

## **ATTACHMENT G – TOTAL MAXIMUM DAILY LOAD IMPLEMENTATION, COMPLIANCE, AND REPORTING REQUIREMENTS**

### **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:

- Technical requirements for best management practices, and
- 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.

### **G1. DESIGN, CONSTRUCTION, AND MAINTENANCE OF BEST MANAGEMENT PRACTICES FOR TMDL POLLUTANT REDUCTION**

The Permittee shall comply with best management practices design, construction, and maintenance requirements in Attachments D (Traditional Permittee Provisions) and E (Non-Traditional Permittee Provisions) of this Order.

### **G2. TMDL REPORTING REQUIREMENTS**

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 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 to 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 time schedule order shall be submitted to the applicable Regional Water Board Executive Officer for review and consideration of approval.

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 Permittees: 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 waters 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.<sup>1</sup>

Final Compliance Deadline: The TMDL does not specify a final compliance deadline for dissolved oxygen and temperature.

TMDL Reporting Requirements: Submit annual reports per section G2, above.

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<sup>1</sup> North Coast Water Board Basin Plan, Chapter 4, section 4.2.10, Table 4-14, [Action Plan for Shasta River Watershed](#)

#### **G4.1.2 Lower Eel River Temperature and Sediment TMDL**

Responsible Permittees: 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.<sup>2</sup>

The North Coast Water Board Sediment TMDL Implementation Plan states that control of sediment discharges shall be implemented through permits.<sup>3</sup> Therefore, Fortuna shall comply with this Order to control sediment discharges to the Lower Eel River.

Final Compliance Deadlines: Final compliance deadlines were not included in the TMDL; therefore, over the term of this Order, the Permittee shall implement actions to comply with this Order.

TMDL Reporting Requirements: Submit annual reports per section G2, above.

#### **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.

##### **G4.2.1 TMDL for Diazinon and Pesticide-Related Toxicity in Urban Creeks**

Responsible Permittees: City of Belvedere, City of Larkspur, City of Mill Valley, City of Novato, City of Petaluma, City of San Rafael, City of Sausalito, City of Sonoma, Town of Corte Madera, Town of Fairfax, Town of Ross, City of San Anselmo, Town of Tiburon, County of Marin, County of Sonoma, City of Benicia

Impaired Water Body: Arroyo Corte Madera del Presidio, Corte Madera Creek, Coyote Creek (Marin Co.), Gallinas Creek, Miller Creek, Novato Creek, San Antonio Creek, San Rafael Creek, Petaluma River, Calabazas Creek, Sulphur Springs Creek.

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<sup>2</sup> See Table 12 of the [Lower Eel River Total Maximum Daily Loads for Temperature and Sediment](#).

<sup>3</sup> North Coast Water Board Basin Plan, Section A, Sediment TMDL Implementation Policy.

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 Monitoring Requirements: 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. The City of Benicia has the additional option to collaborate with Phase I MS4 permittees in Fairfield and Vallejo. For data collected through such collaboration, California Department of Pesticide Regulation’s standard operating procedures and quality assurance/quality control methods may be used in place of the SWAMP comparability requirements for monitoring conducted to 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 resultant change would result in overall improvement of pesticide monitoring data collection.
3. Annual Dry Weather Receiving Water Monitoring - Toxicity in Water Column
  - a. Toxicity Field and Laboratory Methods – Permittees shall collect grab samples of receiving water using applicable SWAMP comparable methodology.
    - i. Samples shall be analyzed for the test organisms and methods listed in Table G4.2.1.a., below.

**Table G4.2.1.a. Toxicity Analytical Procedures**

Test Species	Test Endpoints	Units	U.S. EPA Analytical Method
Pimephales promelas (Fathead Minnow)	Larval Survival and Growth	Pass or Fail using TST, % Effect	EPA-821-R-02-013 EPA 833-R10-003
Ceriodaphnia dubia (Freshwater Crustacean)	Survival <sup>a</sup>	Pass or Fail, % Effect 25% Fails	EPA-821-R-02-013 EPA 833-R-10-003

Test Species	Test Endpoints	Units	U.S. EPA Analytical Method
Ceriodaphnia dubia (Freshwater Crustacean)	Reproduction	Pass or Fail using TST, % Effect	EPA-821-R-02-013 EPA 833-R-10-003
Selenastrum capricornutum (Green Algae)	Growth	Pass or Fail using TST, % Effect	EPA-821-R-02-013 EPA 833-R-10-003
Hyalella azteca (Freshwater Amphipod)	Survival	Pass or Fail using TST, % Effect <sup>b</sup>	EPA-821-R-02-012 EPA 833-R-10-003
Chironomus dilutus (midge)	Survival	Pass or Fail using TST, % Effect <sup>b</sup>	EPA-821-R-02-012 EPA 833-R-10-003

Table Notes

TST is the Test of Significant Toxicity statistical approach.

<sup>a</sup> 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."

<sup>b</sup> 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.

- ii. Toxicity shall be evaluated using the Test of Significant Toxicity (TST) statistical approach. Each sample shall be subject to determination of "Pass" or "Fail" and shall indicate "Percent Effect" from toxicity using non-diluted samples.
  - iii. 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:  $((\text{Mean control response} - \text{Mean sample response}) \div \text{Mean control response}) \times 100$ .
- b. Sample Locations – Permittee’s sample locations may be selected based on locations where toxicity could be likely, to coincide with creek restoration sites, or to resample 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 – Permittees shall collect samples annually in the dry season at least the minimum number of sample sites shown in Table G4.2.1.b.

**Table G4.2.1.b. Annual Dry Weather Water Column Sampling - Minimum Number of Sample Sites and Events per Year**

County Where Permittee is Located	Minimum Number of Sample Sites per Year	Minimum Number of Sampling Events per Year
Marin County	1	1
Napa County	1	1
Sonoma County	1	1
Solano County	1	1

4. Dry Weather Sediment Sampling for Toxicity, Pesticides, and Other Pollutants

- a. Field and Laboratory Methods – The Permittee shall collect grab samples of creek sediment using applicable SWAMP-comparable collection methods. 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 U.S. EPA methods listed in 40 C.F.R. subchapter D, part 136.

**Table G4.2.1.c. Toxicity and Pollutants Analytical Procedures**

Test Species or Pollutant	Units	Analytical Method
Hyalella azteca and Chironomus dilutus survival <sup>a</sup>	Pass/Fail using TST, % Effect <sup>a</sup>	EPA-600/R-99-064
Pyrethroids: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin	ppb	EPA 3540C followed by EPA 8270D by NCI-GCMS
Fipronil and its degradates (fipronil-sulfone, fipronil-desulfinyl, fipronil sulfide)	ppb	EPA 1699
Total PAHs	µg/L	
Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Zinc	µg/L	
Total organic carbon	mg/L	
Grain size	grain-size diameters in millimeters and converted to phi units	

Table Notes

- <sup>a</sup> 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. The false positive rate (beta error) is 0.05 and the negative rate (alpha error) is 0.25 for these test methods.

