2026-2027 monitoring year Sonoma County will collect 15 *E. coli* samples and 3 microbial source tracking samples. In the 2027-2028 monitoring year Sonoma County will collect 90 *E. coli* samples and 9 microbial source tracking samples.

Table G4.2.9. Summary of Sampling for County of Sonoma Long-Term Bacteria Monitoring Plan

Timeline	Station Code	Frequency	Station Description	Sampling Method/Analysis	Latitude, Longitude
July 2025 – June 2026	PN1b	1 wet	Rancho Adobe at Adobe Rd.	Geomean/MST ^a	38.298285, -122.661279
July 2025 – June 2026	PN1a	1 wet	East St. Culvert	Geomean/MST	38.295662, -122.661306
July 2025 – June 2026	PN3a	1 wet	Kyler Ct Culvert at Old Redwood Hwy	Geomean/MST	38.298797, -122.672066
July 2025 – June 2026	PN3c	1 wet	Old Redwood Hwy Culvert btw Hatchery and Philips	Geomean/MST	38.271718, -122.676919
July 2025 – June 2026	PN4a	1 wet, 1 dry	Upstream - Adobe Rd at Lichau Cr	Geomean/MST	38.299885, -122.672505
July 2025 – June 2026	PN4b	1 wet, 1 dry	Lichau Cr at Penngrove Park	Geomean/MST	38.294363, -122.666333
July 2025 – June 2026	PN4c	1 wet, 1 dry	Downstream Ely Rd at Lichau Cr	Geomean/MST	38.283326, -122.666406

Timeline	Station Code	Frequency	Station Description	Sampling Method/Analysis	Latitude, Longitude
July 2025 – June 2026	PN5a	1 wet	Goodwin Ave Culvert at Old Redwood Hwy	Geomean/MST	38.284481, -122.667458
July 2026 – June 2027	PW1a	1 wet	Petaluma Blvd N at Jessie Ln	Geomean/MST	38.252768, -122.649009
July 2026 – June 2027	PW1b	1 wet	Petaluma Blvd N at Skillman Rd/Corona Rd	Geomean/MST	38.260030, -122.660349
July 2026 – June 2027	PW1c	1 wet	Culvert at Bailey Ave	Geomean/MST	38.267300, -122.671067
July 2027 – June 2028	PW2a1	1 wet, 1 dry	Marin Creek E at Bodega Ave	Geomean/MST	38.241831, -122.678030
July 2027 – June 2028	PW2a2	1 wet, 1 dry	Marin Creek E at Skillman Ln	Geomean/MST	38.255953, -122.679532
July 2027 – June 2028	PW2	1 wet, 1 dry	Marin Creek E at Rainsville Rd	Geomean/MST	38.270611, -122.684296
July 2027 – June 2028	PW2b1	1 wet, 1 dry	Marin Creek W at Bodega Ave	Geomean/MST	38.246587, -122.664172
July 2027 – June 2028	PW2b2	1 wet, 1 dry	Marin Creek W at Skillman Lane	Geomean/MST	38.256142, -122.684405
July 2027 – June 2028	PW3a	1 wet, 1 dry	Kizer Creek at Bodega Ave	Geomean/MST	38.251693, -122.698449
July 2027 – June 2028	PW3b	1 wet, 1 dry	Kizer Creek at Skillman Lane	Geomean/MST	38.256201, -122.698438

Timeline	Station Code	Frequency	Station Description	Sampling Method/Analysis	Latitude, Longitude
July 2027 – June 2028	PW3c	1 wet, 1 dry	Wiggin's Hill Creek at Rainsville Rd	Geomean/MST	38.270631, -122.688923
July 2027 – June 2028	PW3a1	1 wet, 1 dry	Freeman Creek at Liberty Rd	Geomean/MST	38.258501, -122.700927

Table G4.2.9 Legend:

Wet / Dry: Sampling events will be conducted in both wet and dry seasons.

MST ^a: Microbial Source Tracking is a group of advanced analytical methods and protocols specifically designed to identify sources of fecal contamination in surface water.

Geomean: Sampling method that is composed of samples taken 5 out of 6 weeks to calculate a geometric mean from the analytical results.

- c. The County of Marin and City of Novato shall implement the long-term bacteria water quality monitoring plan as described in its “Long-Term Bacteria Monitoring Plan: For the County of Marin and the City of Novato” submitted on March 11, 2025, approved by the Water Board staff on June 26, 2025, and summarized in Table G4.2.10 below. The total number of annual trend samples to be collected is 40, the total number of annual source area samples to be collected is 20, the total number of annual Microbial Source Tracking samples to be collected is 2.

Table G4.2.10. Summary of Sampling for County of Marin and City of Novato Long Bacteria Monitoring Plan

Timeline	Station Code	Annual Frequency	Station Description	Sampling Method
Ongoing	SAN-A-010	Wet/Dry ^a	San Antonio Creek – upstream of San Antonio bridge crossing	Geomean with statistical trend analysis
Ongoing	PET-002	Wet/Dry	Petaluma River – Black Point Boat Launch dock	Geomean with statistical trend analysis

Timeline	Station Code	Annual Frequency	Station Description	Sampling Method
Ongoing	RCGG	Wet/Dry	Rush Creek downstream at Golden Gate Place	Geomean and statistical trend analysis
Ongoing	RCTRL	Wet/Dry	Rush Creek ~300 ft from west end of Pinheiro Fire Road trailhead	Geomean and statistical trend analysis
Ongoing	BC1	1	Basalt Creek upstream of Binford Rd	<i>Enterococcus</i> , Source Area
Ongoing	BEAT1	1	Beattie Lane – Hunters Club Rd	<i>Enterococcus</i> , Source Area
Ongoing	BAHA1	1	Bahia Channel	<i>Enterococcus</i> , Source Area
Ongoing	WH1	1	Wood Hollow Creek	<i>E. coli</i> , Source Area
Ongoing	PF1	1	Pinheiro Fire Road subwatershed Atherton Ave North and East	<i>E. coli</i> , Source Area
Ongoing	ATH1	1	Atherton Ave southwest subwatershed	<i>E. coli</i> , Source Area
Ongoing	ESC1	1	Escallonia Drive subwatershed	<i>E. coli</i> , Source Area
Ongoing	GGP1	1	Golden Gate Place subwatershed	<i>E. coli</i> , Source Area
Ongoing	CHR1	1	Cherry St subwatershed	<i>E. coli</i> , Source Area
Ongoing	TBD	1	Additional Sites to be Identified	

Timeline	Station Code	Annual Frequency	Station Description	Sampling Method
Ongoing		2	Source Area MST monitoring. The sample location may vary based on suspected sources. Permittee chooses sampling stations.	MST tracking for Human + Dog and/or Horse depending on sample location and suspected sources.

Table G4.2.10 Legend:

Wet/Dry ^a: Sampling events will be conducted in both wet and dry seasons: once per wet and once per dry season.

MST Microbial Source Tracking is a group of advanced analytical methods and protocols specifically designed to identify sources of fecal contamination in surface water.

Geomean: Sampling method that is composed of samples taken 5 out of 6 weeks to calculate a geometric mean from the analytical results.

4. Water Quality Monitoring Reporting

- a. In the annual reports, per section G2, above, the Permittee shall submit a comprehensive Water Quality Monitoring Report for any data collected during the previous monitoring period, beginning July 1 and ending June 30.
- b. Data evaluation shall focus on addressing the following questions:
 - 1) Which land uses and/or sources contribute most to bacteria impairments in the Petaluma River Watershed?
 - 2) Are controllable sources of fecal contamination (e.g., human, horses, dogs) present in the Petaluma River watershed?
 - 3) What are the multi-year indicator bacteria concentration trends in the Petaluma River Watershed?
 - 4) Do control measures appear to be reducing bacteria?
- c. The Report shall include the following:
 - 1) A map showing all monitoring locations (immediately following the Table of Contents);
 - 2) A data tables section (immediately following the map) that includes all the data collected pursuant to this requirement and contains the following information pertaining to the foregoing monitoring period:
 - a) A single completed Locations and Parameters Table containing the following columns or rows for each location sampled: numeric site identifier, a short-hand site name, latitude, longitude, and parameters assessed; and
 - b) Immediately following the Locations and Parameters Table, a single completed Results Table containing the following columns or rows for each location sampled: the short-hand site name and datum, date, constituent, and associated result. Constituents that exceed applicable water quality objectives shall be highlighted.
 - 3) Include a statement of the data quality for all data.
 - 4) An analysis of the data, which includes the following:
 - a) Basic descriptive statistics using indicator bacteria data;
 - b) Identification and evaluation of any controllable sources of fecal contamination (e.g., human waste, cow/cattle waste, horse waste, dog waste) present in the Petaluma River watershed;
 - c) Identification and analysis of any trends in stormwater or receiving water quality; and

- d) Consideration of seasonal, interannual, and spatial variability in the data sets.
- 5) A discussion of the data, which shall:
 - a) Discuss monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Basin Plan;
 - b) Where appropriate, develop hypotheses to investigate pollutant sources, trends, and best management practice effectiveness;
 - c) Identify and prioritize bacteria water quality problems;
 - d) Identify potential sources of water quality problems;
 - e) Describe follow-up management actions taken to address areas with high bacteria levels;
 - f) Evaluate the effectiveness of existing control measures; and
 - g) Identify future management actions needed to address water quality problems.
- 6) Report on attainment of the wasteload allocations specified in General Approach for Controlling Bacteria in MS4 Discharges section VIII.
- 7) The County of Sonoma shall submit a Final Water Quality Monitoring Report to the Regional Water Board in October 2029 along with its annual report and include a follow up long-term monitoring plan for approval by the Regional Water Board Executive Officer.

TMDL Reporting Requirements: Submit TMDL Annual Reports, per the requirements in section G2, above. Demonstrate compliance with the wasteload allocations per the requirements in the section titled TMDL Demonstration of Compliance Report found in section G2 and in Attachments D and E.

Final Compliance Deadline: The final compliance deadline for attainment of the wasteload allocations is not specified in the TMDL. Therefore, this is an on-going effort that is implemented throughout the term of this Order and any administrative extension.

G4.2.9 Napa River Sediment TMDL

Responsible Permittees: City of American Canyon, City of Calistoga, City of Napa, City of St. Helena, County of Napa, Town of Yountville

Impaired Water Body: Napa River

TMDL Implementation Requirements: The Permittee shall implement the following:

1. Sediment Wasteload Allocations

The Permittee shall comply with the requirements in this TMDL section and the Order.

2. Implementation of Sediment load Allocations for Urban Runoff

a. To attain the shared load allocation of 27,000 metric tons per year, Napa County shall implement measures to repair and/or reconstruct road crossings to minimize road-related sediment delivery (less than or equal to 500 cubic yards per mile per 20-year period) to stream channels. To reduce road-related erosion and protect stream-riparian habitat conditions, Napa County shall:

- 1) Continue to implement and update best management practices for maintenance of unimproved (dirt and/or gravel) roads to ensure that the load allocation will be met,
- 2) Document in the Annual Report that the survey of stream-crossings associated with paved public roadways was finalized, and
- 3) Continue to implement a schedule for the maintenance of unimproved (dirt and/or gravel) roads and best management practices to ensure attainment of the wasteload allocation and the repair and/or replacement of high priority crossings/culverts identified in the survey.

b. For paved roads, erosion and sediment control actions shall primarily focus on road crossings to meet the sediment load allocation.

Final Compliance Deadline: The final compliance deadline for attainment of the wasteload allocations is not specified in the TMDL. Therefore, this is an on-going effort that is implemented throughout the term of this Order and any administrative extension.

Reporting: Submit TMDL Annual Reports per the requirements in section G2 above. Demonstrate compliance with the wasteload allocations per the TMDL Demonstration of Compliance requirements in section G2 and in Attachments D or E.

G4.2.10 Sonoma Creek Watershed Sediment TMDL

Responsible Permittees: City of Sonoma, County of Sonoma, Sonoma Water

Impaired Water Body: Sonoma Creek

TMDL Implementation Requirements: For City of Sonoma and County of Sonoma:

1. Implementation of Sediment Wasteload Allocation

The Permittee shall:

- a. Comply with the construction and maintenance requirements in Attachments D or E (as applicable).
- b. Continue to implement actions proposed in its Stormwater Management Plans approved under the 2003 NPDES General Permit (State Water Board [Order 2003-0005-DWQ](#)) to attenuate peak flows and durations from new and redevelopment projects. Implementation action requirements are incorporated herein by reference. The Permittee may propose amendments to those Implementation Actions by submitting an updated Stormwater Management Plan to the San Francisco Bay Regional Water Board Executive Office.

2. Implementation of Sediment Wasteload Allocation

To attain the shared wasteload allocation of 600 tons per year, the Permittee shall leverage 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 Permittee shall:

- a. Continue to implement best management practices for maintenance of unimproved (dirt and/or gravel) roads,
- b. Document in the Annual Report that the survey of stream-crossings associated with paved public roadways was finalized,
- c. By the effective date of this Order, submit a schedule to implement the retrofit and/or replacement of the following high priority site for consideration of approval by the San Francisco Bay Regional Water Board Executive Officer.
 - 1) 40 priority ditches, culverts, and crossings to replace, repair, or maintain,
 - 2) 15 road outfall upgrades to implement, and
 - 3) 9 road sites in which to implement supplemental erosion control and revegetation.

3. For paved roads, erosion and sediment control actions shall primarily focus on road crossings to meet the sediment load allocation. The Permittee

identified in this section shall attenuate peak flows and durations from all new and redevelopment projects.

TMDL Implementation Requirements for Sonoma Water:

1. The Responsible Permittee 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 action requirements 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 San Francisco Bay Regional Water Board Executive Office.

2. Report progress on TMDL implementation measures in each Annual Report.

Final Compliance Deadline: The TMDL does not specify a final deadline for compliance with the wasteload and load allocation. Therefore, within 6 months of the effective date of this Order, the Permittee shall propose a timeline to attain the allocations in the shortest practicable time, for review and consideration of approval by the San Francisco Bay Water Board Executive Officer.

TMDL Reporting Requirements: Submit TMDL Annual Reports per the requirements in section G2 above. Demonstrate compliance with the wasteload allocations per the TMDL Demonstration of Compliance requirements in the section G2 and in Attachments D or E.

G4.2.11 San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDLs

Responsible Permittees: City of American Canyon, City of Belvedere, City of Benicia, City of Calistoga, City of Larkspur, City of Mill Valley, City of Napa, City of Novato, City of Petaluma, City of San Francisco (Port of San Francisco), City of San Francisco (San Francisco Public Utilities Commission), City of San Rafael, City of Sausalito, City of Sonoma, City of St. Helena, County of Marin, County of Napa, County of Solano, County of Sonoma, Port of Oakland, Town of Corte Madera, Town of Fairfax, Town of Ross, Town of San Anselmo, Town of Tiburon, Town of Yountville, Travis Air Force Base, Sonoma Water

Impaired Water Body: The San Francisco Bay Polychlorinated Biphenyls TMDL identifies all segments of San Francisco Bay as impaired due to elevated levels of polychlorinated biphenyls (PCBs) in sport fish. The San Francisco Bay Mercury TMDL identifies all segments of San Francisco Bay and Suisun Marsh as impaired for mercury.

TMDL Implementation Requirements:

TMDL implementation requirements include 12 major elements as provided below in items 1 through 12.

1. Green Infrastructure Plan

The Permittee shall complete and implement a Green Infrastructure Plan for the inclusion of low impact development drainage design into storm drain infrastructure, including streets, roads, storm drains, parking lots, building roofs, and other storm drain infrastructure elements. It may also provide a mechanism to establish and implement alternative or in-lieu compliance options. The Permittee may adapt other plans required by the Permit to meet this requirement.

- a. The Green Infrastructure Plan is intended to serve as an implementation guide and reporting tool during this and subsequent Permit terms to provide reasonable assurance that (1) urban runoff will meet the wasteload allocations the San Francisco Bay Mercury and PCBs TMDLs , and (2) to set goals for reducing, over the long term, the adverse water quality impacts of urbanization and urban runoff on receiving waters.
- b. Over the long term, the Green Infrastructure Plan is intended to describe how the Permittees will shift from impervious surfaces and traditional storm drain infrastructure (i.e., gray infrastructure) towards green infrastructure to reduce PCBs and mercury in stormwater runoff. Green infrastructure will also reduce other sediment-bound pollutants.
- c. The Plan shall also identify means and methods to prioritize projects in areas of moderate or high PCBs or mercury contamination and projects within each Permittee's jurisdiction, at appropriate geographic and time scales, for implementation of green infrastructure projects. Further, it shall include means and methods to track the area within each Permittee's jurisdiction that is treated by green infrastructure controls and the amount directly connected to impervious area. As appropriate, it shall incorporate by reference plans required elsewhere within this Permit.
- d. The Green Infrastructure Plan shall contain the following elements:
 - 1) A mechanism to prioritize and map areas for potential and planned public and private projects on a drainage-area-specific basis. The mechanism shall include criteria for prioritizing project opportunities that can be incorporated into the Permittee's long-term planning and capital improvement processes (e.g. specific logistical constraints, water quality drivers, opportunities to treat runoff from private parcels in retrofitted street right-of-way). The mechanism shall prioritize implementation over time schedules, which are consistent with the timeframes for assessing load reductions.

- 2) Outputs from the prioritization and mapping mechanism described above, including, but not limited to, the prioritization criteria, maps, lists, and other information, as appropriate.
- 3) Targets for the amount of impervious surface, from public and private projects, within the Permittee's jurisdiction to be retrofitted over the following time schedules, which are consistent with the timeframes for assessing load reductions specified above.
- 4) A process for tracking, mapping, and making publicly available, completed public projects including the amounts treated area and connected impervious area.
- 5) Standard specifications and, as appropriate, typical design details and related information necessary for the Permittee to incorporate green infrastructure into projects in its jurisdiction. The specifications shall be sufficient to address the different street and project types within a Permittee's jurisdiction, as defined by land use and transportation characteristics.
- 6) A summary of the planning documents the Permittee has updated or modified to incorporate Green Infrastructure requirements such as: General Plans, Specific Plans, Complete Streets Plans, Active Transportation Plans, Storm Drain Master Plans, Pavement Work Plans, Urban Forestry Plans, Flood Control or Flood Management Plans, and other plans that may affect the future alignment, configuration, or design of impervious surfaces with the Permittee's jurisdiction. Permittees are expected to complete these modifications as part of the Green Infrastructure Plan, and by no later than the end of the permit term.
- 7) A list of green infrastructure projects, public and private, that are planned for implementation during the permit term and infrastructure projects planned for implementation during the permit term that have potential for green infrastructure measures.
- 8) A list of policies, ordinances, and/or appropriate legal mechanisms that will be adopted as necessary to ensure implementation of the Green Infrastructure Plan in accordance with the requirements of this provision.
- 9) A timeline for conducting Outreach and education on the following:
 - (i) Train appropriate staff on the requirements of this provision and methods of implementation;
 - (ii) Educate appropriate Permittee elected officials (e.g. mayors, city council members, county supervisors, district board members) on the requirements of this provision and methods of implementation;
 - (iii) Conduct public

outreach on the requirements of this provision, such as outreach coordinated with adoption or revision of standard specifications and planning documents, and with the initiation and planning of infrastructure projects.

- 10) Consistent methods to track and report implementation of green infrastructure measures, including treated area and connected and disconnected impervious area on both public and private parcels. The methods shall consider the tracking needed to provide reporting on compliance with the wasteload allocations for the San Francisco Bay Polychlorinated Biphenyls (PCBs) and Mercury TMDL.

2. Manage PCBs-Containing Building Materials and Wastes During Building Demolition Activities so that PCBs Do Not Enter Storm Drains

- a. In Year 1 the Permittee shall develop and thereafter implement a protocol for managing PCB-containing building materials with PCBs concentrations of 50 ppm or greater in applicable structures at the time structures are demolished so that PCBs do not enter MS4s. In developing the protocol the Permittee may adapt or use tools developed by the [Bay Area Municipal Stormwater Collaborative](#). The protocol shall include, at a minimum, the following:
 - 1) The necessary authority to ensure that PCBs do not enter MS4s from PCB-containing materials in applicable structures at the time of demolition;
 - 2) A method for identifying applicable structures prior to demolition; and
 - 3) A method(s) for ensuring PCBs are not discharged to the storm drain from demolition of applicable structures.
- b. By the start of Year 2, the Permittee shall ensure that construction sites are inspected during demolition and shall obtain verification that materials from demolished buildings are disposed of appropriately. The Permittee shall:
 - 1) Inspect demolition sites with applicable structures containing building materials with PCBs concentrations of 50 ppm or greater pursuant to the Construction Site Stormwater Runoff Program requirements in Order sections D5 or E5. Demolition site inspections shall ensure that effective construction pollutant controls are used to prevent discharge into the MS4.
 - 2) Enhance its construction site control program to minimize migration of PCBs into the MS4 from those structures containing building materials with PCBs concentrations of 50 ppm or greater during demolition activities. Enhancements may include inspecting

- demolition sites monthly during demolition activities in the dry season (May-September) and requiring the demolition contractors to sweep the project sites and the streets around the property with street sweepers that will effectively remove sediment and dust.
- 3) Require demolition contractors to provide official documentation that the building materials with PCBs concentrations of 50 ppm or greater in these demolished applicable structures were disposed appropriately according to state and federal regulations.
- c. The Permittee shall implement the protocol for applicable structures within its jurisdiction by the start of Year 2. Applicable structures include commercial, public, institutional and industrial structures constructed or remodeled between the years 1950 and 1980 with building materials with PCBs concentrations of 50 ppm or greater. The Permittee shall:
- 1) Implement the established protocol prior to authorizing demolition.
 - 2) Require demolition contractors to provide notification to the Permittee, the Regional Water Board, and USEPA at least one week before any demolition is to occur, for demolition of applicable structures containing building materials with PCBs concentrations of 50 ppm or greater approved beginning July 1, 2026.
 - 3) Structures that are constructed or remodeled between the years 1950 and 1980 and require emergency demolition to protect public health and/or safety are exempt from implementing the protocol, but they must be reported in accordance with Provision.
 - 4) Permittees may elect to update for use in the subsequent permit term the assessment methodology and data collection program to quantify PCBs loads reduced through implementation of the protocol for controlling PCBs during demolition of applicable structures.
- d. Single-family residential and wood frame structures are exempt from these requirements.
- e. A Permittee may seek exemption from this requirement if it provides evidence acceptable to the Executive Officer that the only structures that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame structures.

3. PCBs and Mercury Source Property Identification, Referral, and Abatement Program

Permittees shall investigate land areas that are likely to contribute PCBs and mercury to MS4s and shall map and rank likely source areas within its jurisdictions.

Upon confirmation of a source property the Permittee shall implement appropriate follow-up measures in conjunction with the Regional Water Board and other appropriate regulatory agencies with investigation and cleanup authorities.

Source property identification will involve investigations of properties located in historically industrial land use or other land use areas where PCBs or mercury was used, released, and/or disposed of and/or where sediment concentrations are significantly elevated above urban background levels (generally areas with sediment concentrations greater than 0.5 milligrams PCBs/kilogram or 0.5 milligrams mercury/kilogram), Permittees shall refer the properties to the Executive Officer of San Francisco Bay Regional Water Board for follow-up.

For each source property referred to the Regional Water Board, Permittees shall take action to abate the discharge of PCBs into its MS4s and/or implement interim enhanced operation and maintenance (enhanced O&M) measures in the street or storm drain infrastructure adjacent to the referred source property or implement a stormwater treatment system downstream of the property. These enhanced O&M measures shall be sufficient to intercept historically deposited contaminated sediment in the vicinity of the source area.

- a. Permittees shall implement a systematic investigatory process to identify source properties and determine appropriate next steps for confirmed source areas. The systematic investigatory process shall include the following steps:
 - 1) By the end of Year 1 map and rank PCBs and Mercury Source Properties by (i) identifying areas that should be considered for source area investigations; and (ii) conducting screening-level investigations using desktop analyses to prioritize these areas as high, moderate, or low-likelihood source areas;
 - 2) By the end of Year 1 develop a Source Property Investigation Protocol. In developing the protocol, the Permittee may adapt or use tools developed by the Phase I MS4 Permittees regulated under the Municipal Regional Permit (Order R2-2022-0018 as amended);
 - 3) By the end of Year 1 develop a schedule for investigating and confirming identified Source Property drainages;

- 4) By the start of Year 2, initiate implementation of the Source Property investigation protocol; and
- 5) Permittees shall investigate the following acreage of likely source property during the permit term:
 - a) Sonoma County: 102 acres
 - b) Marin County: 281 acres
 - c) Napa County: 147 acres
 - c) Solano County (non-Phase 1 Permittees): 4 acres
 - d) San Francisco County: 712 acres
 - e) Port of Oakland: 170 acres
- b. Where a source investigation confirms a property is a source of PCBs or mercury, the Permittee shall either:
 - 1) Take direct action to abate discharges of PCBs or mercury to the MS4s; or
 - 2) Refer that property to the Regional Water Board in a report to facilitate the issuance of orders for further investigation and remediation of the subject property. For each referred property the Permittee shall:
 - a) Submit a report, subject to the Regional Water Board Executive Officer approval, that includes a description of the enhanced O&M measures (described below) to be implemented at the referred source properties; and
 - b) Implement, or cause to be implemented, enhanced O&M control measures sufficient to remove historically deposited sediment in the public right-of-way or storm drain infrastructure adjacent to the referred source property or implement a stormwater treatment system downstream of the property. Such measures include:
 - (i) Higher frequency street sweeping; (ii) Higher frequency drain inlet cleaning, pump station cleaning, or conveyance system cleanout; (iii) Flushing or washing the street with collection and proper disposal of the wash water; (iv) Flushing the storm drainage conveyance system with collection and proper disposal of the flush water; (v) Installation and maintenance of rumble strips or stabilized entrances / exits of source properties to reduce offsite tracking of contaminated sediment; (vi) Installation and maintenance of silt fence, gravel bags, fiber rolls, walls, or other sediment control devices at the edge of the right-of-way to

prevent the contaminated sediment from reaching the MS4; (vii) The installation and maintenance of bioretention facilities on the property or right-of-way to treat stormwater; and (viii) Diversion of dry weather and first flush flows to a publicly owned treatment works or appropriately designed stormwater treatment system.

4. PCBs and Mercury Control Measures for Areas of Moderate or Higher Contamination

The Permittee shall address the moderate or higher levels of contamination that exists now and will remain even as Source Properties are identified and abated or referred for additional action. Mercury: Moderately contaminated areas have mercury sediment concentrations of 0.3 mg/kg; greater concentrations are considered highly contaminated areas. PCBs: Moderately contaminated areas have PCBs sediment concentrations of 0.2 mg/kg and areas with PCBs sediment concentrations of 0.5 mg/kg or more are considered highly contaminated. The Permittee shall:

- a. Identify likely areas of moderately or higher contaminated land using desktop geographic information system evaluation or other method.
- b. Then develop a schedule to implement or cause to be implemented treatment control measures, stormwater diversion to wastewater treatment facilities, redevelopment with green infrastructure (GSI), or other control measures to achieve PCBs load reductions.
- c. Account for load reductions achieved through implementation of controls. The amount of credit will be proportional to the ratio of implemented control measure efficiency relative to the efficiency of treatment controls.
- d. Permittees shall develop plans and schedules for implementing control measures in moderately and highly contaminated areas to reduce PCBs and mercury loads and incorporate these plans into the Implementation Plan and Schedule to Achieve TMDL Load Allocations required in Provision K. For each anticipated project the following information shall be included in the Implementation Plan and Schedule:
 - 1) List of ranked areas.
 - 2) Schedule for design and construction of control measures, and status of funding commitment (e.g., added to CIP List).
 - 3) Maps of the areas where control measures are to be implemented.
 - 4) A description of the anticipated design and sizing features for control measures.

- 5) Documentation demonstrating the likely presence of moderate or high PCBs and/or mercury contamination for the anticipated control measures such as: (i) Reconnaissance information; (ii) Monitoring data; (iii) Information on historic parcel use; (iv) Canine PCBs detection methods; (v) Hazardous materials information from CEQA documents prepared for redevelopment.
- e. Permittees shall incorporate the estimated load reductions for implemented and anticipated control measures as part of the Assess PCBs and Mercury Load Reductions from Stormwater report required in Provision J.

5. Program to Control PCBs from Bridges and Overpasses

- a. Permittees shall implement a Caltrans specification to manage, as part of bridge or overpass roadway replacement or major repair, potential PCBs-containing material in expansion joints.
- b. By the end of Year 1, the Permittee shall develop an inventory of publicly owned bridges in its jurisdictions that includes bridge ownership and a replacement/repair schedule. Beginning in Year 2 the Permittee shall implement or cause to be implemented the Caltrans Standard Operating Procedure (SOP) for Inspecting, Removing and Reporting Materials Containing Polychlorinated Biphenyls (PCBs) Prior to Demolition or Renovation of Structures⁷ during applicable replacement activities that are under the direction of the Permittee.

6. Program to Control PCBs from Electrical Utilities

- a. Permittees that own electrical utilities or oil-filled electrical equipment shall develop and implement a program to manage PCBs (in oil-filled electrical equipment) in its jurisdiction's program.
- b. Permittees that own oil-filled electrical equipment shall develop and implement improved standard operating procedures to address spill response and reporting practices for releases from Permittee owned oil-filled electrical equipment.
- c. Permittees that own oil-filled electrical equipment shall document the PCBs loads avoided through the existing and ongoing oil-filled electrical equipment removal and replacement programs.

⁷ Caltrans TMDL Compliance Plan, [Appendix I](#) Standard Operating Procedure (SOP) for Inspecting, Removing and Reporting Materials Containing Polychlorinated Biphenyls (PCBs) Prior to Demolition or Renovation of Structures.

7. Mercury Collection and Recycling Programs

- a. Permittees shall promote, facilitate, and/or participate in collection and recycling of mercury containing consumer products, devices, and equipment (e.g., thermometers, thermostats, switches, bulbs). Mercury is found in a wide variety of consumer products (e.g., fluorescent bulbs, thermostats, thermometers) that are subject to recycling requirements. These recycling efforts are already happening throughout the Small MS4 program area, the Permittee shall continue to promote, facilitate and/or participate in these recycling efforts to increase effectiveness and public participation.
- b. Permittees shall promote recycling of mercury-containing products and make efforts to increase effectiveness of these recycling efforts throughout the region.

8. PCBs and Mercury Risk Reduction Program

- a. The Permittees shall conduct or participate in an ongoing risk reduction program to address public health impacts of mercury and PCBs in San Francisco Bay.⁸ The fish risk reduction program shall take actions to reduce actual and potential health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence anglers and its families. Permittees should work with local health departments, the [Bay Area Clean Water Agencies](#), and the [Western States Petroleum Association](#) to leverage resources for this program and to appropriately target at-risk populations.
- b. At a minimum, Permittees shall conduct or cause to be conducted an ongoing risk reduction program with the potential to reach at least 300 individuals annually who are likely consumers of San Francisco Bay-caught fish. Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement. Permittees shall evaluate the effectiveness of its risk reduction program in the 2030 Annual Report.

9. PCBs and Mercury TMDL Monitoring Program

- a. Permittees shall conduct monitoring to assess inputs of PCBs and mercury to the Bay from local tributaries and urban runoff, provide

⁸ The risk reduction framework developed by municipalities (e.g., [Contra Costa Clean Water Program](#)) covered by the San Francisco Bay Municipal Regional Permit (Order No. R2-2022-0018) under its previous Permit (Citation for MRP 2), which funded community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach.

information to assess compliance with receiving water limitations, support implementation of pollutant controls, assess progress toward achieving wasteload allocations for TMDLs and help resolve uncertainties associated with loading estimates and impairments associated with PCBs and Mercury.