- b. 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 could be likely, to coincide with bioassessment sites, or to resample a location where toxicity has been found in the past, for example.
- c. Annual Sediment Sampling, Number of Sites, Number of Samples, and Frequency – Permittees shall collect at least the minimum number of sediment samples annually as shown in Table G4.2.1.d:

**Table G4.2.1.d. – Annual Sediment Sampling: Minimum Number of Sites, Number of Samples, and Frequency**

County Where Permittee is Located	Minimum Frequency	Minimum Number of Samples	Minimum Number Sites
Marin County	Once per year	1	1
Napa County	Once per year	1	1
Sonoma County	Once per year	1	1
Solano County	Once per year	1	1

5. Wet Weather Receiving Water 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 G4.2.1.c for pyrethroids, fipronil and degradates, and toxicity. For imidacloprid, permittees shall specify an analytical method that achieves a reporting level of 0.01 ppb
  - i. Pyrethroids: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin;
  - ii. Fipronil and its degradates fipronil-sulfone, fipronil-desulfinyl, fipronil sulfide and fipronil amide (amide is optional – perform if the laboratory offers the suite);
  - iii. Toxicity; and
  - iv. Imidacloprid.
- b. Annual Receiving Water Monitoring Locations and Timing – Permittees shall collect samples annually 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 Receiving Water Monitoring Frequency, Timeframe, and Number of Samples



- i. 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 and a minimum of one (1) sample collected annually.
- ii. If sampling is conducted by collaboration with countywide stormwater programs, the Permittee shall collect at least the minimum number of samples annually as shown in the table, below:

County Where Permittee is Located	Minimum Number of Sampling Events
Marin County	1 per year
Napa County	1 per year
Sonoma County	1 every other year
Solano County	1 every other year

TMDL Implementation Requirements: The Permittee may coordinate with the Bay Area Storm Water Management Agencies Association, the Urban Pesticide Pollution Prevention Project, the Urban Pesticide Committee, and other agencies and organizations 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.

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 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 [ReScope California’s Landscape Maintenance Qualification Training Program](#), provided both structural and landscape pest control training are provided.

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, and 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 their 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 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 Regulation surface water protection regulations for outdoor, nonagricultural use of pyrethroid pesticides by any person performing pest control for hire (<https://www.cdpr.ca.gov/docs/legbills/calcode/040501.htm#a6970>).
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 \(BAMSC\)](#); [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 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 evaluate its Integrated Pest Management efforts for effectiveness of efforts appear and how improvement could be made, as follows:

- a. Evaluate the effectiveness of the pesticide control measures implemented by their 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.

## 7. Reporting

In each Annual Report (described in the Reporting section of Attachments D or E as applicable) due by October 15 of each year, 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. 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 their 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.

### b. Reporting for Training Municipal Employees

- 1) In each Annual Report, the Permittee shall report the percentage

of municipal employees who 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 Regional Water Board or State Water Board staff, the Permittee shall submit training materials (e.g., course outline, date, and list of attendees) upon request.

c. 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.

d. 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.

e. Reporting of 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 shall be described in Annual Reports prepared at that respective level; reiteration in individual Permittee reports is discouraged. Reports shall include a brief description of outreach conducted in each of the three categories, including level of effort, messages and target audience.

f. Reporting on Evaluation of Implementation of Pesticide Source Control Actions

Beginning with the first Annual Report, due the first October 15 after the effective date, the Permittee shall annually report its evaluation. The evaluation shall include an assessment of the effectiveness of their 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 shall be evaluated at that respective level; reiteration in individual Permittee evaluation reports is discouraged.

Final Compliance Deadline: The final compliance deadline for attainment of the watershed allocations is not specified in the TMDL.

TMDL Reporting Requirements: Submit the annual reports and the TMDL Demonstration of Compliance Report per section G2, above.

#### **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 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 their 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 to minimize 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. 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 three 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 regarding 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 their 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 their 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. Evaluate the potential bacteria-reduction benefit of prioritizing trash control efforts required in areas where trash generation may be contributing to bacteria exceedances in local surface waters. Where a benefit appears significant, reprioritize trash control actions accordingly.
  - b. Focus some trash reduction efforts in areas where trash generation likely contributes to bacteria exceedances in local surface waters.
- #### 8. Compliance With Receiving Water Limitations

The Permittee shall:

- a. Determine whether discharges from their MS4 causes or contributes to exceedances of bacteria water quality objectives in receiving waters after implementation of control measures. The Permittee are expected to comply with the wasteload allocations by the final deadline in the TMDL. Where a final deadline for compliance with wasteload allocations is not identified in the TMDL, the Permittee is expected to comply with their bacteria or pathogen wasteload allocations within 5 years of the effective date of this Order and demonstrate compliance with the wasteload allocations as specified in the requirements for the TMDL Demonstration of Compliance Reports in Attachments D and E of this Order.

If wasteload allocations are not met by the deadlines, despite a diligent effort to quantify levels, the Permittee shall identify sources of bacteria, document that controls have been completed, and submit a

plan for additional actions to attain the receiving water limitations by the Year 5 Annual Report.

- b. Provide a comprehensive assessment of bacteria sources and bacteria controls to demonstrate compliance with receiving water limitations for applicable bacteria water quality objectives. If compliance cannot be achieved within 5 years of the effective date of this Order, then 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 receiving water limitations 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;
    - c) Description of specific bacteria sources and/or specific geographic areas that receive implementation of existing control measures, as well as. recommended new, modified, or enhanced control 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, as well as. new, modified, or enhanced control that were evaluated or implemented;
    - d) Determination if bacteria receiving water limitations have or will be met, by the end of reporting Year 5; and
    - e) If bacteria wasteload allocations will not be 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 to attain bacteria wasteload allocations 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 2 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 the 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 St. Helena, City of Napa, City of Yountville, County of Napa

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. *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.
3. *Illicit Discharge Detection and Elimination.* Implement strategies to detect and eliminate Illicit discharges (whether mistaken or deliberate) of sewage to the Napa River.
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 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 described 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
Napa River at Zinfandel Lane
Napa River at Calistoga Community Center
Browns Valley Creek at Browns Valley Road
Browns Valley Creek at Borrette Lane
Murphy Creek at Coombsville Road
Murphy Creek at upstream location to be determined <sup>a</sup>
Salvador Channel at Solano Avenue

<b>Baseline Monitoring Sites (sites will be determined by Water Board staff in coordination with the Permittee)</b>
Salvador Channel at Dry Creek Road
Four additional tributaries to be determined <sup>a</sup> , rotated each year

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.

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 above). In the TMDL Annual Report (see section G2), the Permittee must demonstrate that they are in compliance with specified implementation measures.

#### **G4.2.4 Sonoma Creek Pathogens TMDL**

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

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, as well as continue to implement or enhance implementation of the following actions as described above in the General Approach for Controlling Bacteria in MS4 Discharges:

1. *Public Participation and Outreach*. Educate the public regarding sources of fecal coliform and associated health risks of fecal coliform in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.
2. *Pet Waste Management*. Implement enforceable means of reducing/eliminating fecal coliform loading from pet waste.
3. *Illicit Discharge Detection and Elimination*. Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Sonoma Creek.
4. *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’s Quality Assurance Management Plan for the Surface Water Ambient Monitoring Program.

**Table G4.2.4. Sonoma Creek Watershed Monitoring Sites**

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 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.

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, 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 County Water Agency: The Sonoma County Water Agency shall:

1. Continue to implement actions as specified in Sonoma County Water Agency’s updated Storm Water Management Plan. A previous version of 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 County Water Agency: The Sonoma County Water Agency 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 Permittees: Marin County

Impaired Water Bodies: Tomales Bay, Lagunitas Creek, Walker Creek, Olema 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 Deadlines: The TMDL does not specify a compliance deadline. Therefore, this is an on-going effort that is implemented throughout the term of this Order.

TMDL Reporting Requirements: Submit the TMDL Annual Reports and the TMDL Demonstration of Compliance Report per section G2, above. 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, Town of Tiburon, County of Marin

Impaired Water Body: Richardson Bay

TMDL Monitoring Requirements: The Permittee 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 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 and through any administered extension of the Order.

TMDL Reporting Requirements: Submit the TMDL Annual Reports and the TMDL Demonstration of Compliance Report per section G2, above. In the TMDL Annual Reports, report the status of compliance with wasteload

allocations specified in section G4.2.2, the General Approach for Controlling Bacteria in MS4, above.

**G4.2.7 San Francisco Bay Beaches Bacteria, San Francisco Bay Beaches Bacteria TMDL**

Responsible Permittees: Candlestick Point State Recreation Area, California State Parks; San Francisco Public Utilities Commission, San Francisco; Golden Gate National Recreation Area, National Park Service; China Camp State Park, California Department of Parks and Recreation; and McNears Beach Park, County of Marin

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; Parkside Aquatic and Lakeshore beaches on Marina Lagoon, City of San Mateo; China Camp Beach, State Park, Marin County, and McNears Beach, Marin County Parks, Marin County

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 Deadlines: A final compliance deadline is not specified. The implementing Permittees are required to continue the General Approach for Controlling Bacteria in MS4 Discharges, described in section G4.2.2, above.

TMDL Reporting Requirements: Submit the TMDL Annual Reports and the TMDL Demonstration of Compliance Report per section G2, above. In the TMDL Annual Reports, reporting the required information under section G4.2.2 above, the Permittee shall demonstrate compliance with specified implementation measures.

**G4.2.8 Petaluma River Bacteria TMDL**

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

Impaired Water Body: The entire Petaluma River, San Antonio Creek, Lichau Creek, Willow Brook, Lynch Creek, Adobe Creek, and Ellis Creek

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 implement 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 their wasteload allocations.

TMDL Implementation Requirements: The Permittee shall implement the actions described in section G4.2.2, above, the General Approach for Controlling Bacteria in MS4 Discharges. In addition, Permittee shall implement or enhance implementation of the following actions to prevent or reduce discharges of bacteria from the MS4 to meet the municipal stormwater runoff TMDL wasteload allocations. To comply with this element the Permittee shall:

1. *Initial Report.* Submit an Initial Report to the Water Board, within 30 days from the effective date of this Order, describing current actions being implemented to prevent or reduce discharges of bacteria to storm sewer systems. The report shall also include schedule, timeline, or frequency of implementation activities for all future actions, as appropriate.
2. *Follow-Up Report.* Submit a follow up Report and Implementation plan, within 90 days from the effective date of this Order, which includes the additional best management practices and timelines for addressing the following, as appropriate:
  - a. Potential illicit discharges into the storm sewer system from the sanitary sewer collection system that includes the following:
    - 1) A timeline for evaluation and control of at least 20 percent of illicit discharges from the sanitary sewer collection system illicit connections to the storm sewer system each year,
    - 2) A map of the entire storm sewer system and the portions scheduled for inspection each year;
    - 3) A timeline for completion of the annual incremental evaluation and the evaluation of the entire system; and
    - 4) The timeline should include completion of this requirement no later than May 10, 2026.
  - b. Potential pet waste discharges into the storm sewer system that includes the following:
    - 1) A timeline for implementation of a visual inspection program to identify high pet waste accumulation areas and development of a cleanup plan for these areas, including specific actions before winter rains;
    - 2) Location and timeline for installation of new or additional dog waste cleanup signs, waste bag dispensers, and trash bins in high dog waste accumulation areas;

- 3) A timeline for evaluation and improvement of the service frequency of dog waste bins, as needed; and
- 4) A timeline for development and implementation of a comprehensive pet waste public outreach and education campaign that, considers the following:
  - a) Establishment of a new public pet waste management stakeholder group (e.g., formal, or informal dog owners club), if one or more does not exist;
  - b) 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;
  - c) 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;
  - d) Adding to or maintaining a web page on its website with information on the TMDL and the water quality monitoring and best management practices implementation activities, as well as information about proper pet waste management and the impact of improperly deposited waste on water quality of the River and its tributaries and public health;
  - e) Creating and implementing a 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;
  - f) Participating in local events and festivals to distribute pet waste management materials (educational fliers, dog waste bags, etc.); and
  - g) Implementation of comprehensive waste public outreach and education campaign shall begin no later than 90 days from the effective date of this Order.
- c. Discharges and stormwater discharges from the Petaluma Marina, a facility owned and operated by the City of Petaluma, which includes the following:

- 1) A timeline for implementation or enhancement of “no dumping” education efforts to vessel owners, to occur no later than 180 days from the effective date of this Order;
  - 2) A timeline for evaluation and assurance of adequacy and proper performance of sewage collection systems (sewage dump stations, sewage pumpout stations, sewer lines, etc.) for vessel marinas, to occur no later than 180 days from the effective date of this Order; and
  - 3) A timeline for Installation, as needed, of an adequate number of sewage pumpout and dump stations by May 10, 2026.
- d. Discharges and stormwater discharges associated with unsheltered homeless populations, such as those living in tents, other outdoor shelters, and recreational vehicles (RVs), that are a potential source of the high bacteria levels observed in the Watershed that includes the following:
- 1) A timeline for implementation of appropriate control measures in areas where informal tent or small cabin encampments occur near streams with best management practices to control discharges of trash and human waste;
  - 2) A timeline for provision to informal tent encampments and RVs of trash pickup services, porta potties or other sanitary services, and mobile pumpout services as needed;
  - 3) A timeline for targeted stormwater channel cleanups; and
  - 4) A timeline for outreach to encampment residents and RV occupants and owners.
  - 5) Timeline shall include implementation of all items i-iv within five years of the effective date of this Order.
  - 6) Practices that harm or criminalize unsheltered homeless residents, such as encampment sweeps, will not be recognized when considering compliance with this Order.
3. Monitoring Plan and Requirements

Within 90 days of the effective date of this Order, the Permittee shall submit a bacteria water quality monitoring plan for the Petaluma River and its tributaries for review and consideration of approval by the San Francisco Bay Water Board Executive Officer. The monitoring plan must be designed to demonstrate the causing or contributing factors to the impairment of the Petaluma River and its tributaries. The objectives of this monitoring shall include 1) better characterization of fecal indicator

bacteria contributions from respective sources, 2) assessment of control measures effectiveness, and 3) assessment of progress towards attainment of the TMDL wasteload allocations. The Permittees are encouraged to collaborate with each other on a single cooperative water quality monitoring plan. The Permittee shall:

- a. Initiate the monitoring plan within 6 months from the effective date of this Order;
- b. Conduct annual monitoring;
- c. Use the methods described in [The California Microbial Source Identification Manual: A Tiered Approach to Identifying Fecal Pollution Sources to Beaches. Southern California Coastal Water Research Project \(Griffin 2013\)](#);
- d. Submit monitoring data that complies with or is comparable to the Surface Water Ambient Monitoring Program comparable. Minimum data quality shall be consistent with the latest version of the Surface Water Ambient Monitoring Program Quality Assurance Program Plan for applicable parameters, including data quality objectives, field and laboratory blanks, field duplicates, laboratory spikes, and clean techniques, using the most recent Surface Water Ambient Monitoring Program Quality Assurance Program Plan Standard Operating Procedures;
- e. Include a sampling frequency and spatial locations to reliably detect changes in water quality resulting from management actions;
- f. Include all 10 monitoring stations that are within the City of Petaluma Boundary (station codes 206PET355, 206PET350, 206PET315, 206PET310, 206PET265, 206PET260, 206PET215, 206PET205, 206PET130, and 206PET098) and add a minimum of five additional stations to achieve better spatial resolution, as shown in Table G4.2.8,<sup>4</sup> below;
- g. Assess the magnitude of applicable fecal indicator bacteria constituents used as the TMDL numeric targets (i.e., *Escherichia coli* for fresh water and Enterococcus for saline water);
- h. Consider including source-specific fecal bacteria (e.g., Bacteroides) sampling to better identify and track sources of fecal pollution in the watershed, especially where bacteria hotspots are noted;

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<sup>4</sup> From the [Staff Report](#) for Total Maximum Daily Load for Bacteria In Petaluma River, Table 5.1 - Water Quality Monitoring Stations.

- i. For at least six existing trend sites (Station IDs 206PET350, 206PET315, 206PET310, 206PET260, 206PET205, 206PET98<sup>5</sup>), include a minimum of five monitoring events within a six-week interval in the dry season and a minimum of five monitoring events within a six-week interval in the wet season to adequately characterize fecal indicator bacteria levels and their geometric means during flow conditions in both dry and wet seasons;
- j. For each monitoring event, include sampling stations at major tributaries to the Petaluma River’s main stem at locations associated with known or suspected bacteria sources or where previous water quality data were collected, to better characterize bacteria inputs from different subwatersheds;
- k. Include monitoring of fecal indicator bacteria discharges direct from a source (e.g., stormwater outfalls, and City of Petaluma Marina), to characterize and identify their contributions and to use in a trend analysis showing reductions from implementation of best management practices;
- l. Include spatially intensive hotspot monitoring along particular reaches with high fecal indicator bacteria concentrations, to identify proximate sources in urban areas, such as municipal stormwater runoff, dry season discharges from storm drains, dog walking areas or parks, and homeless encampments; and
- m. Be iterative in nature and allow for flexibility of hotspot sampling design and details in future years. In subsequent years of monitoring, based on the results of the previous monitoring, alternative sampling stations may be targeted, sampling intensities may be modified, and sampling frequencies may be adjusted, as necessary.

**Table G4.2.8. Monitoring Stations**

Station Code	Station Name	Station Description	Latitude	Longitude
206PET400	Lichau-400	Lichau Creek - at Penngrove Park	38.294312	-122.666254
206PET393	Willow-393	Willow Brook – 890 m upstream of Lichau Creek confluence	38.285731	-122.65625
206PET355	Lichau-355	Lichau Creek - at N McDowell Blvd 650 m upstream of Petaluma River confluence	38.277545	-122.672016

<sup>5</sup> From Table 5.1 - Water Quality Monitoring Stations in the [Staff Report](#) for Total Maximum Daily Load for Bacteria In Petaluma River.



Station Code	Station Name	Station Description	Latitude	Longitude
206PET350	Pet-350	Petaluma River – 715 m upstream of Petaluma Blvd N bridge. Just downstream of Rainsville Rd bridge	38.271718	-122.676919
206PET315	Pet-315	Petaluma River - Just downstream of Corona Rd Bridge	38.26098	-122.65982
206PET310	Pet-310	Petaluma River - Petaluma Village Premium Outlet Mall, just downstream of bridge leading into mall	38.25539	-122.650371
206PET265	Lynch-265	Lynch Creek 591 m upstream of Petaluma River confluence	38.25174	-122.633153
206PET260	Pet-260	Petaluma River – 100 m upstream of Payran Street bridge	38.246232	-122.637995
206PET215	Trib-215	Unnamed Creek – 220 m upstream of confluence with Pet River, 60 m below Ellis St bridge	38.2458	-122.635577
206PET205	Pet-205	Petaluma River - Just upstream of E. Washington St bridge	38.236157	-122.640363
206PET130	Adobe-130	Adobe Creek - Ely Blvd crossing, near Fairway Meadows Golf Course	38.242536	-122.594417
206PET098	Pet-98	Petaluma River – 100 m downstream of confluence with Adobe Creek	38.223164	-122.605189
206PET090	Ellis-90	Ellis Creek - 1.7 mi upstream of Petaluma River confluence. At Ely Rd crossing.	38.233155	-122.577665
206PET070	San A.-70	San Antonio Creek - Just downstream of Chileno Valley Rd bridge crossing	38.19838	-122.704343
206PET060	San A.-60	San Antonio Creek - Just downstream of Point Reyes Petaluma Rd bridge crossing	38.187549	-122.664172
206PET010	San A.-10	San Antonio Creek- upstream of San Antonio Rd bridge crossing	38.180759	-122.60322
206PET007	Pet-7	Petaluma River - Lakeville Marina dock	38.197109	-122.547627
206PET002	Pet-2	Petaluma River - Black Point Boat Lunch dock	38.114621	-122.506072

4. Water Quality Monitoring Reporting

- a. In the annual reports per section G2, above, the Permittee shall submit a comprehensive Water Quality Monitoring Report reporting on 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? Do control measures appear to be reducing bacteria?
- c. As appropriate, the Report shall include the following:
- 1) A data tables section (immediately following the Table of Contents) that includes all the data collected pursuant to this requirement and contains the following information pertaining to the foregoing monitoring period:
    - a) A map showing all monitoring locations;
    - b) Immediately following the map, a single completed Locations and Parameters Table containing the following columns or rows for each location sampled: numeric site identifier, a short-hand site name, latitude, longitude, and parameters assessed;
    - c) Immediately following the Locations and Parameters Table, a single completed Results Table containing the following columns or rows for each location sampled: the short-hand site name and datum/result for each constituent analyzed. Constituents that exceed applicable water quality objectives shall be highlighted.
  - 2) Include a statement of the data quality for all data.
  - 3) 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.
  - 4) 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 regarding pollutant sources, trends, and best management practice effectiveness;
  - c) Identify and prioritize water quality problems;
  - d) Identify potential sources of water quality problems;
  - e) Describe follow-up management actions to address areas with high bacteria levels;
  - f) Evaluate the effectiveness of existing control measures; and
  - g) Identify management actions needed to address water quality problems.
- 5) Report on attainment of the wasteload allocations specified in General Approach for Controlling Bacteria in MS4 Discharges section VIII.

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 Deadlines: Wasteload allocations are required to be met by May 10, 2027.

#### **G4.2.9 Napa River Sediment TMDL**

Responsible Permittees: Napa County, the City of Napa, City of Yountville, City of St. Helena, City of Calistoga, City of American Canyon

Impaired Water Body: Napa River

TMDL Implementation Requirements: The Permittee shall implement the following:

1. Implementation of Sediment Wasteload Allocations  
The Permittee shall comply with the requirements in this TMDL section and the Order.
2. Implementation of Sediment Load Allocations
  - 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 continue to implement:

- 1) Continue to implement and update best management practices for maintenance of unimproved (dirt and/or gravel) roads to ensure that the LA will be met, and implement these best management practices,
  - 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 unpaved roads and best management practices to ensure attainment of the load 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 TMDL does not specify a final compliance deadline. Therefore, implementation shall continue for the term of this Order.