Monitoring in this provision must be directed toward addressing the following five priority pollutant management information needs (Table G4.2.11):

Table G4.2.11. Monitoring Types and Information Needs

Type	Information Need	Monitoring Methods
1	Identify Source Areas	- Collection and analysis of pollutants on sediments in urban stormwater runoff that are transported through MS4s or receiving waters during stormwater runoff events; or - Collection and analysis of pollutants on bedded sediments deposited in MS4s or receiving waters; or - Collection and analysis of pollutants in stormwater runoff or bedded sediments on source area properties (e.g. private property); or - Other monitoring methods designed to identify specific sources or uses of pollutants (e.g., caulk in roadways or building materials) or watershed source areas.
2	Identify watershed areas contributing most to Bay impairment	- Methods described for Monitoring Type #1; or - Collection and chemical analysis of small fish tissue (or other relevant indicator) near tributary confluences with the Bay; or - Collection of bedded sediments near tributary confluences with the Bay and analysis for pollutants.
3	Provide support for future or existing management action	- Methods described for Monitoring Type #1, with a focus on monitoring the effectiveness of specific management actions in reducing; or - Avoiding pollutants in MS4 discharges.
4	Provide information on pollutant loads, concentrations, or presence / absence	Methods described for Monitoring Type #1, in combination with quantitative modeling associated with quantifying pollutant loads from MS4s or small tributaries to the Bay.
5	Evaluate Trends	Methods described for Monitoring Type #1 or #2.

- b. Permittees may satisfy Monitoring Type 1 requirements through individual jurisdiction level or joint-Permittee level monitoring associated with Items 3 and 4, identification of source properties and/or identification of high and moderate areas of contamination.

Permittees may satisfy the Monitoring Types 2-5 requirements by contributing its fair share financially on an annual basis to the San Francisco Bay Regional Monitoring Program.

Permittees opting not to participate in the San Francisco Bay Regional Monitoring Program must individually or collectively through a cooperative joint program implement monitoring to satisfy the requirements for Monitoring Types 2-5 requirements by developing and conducting the monitoring described in item 2 below.

- c. In Year 2 Permittees shall initiate Monitoring Type 1 in conjunction with its Source Property Investigation Protocol Implementation.
- d. In Year 2 Permittees opting to participate in the San Francisco Bay Regional Monitoring Program to satisfy its Monitoring Types 2-5 requirements shall begin contributions.
- e. Permittees opting to not to participate in the San Francisco Bay Regional Monitoring Program to satisfy its monitoring Types 2-5 requirements shall initiate the monitoring program described below.
 - 1) In Year 2 the Permittees shall develop a Monitoring Program and Quality Assurance Project Plan (QAPP). In Year 3 the Permittee shall initiate monitoring. The Permittee shall implement or cause to be implemented the monitoring components listed below to address the management information needs listed. Permittees shall conduct monitoring consistent with the monitoring intensity and frequency specified in Table G4.2.12 that describes PCBs and mercury monitoring effort for monitoring types b-f. Monitoring frequencies are described as the total annual of number of samples that Permittees working collectively within a given county area or working individually shall collect and analyze. Annual sampling shall be based on the Water Year (October 1 – September 30).
 - 2) Minimum number of samples that Permittees within a countywide Stormwater Program shall collect by the end of a 5-year term to address each monitoring type are also specified. Samples shall be analyzed for parameters listed in Table G4.2.13 Pollutant of Concern Analytes and Analytical Methods. Where no laboratory method is listed in the Monitoring Parameters, Effort and Type Table, Permittees shall use USEPA or SWAMP-approved methods.

Table G4.2.12. Monitoring Parameters and Annual Effort

Permittee	Minimum Type 1 Sampling Events collected by Year 3	Total PCBs Sampling Events During Permit Term and Annual Minimum (a)	Total Annual Mercury Sampling Events During Permit Term and Annual Minimum (a)
Alameda County Permittee			
Port of Oakland	5	Individually 2	Individually 1
Marin County Permittees	Collectively 28	Collectively 14 (Annual Minimum 1)	Collectively 11 (Annual Minimum 1)
Belvedere	Individually 2	Individually 1	Individually 1
Corte Madera	Individually 4	Individually 2	Individually 2
Fairfax	Individually 4	Individually 2	Individually 2
Larkspur	Individually 4	Individually 2	Individually 2
Marin County	Individually 4	Individually 2	Individually 2
Mill Valley	Individually 4	Individually 2	Individually 2
Novato	Individually 4	Individually 2	Individually 2
Ross	Individually 2	Individually 1	Individually 1
San Anselmo	Individually 4	Individually 2	Individually 2
San Rafael	Individually 4	Individually 2	Individually 2
Sausalito	Individually 4	Individually 2	Individually 2
Tiburon	Individually 4	Individually 2	Individually 2
Napa County Permittees	Collectively 16	Collectively 8 (Annual Minimum 1)	Collectively 6 (Annual Minimum 1)
American Canyon	Individually 4	Individually 2	Individually 1
Calistoga	Individually 2	Individually 1	Individually 1
Napa	Individually 4	Individually 2	Individually 1
Napa County	Individually 4	Individually 2	Individually 1
St Helena	Individually 2	Individually 1	Individually 1
Yountville	Individually 2	Individually 1	Individually 1
San Francisco County Permittees			
SFPUC	Individually 2	Individually 1	Individually 1

Permittee	Minimum Type 1 Sampling Events collected by Year 3	Total PCBs Sampling Events During Permit Term and Annual Minimum (a)	Total Annual Mercury Sampling Events During Permit Term and Annual Minimum (a)
Port of San Francisco	Individually 4	Individually 2	Individually 1
Solano County Permittees	Collectively 6	Collectively 5	Collectively 3
Benicia	Individually 4	Individually 2	Individually 1
Solano County	Individually 2	Individually 2	Individually 1
Travis Airforce Base	Individually 3	Individually 2	Individually 1
Sonoma County Permittees	Collectively 10 (Annual Minimum 2)	Collectively 5	Collectively 5
Petaluma	Individually 4	Individually 2	Individually 2
Sonoma	Individually 4	Individually 2	Individually 2
Sonoma County	Individually 4	Individually 2	Individually 2

Table Notes

(a) This column indicates the total number of samples, across monitoring 2-5, that must be collected during the five-year Permit term. The Annual Minimum, in parentheses, indicates the minimum number of samples that must be collected for the applicable monitoring types during each year of the five-year Permit term. Annual minimums only apply to collective sampling programs. It is possible that data can satisfy multiple monitoring types. However, the intent of the Permit is to achieve a distribution of monitoring effort across all applicable monitoring information needs.

Table G4.2.13 Pollutant of Concern Analytes and Analytical Methods

Pollutant of Concern Sampling Event	Matrix	Analyte ^(a)	Laboratory Analytical Methods
PCBs	Water	Total PCBs	USEPA 1668 (RMP 40)
		Total Organic Carbon (TOC)	SM5310B
		Suspended Sediment Concentration (SSC)	ASTM D3977-97
	Bedded Sediment (if applicable)	Total PCBs	As appropriate to address the management information need: USEPA 1668 (RMP 40), 8082A, or 8270D modified by Method 1625

Pollutant of Concern Sampling Event	Matrix	Analyte ^(a)	Laboratory Analytical Methods
		TOC	USEPA 9060
Mercury	Water	Total Mercury	USEPA 1631 Rev E
	Bedded Sediment (if applicable)	Total Mercury	USEPA 7473

Table Notes

^(a) TOC data are not used independently. Rather, TOC can be useful for normalizing PCBs data collected in water and sediment. TOC shall be collected concurrently with PCBs data that should be normalized to TOC. Similarly, SSC samples should be collected and analyzed when water samples are collected that will be used to assess loads, loading trends, or BMP effectiveness for PCBs.

10. Assess PCBs and Mercury Load Reductions from Stormwater

- a. The Permittees shall implement an assessment methodology and data collection program to quantify, in a technically sound manner, PCBs and mercury loads reduced through the implementation of control programs required in this section and other measures taken as part of the provisions of the Permit. In developing the methodology, the Permittees may adapt or use systems developed for the Municipal Regional Permit (Order No. R2-2022-0018). This accounting system describes calculation methodologies, data requirements, and parameters used to quantify the load reduction for each type of control measure. The Permittees shall use the assessment methodology to demonstrate the load reductions achieved during this Permit term as well as progress toward achieving the program area PCBs and mercury TMDL wasteload allocations. The Permittees may update this assessment methodology if necessary for use in subsequent years and permit terms.
- b. The Permittees shall quantify the PCBs and mercury load reductions achieved through all the pollution prevention, source control, green stormwater infrastructure, and other treatment control measures implemented during this permit term as described in G4.2.11 Items 1 through 7, and other provisions of the Permit. The Permittee-specific portion of the regionwide PCBs and mercury load reduction estimate shall be based on the proportion of county population in each municipality.

11. Prepare Implementation Plan and Schedule to Achieve TMDL Load Allocations

- a. The Permittee shall provide accounting of the load reductions that will be achieved over time. The detailed implementation plan prepared for this

requirement will be used to inform permit requirements for the subsequent permit term using the load assessment methodology described above in section G4.2.11 Item 10.

- b. The Permittee shall prepare a long-term implementation plan. The plan must:
 - 1) Identify all technically and economically feasible PCBs and mercury control measures to be implemented (including GSI projects);
 - 2) Include a schedule according to which these technically and economically feasible control measures will be fully implemented;
 - 3) Provide an evaluation and quantification of the PCBs and mercury load reduction of such measures as well as an evaluation of costs, control measure efficiency, and significant environmental impacts resulting from its implementation;
 - 4) Identify all specific control measures implemented during the current permit term and any additional control measures to be implemented in the subsequent permit term;
 - 5) Describe the intensity or extent of control measure implementation;
 - 6) Identify accountability metrics to track during the subsequent permit; and
 - 7) Provide estimates for load reductions to be achieved through implementation of control measures during the subsequent permit at the proposed intensities.

12. Reporting – Permittees shall report on the following:

- a. Green Infrastructure Planning - In the Year 5 Annual Report the Permittee shall submit its completed Green Infrastructure Plan.
- b. Demolition Protocol Development and Implementation
 - 1) Permittees seeking exemption from the requirements of G4.2.11 Item 2 based on lack of applicable structures must submit in its Year 1 Annual Report; documentation, such as historic maps or other historic records, that clearly demonstrates that the only structures that existed pre-1980 were single-family residential and/or wood-frame structures;
 - 2) Permittees subject to G4.2.11 Item 2 shall provide documentation demonstrating development of the protocol or identifying protocol to be used with its Year 1 Annual Report;

- 3) Permittees subject to G4.2.11 Item 2 shall provide documentation of each of the following items beginning with its Year 2 Annual Report and thereafter:
 - i. The number of applicable structures that applied for a demolition permit during that reporting year;
 - ii. A running list of the applicable structures that applied for a demolition permit that had materials(s) with PCBs at 50 ppm or greater, with the address, and demolition date, brief description of the PCBs-containing materials; and brief description or citation of PCB control methods used at each site; and
 - iii. For each applicable structure that requires emergency demolition to protect public health and/or safety, provide the following: address, date building was constructed, and date of demolition.
- c. PCBs and Mercury Source Property Identification, Referral and Abatement Program
 - 1) In the Year 1 Annual Report, each Permittee shall submit its ranked list of likely source properties, acreage of those lands properties, and map delineating those areas and associated drainages.
 - 2) In the Year 2 Annual Report, each Permittee shall submit its investigation protocol and schedule.
 - 3) In the Year 3 Annual Report and thereafter, the Permittees shall provide a list or table of source properties with the following information:
 - i. Current status of source properties (in process / investigated / confirmed / referred / abated / no risk);
 - ii. Estimated area of abated source properties;
 - iii. Estimated area of referred source properties;
 - iv. Estimated area of confirmed source properties;
 - v. Enhanced O&M measures implemented for each referred source property;
 - vi. Estimated load reduction potential for confirmed source properties;
 - vii. Estimated load reduction for abated source properties.
- d. Control Measure Implementation in Areas of Moderate Contamination
 - 1) Permittees shall submit the plans and schedules for implementing control measures in moderately and highly contaminated areas to

reduce PCBs and mercury loads with its Implementation Plan and Schedule to Achieve TMDL Load Allocations required in G4.2.11 Item 11, above.

- 2) Permittees shall submit the submit documentation demonstrating the area has moderate or high PCBs and/or mercury contamination and estimating the load reductions with the Year 5 Annual Report.
- e. Program to Control PCBs from Bridges and Overpasses
- 1) In the Year 1 Annual Report Permittees shall submit an inventory of bridges in the program area that includes bridge ownership and the bridge roadway replacement schedule.
 - 2) Beginning with the Year 1 Annual Report Permittees shall submit in each annual report documentation confirming the use of the Caltrans specification during all instances of bridge roadway replacement or repair in its jurisdiction during that reporting year and provide an estimate of the volume of material managed and total PCBs mass load reduced resulting from implementation of the specification.
 - 3) In the 2030 Annual Report – Permittees shall report an estimate of the total PCBs mass load reduced, consistent with approved accounting procedures, resulting from implementing this control measure.
- f. Program to Control PCBs from Permittee Owned Electrical Utilities
- 1) Permittees shall report in their Year 1 Annual Report whether they operate a Permittee-owned electrical utility or Permittee-owned oil-filled electrical equipment.
 - 2) Permittees subject to G4.2.11 Item 6 shall submit in its Year 2 Annual Report a description of the improved spill response practices implemented by Permittee-owned electrical utilities.
- g. Mercury Collection and Recycling Programs
- 1) Beginning in the Year 2 Annual Report, Permittees shall report on efforts to promote recycling of mercury-containing products in accordance with Attachment D, section D2 and Attachment E, section E2.
- h. PCBs and Mercury Risk Reduction
- 1) The Permittees shall report on the status of the risk reduction program in each of its Annual Reports, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish. The Permittees

shall report the findings of the effectiveness evaluation of its risk reduction program in its 2029 Annual Report.

- i. PCBs and Mercury TMDL Monitoring Program
 - 1) Monitoring reports submitted shall be clear, concise, and well organized. They shall include the following information:
 - i) An executive summary;
 - ii) Quality Assurance/Quality Control summaries for sample collection and analytical methods, including a discussion of any limitations of the data;
 - iii) Brief descriptions of sampling protocols and analytical methods;
 - iv) Sample location description, including water body name and segment as well as latitude and longitude coordinates;
 - v) Sample ID, collection date (and time if relevant), media (e.g., water, filtered water, bed sediment, tissue);
 - vi) Concentrations detected, measurement units, and detection limits;
 - vii) Assessment, analysis, and interpretation of the data for each monitoring program component;
 - viii) A listing of volunteer and other non-Permittee entities whose data are included in the report;
 - ix) Assessment of compliance with applicable water quality standards; and
 - x) Methods, data, calculations, load estimates, and source estimates for each pollutant, as applicable.
 - 2) Permittees shall submit to the California Environmental Data Exchange Network (CEDEN) all monitoring results conducted pursuant to section G4.2.11 item 9.
 - i) Data shall be submitted in SWAMP formats and with the quality controls required by CEDEN.
 - ii) Data collected during the previous October 1 – September 30 period shall be submitted by March 31 of each year.
 - 3) The Permittees shall submit a report describing the allocation of sampling effort for monitoring for the forthcoming year (i.e., the water year that began October 1 of that year) and what was accomplished for monitoring during the preceding water year. The report shall

include: monitoring locations, number and types of samples collected, management question addressed, and analytes measured.

- 4) In the Year 5 Annual Report, Permittees shall submit a comprehensive report that contains the following:
 - i) A comprehensive analysis of all data collected pursuant to section G4.2.11 Item 9;
 - ii) Methods, data, calculations, load estimates, and source estimates for each parameter, as applicable;
 - iii) With cause and justification, recommendations for changes to the monitoring requirements for this permit element in future Permit terms.

j. Load Reductions

- 1) In the 2030 Annual Report, Permittees shall report the total loads reduced using the assessment methodologies described and cited in the Fact Sheet to demonstrate cumulative PCBs load reduced from each control measure implemented since the beginning of the Permit term. This report shall also include an estimate of load reductions from control measures taking place after the 2030 Annual Report submittal but before the end of the permit term. Permittees shall submit all supporting data and information necessary to substantiate the load reduction estimates.

k. Long Term Implementation Plan and Schedule

- 1) Permittees shall submit the plan and schedule with the 2030 Annual report.

G4.3 CENTRAL COAST WATER BOARD

This Order implements TMDLs for the Central Coast Water Board, which includes TMDLs for pathogens, fecal coliform and indicator bacteria, sediment, nitrate-nitrogen, nitrogen compounds and orthophosphate, and pesticides. The Permittees are identified for each TMDL, along with the pollutant and impaired water bodies (together the waterbody-pollutant combination), implementation requirements, final deadlines, and reporting requirements.

On or before the deadline to comply with a TMDLs final wasteload allocation, the Permittee shall submit its TMDL Demonstration of Compliance Report required by G2, above. If the Permittee needs additional time, it may seek a time schedule order, as described in G2, above.

Those specific Permittees that are identified below as requiring a Wasteload Allocation Attainment Plan shall develop and implement a Wasteload Allocation Attainment Program for each catchment⁹ within the Permittee's jurisdiction that discharges to a TMDL waterbody. The Permittee may select different best management practices for different catchments.

The Wasteload Allocation Attainment Plan shall address each TMDL waterbody-pollutant combination identified below. Where applicable, the Permittee shall identify and demonstrate compliance with waste allocations. The Permittee shall identify and address all areas within the Permittee's jurisdiction that discharge to a receiving water with a TMDL. The Permittee may use its catchments identified in its Program Effectiveness Assessment and Improvement Plan (submitted under the previous permit) or alternative catchment delineations.

G4.3.1 Central Coast Water Board - Wasteload Allocation Attainment Plan

The Permittees identified below shall develop and implement a Wasteload Allocation Attainment Plan that identifies the actions it will take to comply with the TMDLs. The Central Coast Water Board recommends early and on-going interaction with the Central Coast Water Board staff to determine appropriate level of detail and scope of analyses necessary for Wasteload Allocation Attainment Plans for a particular TMDL

The Wasteload Allocation Attainment Plan shall include the following components:

⁹ An area of land where water collects when it rains, often bounded by hills.

1. Strategy – The Permittee shall develop a strategy and actions to guide selection, assessment, and implementation of best management practices that, when implemented, will effectively abate pollutant sources, reduce pollutant discharges, and achieve wasteload allocations according to the TMDL compliance schedule.
2. Source Analysis – The Permittee shall conduct a source analysis including the following:
 - a. Identification of sources of the impairment within the Permittee's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction, and
 - b. Prioritization of sources within the Permittee's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
3. Selection and Implementation of Best Management Practices – The Permittee shall develop a control measure assessment and implementation plan including the following:
 - a. Identification of best management practices that will address the sources and reduce the discharge of the TMDL pollutants.
 - b. Prioritization of best management practices based on expected effectiveness at abating sources, reducing impairing pollutant discharges, and other pertinent factors.
 - c. Selection of best management practices to be implemented, as determined, including a detailed implementation schedule. For each best management practice, identify milestones the Permittee will use for tracking implementation, measurable goals that the Permittee will use to assess implementation efforts, and measures and targets the Permittee will use to assess effectiveness.
 - d. The Permittee shall include a schedule of expected best management practices implementation for future implementation years, with the understanding that future best management practices implementation plans may change as new information is obtained.
4. Quantitative Numeric Analysis – The Permittee shall conduct a Quantitative Numeric Analysis that demonstrates best management practices, when implemented, will result in compliance with wasteload allocations for all TMDL pollutants or for the limiting pollutant. The Quantitative Numeric Analysis shall include the following:
 - a. A catchment delineation and pollutant loading analysis shall identify relative pollutant load contribution of each catchment within the Permittee's jurisdiction.

- b. Prioritization of catchments and sources based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
 - c. A quantifiable Quantitative Numeric Analysis that uses published best management practices pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate the selected best management practices will achieve, with reasonable assurance, the Permittee's wasteload allocation by the TMDL compliance schedule.
5. Monitoring Program – The Permittee's monitoring program shall include a detailed description and schedule sufficient to assess discharge and receiving water quality, effectiveness of implemented best management practice, progress towards interim targets, and ultimate compliance with the wasteload allocations. The monitoring program shall be designed to validate implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.

The Permittee may propose *E. coli* monitoring in lieu of fecal coliform monitoring. Sampling shall be at least five samples distributed over a six-week period. The six-week rolling geometric mean of *E. coli* shall not exceed 100 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 320 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a month.

6. Schedule – The Permittee shall propose a schedule that complies with interim targets and final water quality-based effluent limitations according to compliance schedules included in the Fact Sheet. If the dates have passed and TMDLs have not been attained, then the Permittee may request a time schedule order as specified in G2, above. The Wasteload Allocation Attainment Plan schedule must be updated to be consistent with any time schedule order.
- a. If the Permittee-established interim target due dates during the 2013 permit term have passed and have not been attained, then the Permittee shall revise its interim targets (and dates when stormwater discharge conditions will be evaluated). If the TMDL does not include interim targets and the Permittee did not establish targets during the previous permit term, then the Permittee shall establish interim targets. The Permittee shall space interim targets equally over the TMDL compliance schedule and shall represent measurable, continually decreasing discharge concentrations or other appropriate interim measures of pollution reduction and progress towards compliance with the wasteload allocation.
 - b. The Permittee must include at least one interim target and date during the first five years commencing on this Order's adoption date. The

Permittee shall achieve its interim targets by the date specified in its Wasteload Allocation Attainment Plan. If the Permittee does not achieve its interim target by the date specified, the Permittee shall develop and implement best management practices that it can quantitatively demonstrate will achieve the next interim target.

7. Effectiveness Assessment and Adaptive Management – The Permittee shall document program modifications based on its effectiveness evaluations that shall include the following information:
 - a. A detailed description of how the Permittee will assess best management practices and program effectiveness.
 - b. A detailed description of how the Permittee will modify its program to improve best management practices determined to be ineffective during the effectiveness assessment.
 - c. A detailed description of information the Permittee will include in annual reports in accordance with Section G2.1 of this attachment to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
8. Collaboration with Other Agencies – The Permittee shall include a detailed description of how it will collaborate with other agencies, stakeholders, and the public to develop and implement its Wasteload Allocation Attainment Plan.
9. Other – The Permittee shall address any other items identified in the Integrated Report Fact Sheet, TMDL Project Reports, TMDL Resolutions, or other items currently being implemented by the Permittee to control its contribution to the TMDL wasteload.
10. Long-Term Assurance – Once the Permittee has demonstrated full wasteload allocation attainment at a catchment scale, the Permittee shall update the Wasteload Allocation Attainment Plan to document a long-term assurance approach to ensure the Permittee's wasteload reduction strategies/projects will continue to function, according to intended design objectives, in perpetuity. The Permittee shall implement the documented long-term assurance approach and make modifications as necessary to maintain compliance with wasteload allocations. The Permittee shall assess whether its Watershed Asset Management Program can serve the purpose of this requirement.
11. Wasteload Allocation Attainment Plan Submittal, Approval, Commencement, and Revision Process
 - a. Submittal and Approval – By the end of Year 1, the Permittee shall submit a complete Wasteload Allocation Attainment Plan to the Central

Coast Water Board Executive Officer for review and approval. The Wasteload Allocation Attainment Plan shall include a list of waterbody-pollutant combinations with TMDLs within the Permittee's jurisdiction. Portions of Wasteload Allocation Attainment Plan addressing TMDLs that have been added to the Order for the first time during this permit term must be submitted by Year 2. The Central Coast Water Board will provide a minimum 30-day public review period for initial Wasteload Allocation Attainment Plans and updated Wasteload Allocation Attainment Plans.

- b. Implementation Commencement – The Permittee shall commence implementation of its Wasteload Allocation Attainment Plan after Central Coast Water Board Executive Officer approval (or as otherwise specified in approval). The Permittee shall maintain a current Wasteload Allocation Attainment Plan in SMARTS.
- c. Repeat Quantitative Numeric Analyses – The Permittee shall conduct repeat quantitative numeric analysis as the best management practice implementation plans evolve and information on best management practice effectiveness is generated. Once the Permittee has water quality data from its monitoring program, the Permittee shall incorporate water quality data into the numeric analyses to validate best management practice implementation plans.
- d. Revisions – The Permittee shall notify the Central Coast Water Board Executive Officer of any subsequent proposed Wasteload Allocation Attainment Plan revisions. If the Permittee proposes substantive changes, the Central Coast Water Board will provide a minimum 30-day public review period prior to approval of a modified Wasteload Allocation Attainment Plan.

12. Progress Tracking and Reporting

To show progress towards attaining the wasteload allocations and interim targets, the Permittee shall develop a process for tracking development and implementation of the Wasteload Allocation Attainment Plan and shall describe in the annual reports of the Wasteload Allocation Attainment Plan development and implementation actions taken for the previous reporting year. The Permittee shall make the information publicly available. The annual reporting shall include the following at a minimum:

- a. A description of actions taken to develop and implement best management practices per requirements this Order's Wasteload Allocation Attainment Plan.
- b. A description of actions planned for the upcoming reporting year to develop and implement best management practices.

- c. A description of all implemented best management practices, including respective treated area and connected impervious area.
- d. A map showing the location of each planned and implemented best management practice, with respective treated area and connected impervious area.
- e. An analysis of documented and estimated wasteload removal, summarized by catchment, detailing progress towards attaining interim targets and final wasteload allocations.
- f. A discussion of any deviations from the submitted Wasteload Allocation Attainment Plan, including rationale for those deviations, and, if necessary, a description of how the Permittee will compensate for any noted shortfalls in expected wasteload reductions.

G4.3.2 TMDL for Pathogens in Morro Bay and Chorro and Los Osos Creeks

Responsible Permittees: City of Morro Bay, County of San Luis Obispo, Los Osos Community Services District

Impaired Water Bodies: Chorro Creek, Los Osos Creek, Morro Bay, Pennington Creek

TMDL Implementation Requirements: The Permittee identified for this TMDL, above, shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: The final deadline to meet the wasteload allocations was November 19, 2013.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.3 TMDL for Pathogens in Watsonville Slough

Responsible Permittees: City of Watsonville, County of Santa Cruz

Impaired Water Bodies: Gallighan Slough, Hanson Slough, Harkins Slough, Struve Slough, Watsonville Slough

TMDL Implementation Requirements: The Permittee identified for this TMDL, above, shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all

information required under section G4.3.1. The Permittee is required to implement best management practices specifically targeting fecal coliform loading. Required actions include development and implementation of:

1. Public education regarding fecal coliform sources and associated health risk,
2. Enforceable means of addressing pet waste and wild animals that are attracted to stormwater infrastructure, and
3. Elimination of illicit discharges.

The Permittee must also monitor receiving water and stormwater outfalls that may be contributing fecal coliform to the sloughs.

Final Compliance Deadline: The final compliance deadline was November 20, 2016.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.4 TMDL for Fecal Coliform in the Pajaro River Watershed

Responsible Permittees: City of Gilroy, City of Hollister, City of Morgan Hill, City of Watsonville, County of Monterey, County of Santa Clara, County of Santa Cruz

Impaired Water Bodies: Bird Creek, Carnadero/Uvas Creek, Furlong (Jones) Creek, Llagas Creek, Pajaro River, Miller's Canal, Pachecho Creek, Pescadero Creek, San Benito River, San Juan Creek, Santa Ana Creek, Tequesquita Slough, Tres Pinos Creek

TMDL Implementation Requirements: The Permittee identified for this TMDL, above, shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: All wasteload allocations were required to be achieved by July 12, 2023.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.5 TMDL for Sediment in Morro Bay

Responsible Permittee: County of San Luis Obispo

Impaired Water Bodies: Chorro Creek, Dairy Creek, Los Osos Creek, Morro Bay, Pennington Creek, Warden Creek

TMDL Implementation Requirements: The Permittee identified for this TMDL, above, shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: The final compliance deadline is December 3, 2053.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.6 TMDL for Sediment in the San Lorenzo River

Responsible Permittees: City of Santa Cruz, City of Scotts Valley, County of Santa Cruz

Impaired Water Bodies: Carbonera Creek, Lompico Creek, San Lorenzo River, Shingle Mill Creek

TMDL Implementation Requirements: The Permittee identified for this TMDL, above, shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Plan shall include all information required under section G4.3.1.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.7 TMDL for Sediment in the Pajaro River Including Llagas Creek, Rider Creek, and San Benito River

Responsible Permittees: City of Gilroy, City of Hollister, City of Morgan Hill, City of Watsonville, Santa Cruz County Fairgrounds

Impaired Water Bodies: Corralitos Creek (including Rider Creek), Llagas Creek, Mouth of Pajaro River, Tres Pinos, San Benito River, Upper Pajaro River, Uvas Creek

TMDL Implementation Requirements: The Permittee shall implement the practices specified in this Order, tailored to focus on reduction of sediment discharges to the affected waterbodies, to ensure attainment of the wasteload allocations. Submittal of a Wasteload Allocation Attainment Plan is not needed because compliance with this Order in the watershed constitutes TMDL Compliance.

Final Compliance Deadline: The final compliance deadline to achieve the numeric targets is November 27, 2051.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2, above, including TMDL Demonstration of Compliance Report.

TMDL Annual Reports shall outline best management practices implemented to ensure ongoing attainment of the Permittee's allocation.

G4.3.8 TMDL for Pathogens in San Luis Obispo Creek

Responsible Permittees: California Polytechnic State University, San Luis Obispo; City of San Luis Obispo; County of San Luis Obispo,

Impaired Water Bodies: Brizzolari Creek, San Luis Obispo Creek, Stenner Creek

TMDL Implementation Requirements: The Permittee shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1. The Permittees identified in the TMDL for Pathogens in San Luis Obispo Creek are required to implement best management practices specifically targeting fecal coliform loading. Submittal of a Wasteload Allocation Attainment Plan is not required because compliance with this Order in the watershed constitutes TMDL compliance. Required actions include development and implementation of:

1. Public education regarding fecal coliform sources and associated health risk,
2. Enforceable means of addressing pet waste and wild animals that are attracted to stormwater infrastructure, and
3. Elimination of illicit discharges.

Final Compliance Deadline: The final compliance deadline was during or before the year 2012. Therefore, compliance with the wasteload allocation is required immediately.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2, above. TMDL Annual Reports shall outline best management practices implemented to ensure ongoing attainment of its allocation. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.9 TMDLs for Nitrate-Nitrogen in San Luis Obispo Creek

Responsible Permittees: California Polytechnic State University, San Luis Obispo; City of San Luis Obispo; County of San Luis Obispo

Impaired Water Body: San Luis Obispo Creek

TMDL Implementation Requirements: The Permittee shall continue to implement best management practices that specifically address the reduction or elimination of nutrient loading. Submittal of a Wasteload Allocation Attainment Plan is not required because compliance with this Order constitutes compliance with the TMDL.

Final Compliance Deadline: The final compliance deadline was during or before the year 2012.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2, above. TMDL Annual Reports shall outline best management practices implemented to ensure ongoing attainment of its allocation. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.10 TMDL for Fecal Coliform in Corralitos and Salsipuedes Creeks

Responsible Permittees: City of Watsonville, County of Santa Cruz, Santa Cruz County Fairgrounds

Impaired Water Bodies: Corralitos Creek, Salsipuedes Creek

TMDL Implementation Requirements: The Permittee identified for the TMDL for Fecal Coliform in Corralitos and Salsipuedes Creeks shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions it will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include the information required in section G4.3.1.

Final Compliance Deadline: The final compliance deadline to achieve wasteload allocations was September 8, 2024.

TMDL Reporting Requirements: The Permittee shall submit reports as specified in sections G2 and G4.3.1, above.

G4.3.11 TMDL for Fecal Coliform in Lower Salinas River Watershed

Responsible Permittee: County of Monterey

Impaired Water Bodies: Alisal Creek, Gabilan Creek, Lower Salinas River, Natividad Creek, Old Salinas River, Old Salinas River Estuary, Salinas Reclamation Canal, Salinas River Lagoon (North), Santa Rita Creek, Tembladero Slough

TMDL Implementation Requirements: The Permittee identified for the TMDL for Fecal Coliform in Lower Salinas River Watershed shall develop and implement a Wasteload Allocation Attainment Plan that identifies the actions it will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include the information required under section G4.3.1.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.12 TMDL for Pathogens in San Lorenzo Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, and Lompico Creek

Responsible Permittees: City of Santa Cruz, City of Scotts Valley, County of Santa Cruz

Impaired Water Bodies: Branciforte Creek, Camp Evers Creek, Carbonera Creek, Lompico Creek, San Lorenzo River Estuary, San Lorenzo River

TMDL Implementation Requirements: The Permittees identified for the TMDL for Pathogens in San Lorenzo Estuary and River shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all the information required per section G4.3.1.

Final Compliance Deadline: The final compliance deadline was June 6, 2024.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.13 TMDL for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch

Responsible Permittees: City of Capitola, County of Santa Cruz

Impaired Water Bodies: Noble Gulch, Soquel Creek, Soquel Lagoon

TMDL Implementation Requirements: The Permittee identified for the TMDLs for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all the information required under section G4.3.1.

Final Compliance Deadline: The final compliance deadline was September 15, 2023.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2, above.

G4.3.14 TMDL for Pathogens in Aptos Creek, Valencia Creek, and Trout Creek

Responsible Permittee: County of Santa Cruz

Impaired Water Bodies: Aptos Creek, Trout Gulch, Valencia Creek

TMDL Implementation Requirements: The Permittee identified for the TMDL for Pathogens in Aptos Creek, Valencia Creek, and Trout Creek shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: Wasteload allocations were required to be achieved October 29, 2023.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.15 TMDL for Fecal Indicator Bacteria in Santa Maria River Watershed

Responsible Permittees: City of Guadalupe, City of Santa Maria, County of San Luis Obispo, County of Santa Barbara

Impaired Water Bodies: Water Bodies in the Santa Maria River Watershed, including: Blosser Channel, Bradley Channel, Main Street Canal, Nipomo Creek, Orcutt Creek, Santa Maria River.

TMDL Implementation Requirements: The Permittee identified for the TMDL for Fecal Indicator Bacteria in Santa Maria River Watershed shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: The final compliance deadline is February 21, 2028.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.16 TMDL for Nitrogen Compounds and Orthophosphate in the Lower Santa Maria River Watersheds and Tributaries to Oso Flaco Lake

Responsible Permittees: City of Guadalupe, City of Santa Maria, County of San Luis Obispo, County of Santa Barbara

Impaired Water Bodies: 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, Nipomo Creek, North Main Street Channel, Orcutt Creek, Santa Maria River.

TMDL Implementation Requirements: The Permittees identified for the TMDL for Nitrogen Compounds and Orthophosphate in the Lower Santa Maria River Watersheds shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: The compliance date for achieving the final wasteload allocations is May 17, 2044.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.17 TMDL for Nitrogen Compounds and Orthophosphate in the Lower Salinas River Watersheds

Responsible Permittee: County of Monterey

Impaired Water Bodies: Alisal Creek, Gabilan Creek, Lower Salinas River, Natividad Creek, Salinas Reclamation Canal, Santa Rita Creek

TMDL Implementation Requirements: The Permittee identified for TMDL for Nitrogen Compounds and Orthophosphate in the Lower Salinas River Watersheds shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: The final compliance deadline is May 7, 2044.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.18 TMDL for Toxicity and Pesticides in the Santa Maria Watershed

Responsible Permittees: City of Guadalupe; City of Santa Maria; County of Santa Barbara

Impaired Water Bodies: Greene Valley Creek, Blosser Channel, Bradley Channel, Main Street Canal, Orcutt Creek, Santa Maria River

TMDL Implementation Requirements: The Permittees identified for the TMDL for Toxicity and Pesticides in the Santa Maria River Watershed shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Wasteload 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 the Permittee specifically and/or through statewide programs addressing urban pesticide water pollution. The Wasteload Allocation Attainment Plan 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.

Final Deadlines for Compliance: The final deadline for compliance with the pyrethroid wasteload allocation is November 1, 2029. The final compliance date to achieve the wasteload allocations for organochlorine pesticides (dichloro-diphenyl-trichloroethane, dichloro-diphenyl-dichloroethane, dichloro-diphenyl-dichloroethylene, chlordane, eldrin, toxaphene, and dieldrin) is November 1, 2044.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2:

1. By October 29, 2029, the Permittee shall demonstrate attainment of the pyrethroids additive toxicity wasteload allocation as specified in the section titled TMDL Demonstration of Compliance Report in section G2 and Attachment D or E (as applicable).
2. By October 29, 2044, the Permittee shall demonstrate attainment of the organochlorine pesticides (DDT, DDD, DDE, chlordane, eldrin, toxaphene, dieldrin) wasteload allocation in its TMDL Demonstration of Compliance Report as specified in Attachments D and E (as applicable).

G4.3.19 TMDL for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin

Responsible Permittees: City of Gilroy, City of Hollister, City of Morgan Hill, City of Watsonville, County of Monterey, County of Santa Clara, County of Santa Cruz

Impaired Water Bodies: Carnadero Creek, Corralitos Creek, Gallighan Slough, Harkins Slough, Llagas Creek, Pajaro River, Pajaro River Estuary, Pescadero Creek, Salsipuedes Creek, San Benito River, Santa Ana Creek, Struve Slough, Uvas Creek, Watsonville Slough

TMDL Implementation Requirements: The Permittee identified in the TMDL for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Deadline for Compliance: The final compliance date is July 2, 2026. Permittees may request time schedule orders (see section G2.4, above) from the Central Coast Water Board Executive Officer along with early and on-going interaction with Central Coast Water Board staff for adoption of time schedule orders and development of Wasteload Allocation Attainment Plans.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.20 TMDL for Sediment Toxicity and Pyrethroid Pesticides in Sediment in the Lower Salinas River Watershed

Responsible Permittee: County of Monterey

Impaired Water Bodies: Alisal Creek, Alisal Slough, Blanco Drain, Chualar Creek, Espinosa Slough, Gabilan Creek, Merrit Ditch, Natividad Creek, Old Salinas River, Quail Creek, Salinas Reclamation Canal, Salinas River (lower, estuary to near Gonzales Rd crossing, watersheds 30910 and 30920), Tembladero Slough

Final Compliance Deadline: Targets shall be achieved in receiving waters as indicators of meeting TMDLs by June 29, 2033.

TMDL Implementation Requirements: The Permittee identified for the TMDL for Sediment Toxicity and Pyrethroid Pesticides in Sediment in the Lower Salinas River Watershed shall develop and implement a Wasteload Allocation Attainment Plan that identifies the actions it will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Wasteload 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 the Permittee specifically and/or through statewide programs addressing urban pesticide water pollution. The Wasteload Allocation Attainment Plan 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.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.21 TMDL for Nitrogen and Phosphorous Compounds in Streams of the Franklin Creek Watershed

Responsible Permittees: City of Carpinteria, County of Santa Barbara

Impaired Water Body: Franklin Creek

TMDL Implementation Requirements: The Permittee identified for this TMDL, above, shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: The final allocations shall be achieved by May 9, 2034, which is 25 years after the TMDL effective date.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.22 TMDL for Total Phosphorous to Address Cyanobacterial Blooms in Pinto Lake

Responsible Permittees: City of Watsonville, County of Santa Cruz

Impaired Water Body: Pinto Lake

TMDL Implementation Requirements: The Permittee identified for this TMDL, above, shall each develop and implement a Wasteload Allocation Attainment Plan that identifies the actions they will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: The final compliance deadline is September 9, 2031, which is 10 years after approval by Office of Administrative Law.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.3.23 TMDL for Turbidity in Gabilan Creek Watershed

Responsible Permittee: County of Monterey

Impaired Water Bodies: Alisal Creek, Alisal Slough, Espinosa Slough, Gabilan Creek, Merritt Ditch, Natividad Creek, Old Salinas River, Salinas Reclamation Canal, Santa Rita Creek, Tembladero Slough

TMDL Implementing Requirements: The Permittee identified for this TMDL, above, shall develop and implement a Wasteload Allocation Attainment Plan that identifies the actions it will take to ensure its wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: The final compliance deadline is December 8, 2042.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports as specified in sections G2 and G4.3.1, above. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

G4.4 LOS ANGELES WATER BOARD

The following sections provide the implementation, compliance, and reporting requirements for TMDLs within the Los Angeles Water Board region.

G4.4.1 Standard Implementation Action Requirements for Bacteria and Bacteria Indicator TMDLs in the Los Angeles Regional Water Board

Bacteria and indicator bacteria TMDL-specific actions and requirements are provided under each bacteria TMDL.

This Order carries over the previous permits requirements for selecting and implementing either Cooperative Agreements or Program Plans to comply with Los Angeles Water Board bacteria and bacteria indicator TMDLs. The Permittee shall continue to implement its selected path, either a Cooperative Agreement or Program Plan, as follows:

1. Cooperative Agreement for Bacteria TMDLs.

The Permittee was required to notify the Los Angeles Water Board by January 1, 2019, of its intent to enter into a cooperative agreement with the Phase I MS4 Permittee. The Cooperative Agreement was required to be finalized by July 1, 2019, and submitted to the Los Angeles Water Board Executive Officer upon finalization. The Permittee's notification was required to identify the Phase I MS4 Permittee and the Watershed Management Program or Enhanced Watershed Management Program that the Permittee intends to participate in. The Watershed Management Program or Enhanced Watershed Management Program were required to be developed and approved pursuant to one of the Los Angeles Water Board's Phase I MS4 permits. The Cooperative Agreement is required to be in the watershed or subwatershed of the applicable bacteria impaired water body.

Or alternatively,

2. Program Plan for Bacteria TMDLs

The Program Plan was required to be submitted by July 1, 2019, for review and consideration of approval by the Los Angeles Regional Water Board Executive Officer. Once approved, the Permittee is required to implement the Program Plan. The Permittee is responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data. The Permittee's Program Plan shall identify the currently used and planned best management practices and any other planned actions to attain the wasteload allocations, which may include 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 by implementing the best management practices and other planned actions in the Program Plan, the Permittee's MS4 discharges shall achieve the wasteload allocations by the attainment

schedule deadline identified in the Fact Sheet, Attachment B. The Program Plan shall include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocations and validation of the technical demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer.

G4.4.2 Avalon Bay Bacteria TMDL

Responsible Permittee: City of Avalon

Impaired Water Body: Avalon Beach

TMDL Monitoring and Implementation Requirements: Avalon shall continue to implement the monitoring requirements in Cease and Desist Order R4-2012-0077 and as otherwise directed by the Los Angeles Water Board Executive Officer.

TMDL Reporting Requirements: Avalon shall provide the status of compliance with Cease and Desist Order R4-2012-0077 and the following information in each Annual Report (see section G2, above, for TMDL Annual Reporting):

1. Status of compliance with wasteload allocations; and
2. Ongoing actions to comply with the wasteload allocations, the Permittee-specific provisions of Cease and Desist Order R4-2012-0077, and this Order.

G4.4.3 Ballona Creek, Estuary, and Sepulveda Channel Bacteria TMDL

Responsible Permittees: University of California, Los Angeles; Veterans Affairs Greater Los Angeles Healthcare System

Impaired Water Body: Ballona Creek

TMDL Monitoring and Implementation Requirements: The Permittee shall continue to perform TMDL monitoring and TMDL implementation actions according to the Permittee's action selected under the previous order, which are either the Cooperative Agreement or the Program Plan, as described in section G4.4.1.

TMDL Reporting Requirements: In each Annual Report required under section G2 of this Order, each Responsible Permittee shall:

1. Demonstrate that the dry weather wasteload allocation was in compliance by January 1, 2019, per TMDL Demonstration of Compliance requirements in section G2, and
2. Demonstrate that compliance with the wet weather wasteload allocation is achieved by July 15, 2026, per the TMDL Demonstration of Compliance requirements in section G2; and

3. Report the following:
 - a. Status of compliance with wasteload allocations;
 - b. Demonstration of compliance with wasteload allocations as described in section G2;
 - c. Ongoing actions to comply with wasteload allocations;
 - d. Identification of which implementation action in section G4.4.1 was chosen, either the Cooperative Agreements or the Program Plan; and
 - e. Status of implementation of either the Cooperative Agreements or the Program Plan described in section G4.4.1.

G4.4.4 Los Angeles Harbor Bacteria TMDL – Inner Cabrillo Beach and Main Ship Channel

Responsible Permittees: Federal Correctional Institution, Terminal Island; California State University, Dominguez Hills

Impaired Water Body: Los Angeles Harbor

TMDL Monitoring and Implementation Requirements: The Permittee shall continue to perform TMDL monitoring and TMDL implementation actions according to the Permittee's action selected under the previous order, which are either the Cooperative Agreements or the Program Plan for Bacteria TMDLs, as described in section G4.4.1.

TMDL Reporting Requirements: In each Annual Report (see section G2), the Permittee shall report the following:

1. Status of compliance with wasteload allocations;
2. Demonstration of compliance with wasteload allocations per the requirements in section G4.1;
3. Ongoing actions to comply with wasteload allocations;
4. Identification of which implementation action in section G4.4.1 was chosen, either the Cooperative Agreements or the Program Plan for Bacteria TMDLs; and
5. Status of implementation of either the Cooperative Agreements or the Program Plan for Bacteria TMDLs described in section G4.4.1.

G4.4.5 Los Angeles River Bacteria TMDL

Responsible Permittees: California State University, Los Angeles; California State University, Northridge

Impaired Water Body: Los Angeles River

TMDL Monitoring and Implementation Requirements: TMDL monitoring and TMDL implementation actions shall continue to be performed according to the action the Permittee selected under the previous permit. These actions include a choice of either Cooperative Agreements or the Program Plan for Bacteria TMDLs, which are described in section G4.4.1.

TMDL Reporting Requirements: In each Annual Report required under this Order (section G2) the Permittee shall:

1. Use section G2 (TMDL Demonstration of Compliance Report requirements) to demonstrate compliance with the following final dry weather compliance dates:

Waterbody Segment	Final Dry Weather Compliance Date
Segment B (upper and middle Reach 2)	March 23, 2022
Segment B Tributaries (Rio Hondo and 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

2. Use section G2 (TMDL Demonstration of Compliance Report requirements) to demonstrate ongoing actions to achieve compliance and to demonstrate that compliance will be achieved by the following final dry weather compliance dates:

Waterbody Segment	Final Dry Weather Compliance Date
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

3. Use the criteria in section G2 (TMDL Demonstration of Compliance Report requirements) to demonstrate ongoing and planned actions to achieve the wet weather wasteload allocations by March 23, 2037.
4. Provide the status and on-going actions for compliance with wasteload allocations.
5. Identify and provide the status of the implementation action in section G4.4.1 was chosen, either the Cooperative Agreement or the Program Plan for Bacteria TMDLs.

G4.4.6 San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL

Responsible Permittee: California State Polytechnic University, Pomona

Impaired Water Body: San Gabriel River and Tributaries

TMDL Monitoring and TMDL Implementation Requirements: TMDL monitoring and TMDL implementation actions shall continue to be performed according to the action the Permittee selected under the previous permit. These actions include a choice of either Cooperative Agreements or the Program Plan, which are reiterated in section G4.1 of this Order.

TMDL Reporting Requirements: In each Annual Report, the Permittee shall:

1. Demonstrate that attainment of the dry weather wasteload allocation will be achieved by June 14, 2026. Document actions and attainment as required by the criteria in section G2, TMDL Compliance Requirements.
2. Demonstrate that attainment of the TMDL wasteload allocation will be achieved by June 14, 2036. Document actions and attainment as required by the criteria in section G2, TMDL Compliance Requirements.
3. Provide the status of compliance with wasteload allocations.
4. Demonstrate compliance with wasteload allocations using the criteria described in section G4.4.1.
5. Provide ongoing actions to comply with wasteload allocations.
6. Identify and provide the status of the implementation action selected in section G4.4.1, either the Cooperative Agreements or the Program Plan.

G4.4.7 Los Angeles Water Board General Requirements for Cooperative Agreements and Program Plans for Metals, Selenium, and Nitrogen Compounds and Related Effects

This Order carries over the previous permit's requirement to select one of two actions to meet the requirements of the metals, selenium, and other TMDLs. These requirements are described as follows:

1. Cooperative Agreement.

Enter into a cooperative agreement with the Phase I MS4 Permittee in the watershed or subwatershed of the impaired water body of the appropriate TMDL to participate in a Watershed Management Program or Enhanced Watershed Management Program that was developed and approved pursuant to one of the Los Angeles Water Board's Phase I MS4 permits. If this action was selected, then a Small MS4 Permittee was required to notify the Los Angeles Water Board of its intent to enter into a Cooperative Agreement by January 1, 2019, and to identify the Phase I MS4 Permittee and the Watershed Management Program or Enhanced Watershed Management Program that the Small MS4 Permittee intends to participate in. The Permittee was required to finalize the Cooperative Agreement by July 1, 2019, and to submit the cooperative agreement to the Los Angeles Water Board Executive Officer upon finalization.

Or alternatively,

2. Program Plan.

Propose a Program Plan for attaining the wasteload allocations. The Program Plan must identify the currently used and planned best management practices and any other planned actions to attain the wasteload allocations, 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 by implementing the best management practices and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocations by the attainment schedule deadlines identified within the specific TMDL sections. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocations and validate the technical demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan was required to be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittee must implement the Program Plan and is responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

G4.4.8 Ballona Creek Metals TMDL

Responsible Permittees: University of California, Los Angeles; Veterans Affairs Greater Los Angeles Healthcare System

Impaired Water Body: Ballona Creek

TMDL Monitoring and TMDL Implementation Requirements: The Permittee shall continue to perform TMDL monitoring and implementation according to

the action the Permittee selected under the previous permit. These actions include implementing the choice of either Cooperative Agreement or the Program Plan, which are reiterated in section G4.4.7.

TMDL Reporting Requirements: In the Annual Report, the Permittee shall report:

1. Implementation action selected under the previous permit and as reiterated in section G4.4.7, either the Cooperative Agreement or Program Plan.
2. Ongoing monitoring and actions to continue compliance per the option selected in section G4.4.7.
3. Status and demonstration of compliance with the January 1, 2019, dry weather wasteload allocation deadline using the criteria in section G2.
4. Demonstration of compliance with the January 11, 2021, wet weather wasteload allocation deadline using the criteria in section G2.

G4.4.9 Los Angeles River and Tributaries Metals TMDL

Responsible Permittees: California State University, Los Angeles; California State University, Northridge

Impaired Water Body: Los Angeles River

TMDL Monitoring and TMDL Implementation Requirements: The Permittee shall continue TMDL monitoring and TMDL implementation actions according to the action the Permittee selected under the previous permit, which includes a choice of either Cooperative Agreement or the Program Plan. These choices are reiterated in section G4.4.7 of this Order.

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Action selected under the previous permit, which include either the Cooperative Agreement or the Program plan, as reiterated in G4.4.7.
2. Demonstration that compliance with the dry weather wasteload allocation was achieved by January 11, 2024, using the criteria selected in section G2 of this Order.
3. Demonstration that compliance with the wet weather wasteload allocation will be achieved by January 11, 2028, using the criteria selected in section G2, above.

G4.4.10 Los Cerritos Channel Metals TMDL

Responsible Permittees: California State University, Long Beach; Long Beach Veterans Affairs Medical Center

Impaired Water Body: Los Cerritos Channel

TMDL Implementation Requirements: The Permittee shall continue TMDL monitoring and TMDL implementation actions according to the action the Permittee selected under the previous permit, which include a choice of either Cooperative Agreement or the Program Plan. These choices are reiterated in section G4.4.7 of this Order.

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Implementation action selected under the previous permit and as reiterated in section G4.4.7, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G4.4.7.
3. Demonstration of compliance with September 30, 2023, dry weather wasteload allocation deadline using the criteria in section G2.
4. By September 30, 2026, demonstrate compliance with the wet weather wasteload allocation deadline using the criteria in section G2.

G4.4.11 Calleguas Creek Watershed Metals and Selenium TMDL

Responsible Permittees: Naval Base Ventura County, including Port Hueneme and Point Mugu; California State University Channel Islands

Impaired Water Body: Calleguas Creek

TMDL Implementation Requirements: The Permittee shall continue TMDL monitoring and TMDL implementation actions according to the action the Permittee selected under the previous permit, which include a choice of either Cooperative Agreements or the Program Plan. These choices are reiterated in section G4.4.7.

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Implementation action selected under the previous permit and as reiterated in section G4.4.7, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G4.4.7.
3. Demonstration of compliance with the March 27, 2022, final wasteload allocations for metals and selenium using the demonstration of compliance criteria in section G2.

G4.4.12 San Gabriel River and Impaired Tributaries Metals and Selenium TMDL

Responsible Permittee: California State Polytechnic University, Pomona

Impaired Water Body: San Gabriel River and tributaries

TMDL Implementation Requirements: The Permittee shall continue TMDL monitoring and TMDL implementation actions according to the action the Permittee selected under the previous permit, which include a choice of either Cooperative Agreement or the Program Plan. These choices are reiterated in section G4.4.7.

TMDL Reporting Requirements:

1. Implementation action selected under the previous permit and as reiterated in section G4.4.7, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G4.4.7.
3. Using the criteria in section G2, by September 30, 2023, the Permittee shall demonstrate that 100 percent of the total drainage area served by the storm drain system is effectively meeting the dry-weather wasteload allocations and 65 percent of the total drainage area served by the storm drain system is effectively meeting the wet-weather wasteload allocations¹⁰.
4. Using the criteria in section G2, by September 30, 2026, the Permittee shall demonstrate that 100 percent of the total drainage area served by the storm drain system is effectively meeting both the dry-weather and wet-weather wasteload allocations and attaining water quality standards for copper, lead, and zinc¹¹.

G4.4.13 Los Angeles River Nitrogen Compounds and Related Effects TMDL

Responsible Permittees: California State University, Los Angeles; California State University, Northridge

Impaired Water Body: Los Angeles River

TMDL Implementation Requirements: The Permittee shall continue TMDL monitoring and TMDL implementation actions according to the action the Permittee selected under the previous permit, which include a choice of either Cooperative Agreements or the Program Plan. These choices are reiterated in section G4.4.7.

¹⁰ Los Angeles Water Board Basin Plan section 7-20.

¹¹ Los Angeles Water Board Basin Plan section 7-20

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Implementation action selected under the previous permit and as reiterated in section G4.4.7, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G4.4.7.
3. Demonstration that compliance with the final wasteload allocations was achieved by January 1, 2019. The Permittee shall demonstrate compliance using the criteria in section G2.

G4.4.14 Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation TMDL

Responsible Permittees: Naval Base Ventura County, including Port Hueneme and Point Mugu; California State University Channel Islands

Impaired Water Body: Calleguas Creek

TMDL Implementation Requirements: The Permittee shall continue TMDL monitoring and TMDL implementation actions according to the action the Permittee selected under the previous permit, which include a choice of either Cooperative Agreements or the Program Plan as described under G4.4.7 of this Attachment.

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Implementation action selected under the previous permit and as reiterated in section G4.4.7 of this Attachment, which is either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G4.4.7.
3. On or before March 24, 2026, demonstrate that compliance with the final wasteload allocations was achieved. The Permittee shall demonstrate compliance using the criteria in section G2 of this Attachment.

G4.4.15 Ballona Creek Estuary Toxic Pollutants TMDL

Responsible Permittees: University of California, Los Angeles; Veterans Affairs Greater Los Angeles Healthcare System

Impaired Water Body: Ballona Creek

TMDL Implementation Requirements: The Permittee shall continue TMDL monitoring and TMDL implementation actions according to the action the

Permittee selected under the previous permit, which include a choice of either Cooperative Agreements or the Program Plan. These choices are reiterated in section G4.4.7 of this Attachment.

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Implementation action selected under the previous permit and as reiterated in section G4.4.7, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G4.4.7.
3. Demonstrate that compliance with the final wasteload allocations was achieved by January 11, 2021. The Permittee shall demonstrate compliance using the criteria in section G2.

G4.4.16 Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL

Responsible Permittees: Federal Correction Institution, Terminal Island; California State University, Dominguez Hills

Impaired Water Body: Dominguez Channel Watershed

TMDL Implementation Requirements: The Permittee shall continue TMDL monitoring and implementation actions according to the action the Permittee selected under the previous permit, which include a choice of either Cooperative Agreements or the Program Plan. These choices are found in section of this Attachment.

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Implementation action selected under the previous permit and as reiterated in section G4.4.7, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G4.4.7.
3. Demonstrate that compliance with the final wasteload allocations will be achieved by March 23, 2032. The Permittee shall demonstrate compliance using the requirements in the previous permit and as reiterated in section G2.

G4.4.17 Calleguas Creek Watershed Toxicity TMDL

Responsible Permittees: Naval Base Ventura County, including Port Hueneme and Point Mugu; California State University, Channel Islands

Impaired Water Body: Calleguas Creek

TMDL Implementation Requirements: The Permittee shall continue TMDL monitoring and TMDL implementation actions according to the action the Permittee selected under the previous permit, which includes a choice of either Cooperative Agreements or the Program Plan. These choices are reiterated in section G4.4.7 of this Order.

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Implementation action selected under the previous permit and as reiterated in section G4.4.7, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G4.4.7.
3. Demonstrate that compliance with the final wasteload allocations was achieved by January 1, 2019. The Permittee shall demonstrate compliance using the criteria in the previous permit and as reiterated in section G2, above.

G4.4.18 Ballona Creek Trash TMDL

Responsible Permittees: University of California, Los Angeles; Veterans Affairs, Greater Los Angeles Healthcare System

Impaired Water Body: Ballona Creek

TMDL Implementation Requirements: The Permittee shall continue TMDL implementation actions according to the action the Permittee selected under the previous permit, which includes a choice of either:

1. Full Capture Systems,
2. Partial capture devices and the application of institutional controls, or
3. A scientifically based alternative attainment approach to implement either a Full Capture System or partial capture devices and the application of institutional controls. This choice was required to be submitted for approval by the Los Angeles Regional Water Board Executive Officer by July 1, 2019.

A full capture system is any device or series of devices that traps all particles retained by a 5-millimeter 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-millimeter or greater or may not have the minimum design treatment capacity of a one year, one hour, storm event. Thus, a Permittee must implement institutional controls in combination with the partial capture device to comply with the wasteload allocations. The Permittee 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 was due to the Los Angeles Water Board Executive Officer by July 1, 2019, for review and consideration of approval. The alternative attainment approach was required to specify whether the Permittee was implementing either 1) a full capture system or 2) partial capture devices and the application of institutional controls. The Permittee was required to include any proposed studies of institutional controls and partial capture devices for its particular subwatersheds or demonstrate that existing studies are representative and transferable to the implementing area. The Permittee is required to include a schedule for periodic, attainment effectiveness demonstration, and evaluation.

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Identification of the compliance choice selected by July 1, 2019, (full capture, partial capture with institutional controls, or the alternative attainment approach).
2. Status of on-going implementation.
3. Demonstration that compliance with the final wasteload allocations was achieved by January 1, 2019, using the requirements in the previous permit and as reiterated in section G2, above.

G4.4.19 Los Angeles River Trash TMDL

Responsible Permittees: California State University, Los Angeles; California State University, Northridge

Impaired Water Body: Los Angeles River

TMDL Implementation Requirements: The Permittee shall continue TMDL implementation actions according to the action the Permittee selected under the previous permit, which includes a choice of either:

1. Full Capture Systems,
2. Partial capture devices and the application of institutional controls, or

3. A scientifically based alternative attainment approach to implement either a Full Capture System or partial capture devices and the application of institutional controls. This choice was required to be submitted for approval by the Los Angeles Regional Water Board Executive Officer by July 1, 2019.

A full capture system is any device or series of devices that traps all particles retained by a 5-millimeter 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-millimeter or greater or may not have the minimum design treatment capacity of a one year, one hour, storm event. Thus, a Permittee must implement institutional controls in combination with the partial capture device to comply with the wasteload allocations. The Permittee 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 was due to the Los Angeles Water Board Executive Officer by July 1, 2019, for review and consideration of approval. The alternative attainment approach was required to specify whether the Permittee was implementing either 1) a full capture system or 2) partial capture devices and the application of institutional controls. The Permittee was required to include any proposed studies of institutional controls and partial capture devices for its particular subwatersheds or demonstrate that existing studies are representative and transferable to the implementing area. The Permittee is required to include a schedule for periodic, attainment effectiveness demonstration, and evaluation.

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Identification of the compliance choice selected by July 1, 2019, (full capture, partial capture with institutional controls, or the alternative attainment approach).
2. Status of on-going implementation.
3. Demonstration that compliance with the final wasteload allocations was achieved by January 1, 2019, using the requirements in the previous permit and as reiterated in section G2, above.

G4.4.20 Ventura River Estuary Trash TMDL

Responsible Permittee: Ventura County Fairgrounds (Seaside Park and Ventura County Fairgrounds)

Impaired Water Body: Ventura River

TMDL Implementation Requirements: The Ventura County Fairgrounds (Seaside Park and Ventura County Fairgrounds) shall continue implementing the trash implementation requirements set forth in the previous permit, which requires installation of full capture systems. A full capture system is any device or series of devices that traps all particles retained by a 5-millimeter 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).

TMDL Reporting Requirements: The Permittee shall report the following information in each Annual Report:

1. Status of on-going implementation to control trash.
2. Demonstration that compliance with the final wasteload allocations of zero discharge was achieved by January 1, 2019, using the requirements in the previous permit and as reiterated in section G2.

G4.5 CENTRAL VALLEY WATER BOARD

G4.5.1 Lower San Joaquin River Diazinon and Chlorpyrifos TMDL

Responsible Permittee: City of Patterson

Impaired Water Body: San Joaquin River from Mendota Dam to Vernalis

TMDL Implementation Requirements: By the effective date of this Order, the Permittee shall implement best management practices to eliminate diazinon and chlorpyrifos in municipal stormwater discharges. This will be implemented through compliance with the following sections of the Order:

1. Discharge Prohibitions, Order section 4;
2. Legal Authority, Order section 3;
3. Attachment D – Provisions for Traditional Small MS4 Permittees:
 - a. Illicit Discharge Detection and Elimination Program,
 - b. Pollution Prevention and Good Housekeeping Program,
 - c. Post-Construction Storm Water Management Program,
 - d. Program Effectiveness Assessment and Improvement,
 - e. Total Maximum Daily Loads Compliance Requirements Reporting.

TMDL Monitoring Requirements:

1. Demonstration of Compliance with Wasteload Allocations
 - a. The Permittee, who has demonstrated attainment of the wasteload allocations and received confirmation from the Central Valley Water Regional Board Executive Officer, shall discontinue monitoring and continue to implement the TMDL Implementation Requirements described above.
 - b. The Permittee who has not demonstrated attainment of the wasteload allocations shall conduct an assessment:
 - 1) No later than 6 months after the effective date of this Order, the Permittee 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 the attainment of wasteload allocations in the urban discharge; and evaluate attainment of the 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 Permittee.