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 the section G2 and in Attachments D or E.

#### **G4.2.10 Sonoma Creek Watershed Sediment TMDL**

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

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 their Stormwater Management Plans approved under the prior 2003 General Permit (State Water Board Order 2003-0005-DWQ) to attenuate peak flows and durations from new and redevelopment projects. Implementation requirements for implementation actions are incorporated herein by reference. The Permittee may propose amendments to those Implementation Actions by submitting an updated Stormwater Management Plan to the Regional Water Board Executive Office.

##### **2. Implementation of Sediment Load Allocation**

To attain the shared load allocation of 2,100 tons per year, the Permittee shall implement opportunities to retrofit and/or reconstruct road crossings to minimize road-related sediment delivery to stream channels. To reduce road-related erosion and protect stream-riparian habitat conditions, the Permittee shall implement the following actions:

- 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 schedule for the retrofit and/or replacement of high priority crossings/culverts for consideration of approval by the San Francisco Bay Water Board Executive Officer for approval.
  - d. The Permittee has identified:
    - 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.
  - e. The Permittee shall:
    - 1) Replace 24 of the highest priority culverts within the first 5 years of the permit term.
    - 2) Implement supplemental erosion control and revegetation at 9 road sites.
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.
  4. Within 4 years of the effective date of this Order, the Permittee shall demonstrate compliance with the wasteload allocations per the requirements in the section titled TMDL Demonstration of Compliance Report found in Attachments D and E.

TMDL Implementation Requirements For Sonoma County Water Agency:

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 requirements for implementation actions are incorporated herein by reference. The Sonoma County Water Agency may propose amendments to those Implementation Actions by submitting an updated Storm Water Management Plan to the Regional Water Board.
2. Report progress on TMDL implementation measures in each Annual Report.

TMDL Final Compliance Deadline: The TMDL does not specify a final deadline of compliance with the wasteload and load allocation. Therefore, within six 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**

Responsible Permittees: County of Napa, City of American Canyon, City of Calistoga, City of Napa, City 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, City 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, Sonoma Water, City of Petaluma, Port of Oakland, San Francisco Public Utilities Commission, Port of San Francisco

Impaired Water Body: Suisun Bay, Carquinez Strait, San Pablo Bay, Richardson Bay, Central and Lower San Francisco Bay, San Francisco Central Basin, Mission Creek; Oakland Inner Harbor (Fruitvale site, South San Francisco Bay Pacific Dry-Dock Yard 1 Site)

TMDL Monitoring Requirements: Monitoring shall demonstrate progress toward attainment of the TMDL target. Monitoring shall be conducted by maintaining discharger-funded Regional Monitoring Program monitoring of polychlorinated biphenyls in San Francisco Bay fish, sediments, and water at a spatial scale and frequency to track trends in the decline of PCBs in the Bay.

TMDL Implementation Requirements:

1. The Permittee shall implement control measures on a pilot scale to determine effectiveness and technical feasibility of best management practices and control measures.
2. Permittees shall develop and implement a monitoring plan to quantify PCB urban stormwater runoff loads and the load reductions achieved through treatment, source control, and other actions. The Permittee shall submit the monitoring plan to the San Francisco Bay Water Board Executive Officer.
3. The Permittee has a responsibility to oversee PCB discharges within its MS4 jurisdiction. If it is determined that a source is substantially contributing to PCB loads to the Bay or a source is outside the Permittee's jurisdiction or authority, then the San Francisco Bay Water Board Executive Officer will consider a request from a Permittee, which may include an allocation, load reduction, and/or other regulatory requirements for the source in question.

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

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.

**G4.2.12 San Francisco Bay Mercury TMDL**

Responsible Permittees: City of American Canyon, Sonoma County, Napa County, Marin County, Solano County, San Francisco County.

Impaired Water Body: Sacramento-San Joaquin River Delta (within San Francisco Bay region), Suisun Bay, Carquinez Strait, San Pablo Bay, Richardson Bay, Central San Francisco Bay, Lower San Francisco Bay, South San Francisco Bay (including the Lower South Bay), Castro Cove (part of San Pablo Bay), Oakland Inner Harbor (part of Central San Francisco Bay), San Leandro Bay (part of Central San Francisco Bay).

Mercury Control Plan: The Permittee shall develop and implement a Mercury Control Plan to investigate sources and discharges and to implement best management practices and control measures designed to achieve the mercury allocations or accomplish the load reductions derived from the allocations. The Mercury Control Plan shall

1. Submit the Mercury Control Plan to the San Francisco Bay Water Board Executive Officer.



2. Include a sampling and monitoring system to quantify either mercury loads or loads reduced through treatment, source control, and other management efforts. The monitoring system shall include methods to investigate land areas that likely contribute to mercury in the Permittees storm sewer system. Include monitoring for methylmercury in discharges. Include analytical methods and reporting limits.
3. Include best management practices or control measures to control the source in areas found to contribute substantial amounts or where high mercury concentrations are found (i.e., sediment concentrations greater than 0.5 mg mercury per kilogram).
4. Include operation and maintenance activities in the street or the storm drain infrastructure adjacent to any mercury source property.
5. Participate in studies aimed at better understanding of mercury fate, transport, and biological uptake in San Francisco Bay and tidal areas.
6. Collaborate with Caltrans to develop an equitable allocation-sharing scheme that reflects Caltrans load reduction responsibility in consultation with the Permittee. Alternatively, Caltrans may choose to implement load reduction actions on a watershed or regionwide basis in lieu of sharing a portion of an urban runoff management agency's allocation. In such a case, the Water Board will consider a separate allocation for Caltrans for which they may demonstrate progress toward attaining an allocation or load reduction in the same manner mentioned previously for municipal programs

TDML 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 the section G2 and in Attachments D or E.

The Permittee shall report the following in its annual report as required under section G2, above:

1. Evaluate the spatial extent, magnitude, and cause of mercury contamination for locations where elevated mercury concentrations were identified;
2. Provide the status and extent of the mercury source control program, including best management practices;
3. Document any collaboration efforts with Caltrans for allocation-sharing.
4. Document compliance with the Mercury Control Plan and document either mercury loads discharged, or loads reduced through ongoing pollution prevention and control activities; and

- a. Demonstrate progress toward attainment of the wasteload allocations,<sup>6</sup> below, by using one of the following methods: quantify the annual average mercury load reduced through implementing of (i) pollution prevention activities, and (ii) source and treatment controls.
- b. Quantify the mercury load as a rolling five-year annual average using data on flow and water column mercury concentrations.
- c. Quantitatively demonstrate that the mercury concentration of suspended sediment that best represents sediment discharged with urban runoff is below the suspended sediment target.

**Table G4.2.12. Wasteload Allocations for Mercury in Urban Stormwater Discharges**

Entity	Allocation (kg/yr)	Load Reduction (kg/yr)
Sonoma County area	1.6	1.5
Napa County area	1.6	1.5
Marin County area	3.3	3.2
Solano County area	0.81	0.77
San Francisco County area	8.8	8.4
Total	16.11	15.37

Permittees have a responsibility to oversee various discharges within the agencies’ geographic boundaries. However, if it is determined that a source is substantially contributing to mercury loads to the Bay or is outside the jurisdiction or authority of an agency the Water Board will consider a request from an urban runoff management agency which may include an allocation, load reduction, and/or other regulatory requirements for the source in question.