- 2) The Permittee is responsible for providing the assessment and necessary information related to the assessment to the Central Valley Regional Water Board Executive Officer for review and consideration of 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.
- c. With Central Valley Regional Water Board Executive Officer approval, the Permittee 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.
- d. The Permittee that implements individual water quality monitoring plan must submit a Monitoring Plan and Quality Assurance Project Plan to the Central Valley Regional Water Board Executive Officer for review and consideration of approval.
 - 1) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:
 - a) Management questions to be answered by the Monitoring Plan,
 - b) Constituents to be monitored, analytical methods, and reporting limits,
 - c) Sampling sites locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
 - d) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
 - e) 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 shall be attached as part of the TMDL Annual Reporting pursuant to section G2 (above).
 - 2) Quality Assurance Project Plan consistent with Surface Water Ambient Monitoring Program. All samples shall be collected and analyzed according to the Quality Assurance Project Plan. Monitoring Reports shall be attached as part of the TMDL Annual Reporting pursuant to G2 (above) and shall 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 Quality Assurance Project Plan;
- 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 objectives or questions of study design; and
- h) Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Pesticide Management Plans

Unless the Permittee can demonstrate attainment of the wasteload 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 stormwater 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 its jurisdictions. Pesticide Management Plans shall include identifying and promoting, within the context of Integrated Pest Management 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 Integrated Pest Management 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 wasteload allocations. Pest Management Plans may be submitted by an 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 the Permittee's pesticide discharges through participation or support of a regional or statewide pesticide reduction program. To receive credit toward compliance for such participation, the Permittee 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 pesticide regulatory initiative. In developing the monitoring and reporting programs for the Permittee, the Central Valley Water Board will, in coordination with the California Department of Pesticide Regulation, assist the Permittee in identifying diazinon and chlorpyrifos alternatives for which monitoring may be necessary.

TMDL Reporting Requirements: By the effective date of this Order, the Permittee shall demonstrate attainment of the TMDL wasteload allocations pursuant to section G2 (above) and the TMDL Demonstration of Compliance Report in Attachment D. TMDL wasteload allocations are found in Attachment A, section A15.5.1.

G4.5.2 Sacramento-San Joaquin Delta Diazinon and Chlorpyrifos TMDL

Responsible Permittees: City of Lathrop, City of Lodi, City of Manteca, City of Rio Vista, City of Tracy, City of West Sacramento

Impaired Water Body: Sacramento-San Joaquin Delta Waterways

TMDL Implementation Requirements: By the effective date of this Order, the Permittee shall implement the following best management practices to eliminate diazinon and chlorpyrifos in municipal stormwater discharges. This will be implemented through compliance with the following requirements:

1. Discharge Prohibitions, Order section 4;
2. Legal Authority, Order section 3;
3. Attachment D – Provisions for Traditional Small MS4 Permittees:
 - a. Illicit Discharge Detection and Elimination Program,
 - b. Pollution Prevention and Good Housekeeping Program,

- c. Post-Construction Storm Water Management Program,
- d. Program Effectiveness Assessment and Improvement,
- e. Total Maximum Daily Loads Compliance Requirements Reporting.

TMDL Monitoring Requirements:

1. Demonstration of Compliance with Wasteload Allocations
 - a. The Permittee, who has demonstrated attainment of the wasteload allocations and received confirmation from the Central Valley Water Regional Board Executive Officer, shall discontinue monitoring and continue to implement the TMDL Implementation Requirements described above.
 - b. The Permittee who has not demonstrated attainment of the wasteload allocations shall conduct an assessment:
 - 1) No later than 6 months after the effective date of this Order, the Permittee 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 wasteload allocations in the urban discharge; and evaluate attainment of the 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 Permittee.
 - 2) The Permittee is 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.
 - c. With Central Valley Regional Water Board Executive Officer approval, the Permittee 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.
 - d. The Permittee that implement individual water quality monitoring must submit a Monitoring Plan and Quality Assurance Project Plan to the Central Valley Regional Water Board Executive Officer for review and approval.

- 1) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:
 - a) Management questions to be answered by the Monitoring Plan,
 - b) Constituents to be monitored, analytical methods, and reporting limits,
 - c) Sampling sites locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
 - d) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
 - e) 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 TMDL Annual Reporting pursuant to section G2 (above).
- 2) Quality Assurance Project Plan consistent with Surface Water Ambient Monitoring Program. All samples shall be collected and analyzed according to the Quality Assurance Project Plan. Monitoring Reports shall be submitted with the TMDL Annual Reporting pursuant to section G2 (above) 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 Quality Assurance Project Plan;
 - 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 objectives or questions of study design; and
- h) Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Pesticide Management Plan

Unless the Permittee can demonstrate attainment of the wasteload 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 Plan covering current use pesticides with the goal of reducing the discharge of pesticides from municipal stormwater 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 its jurisdictions. Pesticide Management Plans shall include identifying and promoting, within the context of Integrated Pest Management 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 Integrated Pest Management 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 wasteload 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 the Permittee's pesticide discharges through participation or support of a regional or statewide pesticide reduction program. To receive credit toward compliance for such participation, the Permittee 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 California Department of Pesticide Regulation, assist the Permittee in identifying diazinon and chlorpyrifos alternatives for which monitoring may be necessary.

TMDL Reporting: By the effective date of this Order, the Permittee shall demonstrate attainment of the TMDL wasteload allocations in accordance with section G2 (above) and the TMDL Demonstration of Compliance Report requirements in Attachment D. TMDL wasteload allocations are found in Attachment A, section A15.5.2.

G4.5.3 TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers

Responsible Permittees: City of Anderson, City of Marysville, City of Red Bluff, City of Redding, City of Yuba City, County of Colusa, County of Shasta, County of Sutter, County of Yuba

Impaired Water Bodies: Sacramento River from Shasta Dam to I Street Bridge, Feather River from Fish Barrier Dam to Sacramento River

TMDL Implementation Requirements: By the effective date of this Order the Permittee shall implement best management practices to eliminate diazinon and chlorpyrifos in municipal stormwater discharges. This will be implemented through compliance with the following requirements:

1. Discharge Prohibitions, Order section 4
2. Legal Authority, Order section 3;
3. Attachment D – Provisions for Traditional Small MS4 Permittees:
 - a. Illicit Discharge Detection and Elimination Program,
 - b. Pollution Prevention and Good Housekeeping Program,
 - c. Post-Construction Storm Water Management Program,
 - d. Program Effectiveness Assessment and Improvement,
 - e. Total Maximum Daily Loads Compliance Requirements Reporting.

TMDL Monitoring Requirements:

1. Demonstration of Compliance with Wasteload Allocations
 - a. The Permittee, who has demonstrated attainment of the wasteload allocations and received confirmation from the Central Valley Water Regional Board Executive Officer, shall discontinue monitoring and continue to implement the TMDL Implementation Requirements described above.

- b. The Permittee who has not demonstrated attainment of the wasteload allocations shall conduct an assessment:
 - 1) No later than 6 months after the effective date of the Order, the Permittee 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 wasteload allocations in the urban discharge; and evaluate attainment of the 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 Permittee.
 - 2) The Permittee is 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.
- c. With Central Valley Regional Water Board Executive Officer approval, the Permittee 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.
- d. The Permittee that implement individual water quality monitoring must submit a Monitoring Plan and Quality Assurance Project Plan to the Central Valley Regional Water Board Executive Officer for review and approval.
 - 1) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:
 - a) Management questions to be answered by the Monitoring Plan,
 - b) Constituents to be monitored, analytical methods, and reporting limits,
 - c) Sampling sites locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
 - d) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
 - e) 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 TMDL Annual Reporting pursuant to section G2 (above).

- 2) Quality Assurance Project Plan consistent with Surface Water Ambient Monitoring Program. All samples shall be collected and analyzed according to the Quality Assurance Project Plan. Monitoring Reports shall be submitted with the TMDL Annual Reporting pursuant to section G2 (above) 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 Quality Assurance Project Plan;
 - 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 objectives or questions of study design; and
 - h) Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Pesticide Management Plan

Unless the Permittee can demonstrate attainment of the wasteload 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 stormwater 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 its jurisdictions. Pesticide Management Plans shall include identifying and promoting, within the context of Integrated Pest Management 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 Integrated Pest Management 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 wasteload 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 the Permittee's pesticide discharges through participation or support of a regional or statewide pesticide reduction program. To receive credit toward compliance for such participation, the Permittee 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 California Department of Pesticide Regulation, assist the Permittee in identifying diazinon and chlorpyrifos alternatives for which monitoring may be necessary.

Final Compliance Deadline: The final compliance deadline is May 21, 2040.

TMDL Reporting Requirements: By the effective date of this Order, the Permittee shall demonstrate attainment of the TMDL wasteload allocations in accordance with section G2 (above) the TMDL Demonstration of Compliance Report requirements in Attachment D. The TMDL wasteload allocations are found in Attachment A, section A15.5.3.

G4.5.4 TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel

Responsible Permittees: City of Atwater, City of Ceres, City of Escalon, City of Hughson, City of Lathrop, City of Livingston, City of Los Banos, City of

Manteca, City of Merced, City of Newman, City of Oakdale, City of Patterson, City of Ripon, City of Riverbank, City of Turlock, County of Merced, County of Stanislaus

Impaired Water Body: Lower San Joaquin River (Stockton Deep Water Ship Channel).

TMDL Implementation Requirements: The Permittee shall implement best management practices to control the discharge of oxygen demanding substances and precursors in the Permittee's urban discharge. The Permittee shall implement this requirement through compliance with the following sections of this Order:

1. Discharge Prohibitions, Order section 4;
2. Legal Authority, Order section 3;
3. Attachment D – Provisions for Traditional Small MS4 Permittees:
 - a. Illicit Discharge Detection and Elimination Program,
 - b. Pollution Prevention and Good Housekeeping Program,
 - c. Post-Construction Storm Water Management Program,
 - d. Program Effectiveness Assessment and Improvement,
 - e. Total Maximum Daily Loads Compliance Requirements Reporting.

TMDL Monitoring Requirements:

1. The Permittee who has demonstrated attainment of the wasteload allocations and received confirmation from the Central Valley Regional Water Board Executive Officer, shall discontinue monitoring and continue to implement the TMDL Implementation Requirements described above.
2. Within 6 months of the effective date of this Order, the Permittee who has not demonstrated attainment of the wasteload allocations shall submit an updated Monitoring and Reporting Plan.
3. The Permittee 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, with Central Valley Regional Water Board Executive Officer approval.
4. The Permittee that chooses to implement individual water quality monitoring instead of participation in the Delta Regional Monitoring Program or other collective monitoring efforts must submit a Monitoring Plan and Quality Assurance Project Plan to the Executive Officer for review and consideration of approval.

- a. 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 sites 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 TMDL Annual Reporting pursuant to section G2 (above).
- b. Quality Assurance Project Plan consistent with Surface Water Ambient Monitoring Program. All samples shall be collected and analyzed according to the Quality Assurance Project Plan. Monitoring Reports shall be submitted with the TMDL Annual Reporting pursuant to section G2 (above) 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 Quality Assurance Project Plan;
 - 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 objectives or questions of study design; and

- 8) Quantifiable discussion of program/study pollutant reduction effectiveness.

TMDL Reporting Requirements:

1. The Permittee shall submit Annual Reports pursuant to section G2 (above) and the TMDL annual reporting requirements in Attachment D. The Permittee shall document progress toward attainment of the wasteload allocations in its Annual Report. In measuring compliance with permit requirements related to attainment of these wasteload allocations, the Central Valley Water Board Executive Officer will give credit for best management practices implemented after July 12, 2004. The Permittee shall document the implementation of best management practices to control the discharge of oxygen demanding substances and precursors in its urban discharge. Each Annual Report shall include documentation of compliance with the Order requirements and a discussion of the effectiveness of best management practices. The Permittee shall use the information gained from the Program Effectiveness Assessments to improve its program and identify new best management practices or modifications of existing best management practices to ensure that they are meeting applicable wasteload allocations. The Program Effectiveness 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.
2. By the effective date of this Order, the Permittee shall demonstrate attainment of the TMDL wasteload allocations in accordance with section G2 (above) the TMDL Demonstration of Compliance Report requirements in Attachment D. TMDL wasteload allocations are provided in Attachment A, section A15.5.4.

G4.5.5 Sacramento-San Joaquin Delta Methylmercury TMDL

Responsible Permittees: City of Lathrop, City of Lodi, City of Rio Vista, City of Tracy, City of West Sacramento, County of Yolo

Impaired Water Body: Sacramento-San Joaquin Delta and Yolo Bypass waterways listed in [Basin Plan, Appendix 43](#), Table A43-1.

TMDL Implementation Requirements: The Permittee shall implement best management practices to control erosion and sediment discharges with the goal of reducing mercury discharges. This will be implemented through compliance with the following:

1. Discharge Prohibitions in Order section 5;

2. Legal Authority in Order section 3; and
3. Attachment D – Provisions for Traditional Small MS4 Permittees:
 - a. Illicit Discharge Detection and Elimination Program,
 - b. Pollution Prevention and Good Housekeeping Program,
 - c. Post-Construction Storm Water Management Program,
 - d. Program Effectiveness Assessment and Improvement,
 - e. Total Maximum Daily Loads Compliance Requirements Reporting.
4. Implement reasonable and feasible mercury and methylmercury management practices identified by the large MS4 Permittee and other Delta Mercury Control Program studies.

TMDL Monitoring Requirements: 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 October 20, 2022, whichever date occurs first:

1. Methylmercury Monitoring
 - a. The Permittee shall begin monitoring methylmercury loads and concentrations in stormwater discharges to assess attainment with the TMDL allocations. Within one year of the Delta Mercury Control Program review, the Permittee shall submit a monitoring plan, for Central Valley Regional Water Board Executive Officer approval, describing the locations and frequency of methylmercury monitoring. The monitoring plan shall include sampling locations and frequencies representative of the Permittee's service area. The sampling locations, frequencies, and reporting may be the same as the requirements in this Order. The Permittee shall implement the monitoring plan within six months of Central Valley Regional Water Board Executive Officer approval.
 - b. The Permittee shall begin monitoring ambient methylmercury concentrations within Delta waterways. With Central Valley Regional Water Board Executive Officer approval, the Permittee may participate in the [Delta Regional Monitoring Program](#) or other collective monitoring efforts in lieu of some or all of the ambient monitoring requirements required by the Delta Mercury Control Program.
 - c. The Permittee that implements individual water quality monitoring must submit a Monitoring Plan and Quality Assurance Project Plan within one year of the Delta Mercury Control Program review to the Central Valley Water Board Executive Officer for review and approval.

- 1) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:
 - a) Study objectives and management questions,
 - b) Constituents to be monitored, analytical methods, and reporting limits as described in the [Water Quality Control Plan for the Sacramento River and San Joaquin River Basins](#), Section 5.8.3.2,
 - c) Sampling sites locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
 - d) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
 - e) Proposed monitoring schedule and level of detail included in the TMDL Annual Reporting pursuant to G2 (above).
- 2) Quality Assurance Project Plan shall be consistent with Surface Water Ambient Monitoring Program. All samples shall be collected and analyzed according to the Quality Assurance Project 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 Quality Assurance Project Plan;
 - 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 objectives or questions of study design; and
 - h) Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Progress toward attainment of the wasteload allocations shall be documented in the TMDL Annual Reporting pursuant to section G2 (above) 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 provides guidance for the calculation of methylmercury loading from urban areas and determination of attainment (see Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Section 5.8.3.2). 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 Water Board Executive Officer.

TMDL Reporting Requirements:

1. By December 31, 2030, the Permittee shall demonstrate attainment of the TMDL wasteload allocation in accordance with section G2 (above) and the TMDL Demonstration of Compliance Report requirements in Attachment D.
2. The Permittee shall document compliance with this TMDL in the TMDL Annual Reports described in section G2 (above) and Attachment D for annual reporting requirements. The Permittee shall document implementation of any methylmercury best management practices or controls, compliance with erosion and sediment control requirements, and monitoring requirements in this Order, including discussion on Program Effectiveness Assessment and Improvement.

G4.5.6 Clear Lake Nutrients TMDL

Responsible Permittees: City of Clearlake, City of Lakeport, County of Lake

Impaired Water Body: Clear Lake

TMDL Implementation: The Permittee shall implement best management practices to control erosion and sediment discharges as a means of controlling phosphorous. This will be implemented through compliance with the following requirements in this Order:

1. Discharge Prohibitions;
2. Legal Authority;
3. Attachment D – Provisions for Traditional Small MS4 Permittees:
 - a. Illicit Discharge Detection and Elimination Program,
 - b. Pollution Prevention and Good Housekeeping Program,
 - c. Post-Construction Storm Water Management Program,

- d. Water Quality Monitoring,
- e. Program Effectiveness Assessment and Improvement,
- f. Total Maximum Daily Loads Compliance Requirements Reporting.

TMDL Monitoring Requirements:

1. Within 3 months of the effective date of this Order, each Permittee shall incorporate individual monitoring and reporting plans, or the Permittee can collectively incorporate a single monitoring plan into its 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 wasteload allocations and shall be representative of the respective MS4 service area.
2. With Central Valley Water Board Executive Officer approval, the Permittee 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. The Permittee that implements individual water quality monitoring pursuant to this provision must develop and implement a Monitoring Plan and Quality Assurance Project Plan to the Central Valley Water Board Executive Officer for review and approval.
 - a. Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:
 - 1) Study objectives and management questions,
 - 2) Constituents to be monitored, analytical methods, and reporting limits,
 - 3) Sampling sites 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 TMDL Annual Reporting pursuant to section G2 (above).
 - b. Quality Assurance Project Plan consistent with Surface Water Ambient Monitoring Program. All samples shall be collected and analyzed

according to the Quality Assurance Project Plan. Monitoring Reports shall be submitted with the TMDL Annual Reporting pursuant to section G2 (above) 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 Quality Assurance Project Plan;
- 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 objectives or questions of study design; and
- 8) Quantifiable discussion of program/study pollutant reduction effectiveness.

The Permittee 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.

TMDL Reporting Requirements:

1. By the effective date of this Order, the Permittee shall demonstrate attainment of the TMDL wasteload allocations and the TMDL Demonstration of Compliance Report requirements pursuant to section G2 (above). TMDL wasteload allocations are found in Attachment A, section A15.5.6.
2. The Permittee shall document progress toward attainment of the wasteload allocation in the TMDL Annual Reports pursuant to section G2 (above), the TMDL annual reporting requirements in Attachment D, and
 - a. The Permittee shall document implementation of erosion and sediment best management practices. Each Annual Report shall include documentation of compliance with the above TMDL requirements.

- b. The Permittee shall complete and submit Program Effectiveness Assessments as specified in Attachment D of this Order. The Permittee shall use the information gained from the Program Effectiveness Assessments to improve its program and identify new best management practices or modifications of existing best management practices.

G4.5.7 TMDL for Pyrethroid Pesticides in Sacramento and San Joaquin River Basin

Responsible Permittees: City of Roseville

Impaired Water Bodies: Curry Creek (Placer County); Kaseberg Creek (tributary to Pleasant Grove Creek in Placer County); Pleasant Grove Creek (upstream of Fiddymont Road); and Pleasant Grove Creek, South Branch

TMDL Implementation Requirements: The Permittee shall:

1. Continue to implement its Pyrethroid Management Plan, as approved by the Central Valley Water Board Executive Officer on March 4, 2021¹², which identifies management practices to reduce pyrethroid pesticides in urban runoff to the maximum extent practicable.
2. If the State Water Resources Control Board establishes a statewide water quality control plan that requires best management practices for the control of urban pesticide discharges applicable to the Permittee under the Pyrethroid TMDL, then compliance with those requirements shall be deemed compliance with the requirement to implement a Pyrethroid Management Plan.

TMDL Monitoring Requirements:

Pyrethroids Trend Monitoring Plan¹³

1. Within 18 months of the effective date of this Order, the Permittee shall develop and submit a Pyrethroids Trend Monitoring Plan and Quality Assurance Project Plan to be incorporated within the Monitoring Study Design and Implementation Schedule for Central Valley Water Board Executive Officer approval. The Permittee shall implement the Pyrethroids Trend Monitoring Plan once it has been approved by the Central Valley Water Board Executive Officer. The Quality Assurance Project Plan must be submitted as part of the Monitoring Study Design and Implementation Schedule.

¹² See SMARTS Attachment ID 3129941 for City of Roseville

¹³ Central Valley Water Board [Basin Plan](#), Section 5.1.6 Municipal Storm Water Monitoring

2. The Pyrethroids Trend Monitoring Plan shall be designed to collect the information to:
 - a. Determine whether receiving waters are attaining the Pyrethroid Pesticides Water Column Additivity Numeric Targets and whether the wasteload allocations are being attained in discharges as measured at representative receiving water locations by providing pyrethroid and dissolved and particulate organic carbon concentration data;
 - b. Determine whether bed sediments are attaining the Sediment Toxicity Numeric Target. Chemical analysis of the sediment for pyrethroid pesticides shall be performed if the sediment is toxic;
 - c. Provide *Hyaella azteca* toxicity data to determine whether pyrethroid pesticides are causing or contributing to exceedances of the narrative water quality objective for toxicity in surface waters;
 - d. Determine whether the implementation of management practices is sufficient to attain the TMDL allocations and numeric targets; and
 - e. In cooperation with the Central Valley Water Board, USEPA, and Department of Pesticides Regulation, determine if monitoring and reporting programs for alternatives to pyrethroid pesticides are necessary and identify alternative insecticides for which monitoring might be appropriate with consideration of the commercial availability of acceptable analytical methods. If an alternative insecticide is identified as appropriate for monitoring, monitoring shall be performed by the Permittee to determine whether alternatives to pyrethroid pesticides are being discharged at concentrations with the potential to cause or contribute to exceedances of applicable water quality objectives.

This 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. The Permittee may collect data to recommend a determination as part of the Trend Monitoring Program for review by the cooperating agencies.

3. The Pyrethroids Trend Monitoring Plan shall include at a minimum monitoring of the receiving water or the Permittee's discharge as shown in Table G4.5.7, below:

Table G4.5.7: Receiving Water or MS4 Discharge Monitoring

Chemical ^a	Units	Sample Type	Minimum Sampling Frequency ^e	Minimum QA/QC Sampling Frequency ^d	Minimum Reporting Level ^{b,c} (ng/L)
Bifenthrin	ng/L	Grab	4/year	1/year	1.3

Chemical ^a	Units	Sample Type	Minimum Sampling Frequency ^e	Minimum QA/QC Sampling Frequency ^d	Minimum Reporting Level ^{b,c} (ng/L)
Cyfluthrin	ng/L	Grab	4/year	1/year	1.3
Cypermethrin	ng/L	Grab	4/year	1/year	1.7
Esfenvalerate	ng/L	Grab	4/year	1/year	3.3
Lambda-cyhalothrin	ng/L	Grab	4/year	1/year	1.2
Permethrin, Total	ng/L	Grab	4/year	1/year	10
Total Organic Carbon	mg/L	Grab	4/year	1/year	-
Dissolved Organic Carbon	mg/L	Grab	4/year	1/year	-

Table G4.5.7 Notes:

- a. Concentrations are total analyte concentrations, including all isomers.
- b. Numbers reported to two significant figures.
- c. Analytical Methods shall not exceed the minimum reporting levels specified in Table G4.5.1. Minimum reporting levels calculated from prohibition trigger limits established by Central Valley Regional Water Board Resolution R5-2017-0057.
- d. QA/QC means Quality Assurance/Quality Control. The minimum number of Quality Assurance/Quality Control samples collected shall be 20 percent of total water samples collected.
- e. Samples shall be collected for three qualifying wet weather events¹⁴ and one dry weather¹⁵ event. If there are not three qualifying wet weather events by the end of the time period for wet weather sampling during the first year of sampling, the monitoring shall be extended until three qualifying wet weather events occur. End of Table Notes.

4. Proposed sampling locations to collect water samples from either a receiving water or downstream of the Permittee's discharge; or from the Permittees discharge itself.
5. Water column and sediment toxicity monitoring, which includes the following:

¹⁴ Qualifying wet weather event to correspond with the qualifying wet weather event in the Permittee's Monitoring Design Study and Implementation Plan.

¹⁵ A dry weather event is to correspond with the dry weather event in the Permittee's Monitoring Design Study and Implementation Plan.

- a. Water Column Toxicity Testing – The Permittee shall meet the following acute toxicity testing requirements:
- 1) Monitoring Frequency – The Permittee shall perform water column toxicity testing four times per year to coincide with Table G4.5.1 sampling.
 - 2) Sampling Types – The Permittee shall use static renewal testing. The samples shall be grab samples and be taken at the approved monitoring locations and within 24 hours of the water sampling event.
 - 3) Test Species and Duration – The test species shall consist of *Hyalella azteca* and the duration of the test shall be 96 hours.
 - 4) Methods – The water column toxicity testing samples shall be analyzed using EPA Method EPA-821-R-02-012 ([Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms](#), Fifth Edition, USEPA, October 2002, or most recent edition). Except as specified in these Provisions, water column toxicity testing shall follow the measurement quality objectives provided in the Surface Water Ambient Monitoring Program Quality Assurance Program Plan. When feasible, the Permittee shall use the [Southern California Coastal Water Research Project guidance \(Schiff and Greenstein, 2016\)](#) on test organism age and size for *Hyalella azteca*. For consistency with EPA Method EPA-821-R-02-012 and Environmental Laboratory Accreditation Program accreditation, *Hyalella azteca* water column toxicity testing for trend monitoring must be performed at either 20 or 25 degrees Celsius. The test temperature should be the temperature that is closest to the daily average temperature of the water body at the monitoring location on the day the sample is collected. Due to temperature conditions expected during most monitoring events, daily average water temperatures can be assumed to be closer to 20 degrees Celsius. Therefore, this test shall be performed at 20 degrees Celsius, with the following exception: If the Permittee can document that, on the sample date, the daily average water temperature of the water body at the monitoring location was 22.5 degrees Celsius or higher, the test shall be performed at 25 degrees Celsius.
 - 5) Reporting – Toxicity trends shall be reported as evaluated using the statistical approach referred to as Test of Significant Toxicity (TST). Each sample shall be subject to determination of “Pass” or “Fail” and shall indicate “Percent Effect” from toxicity using non-diluted samples.

- b. Sediment Toxicity Testing – The Permittee shall meet the following sediment toxicity testing requirements:
 - 1) Monitoring Frequency – The Permittee shall perform sediment toxicity testing four (4) times per year to coincide with Table G4.5.1 sampling.
 - 2) Sampling Types – The Permittee shall identify and collect sediment samples in a depositional area in receiving waters downstream of the MS4 discharge.
 - 3) Test Species and Duration – The test species shall consist of *Hyaella azteca* and the duration shall be a 10-day test.
 - 4) Methods – The sediment toxicity testing samples shall be analyzed using EPA method EPA-600-R-99-064 ([Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates](#), USEPA, 2000, or most recent edition).
 - 5) Test Failure – If a toxicity test does not meet all test acceptability criteria as specified in the test method, the Permittee must resample and initiate retesting as soon as possible, not to exceed 14 days following notification of test failure by the laboratory.
 - 6) Observed Toxicity – If *Hyaella azteca* sediment toxicity is observed, sediment shall be analyzed for pyrethroid pesticides using an ELAP-certified laboratory.
6. The Permittee shall perform TST trend monitoring for one year of monitoring, including at least three qualifying wet weather events and one dry weather event. Trend monitoring shall be initiated no later than twelve (12) months after the Monitoring Design Study and Implementation Schedule is approved. If the numeric targets are exceeded in any qualifying wet weather monitoring event, the Permittee may cease monitoring additional wet weather events but must complete the dry season monitoring. If the numeric targets are exceeded in the dry weather trend monitoring event, the Permittee must proceed with qualifying wet weather monitoring trend events. A final report on the trend monitoring shall be provided with the Annual Report. Trend Monitoring can be completed as a regional group as described in an approved Monitoring Design Study and Implementation Schedule.
7. The Permittee shall use Environmental Laboratory Accreditation Program-accredited laboratories and methods for chemistry and toxicity testing. Environmental Laboratory Accreditation Program-accredited methods are acceptable for pyrethroid chemical analysis provided that the method meets the analytical capability described in Table G4.5.1. A current list of Environmental Laboratory Accreditation Program-approved laboratories and

points of contact can be found on the [Central Valley Regional Water Board's website](#).

8. The Permittee shall implement pyrethroids monitoring five years after completion of the initial monitoring described above, and then every five years hence.
9. If the State Water Resources Control Board establishes a statewide water quality control plan for urban pesticide discharges that requires monitoring representative of the MS4's pesticide discharges that meets the goals specified in this section, compliance with those monitoring requirements shall be deemed in compliance with the monitoring requirements specified for the Pyrethroid Pesticide TMDL.

TMDL Reporting Requirements: The Permittee shall submit TMDL Annual Reports pursuant to section G2. The Permittee shall submit a Pyrethroid Pesticides TMDL Progress Report as an attachment to the TMDL Annual Report to document the management practices that have been implemented, evaluate attainment of the wasteload allocations, and identify effective actions to be taken in the future. The toxicity monitoring is, in part, intended to assist the Board in determining whether the pyrethroid numeric triggers are sufficiently protective of the most sensitive aquatic species, *Hyaella azteca*.

The Permittee shall demonstrate attainment of the TMDL wasteload allocations and the TMDL Demonstration of Compliance Report pursuant to section G2 (above). The TMDL requires attainment of the pyrethroid numeric targets as soon as practicable but not later than April 22, 2039.

G4.6 LAHONTAN WATER BOARD

G4.6.1 TMDL for Sediment in the Middle Truckee River Watershed, Placer, Nevada and Sierra Counties

Responsible Permittees: County of Placer, Town of Truckee

Impaired Water Body: Truckee River

TMDL Implementation Requirements: The Permittee shall develop, implement, and report best management practices as follows:

1. Road sand application best management practices and recovery tracking. Road sand shall be applied using best management practices 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. The Permittee shall focus on dirt roads with high potential for sediment delivery to surface waters (e.g., within 200 feet of watercourse). The number of miles of roads inspected, proposed corrective actions, and effectiveness.
3. Legacy sites restoration and best management practices implementation. Identified legacy sites shall be restored or stormwater best management practices shall be implemented to prevent erosion and sedimentation to surface waters. A prioritized list of legacy sites should be maintained and updated periodically as new information is generated. Activities completed to address legacy sites should be reported annually.

Reporting Requirements: The Permittee shall report its status of TMDL implementation and monitoring in its TMDL Annual Reports, described in section G2, above, and further defined in the section titled Annual TMDL Compliance Report in Attachment D.

G4.7 COLORADO RIVER BASIN WATER BOARD

The Colorado River Basin Region does not have any TMDLs applicable to Small MS4s at the time of adoption of this Order.

G4.8 SANTA ANA WATER BOARD

G4.8.1 San Diego Creek, Upper and Lower Newport Bay, Revised Organochlorine Compounds TMDL ¹⁶

Responsible Permittees: Orange County Fair & Event Center; University of California, Irvine

Impaired Water Bodies: San Diego Creek, Upper and Lower Newport Bay

TMDL Implementation Requirements: The Permittee shall carry out an effective portfolio of projects and programs for the control of organochlorine compounds in stormwater and authorized non-stormwater runoff from its MS4s. The Permittee shall demonstrate compliance through the following actions:

1. Within 1 year of the effective date of this Order, submit for review and consideration of approval by the Santa Ana Water Board Executive Officer, a region-specific TMDL Compliance Plan that provides the Permittee's strategies to comply with the wasteload allocations in the Organochlorine Compounds TMDLs for San Diego Creek, Upper and Lower Newport Bay, and Rhine Channel. Upon approval of the TMDL Compliance Plan, the Permittee shall immediately implement all terms and provisions of the approved TMDL Compliance Plan; or,
2. Within 1 year of the effective date of this Order, submit notification for acknowledgement by the Santa Ana Water Board of a commitment to implement, or cause to be implemented on its behalf (e.g., separate implementing entity), joint cooperative implementation actions, monitoring actions and special studies with other responsible agencies, following an approved water quality monitoring plan.
 - a. Joining a Regional Monitoring Program does not excuse the Permittee from compliance with the monitoring requirements in Attachment D or E (as applicable) of this Order. This includes, but is not limited to, Permittee annual report certification and submittal to the Santa Ana Water Board via SMARTS no later than October 15 of each year.

TMDL Reporting Requirements:

1. The compliance deadline of December 31, 2020, has passed. Therefore, by the effective date of this Order, the Permittee shall demonstrate attainment of the TMDL wasteload allocations (as specified in the Fact Sheet) pursuant

¹⁶ [Santa Ana Water Board, Basin Plan](#), Chapter 6, section 4.b.3.

to section G2 (above) and the TMDL Demonstration of Compliance Report requirements in Attachment D and E of this Order.

2. If the Permittee cannot demonstrate compliance with the TMDL wasteload allocation by the deadlines and believes additional time to comply with the wasteload allocation is necessary, the Permittee may request a Time Schedule Order pursuant to the requirements in section G2 (above) and in Request for Time Schedule Order in Attachments D or E (as applicable). The Permittee shall submit its request for a Time Schedule Order to the Santa Ana Water Board Executive Officer.
3. By October 15 of each year, the Permittee shall submit a TMDL Annual Report pursuant to section G2 (above) and Attachments D or E (as applicable).

G4.8.2 Lake Elsinore and Canyon Lake Nutrient TMDL

Responsible Permittee: March Air Reserve Base

Impaired Water Bodies: Canyon Lake, Lake Elsinore

TMDL Implementation Requirements: The Permittee shall implement the following actions:

1. March Air Reserve Base 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 Air Reserve Base 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.
2. If the Santa Ana Regional Water Board determines that March Air Reserve Base is not fulfilling its Lake Elsinore/Canyon Lake Task Force obligations or if March Air Reserve Base chooses to opt out of the cooperative approach with the TMDL Task Force for implementation actions, monitoring actions, and/or special studies, March Air Reserve Base shall provide formal notification to the Santa Ana Regional Water Board. March Air Reserve Base will then be required to conduct the following activities:
 - a. Within 30 days of such notification, March Air Reserve Base shall submit a proposed update of the March Air Reserve Base Storm Water Pollution Prevention Plan to address nutrient discharges;
 - b. Within 30 days of such notification, March Air Reserve Base shall submit a proposed March Air Reserve Base specific nutrient monitoring program. This monitoring program must be prepared and executed in a manner that attainment of wasteload allocations will be determined. The

monitoring program must be consistent with the most current, Santa Ana Regional Water Board-approved, Lake Elsinore/Canyon Lake TMDL Task Force monitoring plan;

- c. Within 60 days of such notification, March Air Reserve Base shall submit a proposed water quality monitoring program to evaluate the impairment status of Lake Elsinore and Canyon Lake.

TMDL Reporting Requirements:

1. By October 15 of each year, the Permittee shall submit a TMDL Annual Report pursuant to section G2 (above) and Attachments E.
2. The TMDL wasteload allocation compliance date of December 31, 2020, has passed. Therefore, by the effective date of this Order, the Permittee shall submit a TMDL Demonstration of Compliance Report pursuant to the requirements in section G2 (above) and Attachment E.
3. If the Permittee cannot demonstrate compliance with the TMDL wasteload allocation by the deadlines and believe additional time to comply with the final wasteload allocations is necessary, the Permittee may request a Time Schedule Order from the Santa Ana Water Board pursuant to section G2 (above) and Attachment E.

G4.8.3 Middle Santa Ana River Watershed Bacterial Indicator TMDL

Responsible Permittees: California Institute for Men; California Institute for Women; California Rehabilitation Center; University of California, Riverside

Impaired Water Bodies: Chino Creek, Mill Creek, Prado Park Lake, Reach 3, Santa Ana River

TMDL Implementation Requirements: The Permittee shall implement the following actions:

1. **Monitoring Program:** By the effective date of this Order, the Permittee shall submit a watershed-wide attainment monitoring and facility specific bacterial indicator region-specific Monitoring Program that is adequate to determine attainment of the dry and wet season wasteload allocation. The Permittee may alternatively participate in a stakeholder group monitoring program for the same purpose. The Permittee shall submit the region-specific Monitoring Program to the Santa Ana Water Board Executive Officer for review and consideration of approval.
2. **Bacterial Indicator Reduction Plan.** By the effective date of this Order, the Permittee shall either: a) develop a facility-specific Bacterial Indicator Reduction Plan or b) implement a watershed-based Bacterial Indicator

Reduction Plan (within the Santa Ana River watershed) that has been approved by the Santa Ana Water Board Executive Officer.

3. For the Permittee that chooses to develop facility-specific Bacterial Indicator Reduction Plans, the following applies:
 - a. 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 wasteload allocations as soon as feasible.
 - b. 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 wasteload allocations by December 31, 2025.
 - c. The Dry Season and Wet Season Bacterial Indicator Reduction Plans must include the following:
 - 1) The specific Best Management Practices implemented to reduce the concentration of indicator bacteria from the facility and the water quality improvements expected to result from these best management practices.
 - 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 metrics that will be established to demonstrate the effectiveness of the Bacterial Indicator Reduction Plan.
 - 6) Detailed descriptions of any additional best management practices planned, and the time required to implement those best management practices, 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.

TMDL Reporting Requirements:

1. Dry Weather Wasteload Allocations. To demonstrate attainment of the Dry Weather wasteload allocations, the Permittee shall submit a TMDL Demonstration of Compliance Report as soon as feasible. The report shall follow the requirements pursuant to section G2 (above) and the TMDL Demonstration of Compliance Report requirements in Attachments D or E (as applicable).
2. Wet Weather Wasteload Allocations. By December 31, 2025, the Permittee shall demonstrate attainment of the Wet Weather wasteload allocations by submitting a TMDL Demonstration of Compliance Report pursuant to section G2 (above) and the TMDL Demonstration of Compliance Report requirements in Attachments E.
3. By October 15 of each year, the Permittee shall submit a TMDL Annual Report pursuant to section G2 (above) and Attachment E.

G4.8.4 San Diego Creek and Upper Newport Bay Diazinon and Chlorpyrifos TMDL

Responsible Permittees: Orange County Fair & Event Center; University of California, Irvine

Impaired Water Bodies: San Diego Creek and Upper Newport Bay

TMDL Implementation Requirements: The Permittee shall carry out an effective portfolio of projects and programs for the control of diazinon and chlorpyrifos in stormwater and authorized non-stormwater runoff from its MS4s. The Permittee shall demonstrate compliance through the following actions:

1. Within 1 year of the effective date of this Order, submit for review and consideration of approval by the Santa Ana Water Board Executive Officer, a region-specific TMDL Compliance Plan that provides the Permittee's strategies to comply with the wasteload allocations in the Diazinon & Chlorpyrifos TMDLs for the Upper Newport Bay and San Diego Creek (see Attachment A, section A15.8.4 for the wasteload allocation). Upon approval of the TMDL Compliance Plan, the Permittee shall immediately implement all terms and provisions of the approved TMDL Compliance Plan; or,
2. Within 1 year of the effective date of this Order, submit notification for acknowledgement by the Santa Ana Water Board of a commitment to implement, or cause to be implemented on its behalf (separate implementing entity), joint cooperative implementation actions, monitoring actions and special studies with other responsible agencies, following an approved water quality monitoring plan.

- a. Joining a Regional Monitoring Program does not excuse the Permittee from compliance with the Water Quality Monitoring requirements in Attachment E of this Order.

TMDL Reporting Requirements: The compliance date of December 1, 2007, has passed.

1. By October 15 of each year, the Permittee shall submit a TMDL Annual Report pursuant to section G2 (above) and Attachment E.
2. By the effective date of this Order, the Permittee shall submit a TMDL Demonstration of Compliance Report pursuant to section G2 (above) and Attachments D or E (as applicable).

G4.8.5 San Diego Creek and Newport Bay Toxic Pollutants (Metals) TMDL

Responsible Permittees: Orange County Fair & Event Center; University of California, Irvine

Impaired Water Bodies: San Diego Creek and Newport Bay

TMDL Implementation Requirements: The Permittee shall carry out an effective portfolio of projects and programs for the control of toxic pollutants (metals) in stormwater and authorized non-stormwater runoff from its MS4s. The Permittee shall demonstrate compliance through the following actions:

1. Within 1 year of the effective date of this Order, submit for review and consideration of approval by the Santa Ana Water Board Executive Officer, a region-specific TMDL Compliance Plan that provides the Permittee's strategies to comply with the wasteload allocations, which are provided in Attachment A, section A15.8.5 of this Order. Upon approval of the TMDL Compliance Plan, the Permittee shall immediately implement all terms and provisions of the approved TMDL Compliance Plan; or,
2. Within 1 year of the effective date of this Order, submit notification for acknowledgement by the Santa Ana Water Board of a commitment to implement, or cause to be implemented on its behalf (separate implementing entity), joint cooperative implementation actions, monitoring actions and special studies with other responsible agencies, following an approved water quality monitoring plan.
 - a. Joining a Regional Monitoring Program does not excuse the Permittee from compliance with the Water Quality Monitoring requirements in Attachment E of this Order.

TMDL Reporting Requirements:

1. By the effective date of this Order, the Permittee shall submit a TMDL Demonstration of Compliance Report pursuant to section G2 (above) and Attachment E.
2. If the Permittee cannot demonstrate compliance with the TMDL wasteload allocation by the deadline and believes additional time to comply with the final wasteload allocations is necessary, the Permittee may request a Time Schedule Order from the Santa Ana Water Board pursuant to section G2 (above) and Attachments E.

G4.8.6 Selenium TMDLs in Freshwater for Newport Bay Watershed

Responsible Permittees: Orange County Fair & Event Center; University of California, Irvine

Impaired Water Body: Newport Bay Watershed

TMDL Implementation Requirements: The Permittees shall implement an effective portfolio of projects and programs for the control of selenium in stormwater and authorized non-stormwater runoff from its MS4s. Permittees shall demonstrate compliance through the following actions:

1. Within 1 year of the effective date of this Order, submit notification for acknowledgement by the Santa Ana Water Board of a commitment to implement, or cause to be implemented on its behalf (separate implementing entity), joint cooperative implementation actions, monitoring actions and special studies with other responsible agencies, following an approved water quality monitoring plan: or
2. Within 1 year of the effective date of this Order, submit for review and consideration of approval by the Santa Ana Water Board Executive Officer, a region-specific TMDL Compliance Plan that provides the Permittees' strategies to comply with the wasteload allocations, which are provided in Attachment A section A15.8.8 of this Order. Upon approval of the TMDL Compliance Plan, the Permittees shall immediately implement all terms and provisions of the approved TMDL Compliance Plan.

Please note that joining a Regional Monitoring Program does not excuse Permittees from compliance with the Water Quality Monitoring requirements in Attachments E of this Order.

TMDL Reporting Requirements: The compliance date is June 20, 2049. According to the Water Quality [Report Card](#) released September 2021, water quality data and/or other indicators demonstrate improvement, but the final water quality targets are not consistently being met. Therefore,

1. By October 15 of each year, the Permittees shall submit a TMDL Annual Compliance Report pursuant to section G2 (above) and Attachment E.
2. If the Permittee has evidence to demonstrate compliance with the final wasteload allocations for this TMDL, the Permittees shall submit a TMDL Demonstration of Compliance Report pursuant to section G2 (above) and Attachments E.
3. The Permittee shall attain compliance with the TMDL wasteload allocations by the compliance date.
4. The Permittee shall submit a TMDL Demonstration of Compliance Report pursuant to section G2 (above) and Attachment E by the compliance date.

G4.9 SAN DIEGO WATER BOARD TOTAL MAXIMUM DAILY LOADS

G4.9.1 TMDL for Sediment in Los Peñasquitos Lagoon

Responsible Permittees: Marine Corps Air Station Miramar; North County Transit District; University of California, San Diego; Veterans Affairs San Diego Healthcare System

Impaired Water Body: Los Peñasquitos Lagoon

Final Compliance Deadline: By July 14, 2034, Permittees shall demonstrate attainment of the TMDL wasteload allocations as specified in Attachment E, section E7.1 (items a through g) and below.

Wasteload Allocations:

1. The TMDL sediment wasteload allocation of 2,580 tons/year is assigned collectively to all responsible permittees identified in the TMDL.
2. Permittee's discharges shall not prohibit the sustainable restoration of tidal and non-tidal saltmarsh vegetation of at least 346 acres in Los Peñasquitos Lagoon; and
3. The TMDL watershed sediment wasteload allocation is assigned to the Phase II MS4 permittees identified above.

TMDL Implementation Requirements: Permittees shall take the following actions to meet the requirements of this TMDL:

1. Within 12 months of the effective date of this Order, Permittees shall update and implement their Storm Water Pollution Prevention Plan including additional measures necessary to achieve reductions in sediment by the final TMDL compliance deadline. The Storm Water Pollution Prevention Plan shall include short term and long-term best management practices strategies appropriate for achieving the TMDL wasteload allocations.
2. Within 12 months of the effective date of this Order, Permittees shall submit a TMDL Monitoring Compliance Plan describing activities that will be conducted to demonstrate compliance with the TMDL numeric targets through one or more of the criteria in section E7.1.3 (items a through g) in Attachment E for review and consideration of approval by the San Diego Water Board Executive Officer. Permittees are encouraged to collaborate with other TMDL permittees who discharge to the same receiving water body to develop and submit the TMDL Monitoring Compliance Plan. The TMDL Monitoring Plan shall be submitted by each Permittee and must include the following.
 - a. During each wet season (October 1 through April 30), collect a minimum of one wet weather sample on a monthly frequency from all

- outfalls/discharge locations or one or more representative outfalls/discharge locations within its facility that discharge to Los Peñasquitos Lagoon.
- b. Representative outfalls/discharge locations must be approved by the San Diego Water Board Executive Officer as part of the Monitoring Compliance Plan.
 - c. Monitoring shall include representative flow rates and total suspended solids concentrations.
4. Submit a TMDL Compliance Report annually via SMARTS in accordance with the sections titled Annual TMDL Compliance Reporting, Water Quality Monitoring, and Program Effectiveness in Attachments E, and include additional reporting requirements as specified below that demonstrates progress towards attainment of final wasteload allocation through meeting one or more of the criteria in Attachment E, section E7.1 (items a through g). The TMDL Compliance Annual Report shall include the following:
- a. Assessment of Sediment Loading. Sediment loading from the Permittees discharge shall be calculated using flow rate results and total suspended solids concentrations from monitoring conducted at the Permittees outfalls/discharge locations.
 - b. Reporting of the estimated sediment loading (tons/wet season) from its facilities to the Los Peñasquitos Lagoon for the entire wet season (i.e. October 1 to April 30).
 - c. Comparison of sediment loadings to the TMDL wasteload allocations. Because the TMDL wasteload allocations are assigned to multiple Permittees, Permittees shall compare its sediment loadings to its proportional load responsibility from the total watershed wasteload allocation. Permittees shall assess whether its sediment loadings met or exceeded its proportional load responsibility. Permittees shall assess whether its sediment loadings met or exceeded its proportional load responsibility from the watershed wasteload allocation during the wet season.
5. Permittees that can demonstrate that their discharges are not contributing to an exceedance of an applicable wasteload allocation may request a monitoring reduction modification to the monitoring required above. Monitoring reduction modification requests must be submitted to the San Diego Water Board Executive Officer for approval. The Permittee shall have obtained a minimum of two consecutive years of monitoring data demonstrating such compliance. Upon approval, the Permittee shall comply with the approved monitoring reduction requirements.
6. By July 14, 2034, Permittees shall either:

- a. Submit a final wet weather TMDL Demonstration of Compliance Report to the San Diego Water Board Executive Officer for review and consideration of approval. The TMDL Demonstration of Compliance Report shall detail the sediment reduction activities conducted to demonstrate compliance with the wet weather wasteload allocations through one or more of the criteria in Attachment E, sections E7.1 (items a through g;
Or alternatively
- b. Request a time schedule order, as specified in Attachment E, section E7.2.

G4.9.2 TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region¹⁷

Responsible Permittees: 22nd District Agricultural Association; California State University, San Marcos; Camp Pendleton; Marine Corps Air Station Miramar; North County Transit District; San Diego Metropolitan Transit System; San Diego State University; University of California, San Diego; Veterans Affairs San Diego Healthcare System

Impaired Water Bodies: Chollas Creek, Laguna/San Joaquin, Miramar Creek, San Clemente, San Diego River, San Dieguito River, San Juan, San Luis Rey, San Marcos, Scripps HA, Tecolote HA

Final Compliance Deadlines:

1. By April 4, 2021, the Permittees are required to demonstrate attainment of the dry weather wasteload allocations shown in Fact Sheet section 14.9.2. The compliance deadline has passed.
2. Within 12 months of the effective date of this Order, Permittees shall update and implement the Stormwater Pollution Prevention Plan as specified below.
3. By April 4, 2031, Permittees are required to demonstrate compliance with wet weather allocations and/or numeric targets shown in Fact Sheet section A14.9.2.

¹⁷ San Diego Water Board, [Basin Plan, Chapter 7](#)

TMDL Implementation Requirements:

Permittees shall attain compliance with wasteload allocations and numeric targets for indicator bacteria in the Permittee's discharges from its MS4 and/or receiving water. Tables G4.9.1, G4.9.2(a), G4.9.2(b), and G4.9.2(c) provide the receiving waters, wasteload allocations, and numeric targets for beaches and creeks.

Information and data collected under the San Diego River investigative order ([Order R9-2019-0014](#)) may be utilized to fulfill requirements and demonstrate compliance with the Revised TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region. Permittee efforts that demonstrate the attainment of the wasteload allocation may be included with TMDL Demonstration of Compliance Report (section G2, above) in accordance with Attachment E, section E7.1.3 (a-g).

Permittees shall take the following actions to meet the requirements of this TMDL:

1. Final Dry Weather Demonstration of Compliance – Permittees were required to demonstrate attainment of the final Dry Weather wasteload allocation to the San Diego Water Board Executive Officer for review and consideration of approval by April 4, 2021. If the Permittee has not received approval of Final Demonstration of Compliance, the Permittee shall comply with the requirements of this section. Since compliance with the dry weather wasteload allocations is past due, Permittees may either:
 - a. Submit a TMDL Demonstration of Compliance Report demonstrating attainment of the dry weather wasteload allocations and/or numeric targets by complying with one or more of the criteria in Attachment E, E7.1.3 (items a through g), or
 - b. Request a time schedule order from the San Diego Water Board Executive Officer as specified in Attachment E, section E7.2.
2. Stormwater Pollution Prevention Plan – Within 12 months of the effective date of this Order, Permittees shall update and implement the existing Stormwater Pollution Prevention Plan. The Stormwater Pollution Prevention Plan shall include:
 - a. Measures necessary to achieve bacteria reductions in fecal coliform, *Enterococcus*, and total coliform to meet dry and wet weather wasteload allocations and/or numeric targets by the final compliance deadlines; and
 - b. Short term and long-term best management practices strategies appropriate for achieving the TMDL wasteload allocations or numeric targets and bacteria reduction.

3. TMDL Monitoring Compliance Plan –

The following requirements only apply if the Permittee has received notice from the San Diego Water Board that they are considered a significant source of pollutants. In the absence of that, compliance shall be demonstrated by submitting a report as part of the Demonstration of Compliance outlining the bacteria control measures in their stormwater management plan and explaining why they constitute Maximum Extent Practicable.

Within 12 months of the effective date of this Order, Permittees shall submit a TMDL Monitoring Compliance Plan describing activities that will be conducted to demonstrate compliance with the numeric targets through one or more of the compliance options in Attachment E, section E7.1.3 (items a through g) for review and consideration of approval by the San Diego Water Board Executive Officer. Permittees are encouraged to collaborate with other bacteria TMDL permittees who discharge to the same receiving water body in order to develop and submit the TMDL Monitoring Compliance Plan. The TMDL Monitoring Plan shall be submitted by each Permittee and must include the following:

- a. Identify the Permittee's discharge location by watershed, waterbody, and/or segment or area as listed in Table G4.9.1.
- b. Monitor all outfalls/discharge locations or one or more representative outfall/discharge location within its facility that discharge to the applicable receiving waterbody listed Table G4.9.1, which includes beaches and creeks.
- c. Representative outfalls/discharge locations must be approved by the San Diego Water Board Executive Officer as part of the Monitoring Compliance Plan.
- d. For discharges to a beach segment of an applicable receiving waterbody, monitor for total coliform, fecal coliform, *Enterococcus* and flow rate.
- e. For discharges to a creek segment, monitor for fecal coliform, *Enterococcus*, and flow rate.
- f. During each dry season (May 1 through September 30), collect a minimum of 5 discharge samples, including at least one wet weather day sample, from the same outfalls/discharge locations for at least one 30-day period. Wet and dry weather day samples may be collected during each 30-day period sampled. In the event no flow is observed from the outfall during one or more of the five minimum samples required for a 30-day geometric mean calculation, the 30-day geometric mean would not be calculated, and potentially no 30-day geometric

g. During each wet season (October 1 through April 30), collect a minimum of 5 samples, including at least one wet weather day sample, from the same outfalls/discharge locations for at least one 30-day period. Wet and dry weather day samples may be collected during each 30-day period sampled.

- Bacteria Loading = flow rate (volume/time) x Bacteria density (number of colonies/volume)

- 2) Assessment of Bacteria Loadings – An assessment of the Permittee’s bacteria loadings (MPN/year) during Dry Weather and Wet Weather for the reporting year. This includes:
 - a) For Permittees who discharge to a beach segment, fecal coliform and *Enterococcus*.
 - b) For Permittees who discharge to a creek segment, total coliform, fecal coliform and *Enterococcus*.
- 3) Comparison of Bacteria Loading to Receiving Water Wasteload Allocations – A comparison of the Permittee’s discharge bacteria loadings to the receiving water body wasteload allocations and an assessment of whether the Permittee’s bacteria loadings meet or exceed the assigned wasteload allocations for the applicable receiving water body during the reporting year.
- 4) Assessment of Numeric Targets – Numeric targets consist of the numeric Water Quality Objectives from the Basin Plan and/or Ocean Plan and an allowable exceedance frequency. The numeric targets for the wet weather TMDLs consist of the REC-1 single sample maximum Water Quality Objectives and a 22 percent allowable exceedance frequency. The numeric targets for dry weather TMDLs consist of the REC-1¹⁸ 30-day geometric mean Water Quality Objectives and a 0 percent allowable exceedance frequency. Numeric Targets are provided in Tables G4.9.2(a) and G4.9.2(b) and the assessment includes:
 - a) Dry Weather exceedance frequencies shall be calculated as follows:
 - i. The single sample maximum exceedance frequency shall be calculated by dividing the number of dry weather day samples that exceed the single sample maximum numeric targets by the total number of dry weather day samples collected during the dry and wet seasons.
 - ii. The exceedance frequency shall be calculated by dividing the number of geometric means that exceed the geometric mean numeric targets by the total number of geometric means calculated from samples collected during the dry season.

¹⁸ Water Contact Recreation (REC-1) - Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible.

- b) Wet Weather exceedance frequencies shall be calculated as follows:
 - i. If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event shall be assumed to be equal to the results from the one sample;
 - ii. If more than one sample is collected for a storm event, but not on each day of the storm event, the bacteria density for all wet weather days of the storm event not sampled shall be assumed to be equal to the highest bacteria density result reported from the samples;
 - iii. If there are any storm events not sampled, the bacteria density for every wet weather day of those storm events shall be assumed to be equal to the average of the highest bacteria densities reported from each storm event sampled;
 - iv. The single sample maximum exceedance frequency shall be calculated by dividing the number of wet weather days that exceed the single sample maximum numeric targets by the total number of wet weather days during the wet season; and
 - v. Wet weather monitoring data shall be used to calculate wet weather 30-day geometric means. Wet weather 30-day geometric means shall be calculated using a minimum of 5 samples, including at least one wet weather day sample, that were collected during a 30-day period. Additional geometric means may be calculated for each 30-day period sufficiently sampled. The exceedance frequency of the wet weather 30-day geometric mean shall be calculated by dividing the number of 30-day geometric means that exceed the geometric mean numeric targets by the total number of geometric means calculated from samples collected during the wet season.
- 6. Monitoring Reduction – Permittees that can demonstrate that its discharges are not contributing to an exceedance of an applicable wasteload allocation or numeric target may request a monitoring reduction modification to the monitoring required above. Monitoring reduction modification requests must be submitted to the San Diego Water Board Executive Officer for approval. The Permittee shall have obtained a minimum of two consecutive years of monitoring data demonstrating such compliance. Upon approval, the Permittee shall comply with the approved monitoring reduction requirements.

Table G4.9.1 Impaired Beaches and Creeks for Wasteload Allocation Implementation

Watershed	Waterbody	Segment or Area
San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Cameo Cove at Irvine Cove Dr. – Riviera Way
San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	at Heisler Park – North
San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	at Main Laguna Beach
San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Laguna Beach at Ocean Avenue
San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Laguna Beach at Laguna Avenue
San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Laguna Beach at Cleo Street
San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Arch Cove at Bluebird Canyon Road
San Joaquin Hills /Laguna Beach Hydrologic Subareas (901.11 and 901.12)	Pacific Ocean Shoreline	Laguna Beach at Dumond Drive
Aliso (Hydrologic Subarea 901.13)	Pacific Ocean Shoreline	Laguna Beach at Lagunita Place/Blue Lagoon Place at Aliso Beach
Aliso (Hydrologic Subarea 901.13)	Aliso Creek	The entire reach (7.2 miles) and associated tributaries Aliso Hills Channel, English Canyon Creek, Dairy Fork Creek, Sulphur Creek, and Wood Canyon Creek
Aliso (Hydrologic Subarea 901.13)	Aliso Creek (mouth)	At creek mouth
Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	Aliso Beach at West Street
Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	Aliso Beach at Table Rock Drive
Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	1000 Steps Beach at Pacific Coast Hwy at Hospital (9th Avenue)
Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	1000 Steps Beach at Pacific Coast Hwy at Salt Creek (large outlet)
Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	Salt Creek Beach at Salt Creek service road
Dana Point Hydrologic Subarea (901.14)	Pacific Ocean Shoreline	Salt Creek Beach at Dana Strand Road
Lower San Juan Hydrologic Subarea (901.27)	Pacific Ocean Shoreline	At San Juan Creek
Lower San Juan Hydrologic Subarea (901.27)	San Juan Creek	Lower 1 mile

Watershed	Waterbody	Segment or Area
Lower San Juan Hydrologic Subarea (901.27)	San Juan Creek (mouth)	At creek mouth
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	at Poche Beach (large outlet)
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	Ole Hanson Beach Club Beach at Pico Drain
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at Linda Lane
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente State Beach at Riviera Beach
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at Mariposa Street
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at Cypress Shores
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at Lifeguard Headquarters
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	Under San Clemente Municipal Pier
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at El Portal Street Stairs
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at South Linda Lane
San Clemente Hydrologic Area (901.30)	Pacific Ocean Shoreline	San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)
San Luis Rey Hydrologic Unit (903.00)	Pacific Ocean Shoreline	at San Luis Rey River Mouth
San Marcos Hydrologic Area (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach
San Dieguito Hydrologic Unit (905.50)	Pacific Ocean Shoreline	at San Dieguito Lagoon Mouth
Miramar Reservoir Hydrologic Area (906.10)	Pacific Ocean Shoreline	Torrey Pines State Beach at Del Mar (Anderson Canyon)
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at Caminito Del Oro
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at Vallecitos
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at Avenue de la Playa
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	at Casa Beach, Children's Pool
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	South Casa Beach at Coast Blvd.
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Whispering Sands Beach at Ravina Street
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Windansea Beach at Vista de la Playa
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Windansea Beach at Bonair Street
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Windansea Beach at Playa del Norte
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Windansea Beach at Palomar Avenue.
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	at Tourmaline Surf Park
Scripps Hydrologic Area (906.30)	Pacific Ocean Shoreline	Pacific Beach at Grand Avenue.
Tecolote Hydrologic Area (906.5)	Tecolote Creek	The entire reach and associated tributaries

Watershed	Waterbody	Segment or Area
Mission San Diego/Santee Hydrologic Subareas (907.11 and 907.12)	San Diego River, Lower	Lower 6 miles
Mission San Diego/Santee Hydrologic Subareas (907.11 and 907.12)	Pacific Ocean Shoreline	At San Diego River Mouth at Dog Beach
Mission San Diego/Santee Hydrologic Subareas (907.11 and 907.12)	Forrester Creek	Lower 1 mile
Chollas Hydrologic Subarea (908.22)	Chollas Creek	Bottom 1.2 miles

Table G4.9.2(a). Numeric Targets – Final **Receiving Water Limitations** Expressed as Bacteria Densities and Allowable Exceedance Frequencies for Beaches

Constituent	Wet Weather Days Single Sample Maximum ^{a,b} (MPN/100 mL)	Wet Weather Days Single Sample Maximum Allowable Exceedance Frequency ^c	Dry Weather Days 30-Day Geometric Mean ^b (MPN/100 mL)	Dry Weather Days 30-Day Geometric Mean Allowable Exceedance Frequency
Total Coliform	10,000	22%	1,000	0%
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	104	22%	35	0%

Table Notes:

- a. During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
- b. During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.
- c. The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Ocean Plan. End Table Notes

Table G4.9.2(b). Numeric Targets – Final **Receiving Water Limitations** Expressed as Bacteria Densities and Allowable Exceedance Frequencies for Creeks

Constituent	Wet Weather Days Single Sample Maximum (MPN/100 mL)	Wet Weather Days Single Sample Maximum Allowable Exceedance Frequency ^c	Dry Weather Days 30-Day Geometric Mean ^b (MPN/100mL)	Dry Weather Days 30-Day Geometric Mean Allowable Exceedance Frequency
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	61 (104)	22%	33	0%

Table Notes:

- During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
- During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.
- The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Basin Plan.
- A single sample maximum of 104 MPN/100 ml for *Enterococcus* may be applied as a receiving water limitation for creeks, instead of 61 MPN/100 mL, if one or more of the creeks addressed by these TMDLs (San Juan Creek, Aliso Creek, Tecolote Creek, Forrester Creek, San Diego River, and/or Chollas Creek) is designated with a “moderately to lightly used area” or less frequent usage frequency in the Basin Plan. Otherwise, the single sample maximum of 61 MPN/100 mL for *Enterococcus* must be used to assess compliance with the allowable exceedance frequency. End Table Notes.

Table G4.9(c). Final Concentration-Based Effluent Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies in MS4 Discharges to the Water Body

Constituent	Single Sample Maximum ^{a,b}	Single Sample Maximum Allowable Exceedance Frequency ^c	30-Day Geometric Mean ^b (MPN/100 mL)	30-Day Geometric Mean Allowable Exceedance Frequency
Total Coliform ^d	10,000	22%	1,000	0%
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	104 ^e / 61 ^f	22%	35 ^e / 33 ^f	0%

Table Notes:

- During wet weather days, only the single sample maximum effluent limitations are required to be achieved.

- b. During dry weather days, the single sample maximum and 30-day geometric mean effluent limitations are required to be achieved.
- c. The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Ocean Plan for discharges to beaches, and the Basin Plan for discharges to creeks and creek mouths.
- d. Total coliform effluent limitations only apply to MS4 outfalls that discharge to the Pacific Ocean Shorelines and creek mouths.
- e. This *Enterococcus* effluent limitation applies to MS4 discharges to segments of areas of Pacific Ocean Shoreline.
- f. This *Enterococcus* effluent limitation applies to MS4 discharges to segments or areas of creeks or creek mouths.