**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.

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<sup>6</sup> From [San Francisco Bay Water Board Basin Plan](#), Table 7.2.2-2

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 catchment<sup>7</sup> 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 combinations identified below for each TMDL. 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 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 Wasteload Allocation Attainment Plan shall include the following components:

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.

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<sup>7</sup> An area of land where water collects when it rains, often bounded by hills.

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 practices, 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 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.

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. 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 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 Waste Load 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.

#### G4.3.1.1 Long-Term Assurance

Once the Permittee has demonstrated full wasteload allocation attainment at a catchment scale, the Permittee shall update the Waste Load 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.

#### G4.3.1.2 Wasteload Allocation Attainment Plan Submittal, Approval, Commencement, and Revision Process

1. 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.
2. 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.
3. 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.

4. 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.

#### G4.3.1.3 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:

1. A description of actions taken to develop and implement best management practices per requirements this Order's Wasteload Allocation Attainment Plan.
2. A description of actions planned for the upcoming reporting year to develop and implement best management practices.
3. A description of all implemented best management practices, including respective treated area and connected impervious area.
4. A map showing the location of each planned and implemented best management practice, with respective treated area and connected impervious area.
5. An analysis of documented and estimated wasteload removal, summarized by catchment, detailing progress towards attaining interim targets and final wasteload allocations.
6. 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, Los Osos Community Services District, County of San Luis Obispo

Impaired Water Body: Morro Bay, Chorro Creek, Los Osos Creek, 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 their 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 Body: Watsonville Slough, Struve Slough, Harkins Slough, Gallighan Slough, Hanson 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 their wasteload allocation is achieved. The Waste Load 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 Deadlines: 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 Body: Pajaro River, San Benito River, Llagas Creek, Tequesquita Slough, San Juan Creek, Carnadero/Uvas Creek, Bird Creek, Pescadero Creek, Tres Pinos Creek, Furlong (Jones) Creek, Santa Ana Creek, Pachecho Creek, Miller's Canal

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 their 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 Permittees: County of San Luis Obispo

Impaired Water Body: Morro Bay, Los Osos Creek, Chorro Creek, Dairy Creek, Pennington Creek, and 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 their 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 Body: San Lorenzo River, Carbonera Creek, Lompico Creek, 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 their 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**

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

Impaired Water Body: Tres Pinos, San Benito River, Llagas Creek, Uvas Creek, Upper Pajaro River, Corralitos Creek (including Rider Creek), Mouth of Pajaro River

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. The Permittee shall submit the TMDL Demonstration of Compliance Report as specified in section G2.

TMDL Annual Reports shall outline best management practices implemented to assure ongoing attainment of the Permittee's allocation.

#### **G4.3.8 TMDL for Pathogens in San Luis Obispo Creek**

Responsible Permittees: City of San Luis Obispo, County of San Luis Obispo, California Polytechnic State University, San Luis Obispo Campus

Impaired Water Body: San Luis Obispo Creek, Stenner Creek, Brizzolari 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 their 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 assure ongoing attainment of their 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: City of San Luis Obispo, County of San Luis Obispo, California Polytechnic State University, San Luis Obispo campus

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 assure ongoing attainment of their 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 Body: 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 their 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 Permittees: County of Monterey

Impaired Water Body: Lower Salinas River, Old Salinas River, Old Salinas River Estuary, Tembladero Slough, Salinas Reclamation Canal, Alisal Creek, Gabilan Creek, Salinas River Lagoon (North), Santa Rita Creek, Natividad Creek

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 and River**

Responsible Permittees: City of Santa Cruz, City of Scotts Valley, County of Santa Cruz

Impaired Water Body: San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, Lompico Creek

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 their 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 is 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 Body: Soquel Lagoon, Soquel Creek, Noble Gulch

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 their 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.

#### **G4.3.14 TMDL for Pathogens in Aptos Creek, Valencia Creek, and Trout Creek**

Responsible Permittees: County of Santa Cruz

Impaired Water Body: Aptos Creek, Valencia Creek, Trout Gulch

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 their wasteload allocation is achieved. The Wasteload Allocation Attainment Plan shall include all information required under section G4.3.1.

Final Compliance Deadline: Waste load allocations was 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 Santa Maria, County of Santa Barbara, County of San Luis Obispo, City of Guadalupe

Impaired Water Body: Water Bodies in the Santa Maria River Watershed, including: Blosser Channel, Bradley Channel, Main Street Canal, Nipomo Creek, Orcutt Creek, Santa Maria River.

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 their 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**

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

Impaired Water Body: Water Bodies in the Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake, including: Blosser Channel,



Bradley Channel, Greene Valley Creek, Main Street Canal, North Main Street Channel, Orcutt Creek, Nipomo Creek, Santa Maria River.

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 their 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 Permittees: County of Monterey

Impaired Water Body: Lower Salinas River, Santa Rita Creek, Salinas Reclamation Canal, Gabilan Creek, Natividad Creek, Alisal 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 their 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 River Watershed**

Responsible Permittees: City of Guadalupe, City of Santa Maria, County of Santa Barbara

Impaired Water Body: Blosser Channel, Bradley Channel, Greene Valley Creek, Main Street Canal, Orcutt Creek, Santa Maria River

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 their 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, County of Monterey, City of Morgan Hill, County of Santa Clara, County of Santa Cruz, City of Watsonville

Impaired Water Body: Pajaro River, Pajaro River Estuary, San Benito River, Llagas Creek, Carnadero Creek, Corralitos Creek, Gallighan Slough, Harkins Slough, Uvas Creek, Pescadero Creek, Salsipuedes Creek, Santa Ana Creek, Struve Slough, 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 their 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.

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 Permittees: County of Monterey

Impaired Water Body: 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 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 their 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 their 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 Gabilan Creek Watershed Turbidity TMDL**

Responsible Permittees: County of Monterey

Impaired Water Body: Gabilan Creek, Natividad Creek, Alisal Creek, Salinas Reclamation Canal, Tembladero Slough, Old Salinas River, Merritt Ditch, Espinosa Slough, Santa Rita Creek, Alisal Slough

TMDL Implementing 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 their 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, Veteran 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; and
  - b. Demonstration of compliance with wasteload allocations as described in section G2; and
  - c. Ongoing actions to comply with wasteload allocations; and
  - 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 (FCI) Terminal Island and 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; and
2. Demonstration of compliance with wasteload allocations per the requirements in section G4.1; and
3. Ongoing actions to comply with wasteload allocations; and
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 and 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

Waterbody Segment	Final Dry Weather Compliance Date
Segment A Tributaries (Compton Creek)	September 23, 2025
Segment E (Reach 6)	March 23, 2025

- 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

- 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.
- Provide the status of and on-going actions for compliance with wasteload allocations; and
- 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 G9.1 of this Order.

TMDL Reporting Requirements: In each Annual Report, the Permittee shall report:

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. Status of compliance with wasteload allocations; and
4. Demonstrate compliance with wasteload allocations using the criteria described in section G4.1; and
5. Ongoing actions to comply with wasteload allocations; and
6. Identification and status of the implementation action selected in section G9.1, either the Cooperative Agreements or the Program Plan.