G4.10 LIST OF RESPONSIBLE PERMITTEES BY TMDL

Permittee	TMDL	Regional Water Board
22 nd District Agricultural Association	TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region	San Diego
American Canyon, City of	Napa River Pathogens TMDL	San Francisco Bay
American Canyon, City of	Napa River Sediment TMDL	San Francisco Bay
American Canyon, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
American Canyon, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Anderson, City of	TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers	Central Valley, Redding
Atwater, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Fresno
Avalon, City of	Avalon Bay Bacterial TMDL	Los Angeles
Belvedere, City of	Richardson Bay Pathogens TMDL	San Francisco Bay
Belvedere, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Belvedere, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Benicia, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay

Permittee	TMDL	Regional Water Board
Benicia, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
California Institute for Men	Middle Santa Ana River Watershed Bacterial Indicator TMDL	Santa Ana
California Institute for Women	Middle Santa Ana River Watershed Bacterial Indicator TMDL	Santa Ana
California Polytechnic State University, Pomona	San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL	Los Angeles
California Polytechnic State University, San Luis Obispo	TMDL for Pathogens in San Luis Obispo Creek	Central Coast
California Polytechnic State University, San Luis Obispo	TMDLs for Nitrate-Nitrogen in San Luis Obispo Creek	Central Coast
California Rehabilitation Center	Middle Santa Ana River Watershed Bacterial Indicator TMDL	Santa Ana
California State University, Channel Islands	Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation TMDL	Los Angeles
California State University, Channel Islands	Calleguas Creek Watershed Metals and Selenium TMDL	Los Angeles
California State University, Channel Islands	Calleguas Creek Watershed Toxicity TMDL	Los Angeles
California State University, Dominguez Hills	Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL	Los Angeles
California State University, Dominguez Hills	Los Angeles Harbor Bacteria TMDL – Inner Cabrillo Beach and Main Ship Channel	Los Angeles
California State University, Long	Los Cerritos Channel Metals TMDL	Los Angeles

Permittee	TMDL	Regional Water Board
Beach		
California State University, Los Angeles	Los Angeles River and Tributaries Metals TMDL	Los Angeles
California State University, Los Angeles	Los Angeles River Bacteria TMDL	Los Angeles
California State University, Los Angeles	Los Angeles River Nitrogen Compounds and Related Effects TMDL	Los Angeles
California State University, Los Angeles	Los Angeles River Trash TMDL	Los Angeles
California State University, Northridge	Los Angeles River and Tributaries Metals TMDL	Los Angeles
California State University, Northridge	Los Angeles River Bacteria TMDL	Los Angeles
California State University, Northridge	Los Angeles River Nitrogen Compounds and Related Effects TMDL	Los Angeles
California State University, Northridge	Los Angeles River Trash TMDL	Los Angeles
California State University, San Marcos	TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region	San Diego
Calistoga, City of	Napa River Pathogens TMDL	San Francisco Bay
Calistoga, City of	Napa River Sediment TMDL	San Francisco Bay
Calistoga, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Calistoga, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Camp Pendleton	TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San	San Diego

Permittee	TMDL	Regional Water Board
	Diego Region	
Candlestick Point State Recreation Area, California State Parks and Recreation	San Francisco Bay Beaches Bacteria TMDL	San Francisco Bay
Capitola, City of	TMDL for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch	Central Coast
Carpinteria, City of	TMDL for Nitrogen and Phosphorous Compounds in Streams of the Franklin Creek Watershed	Central Coast
Ceres, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
Clearlake, City of	Clear Lake Nutrients TMDL	Central Valley, Sacramento
Colusa, County of	TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers	Central Valley, Sacramento
Corte Madera, Town of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Corte Madera, Town of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Escalon, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
Fairfax, Town of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Fairfax, Town of	TMDL for Diazinon and Pesticide-Related	San Francisco Bay

Permittee	TMDL	Regional Water Board
	Toxicity in Urban Creeks	
Federal Correctional Institution, Terminal Island	Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL	Los Angeles
Federal Correctional Institution, Terminal Island	Los Angeles Harbor Bacteria TMDL – Inner Cabrillo Beach and Main Ship Channel	Los Angeles
Fortuna, City of	Lower Eel River Temperature and Sediment TMDL	North Coast
Gilroy, City of	TMDL for Fecal Coliform in the Pajaro River Watershed	Central Coast
Gilroy, City of	TMDL for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin	Central Coast
Gilroy, City of	TMDL for Sediment in the Pajaro River Including Llagas Creek, Rider Creek, and San Benito River	Central Coast
Guadalupe, City of	TMDL for Fecal Indicator Bacteria in Santa Maria River Watershed	Central Coast
Guadalupe, City of	TMDL for Nitrogen Compounds and Orthophosphate in the Lower Santa Maria River Watersheds and Tributaries to Oso Flaco Lake	Central Coast
Guadalupe, City of	TMDL for Toxicity and Pesticides in the Santa Maria Watershed	Central Coast
Hollister, City of	TMDL for Fecal Coliform in the Pajaro River Watershed	Central Coast

Permittee	TMDL	Regional Water Board
Hollister, City of	TMDL for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin	Central Coast
Hollister, City of	TMDL for Sediment in the Pajaro River Including Llagas Creek, Rider Creek, and San Benito River	Central Coast
Hughson, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
Lake, County of	Clear Lake Nutrients TMDL	Central Valley, Sacramento
Lakeport, City of	Clear Lake Nutrients TMDL	Central Valley, Sacramento
Larkspur, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Larkspur, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Lathrop, City of	Sacramento-San Joaquin Delta Diazinon and Chlorpyrifos TMDL	Central Valley, Sacramento
Lathrop, City of	Sacramento-San Joaquin Delta Methylmercury TMDL	Central Valley, Sacramento
Lathrop, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
Livingston, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Fresno
Lodi, City of	Sacramento-San Joaquin Delta Diazinon	Central Valley, Sacramento

Permittee	TMDL	Regional Water Board
	and Chlorpyrifos TMDL	
Lodi, City of	Sacramento-San Joaquin Delta Methylmercury TMDL	Central Valley, Sacramento
Long Beach Veterans Affairs Medical Center	Los Cerritos Channel Metals TMDL	Los Angeles
Los Banos, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Fresno
Los Osos Community Services District	TMDL for Pathogens in Morro Bay and Chorro and Los Osos Creeks	Central Coast
Manteca, City of	Sacramento-San Joaquin Delta Diazinon and Chlorpyrifos TMDL	Central Valley, Sacramento
Manteca, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
March Air Reserve Base	Lake Elsinore and Canyon Lake Nutrient TMDL	Santa Ana
Marin, County of	Petaluma River Bacteria TMDL	San Francisco Bay
Marin, County of	Richardson Bay Pathogens TMDL	San Francisco Bay
Marin, County of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Marin, County of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Marin, County of	Tomaes Bay Watershed Pathogens TMDL	San Francisco Bay
Marysville, City of	TMDL for Diazinon and Chlorpyrifos in the	Central Valley, Sacramento

Permittee	TMDL	Regional Water Board
	Sacramento and Feather Rivers	
Merced, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Fresno
Merced, County of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Fresno
Mill Valley, City of	Richardson Bay Pathogens TMDL	San Francisco Bay
Mill Valley, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Mill Valley, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Marine Corps Air Station Miramar	TMDL for Sediment in Los Peñasquitos Lagoon	San Diego
Marine Corps Air Station Miramar	TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region	San Diego
Monterey, County of	TMDL for Fecal Coliform in Lower Salinas River Watershed	Central Coast
Monterey, County of	TMDL for Fecal Coliform in the Pajaro River Watershed	Central Coast
Monterey, County of	TMDL for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin	Central Coast
Monterey, County of	TMDL for Nitrogen Compounds and Orthophosphate in the Lower Salinas River Watersheds	Central Coast

Permittee	TMDL	Regional Water Board
Monterey, County of	TMDL for Sediment Toxicity and Pyrethroid Pesticides in Sediment in the Lower Salinas River Watershed	Central Coast
Monterey, County of	TMDL for Turbidity in Gabilan Creek Watershed	Central Coast
Morgan Hill, City of	TMDL for Fecal Coliform in the Pajaro River Watershed	Central Coast
Morgan Hill, City of	TMDL for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin	Central Coast
Morgan Hill, City of	TMDL for Sediment in the Pajaro River Including Llagas Creek, Rider Creek, and San Benito River	Central Coast
Morro Bay, City of	TMDL for Pathogens in Morro Bay and Chorro and Los Osos Creeks	Central Coast
Napa, City of	Napa River Pathogens TMDL	San Francisco Bay
Napa, City of	Napa River Sediment TMDL	San Francisco Bay
Napa, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Napa, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Napa, County of	Napa River Pathogens TMDL	San Francisco Bay
Napa, County of	Napa River Sediment TMDL	San Francisco Bay
Napa, County of	San Francisco Bay Polychlorinated	San Francisco Bay

Permittee	TMDL	Regional Water Board
	Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	
Napa, County of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Naval Base Ventura County; includes Port Hueneme and Point Mugu	Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation TMDL	Los Angeles
Naval Base Ventura County; includes Port Hueneme and Point Mugu	Calleguas Creek Watershed Metals and Selenium TMDL	Los Angeles
Naval Base Ventura County; includes Port Hueneme and Point Mugu	Calleguas Creek Watershed Toxicity TMDL	Los Angeles
Newman, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
North County Transit District	TMDL for Sediment in Los Peñasquitos Lagoon	San Diego
North County Transit District	TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region	San Diego
Novato, City of	Petaluma River Bacteria TMDL	San Francisco Bay
Novato, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Novato, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Oakdale, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water	Central Valley, Sacramento

Permittee	TMDL	Regional Water Board
	Ship Channel	
Orange County Fair & Event Center	San Diego Creek and Newport Bay Toxic Pollutants (Metals) TMDL	Santa Ana
Orange County Fair & Event Center	San Diego Creek and Upper Newport Bay Diazinon and Chlorpyrifos TMDL	Santa Ana
Orange County Fair & Event Center	San Diego Creek, Upper and Lower Newport Bay, Revised Organochlorine Compounds TMDL	Santa Ana
Orange County Fair & Event Center	Selenium TMDLs in Freshwater for Newport Bay Watershed	Santa Ana
Patterson, City of	Lower San Joaquin River Diazinon and Chlorpyrifos TMDL	Central Valley, Sacramento
Patterson, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
Petaluma, City of	Petaluma River Bacteria TMDL	San Francisco Bay
Petaluma, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Petaluma, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Placer, County of	TMDL for Sediment in the Middle Truckee River Watershed, Placer, Nevada and Sierra Counties	Lahontan
Port of Oakland	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay

Permittee	TMDL	Regional Water Board
Presidio of San Francisco	San Francisco Bay Beaches Bacteria TMDL	San Francisco Bay
Red Bluff, City of	TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers	Central Valley, Redding
Redding, City of	TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers	Central Valley, Redding
Rio Vista, City of	Sacramento-San Joaquin Delta Diazinon and Chlorpyrifos TMDL	Central Valley, Sacramento
Rio Vista, City of	Sacramento-San Joaquin Delta Methylmercury TMDL	Central Valley, Sacramento
Ripon, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
Riverbank, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
Roseville, City of	TMDL for Pyrethroid Pesticides in Sacramento and San Joaquin River Basin	Central Valley, Sacramento
Ross, Town of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Ross, Town of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
San Anselmo, Town of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
San Anselmo, Town of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco	San Francisco Bay

Permittee	TMDL	Regional Water Board
	Bay Mercury TMDL	
San Diego Metropolitan Transit System	TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region	San Diego
San Diego State University	TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region	San Diego
San Francisco, City of (Port of San Francisco)	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
San Francisco, City of (San Francisco Public Utilities Commission)	San Francisco Bay Beaches Bacteria TMDL	San Francisco Bay
San Francisco, City of (San Francisco Public Utilities Commission)	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
San Luis Obispo, City of	TMDL for Pathogens in San Luis Obispo Creek	Central Coast
San Luis Obispo, City of	TMDLs for Nitrate-Nitrogen in San Luis Obispo Creek	Central Coast
San Luis Obispo, County of	TMDL for Fecal Indicator Bacteria in Santa Maria River Watershed	Central Coast
San Luis Obispo, County of	TMDL for Nitrogen Compounds and Orthophosphate in the Lower Santa Maria River Watersheds and Tributaries to Oso Flaco Lake	Central Coast
San Luis Obispo, County of	TMDL for Pathogens in Morro Bay and Chorro and Los Osos Creeks	Central Coast

Permittee	TMDL	Regional Water Board
San Luis Obispo, County of	TMDL for Pathogens in San Luis Obispo Creek	Central Coast
San Luis Obispo, County of	TMDL for Sediment in Morro Bay	Central Coast
San Luis Obispo, County of	TMDLs for Nitrate-Nitrogen in San Luis Obispo Creek	Central Coast
San Rafael, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
San Rafael, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Santa Barbara, County of	TMDL for Fecal Indicator Bacteria in Santa Maria River Watershed	Central Coast
Santa Barbara, County of	TMDL for Nitrogen and Phosphorous Compounds in Streams of the Franklin Creek Watershed	Central Coast
Santa Barbara, County of	TMDL for Nitrogen Compounds and Orthophosphate in the Lower Santa Maria River Watersheds and Tributaries to Oso Flaco Lake	Central Coast
Santa Barbara, County of	TMDL for Toxicity and Pesticides in the Santa Maria Watershed	Central Coast
Santa Clara, County of	TMDL for Fecal Coliform in the Pajaro River Watershed	Central Coast
Santa Clara, County of	TMDL for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin	Central Coast

Permittee	TMDL	Regional Water Board
Santa Cruz County Fairgrounds	TMDL for Fecal Coliform in Corralitos and Salsipuedes Creeks	Central Coast
Santa Cruz County Fairgrounds	TMDL for Sediment in the Pajaro River Including Llagas Creek, Rider Creek, and San Benito River	Central Coast
Santa Cruz, City of	TMDL for Pathogens in San Lorenzo Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, and Lompico Creek	Central Coast
Santa Cruz, City of	TMDL for Sediment in the San Lorenzo River	Central Coast
Santa Cruz, County of	TMDL for Fecal Coliform in Corralitos and Salsipuedes Creeks	Central Coast
Santa Cruz, County of	TMDL for Fecal Coliform in the Pajaro River Watershed	Central Coast
Santa Cruz, County of	TMDL for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin	Central Coast
Santa Cruz, County of	TMDL for Pathogens in Aptos Creek, Valencia Creek, and Trout Creek	Central Coast
Santa Cruz, County of	TMDL for Pathogens in San Lorenzo Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, and Lompico Creek	Central Coast
Santa Cruz, County of	TMDL for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch	Central Coast
Santa Cruz, County of	TMDL for Pathogens in Watsonville Slough	Central Coast

Permittee	TMDL	Regional Water Board
Santa Cruz, County of	TMDL for Sediment in the San Lorenzo River	Central Coast
Santa Cruz, County of	TMDL for Total Phosphorous to Address Cyanobacterial Blooms in Pinto Lake	Central Coast
Santa Maria, City of	TMDL for Fecal Indicator Bacteria in Santa Maria River Watershed	Central Coast
Santa Maria, City of	TMDL for Nitrogen Compounds and Orthophosphate in the Lower Santa Maria River Watersheds and Tributaries to Oso Flaco Lake	Central Coast
Santa Maria, City of	TMDL for Toxicity and Pesticides in the Santa Maria Watershed	Central Coast
Sausalito City of	Richardson Bay Pathogens TMDL	San Francisco Bay
Sausalito City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Sausalito City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Scotts Valley, City of	TMDL for Pathogens in San Lorenzo Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, and Lompico Creek	Central Coast
Scotts Valley, City of	TMDL for Sediment in the San Lorenzo River	Central Coast
Shasta, County of	TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers	Central Valley, Redding
Solano, County of	San Francisco Bay Polychlorinated	San Francisco Bay

Permittee	TMDL	Regional Water Board
	Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	
Sonoma Water (formerly Sonoma County Water Agency)	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Sonoma Water (formerly Sonoma County Water Agency)	Sonoma Creek Pathogens TMDL	San Francisco Bay
Sonoma Water (formerly Sonoma County Water Agency)	Sonoma Creek Watershed Sediment TMDL	San Francisco Bay
Sonoma, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Sonoma, City of	Sonoma Creek Pathogens TMDL	San Francisco Bay
Sonoma, City of	Sonoma Creek Watershed Sediment TMDL	San Francisco Bay
Sonoma, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Sonoma, County of	Petaluma River Bacteria TMDL	San Francisco Bay
Sonoma, County of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Sonoma, County of	Sonoma Creek Pathogens TMDL	San Francisco Bay
Sonoma, County of	Sonoma Creek Watershed Sediment TMDL	San Francisco Bay
Sonoma, County of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
St. Helena, City of	Napa River Pathogens TMDL	San Francisco Bay

Permittee	TMDL	Regional Water Board
St. Helena, City of	Napa River Sediment TMDL	San Francisco Bay
St. Helena, City of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
St. Helena, City of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Stanislaus, County of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
Sutter, County of	TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers	Central Valley, Sacramento
Tiburon, Town of	Richardson Bay Pathogens TMDL	San Francisco Bay
Tiburon, Town of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Tiburon, Town of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Tracy, City of	Sacramento-San Joaquin Delta Diazinon and Chlorpyrifos TMDL	Central Valley, Sacramento
Tracy, City of	Sacramento-San Joaquin Delta Methylmercury TMDL	Central Valley, Sacramento
Travis Air Force Base	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Truckee, Town of	TMDL for Sediment in the Middle Truckee River Watershed, Placer, Nevada and Sierra Counties	Lahontan, South Lake Tahoe

Permittee	TMDL	Regional Water Board
Turlock, City of	TMDL for Low Dissolved Oxygen in the San Joaquin River Stockton Deep Water Ship Channel	Central Valley, Sacramento
University of California, Irvine	San Diego Creek and Newport Bay Toxic Pollutants (Metals) TMDL	Santa Ana
University of California, Irvine	San Diego Creek and Upper Newport Bay Diazinon and Chlorpyrifos TMDL	Santa Ana
University of California, Irvine	San Diego Creek, Upper and Lower Newport Bay, Revised Organochlorine Compounds TMDL	Santa Ana
University of California, Irvine	Selenium TMDLs in Freshwater for Newport Bay Watershed	Santa Ana
University of California, Los Angeles	Ballona Creek Estuary Toxic Pollutants TMDL	Los Angeles
University of California, Los Angeles	Ballona Creek Metals TMDL	Los Angeles
University of California, Los Angeles	Ballona Creek Trash TMDL	Los Angeles
University of California, Los Angeles	Ballona Creek, Estuary, and Sepulveda Channel Bacteria TMDL	Los Angeles
University of California, Riverside	Middle Santa Ana River Watershed Bacterial Indicator TMDL	Santa Ana
University of California, San Diego	TMDL for Sediment in Los Peñasquitos Lagoon	San Diego
University of California, San Diego	TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region	San Diego
Ventura County Fairgrounds (Seaside Park and Ventura County	Ventura River Estuary Trash TMDL	Los Angeles

Permittee	TMDL	Regional Water Board
Fairgrounds)		
Veterans Affairs Greater Los Angeles Healthcare System	Ballona Creek Estuary Toxic Pollutants TMDL	Los Angeles
Veterans Affairs Greater Los Angeles Healthcare System	Ballona Creek Metals TMDL	Los Angeles
Veterans Affairs Greater Los Angeles Healthcare System	Ballona Creek Trash TMDL	Los Angeles
Veterans Affairs Greater Los Angeles Healthcare System	Ballona Creek, Estuary, and Sepulveda Channel Bacteria TMDL	Los Angeles
Veterans Affairs San Diego Healthcare System	TMDL for Sediment in Los Peñasquitos Lagoon	San Diego
Veterans Affairs San Diego Healthcare System	TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region	San Diego
Watsonville, City of	TMDL for Fecal Coliform in Corralitos and Salsipuedes Creeks	Central Coast
Watsonville, City of	TMDL for Fecal Coliform in the Pajaro River Watershed	Central Coast
Watsonville, City of	TMDL for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin	Central Coast
Watsonville, City of	TMDL for Pathogens in Watsonville Slough	Central Coast
Watsonville, City of	TMDL for Sediment in the Pajaro River Including Llagas Creek, Rider Creek, and San Benito River	Central Coast
Watsonville, City of	TMDL for Total Phosphorous to Address Cyanobacterial Blooms in Pinto Lake	Central Coast

Permittee	TMDL	Regional Water Board
West Sacramento, City of	Sacramento-San Joaquin Delta Diazinon and Chlorpyrifos TMDL	Central Valley, Sacramento
West Sacramento, City of	Sacramento-San Joaquin Delta Methylmercury TMDL	Central Valley, Sacramento
Yolo, County of	Sacramento-San Joaquin Delta Methylmercury TMDL	Central Valley, Sacramento
Yountville, Town of	Napa River Pathogens TMDL	San Francisco Bay
Yountville, Town of	Napa River Sediment TMDL	San Francisco Bay
Yountville, Town of	TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks	San Francisco Bay
Yountville, Town of	San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL and San Francisco Bay Mercury TMDL	San Francisco Bay
Yreka, City of	Shasta River Watershed Temperature and Dissolved Oxygen TMDL	North Coast
Yuba City, City of	TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers	Central Valley, Sacramento
Yuba, County of	TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers	Central Valley, Sacramento

ATTACHMENT H – TRASH IMPLEMENTATION REQUIREMENTS

OVERVIEW

The requirements of this Attachment implement the Trash Provisions of the Water Quality Control Plan for Ocean Waters of California ([Ocean Plan](#)) and the [Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California](#) (cumulatively the Trash Provisions).

This Attachment identifies three categories of Permittees:

- Renewal Permittees identified in Attachment B of this Order.
- New Permittees designated under this Order and listed in Attachment B.
- New Permittees designated after adoption of this Order.

H1. COMPLIANCE WITH TRASH WATER QUALITY OBJECTIVES AND PROHIBITION OF DISCHARGE

Permittees shall comply with Order section 5.3, the Trash narrative Water Quality Objectives and Prohibition of Discharge through compliance with the requirements of this Attachment.

H2. COMPLIANCE DEADLINE

1. Renewal Permittees listed in Order Attachment B shall demonstrate full compliance with the requirements of this Attachment by December 2, 2030.
2. New Permittees listed in Order Attachment B shall demonstrate full compliance with the requirements of this Attachment within ten years of the effective date of this Order.
3. New Permittees designated after the effective date of this Order shall demonstrate full compliance with this Attachment within ten years of the effective date of their designation.

H3. APPLICABILITY

Traditional and Non-Traditional Permittees shall comply with the requirements of this Attachment.

H4. CERTIFIED FULL CAPTURE SYSTEMS AND THE PEAK FLOW RATE, Q

H4.1 Definition of Certified Full Capture Systems

1. Certified Full Capture Systems include both [Certified Trash Full Capture Trash Systems](#) and [Categorically Certified Multi-Benefit Systems](#). Certified Full Capture Systems¹ are trash treatment control systems that are certified by the State Water Board Executive Director to trap all particles 5-millimeters or greater.
2. In accordance with the Trash Provisions, Permittees shall ensure that Certified Full Capture Systems have a design treatment capacity that is:
 - a. Not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
 - b. Designed and sized to convey at least the same flows as the corresponding storm drain, if the storm drain conveys less than the peak flow rate.

H4.2 Rational Equation to Compute the Peak Flow Rate, Q

For each subdrainage area discharging to a Certified Full Capture System, Permittees shall use the Rational Equation² to compute the peak flow rate, as shown in the formula below:

$$Q = C \cdot i \cdot A$$

Where “Q” is the design flow rate in cubic feet per second; “C” is the runoff coefficient (dimensionless); “i” is the design rainfall intensity in inches per hour as determined from the rainfall isohyetal map specific to each region³, and “A” is the subdrainage area in acres.

H4.3 Lists of Certified Full Capture Systems

¹ Certified Trash Full Capture Systems (including High Flow Trash Full Capture Systems) and Categorically Certified Multi-Benefit Systems are found at the State Water Board’s [Trash Implementation Program](#) web page.

² The Rational Equation is alternatively referred to as the Rational Method.

³ [NOAA Atlas 14](#) is frequently used to determine the intensity, which will be replaced with NOAA Atlas 15 in 2026.

Lists of Certified Full Capture Systems and implementation requirements for Categorically Certified Multi-Benefit Systems are published on the State Water Board's [Trash Implementation Program](#) web page.

H4.4 Application Process to Certify a New Trash Full Capture System

Permittees may apply to certify a new trash full capture system by submitting a complete application in accordance with the application requirements published on the State Water Board's [Trash Implementation Program](#) web page. For project-specific new trash full capture systems, the project specific application is available upon request.

H5. DEFINITIONS AND COMPLIANCE TRACKS

H5.1 Priority Land Uses

Priority Land Uses are (1) high-density residential land uses with at least ten (10) developed dwelling units/acre; (2) Industrial land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards); (3) Commercial land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.); (4) Mixed urban land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed); and (5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops); and (6) as approved by the applicable Regional Water Board Executive Officer, equivalent alternative land uses that generate substantial amounts of trash.

H5.2 Equivalent Alternate Land Uses

A Permittee with regulatory authority over Priority Land Uses may request approval from the applicable Regional Water Board Executive Officer to substitute one or more land uses with alternate land uses within the Permittee's jurisdiction that generates trash at rates equivalent to or greater than the Priority Land Use(s) being substituted. The substituted land use area need not be an acre-for-acre replacement. Substitution may involve one or more Priority Land Uses, a fraction of a Priority Land Use, or both, provided that the total trash generated from the equivalent alternative land use is equal to or greater than the

total trash generated from the Priority Land Use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the “Keep America Beautiful Visible Litter Survey”; or other information as required by the applicable Regional Water Board Executive Officer.⁴

H5.3 Substantial Trash Generation Areas

Areas with Very High, High, and Moderate trash generation rates are considered substantial trash generation areas. Trash generation rates are described and quantified as defined by the On-Land Visual Trash Assessment (OVTA) Protocol, as follows:

Table H5.3: Trash Generation Rates

Trash Generation Rate	Description of Trash Generation Rate ⁵	Best Midpoint Trash Generation Rates and Ranges in gallons/acre/year ⁶
Low	Effectively no trash is observed in the assessment area. Approximately less than one piece per two car lengths (on average). There may be some small pieces in the area, but they are not obvious at first glance. One individual could easily clean up all trash observed in a very short timeframe	2.5 (0 – 5)
Moderate	Predominantly free of trash except for a few areas with trash. On average, one piece per two car lengths. The trash could be collected by one or two individuals in a short period of time	7.5 (5 – 10)
High	Predominantly trash-strewn except for a few clean areas. Trash is widely/evenly distributed and/or small accumulations are visible. At least two or three pieces per car length on average. It would take a more organized effort to remove all trash from the area	30 (10 – 50)
Very High	Trash is continuously seen throughout the assessment area. Large piles and a strong impression of lack of concern for trash in the	90 (>50)

⁴ From the glossary in the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California and Appendix I to the Final Trash Amendment to the Water Quality Control Plan for Ocean Water of California.

⁵ EOA Inc/BASMAA, Table 2.1, [Tracking California's Trash Project](#), June 2017

⁶ EOA Inc/BASMAA, Table 1.1, [Tracking California's Trash Project](#), June 2017

Trash Generation Rate	Description of Trash Generation Rate ⁵	Best Midpoint Trash Generation Rates and Ranges in gallons/acre/year ⁶
	area. There is often significant trash. It would take a large number of people during an organized effort to remove all trash from the area	

H5.4 Traditional and Non-Traditional Permittees

1. Traditional Permittees: Traditional Permittees have regulatory authority over and treat the discharge from Priority Land Use areas. The Permittee identifies Priority Land Use areas with substantial amounts of trash using the On-Land Visual Assessment Tool or equivalent tool, with the ability to rate areas as having Very High, High, or Moderate trash generation rates.⁷
2. Non-Traditional Permittees: Non-Traditional Permittees may have land uses and locations that generate substantial amounts of trash, but do not clearly fall under the definition of Priority Land Use Areas. The Trash Provisions allow interpretation regarding whether high-density residential uses, buildings, or facilities qualify as priority land uses. Substantial amounts of trash may also be generated at non-traditional facilities or sites not explicitly defined as Priority Land Uses, such as parking lots, right of ways, and other land uses within the Permittee's jurisdiction. For Non-Traditional Permittees, areas with substantial amounts of trash shall be identified using the On-Land Visual Assessment Tool or equivalent tool, with ability to rate areas as having Very High, High, or Moderate trash generation rates.⁷.

H5.5 Compliance Track Options for Traditional and Non-Traditional Permittees

Traditional and Non-Traditional Permittees shall choose one of the compliance track options listed below:

1. Traditional Track 1 Permittees: Traditional Track 1 Permittees shall install, operate, and maintain Certified Full Capture Systems for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions.
2. Traditional Track 2 Permittees: Traditional Track 2 Permittees shall install, operate, and maintain any combination of Certified Full Capture Systems, other treatment controls, and institutional controls within either the Permittee's jurisdiction or the jurisdiction of the Permittee in coordination with contiguous Permittees.

⁷ See section H8. Trash Assessment Plan (Track 2)

- a. Traditional Track 2 Permittees may determine the locations or land within their jurisdiction that discharge to the storm drain system that generate substantial amounts of trash and shall implement any combination of controls at those locations.
 - b. Traditional Track 2 Permittees shall demonstrate that such a combination achieves Full Capture System Equivalency. Permittees shall demonstrate that the amount of trash addressed at Priority Land Uses, together with identified locations or land uses that generate substantial amounts of trash, is equal to or greater than the amount of trash generated by the Permittee's Priority Land Uses. It is the State Water Board's expectation that Traditional Track 2 Permittees will install Certified Full Capture Systems where such installation is not cost-prohibitive.
3. Non-Traditional Track 1 Permittees: Non-Traditional Track 1 Permittees shall install, operate, and maintain Certified Full Capture Systems for all storm drains that capture runoff from locations and land uses that generate substantial amounts of trash in their jurisdictions.
4. Non-Traditional Track 2 Permittees:
 - a. Non-Traditional Track 2 Permittees shall install, operate, and maintain any combination of Certified Full Capture Systems, other treatment controls, and institutional controls within either the Permittee's jurisdiction or the jurisdiction of the Permittees in coordination with contiguous Permittees to address locations and land uses that generate substantial amounts of trash.
 - b. The Non-Traditional Track 2 Permittees shall determine the locations and land uses within their jurisdictions that generate substantial amounts of trash. Permittees shall demonstrate that such combination achieves Full Capture System Equivalency. It is the State Water Board's expectation that Non-Traditional Track 2 Permittees will install Certified Full Capture Systems wherever such installations are not cost-prohibitive.

H5.6 How to Select or Change the Compliance Track

Permittees shall prepare and upload to SMARTS a certification statement with their selection of compliance track (i.e., Track 1 or Track 2), as required below:

1. Renewal Permittees listed in Order Attachment B shall implement their previously selected compliance track as required by the State Water Board's June 2, 2017, Water Code section 13383 Order.

2. New Permittees listed in Order Attachment B shall select and upload to SMARTS within 60 days of enrollment for coverage under this Order a certification statement with their selected compliance track.
3. New Permittees designated after the effective date of this Order shall select and upload to SMARTS within 60 days of enrollment for coverage under this Order a certification statement with their selected compliance track.
4. Permittees may change their compliance track through the following procedure:
 - a. Prepare and upload your certification statement with the new compliance track to SMARTS.
 - b. Notify the appropriate Regional Board Executive Officer of the compliance track change via e-mail.
 - c. Comply with the requirements associated with the selected compliance track.
 - d. Update their Trash Implementation Inventory, Trash Generation Map, Trash Assessment Plan (Track 2 and non-Traditional Track 1), and Trash Implementation Plan (Track 2) and submit via SMARTS within 180 days of changing their compliance track.