#### **G4.4.7 Los Angeles Water Board Metals and Selenium TMDLs General Requirements**

This Order carries over the previous permit's requirement to select one of two actions to meet the requirements of the metals and selenium 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 in order 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: Veteran Affairs Greater Los Angeles Healthcare System, University of California Los Angeles

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 G.5.4.1.

TMDL Reporting Requirements: In the Annual Report, the Permittee shall report:

1. Implementation action selected under the previous permit and as reiterated in section G.5.4.1, either the Cooperative Agreement or Program Plan.
2. Ongoing monitoring and actions to continue compliance per the option selected in section G.5.4.1.
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 G.5.4.1 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 G.5.4.1.
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 G.5.4.1 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 G.5.4.1, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G.5.4.1.
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 (Point Mugu), and 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 G.5.4.1.

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 G.5.4.1, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G.5.4.1.
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 G.5.4.1.

TMDL Reporting Requirements:

1. Implementation action selected under the previous permit and as reiterated in section G.5.4.1, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G.5.4.1.
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 allocations<sup>8</sup>.

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 zinc<sup>9</sup>.

#### **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 G.5.4.1.

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 G.5.4.1, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G.5.4.1.
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 (Point Mugu), and California State University, Channel Islands

Impaired Water Body: Calleguas Creek

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<sup>8</sup> Los Angeles Water Board Basin Plan section 7-20.

<sup>9</sup> IBID



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 required under G.5.4.1 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 G4.4.1 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 G.5.4.1.
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: Veteran Affairs Greater Los Angeles Healthcare System and University of California Los Angeles

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 G.5.4.1 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 G4.4.1, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G4.4.1.
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; and 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 G.5.4.1, either the Cooperative Agreements or Program Plan.
2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G.5.4.1.
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 (Point Mugu); and 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 G4.4.1 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 G4.4.1, either the Cooperative Agreements or Program Plan.

2. Ongoing monitoring and implementation actions to continue compliance per the option selected in section G4.4.1.
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: Veteran Affairs, Greater Los Angeles Healthcare System and the University of California Los Angeles

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 their 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 and 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 their 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 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 Permittees: City of Patterson

Impaired Water Body: San Joaquin River from Mendota Dam to Vernalis.

TMDL Implementation Requirements: Permittee shall implement best management practices to eliminate diazinon and chlorpyrifos in municipal stormwater discharges by the effective date of this Order. 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) Six 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 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;
- 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 their 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 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.

#### **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, County of San Joaquin, City of Tracy, City of West Sacramento

Impaired Water Body: Sacramento-San Joaquin Delta Waterways

TMDL Implementation Requirements: The Permittee shall implement the following best management practices to eliminate diazinon and chlorpyrifos in municipal stormwater discharges by the effective date of this Order. 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) Six 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;
- 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 their 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.

#### **G4.5.3 TMDL for Diazinon and Chlorpyrifos in the Sacramento and Feather Rivers**

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

Impaired Water Body: Sacramento River from Shasta Dam to I Street Bridge, Feather River from Fish Barrier Dam to Sacramento River

TMDL Implementation Requirements: The Permittee shall implement best management practices to eliminate diazinon and chlorpyrifos in municipal stormwater discharges by the effective date of this Order. 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) Six 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;
  - 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 their 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.

#### **G4.5.4 TMDL for Low Dissolved Oxygen in the San Joaquin River**

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, Merced County, City of Newman, City of Oakdale,

City of Patterson, City of Ripon, City of Riverbank, San Joaquin County, Stanislaus County, City of Turlock

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. This will be implemented 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. The Permittee who has not demonstrated attainment of the wasteload allocations shall submit an updated Monitoring and Reporting Plan within 6 months of the effective date of this Order.
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 their 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 their 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.

#### **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 San Joaquin, 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 Order in the TMDL Annual Reports, pursuant to section G2 (above) and Attachment D or 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, County of Lake, City of Lakeport

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 three 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 their respective Storm Water Management Plans approved under the previous 2003 Permit (State Water Board Order 2003-0005-DWQ). The monitoring plans shall enable the Central Valley Water Board to evaluate the MS4 Permittee's progress toward attainment of the 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 implement 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;
- 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).
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 their 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 Body: Curry Creek (Placer and Sutter Counties), Kaseberg Creek (tributary to Pleasant Grove Creek, Placer County), Pleasant Grove Creek (upstream of Fiddymont Road), and Pleasant Grove Creek, South Branch

TMDL Implementation Requirements: The Permittee shall implement the following:

1. Implement the Pyrethroid Management Plan, as approved by the Central Valley Water Board Executive Officer, 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, compliance with those requirements shall be deemed compliance with the requirement to implement a Pyrethroid Management Plan.

TMDL Monitoring Requirements:

Pyrethroids Monitoring<sup>10</sup>

1. Within 18 months of the effective date of this Order, the Permittee shall develop and submit a Pyrethroids Monitoring Plan and Quality Assurance Project Plan for Central Valley Regional Water Board Executive Officer approval and shall implement the Pyrethroids Trend Monitoring Plan once it has been approved by the Central Valley Regional Water Board Executive Officer.
2. The Pyrethroids 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;

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<sup>10</sup> Central Valley Water Board [Basin Plan](#), Section 5.1.6 Municipal Storm Water Monitoring

- 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 *Hyalella 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 Regional Water Board, United States Environmental Protection Agency (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.

- 3. The Pyrethroids Monitoring Plan shall include at a minimum monitoring of the receiving water or the Permittee’s discharge as show in Table G4.5.1, below:

**Table G4.5.1: Receiving Water or MS4 Discharge Monitoring**

Chemical <sup>a</sup>	Units (ng/L)	Sample Type	Minimum Sampling Frequency <sup>e</sup>	Minimum QA/QC Sampling Frequency <sup>d</sup>	Minimum Reporting Level <sup>b,c</sup> (ng/L)
Bifenthrin	ng/L	Grab	4/year	1/year	1.3
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, Tota)	ng/L	Grab	4/year	1/year	10

Chemical <sup>a</sup>	Units (ng/L)	Sample Type	Minimum Sampling Frequency <sup>e</sup>	Minimum QA/QC Sampling Frequency <sup>d</sup>	Minimum Reporting Level <sup>b,c</sup> (ng/L)
Total Organic Carbon	mg/L	Grab	4/year	1/year	-
Dissolved Organic Carbon	mg/L	Grab	4/year	1/year	-

**Table 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 events<sup>11</sup> (i.e., post first flush<sup>12</sup>, post mid-winter<sup>13</sup> wet weather event, post spring runoff<sup>14</sup> event) and one dry weather<sup>15</sup> event. If, during the time period for a wet weather event, a qualifying wet weather event does not occur, additional storms shall be sampled during the time period for the next wet weather 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. If the monitoring is extended, the due date for the Baseline Monitoring Report shall be extended until 90 days following the final qualifying wet weather event. 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.

<sup>11</sup> Qualifying wet weather event is any rain event 0.25-inch in 24-hours.

<sup>12</sup> Post first flush timeframe is within 1 day of the qualifying wet weather event between October 1 and December 31.

<sup>13</sup> Post mid-winter wet weather event is within 1 day of a qualifying wet weather event between January 1 and March 19.