H6. TRASH IMPLEMENTATION INVENTORY: ACRES TREATED AND ACRES REMAINING

The initial Trash Implementation Inventory shall identify the area already treated and the area remaining to be treated. Permittees shall prepare an initial inventory and thereafter shall prepare annual updates. Their Trash Implementation Inventory shall cover the period starting with July 1 and ending on June 30 of each year. Their Trash Implementation Inventory shall be retained according to the Record Retention requirements in section H19. The Trash Implementation Inventory includes all the information necessary to prepare and annually update the Trash Generation Map that is required under section H7.

The schedule for the initial Trash Implementation Inventory is provided as follows:

1. Within 180 days of the effective date of this Order, Renewal and New Permittees listed in Order Attachment B shall prepare an initial Trash Implementation Inventory.

2. Within 180 days of designation, New Permittees designated after the effective date of this Order shall prepare an initial Trash Implementation Inventory.

The Trash Implementation Inventory shall be updated annually and shall distinguish the area already treated as of the effective date of this Order or the effective date of designation (whichever is later) and the area remaining to be treated. The Trash Implementation Inventory shall include the items specified in sections H6.1 through H6.6. as applicable.

H6.1 Traditional Permittees Selecting Track 1

For Traditional Permittees selecting Track 1, the Trash Implementation Inventory shall include the following

1. List all subdrainage areas containing Priority Land Use areas using a unique identification number system, latitude and longitude coordinates, Geographic Information System-(GIS-) mapped locations and drainage area served by its full capture system, and representative or nearest street address.
2. For each subdrainage area or location, include:
 - a. The total Priority Land Use area;
 - b. The Priority Land Use area already addressed by or proposed to be addressed by Certified Full Capture Systems; and,
3. For each subdrainage area with Certified Full Capture Systems already installed or proposed to be installed in the following reporting year, include:
 - a. The peak flow rate in cubic feet per second resulting from a one-year, one-hour storm in the subdrainage area, or flow of the corresponding storm drain;
 - b. The hydraulic capacity, trash treatment capacity (if included in the vendor's application), and model name of each Certified Full Capture System already installed or proposed to be installed in the following reporting year; and
 - c. Date(s) of maintenance performed in the previous year, if applicable, and proposed general schedule for maintenance in the following reporting year for each Certified Full Capture System.

H6.2 Non-Traditional Permittees Selecting Track 1

In accordance with the Permittee's Trash Assessment Plan (section H8), Non-Traditional Permittees selecting Track 1 shall conduct either the On-Land Visual Trash Assessment approach or an equivalent empirical approach to determine baseline trash generation rates for each location or land use that generates substantial amounts of trash. The Trash Implementation Inventory shall include the following:

1. List all subdrainage areas determined by the Permittees to generate substantial amounts of trash using a unique identification number system, latitude and longitude coordinates, and representative or nearest street address.
2. For the subdrainage areas identified above include:
 - a. The total area;
 - b. Total area of land uses that generate substantial amounts of trash; and
 - c. Total area of land uses that generate substantial amounts of trash already addressed by or proposed to be addressed by Certified Full Capture Systems.
3. For each subdrainage with Certified Full Capture Systems already installed or proposed to be installed in the following reporting year, include:
 - a. The peak flow rate in cubic feet per second resulting from a one-year, one-hour storm in the subdrainage area or flow of the corresponding storm drain;
 - b. The trash treatment capacity and model name of each Certified Full Capture System already installed or proposed to be installed in the following reporting year, and
 - c. Date(s) of maintenance performed in the previous year and next scheduled maintenance date(s) in the following reporting year.

H6.3 Traditional Permittees Selecting Track 2

For Traditional Permittees selecting Track 2, the Trash Implementation Inventory shall include the following:

1. In accordance with the Permittee's Trash Assessment Plan required in H.8, conduct either the On-Land Visual Trash Assessment Approach or equivalent empirical approach to determine trash generation rates for each Priority Land

Use and determined locations or land uses that generate substantial amounts of trash.

2. List all subdrainage areas determined by the Permittee to generate substantial amounts of trash using a unique identification number system, latitude and longitude coordinates, and representative or nearest street address.
3. For the subdrainage areas identified above, include:
 - a. The total area already addressed by or proposed to be addressed by a combination of Certified Full Capture Systems, other treatment controls, and institutional controls,
 - b. The trash generation rates in gallons per acre per year for each Priority Land Use and determined locations or land uses that generate substantial amounts of trash; and
 - c. The trash generation rates for all Priority Land Uses where Certified Full Capture Systems will not be implemented.
4. For each subdrainage with Certified Full Capture Systems already installed or proposed to be installed in the following reporting year, include:
 - a. The peak flow rate in cubic feet per second resulting from a one-year, one-hour storm in the subdrainage area, or flow of the corresponding storm drain;
 - b. The trash treatment capacity and model name of each Certified Full Capture System already installed or proposed to be installed in the following reporting year; and
 - c. Date(s) of maintenance performed in the previous year and next scheduled maintenance date(s) in the following reporting year.
5. For each subdrainage area where a combination of other treatment controls and institutional controls have been implemented, or are proposed to be implemented, include the previous year dates and next scheduled maintenance date(s) for the following reporting year.
6. Include a description of and rationale for the combinations of other treatment controls and institutional controls selected to achieve Full Capture System Equivalency. The rationale shall demonstrate that the amount of trash to be addressed at Priority Land Uses and determined locations or land uses that

generate substantial amounts of trash is equal to or greater than the amount of trash generated by the Permittee's Priority Land Uses.

H6.4 Non-Traditional Permittees Selecting Track 2

For Non-Traditional Permittees selecting Track 2, the Trash Implementation Inventory shall include the following:

1. In accordance with the Permittee's Trash Assessment Plan, conduct either the On-Land Visual Trash Assessment Approach or an equivalent empirical approach to determine trash generation rates for each location or land use that generates substantial amounts of trash.
2. List all subdrainage areas determined by the Permittee to generate substantial amounts of trash using a unique identification number system, latitude and longitude coordinates, and representative or nearest street address.
3. For the subdrainage areas identified above, include:
 - a. The total area;
 - b. The area already addressed by or proposed to be addressed by a combination of Certified Full Capture Systems, other treatment controls, and institutional controls.
4. For each subdrainage area with Certified Full Capture Systems already installed or proposed to be installed in the following reporting year, include:
 - a. The peak flow rate in cubic feet per second resulting from a one-year, one-hour storm in the subdrainage area, or flow of the corresponding storm drain;
 - b. The trash treatment capacity and model name of each Certified Full Capture System already installed or proposed to be installed in the following reporting year; and
 - c. Date(s) of maintenance performed in the previous year and next scheduled maintenance date(s) for the following reporting year.
5. For each subdrainage area where a combination of other treatment controls and institutional controls have or will be implemented, include the date(s) of previous year's maintenance and next scheduled maintenance date(s) in the following reporting year.

6. Include a description of and rationale for the combinations of other treatment controls and institutional controls selected to achieve Full Capture System Equivalency.

H6.5 Traditional Track 1 Permittees Requesting Equivalent Alternate Land Use Substitution for Priority Land Use

1. Traditional Track 1 Permittees may request authorization from the applicable Regional Water Board Executive Officer to substitute one or more Priority Land Uses with equivalent alternative land uses within the Permittee's jurisdiction, as follows:
 - a. Permittees shall establish, in accordance with the definition of equivalent alternate land use (section H5.2), that trash generation rates (in gallons per acre per year) in the equivalent alternate land use are equal to or greater than those of Priority Land Uses. The equivalent alternate land use area requested to substitute for a Priority Land Use need not be an acre-for-acre substitution; substitution may involve one or more Priority Land Uses, or a fraction of a Priority Land Use, or both, provided the total trash generated in the equivalent alternative land use is equal to or greater than the total trash generated from the Priority Land Use(s) for which substitution is requested; and,
 - b. Permittees shall provide a rationale for the requested substitution.
2. If a Priority Land Use substitution is authorized, Permittees shall include the alternative land uses in the Trash Implementation Inventory and Trash Generation Map.

H6.6 Newly Identified Regulated Areas

1. Any newly identified Priority Land Uses or other locations and land uses (Newly Identified Regulated Areas) shall be addressed in accordance with the requirements of this Order.
2. Newly Identified Regulated Areas shall be included in the Trash Implementation Inventory, Trash Generation Map, Trash Assessment Plan (Track 2 and Non-Traditional Track 1 only), and Trash Implementation Plans (Track 2 only).
3. Newly Identified Regulated Areas are subject to the Trash Reduction Milestones in section H13.
4. Priority Land Uses or other locations and land uses that were required to have been identified by the Permittee in its initial Trash Implementation

Inventory (section H6) are not eligible for classification as Newly Identified Regulated Areas.

- a. For Traditional Track 1 Permittees, this includes any Priority Land Uses in existence at the time the Permittee submitted its initial Trash Implementation Inventory that were not substituted for alternative land uses per section H6.5 of this Attachment.
- b. For Traditional Track 2 Permittees, this includes any areas necessary to achieve Full Capture System Equivalency as measured against Priority Land Uses in existence at the time the Permittee submitted its initial Trash Implementation Inventory.
- c. For Non-Traditional Permittees, this includes any areas that should have been identified as generating substantial amounts of trash in the Permittee's initial Trash Generation Maps (see section H7).

H7. TRASH GENERATION MAPS

Trash Generation Maps shall be submitted in accordance with the Reporting Items in section H18 and shall include the information required below. Trash Generation Maps shall be submitted to SMARTS by October 15 of each year and shall cover the period starting on July 1 and ending on June 30 of each year.

1. Traditional and Non-Traditional Permittees listed in Order Attachment B shall within 180 days of the effective date of this Order prepare and submit via SMARTS a new or updated Trash Generation Map that addresses the requirements in H7.1 through H7.2, as applicable.
2. Within 180 days of designation, New Permittees designated after the effective date of this Order shall prepare and submit via SMARTS a new Trash Generation Map that addresses the requirements in H7.1 through H7.2, as applicable.

The Permittees shall annually review and update as necessary their Trash Generation Map and submit via SMARTS by October 15.

H7.1 Trash Generation Map for Traditional Permittees

Traditional Permittees shall include the following information in the Trash Generation Maps:

1. All Priority Land Use subdrainage areas discharging to the MS4 and the corresponding stormwater conveyance system, including inlets and outlets that collect and convey discharges from Priority Land Uses.

2. GIS-mapped locations of Certified Full Capture Systems that have been installed and those proposed to be installed in the following reporting year.
3. Track 2 Permittees shall additionally include:
 - a. Based upon the trash assessments required in section H.8, the trash generation rates of all locations and land uses where a combination of other treatment controls and institutional controls have been or will be implemented. Color coding of the trash generation rate for each location and land use is recommended for clarity; and
 - b. Locations and land uses where a combination of other treatment controls and institutional controls have been implemented that achieve Full Capture System Equivalency.

H7.2 Trash Generation Map for Non-Traditional Permittees

Non-Traditional Permittees shall include the following information in the Trash Generation Maps:

1. Based on the trash assessments required in section H8, the trash generation rates of all locations and land uses determined to generate substantial amounts of trash and that discharge to the MS4 stormwater conveyance system, including the location of inlets and outlets that collect and convey discharges from the locations and land uses. Color coding of the trash generation rate for each location and land use is recommended for clarity;
2. GIS-mapped Locations and land uses of Certified Full Capture Systems that have been installed and those proposed to be installed in the following reporting year; and
3. Track 2 Permittees shall additionally include:
 - a. Locations and land uses where a combination of other treatment controls and institutional controls have been implemented to achieve Full Capture System Equivalency; and
 - b. Locations and land uses where a combination of other treatment controls and institutional controls will be implemented in the following reporting year to achieve Full Capture System Equivalency.

H8. TRASH ASSESSMENT PLAN: TRACK 2 AND NON-TRADITIONAL TRACK 1 PERMITTEES⁸

Trash Assessment Plans are required for Non-Traditional Track 1, Traditional Track 2, and Non-Traditional Track 2 Permittees. Permittees shall retain their Trash Assessment Plan and annual updates according to the Record Retention requirements in section H19 of this Attachment.

The trash assessment is only required to demonstrate Full Capture System Equivalency for areas where other trash treatment controls and/or institutional controls have been implemented. Trash levels shall be assessed for Very High, High, Moderate, and Low levels generation rates (see section H5.3 for the table with trash generation rates).

This Order does not require Renewal Permittees to additionally assess such areas where the Permittees have implemented Certified Full Capture Systems since these systems inherently achieve Full Capture System Equivalency if designed and maintained properly.

Applicable Permittees shall prepare and implement their Trash Assessment Plan according to the following schedule:

1. Within 90 days of the effective date of this Order, each Non-Traditional Renewal Permittee selecting Track 1 shall prepare its Trash Assessment Plan. Thereafter the Trash Assessment Plan shall be updated each reporting year as necessary.
2. Within 90 days of the effective date of this order, each Permittee who selected Track 2 shall prepare its initial or updated Trash Assessment Plan. Thereafter the Trash Assessment Plan shall be updated each reporting year as necessary.
3. Within 90 days of designation, New Permittees selecting Track 2 and New Non-Traditional Permittees selecting Track 1 shall prepare their Trash Assessment Plan. Thereafter the Trash Assessment Plan shall be updated each reporting year as necessary.

H8.1 Prepare and Update the Trash Assessment Plan

The Trash Assessment Plan shall include the following:

⁸ The State Water Board 13383 Water Quality Order, June 1, 2017, required development and submittal of Trash Assessments for Permittees selecting Track 2.

1. Identification of either the On-land Visual Trash Assessment methodology or an equivalent empirical approach approved by the Regional Water Board Executive Officer. All trash assessments shall be capable of identifying trash generating areas with Very High, High, Moderate, and Low trash generation rates. Areas with Very High, High, and Moderate trash generation rates are considered substantial trash generation areas;
2. A map geographically depicting the trash assessment areas evaluated during the previous reporting year and the trash assessment areas proposed to be evaluated during the following reporting year. Incorporate this information into the Trash Generation Map required in section H7;
3. The interval and frequency of trash assessments, including justification that the selected intervals and frequencies will yield data representative of trash generation;
4. Trash assessment field procedures;
5. Quality assurance and quality control procedures, including field trash assessor training, to ensure the representativeness, comparability, completeness, sensitivity, and accuracy of the trash assessment data collected; and
6. Trash assessments are not required in areas where a Certified Full Capture System is designed in accordance with section H4.

H8.2 Implement the Trash Assessment Plan

1. Conduct trash assessments within 180 days of the effective date of this Order or within 180 days of new designation to establish initial trash generation rates.
 - a. Renewal Permittees may utilize previous trash assessments conducted to comply with the State Water Board 13383 Water Code Order; however, the Permittee's trash assessments shall be updated as necessary (i.e., to account for new trash generation areas).
 - b. New Traditional Track 2 Permittees shall conduct a trash assessment of the Priority Land Use areas to identify existing levels of trash. If choosing to select other locations or land uses within their jurisdiction to implement a combination of controls that achieve Full Capture System Equivalency, then the additional selected locations and land uses shall also be assessed. If proposing locations or land uses other than Priority Land Uses, the Permittees shall provide a justification to the Regional Water Board Executive Officer for approval demonstrating that the selected

locations or land uses generate trash at rates that are equivalent to or greater than those Priority Land Uses.

- c. New Non-Traditional Permittees shall conduct trash assessments to identify the land uses and locations that generate substantial amounts of trash and to identify the existing levels of trash generation.
2. Conduct trash assessment each reporting year to determine the effectiveness of implemented combinations of other treatment controls and institutional controls in achieving Full Capture System Equivalency.
3. Assess trash load reduction each reporting year at:
 - a. Each location or land use where the Permittee has implemented a combination of other treatment controls and institutional control, or
 - b. A statistically representative set of locations or land uses, of similar trash generation levels, and with similar implemented combination of other treatment controls and institutional controls. The results of such assessments will be applied to all corresponding similar locations or land uses. The Permittee shall include a justification supporting the selected locations.

H9. TRASH IMPLEMENTATION PLAN FOR TRACK 2

Track 2 Permittees are required to prepare and updated annually as necessary with their Trash Implementation Plan. Track 2 Permittees shall retain their updated Trash Implementation Plan according to the Record Retention requirements in section H19 of this Attachment.

1. Schedule for Trash Implementation Plan
 - a. Renewal Permittees listed in Order Attachment B: Within 180 days of the effective date of this Order, renewal Permittees listed in Order Attachment B shall review and update as necessary their initial Trash Implementation Plan.
 - i. Renewal Permittees that have reviewed and not needed to update their initial Trash Implementation Plan submitted under the State Water Board Water Code Order 13383 shall retain their initial Trash Implementation Plan and annual updates according to the Record Retention requirements.
 - ii. Renewal Permittees that have revised their initial Trash Implementation Plan submitted under the State Water Board Water

Code Order 13383 shall upload it to SMARTS within 180 days of the effective date of this Order.

- b. New Permittees listed in Order Attachment B: Within 180 days of the effective date of this Order, new Permittees listed in Order Attachment B shall prepare their Trash Implementation Plan and upload it to SMARTS. Thereafter, they shall retain their initial and updated Trash Implementation Plan in accordance with the Record Retention requirements in section H19.
 - c. New Permittees Designated by the State Water Board after the effective date of this Order: New permittees designated by the State Water Board after the effective date of this Order, shall prepare and submit their Trash Implementation Plan to SMARTS within 180 days of designation. Thereafter, the Trash Implementation Plan shall be updated as necessary and retained according to the Record Retention requirements in section H19.
2. The Trash Implementation Plan shall include:
- a. A schedule for the installation or implementation of Certified Full Capture Systems, other treatment controls, and institutional controls in the following 12 months.
 - b. For each Certified Full Capture System proposed to be installed in the following reporting year, provide:
 - 1) The proposed installation location;
 - 2) The area discharging to each Certified Full Capture System;
 - 3) The trash reduction resulting from the installation of the Certified Full Capture Systems (Track 2 Permittees only); and
 - 4) The design treatment capacity.
3. An annual evaluation of:
- a. The progress toward attaining interim milestones including the progress in achieving the previous year's Trash Implementation Plan goals; and
 - b. If applicable, the plan to address a shortfall in trash reduction implementation from the previous years.

4. In addition to the requirements of H8.1 – H8.3, above, all Track 2 Permittees shall include the following:
 - a. Stormwater discharge locations and associated area where a combination of other treatment controls and institutional controls are planned to be implemented in the following reporting year.
 - b. Descriptions of other treatment controls and institutional controls scheduled to be implemented in the following reporting year for each location and land use identified above; and
 - c. The estimated trash reduction resulting from the implementation of the selected combinations of the other treatment controls and institutional controls, which shall be calculated using the methodology described in its Trash Assessment Plan.
5. Permittees shall coordinate activities with the California Department of Transportation to install, operate, and maintain Certified Full Capture Systems, other treatment controls, and institutional controls in mutually impacted areas. Mutually impacted areas are those areas where the jurisdictions and trash generation of the Permittees and the Department overlap.

H10. FULL CAPTURE SYSTEM EQUIVALENCY FOR TRACK 2

Track 2 Traditional and Non-Traditional Permittees shall demonstrate that the combinations of Certified Full Capture Systems, other treatment controls, and institutional controls implemented achieve Full Capture System Equivalency. Full Capture System Equivalency is achieved by:

1. By installing, sizing, and maintaining a Certified Full Capture System at a location; and/or
2. Implementing and maintaining any combination of other treatment controls and institutional controls at locations that result in a trash load reduction equivalent to the performance of properly sized, installed, and maintained Certified Full Capture Systems.

H11. HOW TO CALCULATE THE YEARLY DECREASE IN TRASH FOR TRACK 2

Track 2 Permittees shall use the formula below to calculate and report in the Annual Monitoring Report (section H17) the yearly decrease in trash from the baseline, to demonstrate Full Capture System Equivalency, and to demonstrate compliance with the interim milestones. For Track 2 Permittees, the percentage

discharge reduction from 2027 baseline shall be calculated based on the formula below, which accounts for

- Very High generation areas reduced to High, Moderate, and Low generation areas,
- High generation areas reduced to Moderate and Low generation areas, and
- Moderate trash generation areas reduced to Low trash generation areas.

Formula to Calculate Decrease in Trash for Track 2

The formula allows Track 2 Permittees to receive trash reduction credit for locations and land uses that are improving but still have not achieved Full Capture System Equivalency. Percent discharge reduction is calculated as follows:

$$\text{Trash Generation \% Reduction} = 100 \times \frac{\text{Baseline} - \text{Reporting Year}}{\text{Baseline}}$$

$$\text{Baseline} = (12 \times V_0) + (4 \times H_0) + M_0$$

$$\text{Reporting Year} = (12 \times V) + (4 \times H) + M$$

Where:

Baseline Year = effective year of the permit or effective date of the Permittee's designation, whichever is later

V_0 = Very high trash generation jurisdictional area in the baseline year

H_0 = High trash generation jurisdictional area in the baseline year

M_0 = Moderate trash generation jurisdictional area in the baseline year

V = Very high trash generation jurisdictional area in the reporting year

H = High trash generation jurisdictional area in the reporting year

M = Moderate trash generation jurisdictional area in the reporting year

12 = Very High to Moderate weighing ratio

4 = High to Moderate weighing ratio

100 = Fraction to percentage conversion factor

H12. TRASH REDUCTION MILESTONES FOR RENEWAL PERMITTEES

Renewal Permittees are listed in Order Attachment B. Renewal Permittees shall achieve the following milestones based on the area identified in the Permittee's Trash Implementation Inventory (see section H6).

1. First Milestone. On or before December 2, 2027:
 - a. Renewal Traditional Track 1 Permittees: Install, operate, and maintain Certified Trash Capture Systems at 30 percent of identified Priority Land Use area to be addressed by Certified Full Capture Systems.
 - b. Renewal Non-Traditional Track 1 Permittees: Install, operate and maintain Certified Full Capture Systems at 30 percent of identified locations and land use area that generate substantial amounts of trash.
 - c. Renewal Traditional and Non-Traditional Track 2 Permittees: Install, operate, and maintain any combination of Certified Full Capture Systems, other treatment controls, and institutional Controls to address 30 percent of determined locations or land uses area that generates substantial amounts of trash.
2. Second Milestone. On or before December 2, 2028, Renewal Traditional Track 1 Permittees shall install Certified Full Capture Systems at 65 percent or more of the identified Priority Land Use area. Renewal Non-Traditional Track 1 and all Renewal Traditional and Non-Traditional Track 2 Permittees shall address 65 percent of selected area, or locations and land use area generating substantial amounts of trash.
3. Third Milestone. On or before December 2, 2030, Renewal Traditional Track 1 Permittees shall install Certified Full Capture Systems at 100 percent of the identified Priority Land Use area. Renewal Non-Traditional Track 1 and Renewal Traditional and Non-Traditional Track 2 Permittees shall address 100 percent of selected area, or locations and land use area generating substantial amounts of trash.
4. Permittees may request approval of alternative first and second Trash Reduction Milestones for review and approval by Regional Water Board Executive Officer. Requests shall include justification. Upon approval, Permittees shall comply with the approved alternative milestones.
5. Track 2 Permittees may receive partial trash reduction credit for area treated by other treatment controls and institutional controls where trash generation has been reduced using the either the On-land Visual Trash Assessment

methodology or an equivalent empirical approach approved by the Regional Water Board Executive Officer.

6. Track 2 permittees shall calculate trash reduction using the method shown in section H11.

H13. TRASH REDUCTION MILESTONES FOR NEW PERMITTEES

This section applies to New Permittees listed in Order Attachment B and New Permittees designated after the adoption of this Order who shall achieve the following milestones based on the area identified in the Permittee's Trash Implementation Inventory (see section H6).

1. First Milestone for New Permittees. Within four (4) years of the effective date of this Order or the effective date of designation, whichever is later.
 - a. New Traditional Track 1 Permittees shall install, operate, and maintain Certified Full Capture Systems at 40 percent of identified Priority Land Use area
 - b. New Non-Traditional Track 1 Permittees shall install, operate and maintain Certified Trash Capture Systems at 40 percent of identified locations and land use area that generate substantial amounts of trash.
 - c. New Traditional and Non-Traditional Track 2 Permittees shall install, operate, and maintain any combination of Certified Full Capture Systems, other treatment controls, and institutional Controls to achieve 40 percent trash reduction of determined locations or land uses that generate substantial amounts of trash.
2. Second Milestone. Within seven (7) years of the effective date of this Order or the effective date of Designation, New Traditional Track 1 Permittees shall install Certified Full Capture Systems at 70 percent or more of the Priority Land Use area. New Non-Traditional Track 1 Permittees and New Traditional and Non-Traditional Track 2 Permittees shall address 70 percent of selected area, or locations and land use area generating substantial trash.
3. Third Milestone. Within ten (10) years of the effective date of this Order or the effective date of designation, New Traditional Track 1 Permittees shall install Certified Full Capture Systems at 100 percent or more of the Priority Land Use area. Traditional and Non-Traditional Track 2 Permittees shall address 100 percent of selected area, or locations and land use area generating substantial amounts of trash.

4. Track 2 Permittees may receive partial trash reduction credit for area treated by other treatment controls, and institutional Controls where trash generation has been reduced using either the On-land Visual Trash Assessment methodology or an equivalent empirical approach approved by the Regional Water Board Executive Officer.
5. Track 2 permittees shall calculate trash reduction using the method shown in section H11.
6. New Permittees may request approval of alternative first and second Trash Reduction Milestones for review and approval by the Regional Water Board Executive Officer. Requests shall include justification. Upon approval, Permittees shall comply with the approved alternative milestones.

H14. TRASH REDUCTION MILESTONES FOR NEW REGULATED LAND USES

New Regulated Land Uses must be in compliance with the requirements of this Order within five years unless an alternative time schedule order, not to exceed 10 years, is established or approved by the applicable Regional Water Board Executive Officer.

H15. INSPECTION AND MAINTENANCE REQUIREMENTS

Permittees shall ensure that Certified Full Capture Systems are inspected and maintained at a frequency sufficient to maintain design hydraulic capacity to trap trash for peak flow rates as described in section H4 during any storm event. Permittees shall also inspect and maintain other treatment controls and institutional controls that achieve Full Capture System Equivalency. Inspections and maintenance requirements may be incorporated into a Permittee's existing inspection and maintenance program.

1. General Inspection and Maintenance Requirements.

Permittees shall:

- a. Develop an individual inspection and maintenance schedule appropriate for each Certified Full Capture System that ensures the Certified Full Capture System maintains its design treatment capacity to trap trash for peak flow rates, as described in section H4.
- b. Adjust the inspection and maintenance schedule for any Certified Full Capture System based on information gained from inspections (described in section H15) to maintain trash treatment capacity for peak flow rates as described in sections H4; and

- c. Include the inspection and maintenance schedule for each Certified Full Capture Systems in the Trash Implementation Inventory.
2. Certified Full Capture System Minimum Inspection and Maintenance Requirements.

The minimum inspection and maintenance requirements for each Certified Full Capture System are as follows:

- a. Track 1 Permittees shall conduct inspections at least twice per reporting year at all locations and perform maintenance as needed. The first inspection and maintenance shall be scheduled within two months prior to November 1. The second inspection and maintenance shall be scheduled during the wet season (October – May). Based on inspection and maintenance results, the Permittee shall adjust the inspection frequency as needed to ensure that each Certified Full Capture System functions as designed.
 - b. Track 2 Permittees shall perform inspections and conduct maintenance as needed at all locations with installed Certified Full Capture Systems at least:
 - 1) Once per reporting year for areas with moderate trash generation, and
 - 2) At least twice per reporting year for areas with high and very high trash generation.
 - c. If any Certified Full Capture System (other than systems certified as High Flow Capacity Trash Full Capture Systems by the State Water Board Executive Director) is found to have a screen that is 50 percent or more blinded, or is 50 percent full or more, full of trash and debris, then the inspection and maintenance frequency shall be increased so that the system is neither 50 percent or more blinded nor 50 percent or more full of trash and debris at the next inspection or maintenance event.
 - d. If any high-flow capacity Certified Full Capture Systems, as designated by the State Water Board Executive Director, is found to be failing to maintain design treatment capacity, the Permittee shall increase the inspection and maintenance frequency to ensure that the Certified Full Capture System maintains design treatment capacity prior to the next inspection and maintenance event.
3. Categorically Certified Multi-Benefit System Maintenance

- a. Permittees shall inspect and maintain Categorically Certified Multi-Benefit Systems with the same frequency as described above in item 2 of section H15.
 - b. Permittees shall ensure trash accumulation in Categorically Certified Multi-Benefit Systems does not inhibit their design treatment capacity to infiltrate or treat stormwater at the design peak flow rate; and
 - c. The maintenance frequency shall be increased, as necessary, to ensure the Categorically Certified Multi-Benefit System maintains its functionality to trap trash in accordance with section H4.
4. Other Treatment Controls and Institutional Controls Maintenance
- a. Permittees shall inspect locations and areas where other treatment controls and institutional controls have been implemented with the same frequency as described in item 2 of section H15; and
 - b. The maintenance frequency shall be increased, if necessary, to ensure that other treatment controls and institutional controls achieve Full Capture System Equivalency.

H16. REGIONAL BOARD DETERMINATIONS

Where the Permittee has jurisdictional authority to implement trash controls:

1. The Regional Water Board Executive Officer may determine that any land use or location generates substantial amounts of trash and may require the relevant Permittees to implement Certified Full Capture Systems or achieve Full Capture System Equivalency for the identified land uses or locations.
2. The Regional Water Board Executive Officer may require that permittees submit information about any identified land uses or locations (e.g., parks, stadia, schools, campuses, or roads leading to landfills) prior to the determination.
3. If the Regional Water Board Executive Officer determines that a land use or location generates substantial amounts of trash, the Executive Officer shall require implementation of Certified Full Capture Systems or achievement of Full Capture System Equivalency for the land uses or locations in accordance with a schedule for full compliance as deemed appropriate by the Executive Officer.

4. If the Permittee disagrees with the Executive Officer's determination or proposed schedule, the Permittee may dispute the determination to the State Water Board Executive Director in accordance with the provisions of this Order relating to Dispute Resolution.
5. Following determination and any Dispute Resolution process, if applicable, the Permittee shall include the areas in the Trash Implementation Inventory and Trash Generating Map and address these areas in the Trash Implementation Plan.
6. The Regional Water Board Executive Officer's schedule for full compliance for the specific land uses or locations (e.g., parks, stadia, schools, campuses, or roads leading to landfills) that generate substantial amounts of trash shall not be more than ten years from the date of the Regional Water Board Executive Officer's determination or finalization of the Dispute Resolution process, if applicable.

H17. ANNUAL TRASH MONITORING REPORT

The Annual Trash Monitoring Report covers the period starting with July 1 and ending on June 30 of each year. The Annual Trash Monitoring Report is due on October 15 of each year, which shall be submitted annually in accordance with the Reporting Items in section H18. All Permittees shall submit their Annual Trash Monitoring Report to SMARTS, which shall include the following information in each Annual Trash Monitoring Report:

1. All Track 1 and Track 2 Permittees shall:
 - a. Annually review, update any changes, and upload to SMARTS the Trash Generation Map.⁹ If no changes are required after review, the Permittee shall state this in its Annual Trash Monitoring Report. The Trash Generation Map shall indicate the year of each annual review;
 - b. Include Certified Full Capture Systems installed in the previous reporting year, their GIS-mapped locations, and the individual and cumulative area addressed;
 - c. Include Certified Full Capture Systems to be installed in the next reporting year, their GIS-mapped locations, and the individual and cumulative area to be addressed;

⁹ See State Water Board's 13383 Water Code Order dated June 1, 2017, which required submittal of a baseline/initial Jurisdictional Map by December 1, 2018.

- d. Include the total number of installed Certified Full Capture Systems and cumulative area addressed to date;
 - e. Include a certification that each installed Certified Full Capture System is operated and maintained to consistently achieve compliance with sections H4;
 - f. Include progress toward compliance with milestones described in sections H11 through H14; and
 - g. Include, if applicable, a description and timeline to address deficiencies in achieving the applicable trash reduction milestones
2. Additional reporting for Track 2 Permittees:
- a. Other treatment controls and institutional controls implemented in the previous reporting year, their locations, and individual and cumulative area addressed;
 - b. Other treatment controls and institutional controls to be implemented in the following reporting year, their locations, and individual and cumulative area to be addressed;
 - c. Total area addressed by other treatment controls and institutional controls;
 - d. The effectiveness of the implemented combinations of other treatment controls, and institutional controls in meeting Full Capture System Equivalency as required in section H10;
 - e. A summary of the annual trash assessments required in H.8 including the number and dates of the annual assessments;
 - f. The decrease in the amount of trash discharged from the areas where Certified Full Capture Systems, combinations of other treatment controls, and institutional controls have been implemented as compared to the previous reporting year; and
 - g. Where information is readily available, the decrease in the amount of Trash in the Permittee's receiving waters from the previous year.
3. Track 2 Permittees shall include calculation results from implementing the Formula to Calculate Yearly Decrease in Trash – Track 2 Permittees, provided in section H11.

H18. SCHEDULE AND REPORTING ITEMS

The reporting year starts on July 1 and ends on June 31 of each year. October 15 of each year is the due date for submitting the Annual Monitoring Report and Trash Generation Map to SMARTS. Other due dates are listed below as follows:

1. Track Selection Schedule

- a. **Within 60 days of enrollment** under this Order, New Permittees listed in Order Attachment B shall select and upload to SMARTS a letter documenting their selected compliance track (i.e., Track 1 or Track 2). It shall be retained according to the Records Retention requirements in section H19.
- b. **Within 60 days of designation**, New Permittees designated after the effective date of this Order shall submit a letter to SMARTS identifying its selected compliance track (either Track 1 or Track 2). It shall be retained according to the Records Retention requirements in section H19.
- c. Track change may be submitted to SMARTS according to section H5. It shall be retained according to the Records Retention requirements in section H19.

2. Trash Assessment Plan: Track 2 and Non-Traditional Track 1 Permittees

Permittees shall retain their Trash Assessment Plan according to the Records Retention requirements in H19.

- a. **Within 90 days of the effective date** of this Order, each Non-Traditional Renewal Permittee selecting Track 1 shall prepare its Trash Assessment Plan. Thereafter the Trash Assessment Plan shall be updated each reporting year as necessary.
- b. **Within 90 days of designation**, New Permittees selecting Track 2 and New Non-Traditional Permittees selecting Track 1 shall prepare their Trash Assessment Plan. Thereafter the Trash Assessment Plan shall be updated each reporting year as necessary.

3. Trash Implementation Inventory: Acres Treated and Acres Remaining

The Trash Implementation Inventory shall be retained according to the Record Retention requirements in section H19.

- a. **Within 180 days of the effective date** of this Order, Renewal and New Permittees listed in Order Attachment B shall prepare an initial Trash Implementation Inventory.

- b. **Within 180 days of designation**, New Permittees designated after the effective date of this Order shall prepare an initial Trash Implementation Inventory.

4. Trash Generation Maps

- a. **Within 180 days of the effective date of this Order**, Renewal and New Permittees listed in Order Attachment B shall prepare and submit their Trash Generation Map to SMARTS. Thereafter, the Permittees shall submit annual updates to Smarts by October 15.
- b. **Within 180 days of designation**, New Permittees designated after the effective date of this Order shall prepare and submit an initial Trash Generation Map to SMARTS. Thereafter, the Permittees shall submit annual updates to Smarts by October 15.

- c. Trash Generation Maps After Changing Tracks

Within 180 days of changing Tracks, Permittees shall submit their Trash Generation Map via SMARTS. Thereafter, the Permittees shall submit annual updates to Smarts by October 15.

5. Trash Implementation Plan

Track 2 Permittees shall upload to SMARTS and thereafter retain their Trash Implementation Plan according to the Records Retention schedule in section H19.

- a. **Within 180 days of the effective date** of this Order, Track 2 renewal Permittees listed in Order Attachment B shall review and update as necessary their initial Trash Implementation Plan.
 - 1) Track 2 Renewal Permittees that have reviewed and not needed to update their initial Trash Implementation Plan submitted under the State Water Board Water Code Order 13383 shall retain their initial Trash Implementation Plan and annual updates according to the Record Retention requirements.
 - 2) Track 2 Renewal Permittees that have revised their initial Trash Implementation Plan submitted under the State Water Board Water Code Order 13383 shall upload it to SMARTS within 180 days of the effective date of this Order. Thereafter, their Trash Implementation Plan shall be retained according to the Records Retention requirements in section H19.

- b. **Within 180 days of the effective date** of this Order, new Track 2 Permittees listed in Order Attachment B shall prepare their Trash Implementation Plan and upload it to SMARTS. Thereafter, their Trash Implementation Plan shall be retained according to the Records Retention requirements in section H19.
 - c. **Within 180 days of designation**, New Track 2 permittees designated by the State Water Board after the effective date of this Order, shall prepare and submit their Trash Implementation Plan to SMARTS. Thereafter, their Trash Implementation Plan shall be retained according to the Records Retention requirements in section H19.
6. Notice to Vector Control
- By October 15 of each year**, all Permittees shall annually provide their local vector control agencies with the name and location of existing Certified Full Capture Systems and proposed Certified Full Capture Systems that will be installed during the following reporting year.
7. **By October 15 of each year**, Permittees shall upload their Annual Trash Monitoring Report via SMARTS per the schedule in this Attachment.

H19. RECORD RETENTION

The Permittees shall retain records required under this Attachment and as required under Order section 16 (Standard Provisions – Records). Upon request by the State and/or Regional Water Board, Permittees shall make records available. All Permittees shall retain the following records, as applicable for their choice of Track 1 or Track 2:

1. Current Trash Implementation Inventory;
2. Initial, annually updated, and current Trash Generation Maps;
3. Current Trash Implementation Plan;
4. Trash Assessment Plan;
5. Inspection and maintenance records including any inspection and maintenance schedules as required in H15; and
6. All supporting calculations, background information, and reference information used to support the development and assessment of the above.

ATTACHMENT I – ALTERNATIVE COMPLIANCE OPTIONS FOR STORMWATER CAPTURE

OVERVIEW

This Attachment provides optional alternatives as methods to comply with stormwater capture.

I1. GENERAL REQUIREMENTS

I1.1 Authorization

1. This Order authorizes the implementation of on-site and off-site alternative compliance options for stormwater capture (referred to together as the Compliance Options and separately as the On-Site and Off-Site Compliance Options) as methods for compliance with this Order's requirements specified in section I1.2, below.
2. On-Site Compliance Options are owned and operated by the Permittee, are located completely within the Permittee's jurisdiction.
3. Off-Site Compliance Options are not located fully within the Permittee's jurisdiction, may receive runoff from multiple and separate entities, and require legal agreements between these entities.
4. The Compliance Options are optional. Permittees are not required to implement either of the Compliance Options.
5. All Compliance Option proposals are subject to Regional Water Board Executive Officer approval. The applicable Regional Water Board Executive Officer shall provide at least a 30-day public notice to obtain written comments prior to the approval of a Compliance Option. Any necessary approvals by local jurisdiction representatives must be obtained and submitted to the Regional Water Board Executive Officer prior to approval of an Off-Site Compliance Option.

I1.2 Compliance Incentives

The following applies to areas of the Permittee's jurisdiction draining to the stormwater capture best management practices (once the best management practices are implemented and operational).

I1.2.1 Compliance

The Permittee is in compliance with Effluent Limitations, section 6.1, regarding compliance with the maximum extent practicable standard, if the Permittee is

in compliance with this attachment (Attachment I) and all other applicable requirements of this Order.

I1.2.2 Deemed Compliance

The Permittee is deemed in compliance with the following sections of this Order if the Permittee is in compliance with this attachment and all other applicable requirements of this Order, :

1. Discharge Prohibitions, section 5.1 (Maximum Extent Practicable), section 5.4 (Exceedances of Water Quality Objectives and Standards) and section 5.5 (Pollution or Nuisance);
2. Effluent Limitations, section 6.2 regarding TMDL wasteload allocations;
3. Receiving Water Limitations, sections 7.1 (Implementation of Receiving Water Limitations) and 7.2 (Total Maximum Daily Loads).

I1.2.3 Exemptions

The Permittee is exempt from the following sections in the Permittee's respective attachment (D or E) of this Order if the Permittee is in compliance with this attachment and all other applicable requirements of this Order,:

1. TMDL Demonstration of Compliance (D7 and E7);
2. Water Quality Monitoring (D8 and E8);
3. Total Maximum Daily Loads Compliance Reporting (D10.8 and E10.8); and
4. Water Quality Monitoring Reporting (D10.9 and E10.9).

I1.3 Failure to Comply

If the Permittee fails to comply with the requirements of this attachment and all other applicable requirements of this Order, the Permittee will no longer be in compliance with Section 6.1 on the basis of its implementation of a Compliance Option, deemed in compliance with the sections identified in Section I1.2.2, nor exempt from the sections identified in Section I1.2.3.

I2. COMPLIANCE OPTION IMPLEMENTATION REQUIREMENTS

I2.1 Implementation Requirements

1. The Permittee may discharge to a stormwater capture best management practice for capture and use, infiltration, and/or evapotranspiration of municipal stormwater and authorized non-stormwater discharges.
2. The stormwater capture best management practices must meet the design criteria of section I3.

3. The municipal stormwater and authorized non-stormwater discharges must not discharge to a water of the U.S., water of the state, or, in the case of an Off-Site Compliance Option, MS4 not party to the relevant implementation agreement prior to reaching the stormwater capture best management practices.
4. The Permittee may include best management practices that capture and divert the required stormwater runoff volumes to a publicly-owned sanitary sewer treatment facility, an on-site facility for on-site use, a regional reclaimed water distribution system, or a combination thereof. Proposed discharges to a publicly-owned sanitary sewer or reclaimed water distribution system shall be supported by a permit (WDR or NPDES) approved by the State or regional water board.
5. The Permittee shall ensure that groundwater is protected, as described in section I4 below.
6. The Permittee shall implement measures to ensure the design standards are maintained for the life of the best management practices and, as appropriate, include reliability and safety factor calculations.

I2.2 Future Post-Construction Requirements

1. The Permittee shall ensure that any future construction within the area of its jurisdiction draining to a stormwater capture best management practice being used to meet the requirements of these Compliance Options does not increase the amount of runoff from that drainage area beyond the designed capacity of its stormwater capture best management practices and/or the capacity allotted to the Permittee as part of an Off-Site stormwater capture best management practice.
2. The Permittee may use the designed capacity of its stormwater capture best management practices and/or the capacity allotted to the Permittee as part of an off-site stormwater capture best management practice to comply with post-construction water quality and retention requirements for future Small Projects and Regulated Projects per the Post-Construction Stormwater Management Program (sections D6 for Traditional and E6 for Non-traditional permittees), i.e., the Permittee may build a stormwater capture best management practice or enter into a legal agreement to attain an allotment from an Off-Site best management practice with additional capacity to account for future development in a drainage area.
3. Permittees implementing provision D6.11 Alternative Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes shall ensure future development and

re-development comply with those provisions if not provided in full by the stormwater capture best management practice.

I2.3 Additional Off-Site Compliance Option Requirements

1. The Permittee may enter into a local agreement with other entities to participate in the development, implementation, and operation of an off-site stormwater capture and/or infiltration best management practice (Off-Site best management practice).
2. The Permittee shall work with the other entities to define participation in the development, implementation, operation of and responsibility for the Off-Site best management practices.
3. The Permittee and other entities shall ensure the agreement includes applicable protections for waters of the state per section I4.

I3. DESIGN CRITERIA

I3.1 General Design Criteria

1. Compliance Option best management practices shall:
 - a. Maintain the effective capacity to capture, infiltrate and/or evapotranspire the volume of runoff produced by rainfall events up to and including the 85th percentile 24-hour precipitation event based upon local, historical precipitation data and records for the entire drainage area claiming Compliance Option credit for the stormwater capture best management practices;
 - b. Be designed to capture, infiltrate, and/or evapotranspire drainage for only the following water sources;
 - i. Municipal stormwater runoff; and
 - ii. Authorized non-stormwater discharges as defined in section 5.8.1 of this Order;
 - c. Be designed with sufficient drawdown time or capacity to receive another design storm 24 hours after cessation of the prior storm event.
 - d. Be designed to drain from full to empty if no inflows are occurring, considering any relevant safety factors.
2. The Permittee shall implement measures to ensure the design standards for the life of the best management practices are maintained, and as appropriate, include reliability and safety factor calculations.
3. A Permittee implementing infiltration best management practices may include a shutoff mechanism (e.g., a valve that diverts a discharge from

entering the best management practices) in the design and implementation of infiltration best management practices. If including a shutoff mechanism is infeasible for a best management practice, appropriate spill prevention and response procedures and training shall be implemented.

I3.2 Certification by the California Registered Civil Engineer

A California registered civil engineer shall certify the following with stamp and wet signature. Certifications shall document the following:

1. Compliance with hydrologic analyses, hydraulic calculations, and best management practices and operation parameters in section I3.
2. Compliance with water quality requirements in section I4.
3. Design of best management practices safety factor and reliability calculations required in section I3.
4. Approval of the operation and maintenance plan.

I4. PROTECTION OF WATERS OF THE STATE

1. Discharges from the following sources are prohibited for any Permittee complying with a Compliance Option:
 - a. Water related to the cleaning and maintenance of the stormwater capture best management practice and,
 - b. Municipal storm water and non-storm water that should be captured through proper design and operation of the best management practice. -
2. The migration of pollutants that cause or contribute to the exceedance of a water quality objective in groundwater is prohibited. The Permittee shall ensure infiltration best management practices implemented for compliance with this attachment are designed and operated to:
 - a. Prevent captured and/or infiltrated stormwater from causing or contributing to the exceedance of a water quality objective in groundwater;
 - b. Prevent the migration of existing soil contamination to groundwater and not interfere with any active remedial activities for existing groundwater contamination in the vicinity of the stormwater capture best management practice; and,
 - c. Address other similar factors which may degrade groundwater.
3. Infiltration and Groundwater Protection
 - a. Infiltration best management practices shall not cause or contribute to an exceedance of an applicable groundwater quality objective.

- b. Infiltration best management practices used for compliance with this attachment shall comply with applicable local municipal ordinances, stormwater requirements, and design standards for the infiltration of stormwater and authorized non-stormwater discharges.
 - c. The soil through which infiltration occurs must have physical and chemical characteristics necessary to support infiltration rates and stormwater treatment to meet the compliance storm standards in this attachment.
4. Monitoring
- a. The Permittee shall propose a monitoring plan, consisting of sampling bypass/overflow from the Compliance Option best management practices at least once per permit term to demonstrate that discharges from the best management practices are not causing or contributing to an exceedance of a water quality standard or water quality objective, causing or threatening to cause a condition of pollution or nuisance, or are otherwise not in compliance with an applicable receiving water limitation.
 - b. If the Permittee determines, following implementation of a Compliance Option, that discharges from its MS4 are causing or contributing to an exceedance of a water quality standard or water quality objective, causing or threatening to cause a condition of pollution or nuisance, or are otherwise not in compliance with an applicable receiving water limitation, the Permittee shall implement additional control measures as necessary to reduce the pollutants in its discharge to the maximum extent practicable in compliance with the procedures specified in Order section 7.1. So long as the Permittee is implementing these procedures, it shall retain its deemed compliance status as detailed in section I1.2.2 of this Attachment.

I5. REGIONAL WATER BOARD AUTHORITIES

To address exceedances of applicable water quality objectives or to otherwise protect waters of the state, including groundwater, within its jurisdiction, the applicable Regional Water Board Executive Officer may review site-specific information, require additional information, require the Permittee to implement additional best management practices, or require modifications to or disapprove any infiltration best management practice as a permissible Compliance Option for the Permittee.

The State Water Board Executive Director or the applicable Regional Water Board Executive Officer may require monitoring of the infiltrated water if deemed to be a threat to groundwater.

I6. REPORTING REQUIREMENTS

I6.1 Design Reporting Requirements

The Permittee shall submit the following information via SMARTS 30 days prior to the initial operation of the best management practice:

1. Implementation Approach – The Permittee shall describe the approach for achieving the capture requirements and multiple benefits, including how it will incorporate effective technologies, approaches, and practices, including green infrastructure and how it will protect groundwater.
2. Quantification – The Permittee shall demonstrate the following for Compliance Option projects:
 - a. The delineation of catchments/watersheds draining to the planned and/or implemented Compliance Option best management practice, and
 - b. The Compliance Option best management practice design, with operation and maintenance, will retain design-storm volumes and function in perpetuity.
 - c. Bypass mechanisms for the discharged volume that is above and beyond the 85th percentile, 24-hour storm, into a local municipal storm system or receiving surface water body.
3. Applicable information on any preexisting contamination in the soil or groundwater for any pollutants at the site of the Compliance Option best management practice that may be discharged or mobilized through infiltration to meet the protections in Section I4.
4. Operation and maintenance – For each Compliance Option best management practice, the Permittee shall record the parcels where infrastructure for Compliance Option projects are constructed, operation and maintenance plans and agreements certified by the California licensed civil engineer that includes but is not limited to, the following items:
 - a. Inspection frequency;
 - b. Titles of personnel authorized to conduct the best management practices inspections;
 - c. Maintenance procedures for best management practices and installed pretreatment;
 - d. Maintenance schedule;
 - e. Latitude(s) and longitude(s) of best management practices;

I6.2 Schedule

1. Schedule –The Permittee shall include a schedule for full implementation of the Compliance Option. The Permittee may propose a schedule that exceeds the permit term. If the schedule exceeds the implementation schedule specified in an applicable TMDL identified in the Fact Sheet (Attachment B), the Permittee shall request a time schedule order as specified in section G2.4. The Compliance Option schedule must be updated to be consistent with any time schedule order.
2. Short-Term Schedule – The Permittee shall include a detailed short-term implementation schedule (including design and construction phases for retention facilities) for years three and five of the permit term. If the term of the permit is extended, the Permittee shall submit a second detailed short-term schedule for years six and ten.
3. Financial Strategy – The Permittee shall outline its funding procurement and management strategy to support project development and long-term maintenance and lifecycle costs.

I6.3 Off-Site Compliance Reporting Prior to Operation

Permittee's participating in an off-site Compliance Option shall additionally submit the following via SMARTS seven days prior to the initial operation:

1. Copies of the Permittee's approved agreements with other entities to implement the Off-Site Compliance Option;
2. A copy of the Permittee's approval from the Regional Water Board Executive Officer;
3. Information on, and description of, the actions the Permittee must take during the development, implementation, and operation of the Off-Site best management practices, as established in the approved agreement, that allows the municipality's stormwater discharge to enter an Off-Site best management practice; and
4. A copy of the operation and maintenance plan(s) for the Off-Site best management practices that receive the municipality's discharge.

I6.4 Off-Site Compliance Annual Reporting

A Permittee implementing the Off-Site Compliance Option shall submit and certify via SMARTS the following information as part of the Annual Report to document the status of the local agreement project(s) and implementation progress:

1. Proof that participation in the local agreement is still valid, such as a copy of the current permit or the current authorization in writing from the system's agency that specifically allows the proposed stormwater flow rates;
2. Identification of the other entities that are part of the agreement, including a contact name, title, email, and phone number of the local representative;
3. Summary of actions (including, but not limited to, monitoring, structural best management practices installation and maintenance, non-structural best management practices implementation, training) completed per the local agreement(s) during the reporting year;
4. Summary of actions (including, but not limited to, monitoring, structural best management practices installation and maintenance, non-structural best management practices implementation, training) planned per the local agreement(s) for implementation over the next two years to comply with the agreement with the local jurisdiction; and,
5. Any updates to the implementation schedule per the local agreement(s).

ATTACHMENT J – ACRONYMS, ABBREVIATIONS, AND GLOSSARY

Acronyms and Abbreviations

ASBS	Area of Special Biological Significance
CASQA	California Stormwater Quality Association
CEDEN	California Environmental Data Exchange Network
C.F.R.	Code of Federal Regulations
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
GIS	Geographic Information System
HCH	Hexachlorocyclohexane
LID	Low Impact Development
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
OP	Organophosphate pesticide
PAH	Polycyclic Aromatic Hydrocarbon
PCBs	Polychlorinated Biphenyls
QAPP	Quality Assurance Project Plan
QSD	Qualified SWPPP Developer
QSP	Qualified SWPPP Practitioner
SMARTS	Stormwater Multiple Application and Report Tracking System
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load

USEPA	United States Environmental Protection Agency
Water Code	California Water Code

Glossary

Area of Special Biological Significance (ASBS) – an area designated by the State Water Board as ocean area requiring protection of species or biological communities to the extent that maintenance of natural ocean water quality is assured.

At the Point of Discharge(s) – as used in the context of discharges to ASBS, in the surf zone immediately where runoff from an outfall meets the ocean water (a.k.a., at point zero).

Beneficial Uses – 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.

California Ocean Plan – the statewide water quality control plan for California near-coastal waters adopted by the State Water Board. The California Ocean Plan serves as statewide regulations to protect the beneficial uses and water quality of ocean water, adjacent coastal water bodies, and Areas of Special Biological Significance.

Catch Basin – a sump that captures a portion of the sediment, debris and other pollutants prior to discharging stormwater and dry weather flows to the storm drain system.

Catchment – an area of land where water collects when it rains, often bounded by hills.

Construction Site – the site of 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.

Core Discharge Monitoring – ASBS monitoring of stormwater effluents from the stormwater outfalls at the priority discharge locations.

Chlordane – the sum of chlordane-alpha, chlordane-gamma, chlordane-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

DDT – the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

Dichlorobenzenes – the sum of 1,2- and 1,3-dichlorobenzene.

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 a Permittee's jurisdiction that discharges waste.

Dry Weather – a season where prolonged dry periods occur; it usually corresponds to the period between May and September.

Effective Date of Designation – the effective date of the permit in which the entity is designated as a permittee.

Endosulfan – the sum of endosulfan-alpha and -beta and endosulfan sulfate.

Erosion – the physical detachment of soil due to wind or water.

Erosion Control Measures – measures used to minimize soil detachment.

eRule – USEPA's Electronic Reporting Rule that modernizes reporting under the Clean Water Act. The rule requires entities regulated under the Clean Water Act to report information electronically instead of filing paper reports. The rule also requires that regulatory authorities share data electronically with USEPA. (USEPA, [National Pollutant Discharge Elimination System \(NPDES\) Electronic Reporting Rule, Final Rule](#)).

Exceedances of Natural Ocean Water Quality – if results of post-storm receiving water quality testing at an ASBS indicates 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.

Full Capture System – a treatment control, or series of treatment controls, including but not limited to, a multi-benefit project or a low-impact development control that traps all particles that are 5-millimeters or greater, and has a design treatment capacity that is either:

1. Of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the sub-drainage area, or
2. Appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: $Q = C \cdot I \cdot A$, where Q = design flow rate (cubic feet per second); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = sub-drainage area (acres).]

To be considered a Full Capture System, the treatment control or series of treatment controls must be certified as a Full Capture System by the State Water Board Executive Director. Certified Full Capture systems are listed on the [State Water Board's Trash Implementation Program website](http://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html) (www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html).

Full Capture System Equivalency – the trash load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land. The full capture system equivalency is a trash load reduction target that the treatment quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of State Water Board Executive Director.

Full Depth Reclamation – a pavement rehabilitation technique in which the full thickness of the asphalt pavement, a portion of the underlying layers, and a small percentage of added cement are pulverized to provide a homogeneous pavement material.

Halomethanes – the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

HCH – the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

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 – cutting and/or filling of the land surface to a desired slope or elevation.

Hotspot – 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.

Illicit Discharge – any discharge to a municipal separate storm sewer system that is not composed entirely of storm water except discharges pursuant to an NPDES permit.

Impaired Waterbody – a waterbody with chronic or recurring monitored violations of the applicable numeric or narrative water quality criteria. An impaired water is either listed on the California 303(d) list or has not yet been listed but otherwise meets the criteria for listing. The State Water Board [Integrated Report, 303\(d\) List](https://www.waterboards.ca.gov/rwqcb5/water_issues/tmdl/impaired_waters_list) can be found https://www.waterboards.ca.gov/rwqcb5/water_issues/tmdl/impaired_waters_list.

Impervious Surface – a surface covering or pavement of a developed parcel of land that prevents the land's natural ability to absorb and infiltrate 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.

Linear Underground/Overhead Projects (LUPs) – includes, 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), liquescent, 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 (LID) – 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, 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.

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.

Method Detection Limit (MDL) – the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. Part 136 Appendix B.

Minimum Level (ML) – the concentrations at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes and processing steps have been followed.

Multi-Benefit Project – a treatment control project designed to achieve any benefits per section 10562(d) of the Water Code. Examples include projects to infiltrate, recharge or store stormwater for beneficial reuse; develop or enhance habitat and open space through stormwater and non-stormwater management; and reduce stormwater and non-stormwater runoff volume.

Municipal Separate Storm Sewer System (MS4) – "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 C.F.R. 122.2." (40 C.F.R. 122.26(b)(8).)

In practical terms, operators of MS4s can include municipalities and local sewer districts, state and federal departments of transportation, public universities, public hospital complexes, military bases, and correctional facility complexes. 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 programs. 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 ocean 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). Natural ocean water quality is determined from the ocean reference area monitoring.

New Development and Redevelopment – new development is 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. Redevelopment is 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. New development projects involve no alteration of existing impervious surface. Redevelopment projects may either entirely involve alteration of existing impervious surface or some alteration of existing impervious surface alongside addition of new impervious surface.

Non-Traditional Small MS4 – Small MS4s owned or operated by entities other than traditional cities or counties, such as state/federal departments of transportation (DOTs), universities, prisons, hospitals, military bases, and parks.

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. ([Water Code](#), section 13050.)

Organophosphate Pesticides – a class of insecticides that includes chlorpyrifos, diazinon, and malathion.

Outfall – a point source as defined by 40 C.F.R. 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.

PAHs (polynuclear aromatic hydrocarbons) – the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzo fluoranthene, benzo[k]fluoranthene, 1,12-benzo perylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indenol[1,2,3-cd]pyrene, phenanthrene and pyrene

Parking Lot – land area or facility for the parking or storage of motor vehicles used for business, commerce, industry, or personal use.

Polychlorinated biphenyls – the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

Permanent Stormwater Control Measure – 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 but is not limited to landscape-based systems such as vegetated filter strips and swales, bioretention units, infiltration trenches and basins, as well as proprietary systems.

Permittee – an entity named in and subject to the requirements of this General Permit.

Pervious Pavement – pavement that stores and infiltrates rainfall at a rate that exceeds conventional pavement and that is not considered an “impervious surface” per the definition above.

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.

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.

Porter-Cologne Water Quality Control Act – the part of the Water Code that governs water quality regulation in California, established to protect water quality and beneficial uses. It applies to surface water, groundwater, and wetlands, and point source and nonpoint sources of pollution.

Potable Water – water that is safe for domestic use, drinking, and cooking.

Priority Land Uses – developed sites, facilities, or uses (i.e., not simply zoned land uses) within a municipal separate stormwater sewer system permittee’s jurisdiction from which discharges of Trash are regulated by the Trash Provisions as follows:

1. **High-Density Residential:** Land uses with at least ten (10) developed dwelling units/acre.
2. **Industrial:** Land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
3. **Commercial:** Land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.).
4. **Mixed Urban:** Land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
5. **Public Transportation Stations:** Sites where public transit agencies’ vehicles

load or unload passengers or goods (e.g., bus stations and stops).

Receiving Water – surface water that receives regulated and unregulated discharges from activities on land.

Redevelopment – see “**New Development** and **Redevelopment**”.

Reference Area – a watershed or waterbody segment determined or approved by the Water Board to be minimally disturbed by anthropogenic stresses but otherwise is representative of conditions of the assessed site, watershed, or water body segment.

Regulated Project – refers to projects subject to the new and redevelopment standards in this Order.

Regulated Small MS4 – a Small MS4 that discharges to a water of the United States 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.

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.

Small Municipal Separate Storm Sewer System – from 40 C.F.R. §122.26(b)(16) and (17):

(16) Small municipal separate storm sewer system means all separate storm sewers that are:

(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, or an Indian tribe or an authorized Indian tribal organization, or a designated and

approved management agency under section 208 of the CWA that discharges to waters of the United States.

(ii) Not defined as “large” or “medium” municipal separate storm sewer systems pursuant to [paragraphs \(b\)\(4\)](#) and [\(b\)\(7\)](#) of section 40 C.F.R 122.26(b), or designated under [paragraph \(a\)\(1\)\(v\)](#) of 122.26(b).

(iii) This term 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. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

(17) Small MS4 means a small municipal separate storm sewer system.

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.

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 – 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 Season – the months of the year from the onset of rainfall during autumn until cessation of rainfall in the spring. Also referred to as rainy season.

Storm Sewer System Asset Management – the practice of managing stormwater infrastructure capital assets to minimize the total cost of owning, managing and operating the systems.

Stormwater – water from rain or snowmelt that flows over land or impervious surfaces and does not percolate into the ground.

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.

Surf Zone – the submerged area between the breaking waves and the shoreline at any one time.

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 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.

Trash Provisions – Amendment to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) to Control Trash and Amendment to Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The Trash Provisions establish a narrative water quality objective for trash and provide implementation requirements for permitted dischargers.

Treatment – any method, technique, or process designed to remove pollutants and/or solids from polluted storm water runoff, wastewater, or effluent.

Urban Areas –Densely developed areas identified by the US Census and used to identify MS4s to be regulated by NPDES permits.

The Census Bureau’s urban areas represent densely developed territory, and encompass residential, commercial, and other non-residential urban land uses. The Census Bureau delineates urban areas after each decennial census by applying specified criteria to decennial census and other data.

For the 2020 Census, an urban area comprises a densely settled core of census blocks that meet minimum housing unit density and/or population density requirements. This includes adjacent territory containing non-residential urban land uses. To qualify as an urban area, the territory identified according to criteria must encompass at least 2,000 housing units or have a population of at least 5,000.

The universe of regulated Small MS4s automatically expands every 10 years based on where population growth has concentrated in certain areas of the country as identified by each decennial census.

In a June 2023 final rule, USEPA clarified that new Small MS4 designations will be based on whether the previously unregulated MS4s are located in urban areas with a population of 50,000 or more people. The clarification was necessary because the designation criteria in the Phase II regulations had previously been based on the location of “urbanized areas” (defined as urban areas with a population of 50,000 or more people), and the Census Bureau announced in March 2022 that it would no longer provide mapping information on such urbanized areas. The final rule ensures that the automatic designation criteria for MS4s remains the same as it has since the start of the Phase II program.

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) – a Regional Water Board’s master water quality control planning document that serves as the principal set of regulations for protection of water quality in a specific region. 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, USEPA, 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 USEPA-approved water quality standards for waterbodies. Water quality standards include three components:

- The designated use of the waterbody (e.g., recreation, public drinking water supply, protection of and propagation of fish, shellfish, and wildlife);
- Water quality criteria that must be met to protect designated uses (i.e., identifying pollutant levels or conditions that support the designated uses); and
- Federal and state anti-degradation policy. Antidegradation requirements provide a framework for maintaining and protecting water quality that has already been achieved.

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.