<sup>14</sup> Post spring runoff event is within 1 day of a qualifying wet weather event between March 20 and June 20.

<sup>15</sup> A dry weather event is any day between June 21 and September 30 that is preceded by 7-days of no measurable (i.e., <0.1 inches) of rain.



5. Proposed sampling locations to collect water samples from either a receiving water or downstream of the Permittee's discharge; or from the Permittee's discharge itself.
6. Water column and sediment toxicity monitoring, which includes the following:
  - 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) 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.
- 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 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 *Hyalella 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 *Hyalella azteca* sediment toxicity is observed, sediment shall be analyzed for pyrethroid pesticides using a laboratory and method approved by the Executive Officer. When evaluating the analytical methods, the Executive Officer will consider Environmental Laboratory Accreditation Program accreditation, associated quality assurance and quality control provisions, scientifically peer-reviewed methods, results of interlaboratory comparison studies, and/or other factors.
    - a. Monitoring for a full year of monitoring, including at least three storm events and one dry weather event. The monitoring shall be initiated upon approval of the Monitoring Plan and Quality Assurance Project Plan by the Central Valley Water Board Executive Officer. The first year of monitoring shall be initiated no later than 22 months after the effective date of this Order and

shall be completed within 34 months of the effective date of this Order. A final report shall be submitted no later than six months after completion of monitoring or 40 months after the effective date of this Order, whichever comes first.

- b. A Quality Assurance Project Plan shall be in accordance with the quality assurance/quality control and other protocols established by the Surface Water Ambient Monitoring Program. Unless otherwise specified by this Order, field testing, sample collection, preservation, laboratory testing, including quality control procedures and all record keeping shall comply with the most current version of the [Surface Water Ambient Monitoring Program Quality Assurance Program Plan](https://www.waterboards.ca.gov/water_issues/programs/swamp/quality_assurance.html) ([https://www.waterboards.ca.gov/water\\_issues/programs/swamp/quality\\_assurance.html](https://www.waterboards.ca.gov/water_issues/programs/swamp/quality_assurance.html))
4. 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](https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/central_valley_pesticides/pyrethroid_tmdl_bpa/index.html): ([https://www.waterboards.ca.gov/centralvalley/water\\_issues/tmdl/central\\_valley\\_projects/central\\_valley\\_pesticides/pyrethroid\\_tmdl\\_bpa/index.html](https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/central_valley_pesticides/pyrethroid_tmdl_bpa/index.html)).
5. The Permittee shall implement pyrethroids monitoring five years after completion of the initial monitoring described above, and then every five years hence. Subsequent monitoring plans, sampling, reports and Quality Assurance Project Plans will be due six months prior to initiation of monitoring. Sampling will be initiated upon monitoring plan and Quality Assurance Project Plan approval and culminate after a full year. Reports are due six months after completion of pyrethroids monitoring. monitoring for pyrethroid pesticides and alternative insecticides can be discontinued upon the Permittee showing that the specific pesticide is not found, or is not reasonably expected to be found, in receiving waters at concentrations with the potential to exceed the pyrethroid wasteload allocations and/or Acute and Chronic Pyrethroid Triggers or levels of concern for alternative insecticides.
6. 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. 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.

7. 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. By February 19, 2039, the Permittee shall demonstrate attainment of the TMDL wasteload allocations and the TMDL Demonstration of Compliance Report pursuant to section G2 (above).

## **G4.6 LAHONTAN WATER BOARD**

### **0G4.6.1 Middle Truckee River Watershed Sediment TMDL**

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 <sup>16</sup>**

Responsible Permittees: Orange County Fairgrounds, University of California, Irvine

Impaired Water Body: 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 their MS4s. The Permittee shall demonstrate compliance through the following actions:

1. Within one 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 one 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 their 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 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:

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<sup>16</sup> State Water Board [Resolution No. 2012-0051](#)

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 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 Body: Lake Elsinore, Canyon Lake

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 D, or E (as applicable).
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 Attachments D or E (as applicable)
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 Attachments D or E (as applicable).

#### **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 Body: Santa Ana River, Reach 3, Chino Creek, Mill Creek, Prado Park Lake

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 D or E (as applicable).
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).

**G4.8.4 San Diego Creek and Upper Newport Bay Diazinon and Chlorpyrifos TMDL**

Responsible Permittees: Orange County Fairgrounds; University of California, Irvine

Impaired Water Body: 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 their 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. 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 their 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 Attachments D or E (as applicable) 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 Attachments D or E (as applicable).
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 Fairgrounds, University of California, Irvine

Impaired Water Body: 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 their 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 Toxic Pollutants (Metals) TMDLs for the Newport Bay/San Diego Creek. 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 their 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 Attachments D or E (as applicable) 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 Attachments D or E (as applicable).
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 D or E (as applicable).

## **G4.9 SAN DIEGO WATER BOARD TOTAL MAXIMUM DAILY LOADS**

### **G4.9.1 TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region**

Responsible Permittees: 22nd District Agricultural Association, California State University at San Marcos, Marine Corps Air Station Miramar, Marine Corps Base Camp Pendleton, North County Transit District, San Diego State University, San Diego Veterans Affairs San Diego Healthcare System, University of California San Diego, US Marine Corps Recruit Depot, San Diego Metropolitan Transit System, Doheny State Beach, Moonlight State Beach, San Clemente State Beach, San Elijo State Beach, South Carlsbad State Beach, and Torrey Pines State Beach.

Impaired Water Bodies: Laguna/San Joaquin, San Juan, San Clemente, San Luis Rey, San Marcos, San Dieguito River, Miramar Creek, Scripps HA, Tecolote HA, San Diego River, and Chollas Creek.

TMDL Compliance Deadlines:

1. By April 4, 2021, the Permittees are required to demonstrate attainment of the dry weather wasteload allocations shown in Fact Sheet Tables B9.1, and/or numeric targets in Table B9.2.
2. By January 1, 2025, 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 (Fact Sheet Table B9.1 and Table B.9.2).

TMDL Implementation Requirements:

Permittees shall attain compliance with wasteload allocations and numeric targets for indicator bacteria in the Permittee's discharge 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. Permittees shall take the following actions to meet the requirements of this TMDL:

1. Final 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 such a demonstration, 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, 7.1 (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. By January 1, 2025, 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. By January 1, 2025, 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. Monitoring of all outfalls/discharge locations or one or more representative outfall/discharge location within their 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 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.
    - 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.
4. TMDL Demonstration of Compliance Report. By April 4, 2031, Permittees shall 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 bacteria reduction activities conducted to demonstrate compliance with the wet weather wasteload allocations and/or numeric targets through one or more of the criteria in Attachment E, section E7.1 (items a through g).
5. TMDL Annual Reports. Permittees shall submit a TMDL Compliance Annual Report in accordance with the sections titled Annual TMDL Compliance Reporting, Water Quality Monitoring, and Program Effectiveness in Attachments E and the reporting requirements 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. Demonstration of Compliance. Demonstration of attainment of dry weather final wasteload allocations and/or numeric targets and progress towards attainment of wet weather final wasteload allocations and/or numeric targets through meeting one or more of the criteria in section E7.1 (items a through g), and
  - b. Monitoring Results. Assessment of monitoring results for each reporting year. This shall include an analysis of the dry weather and wet weather monitoring data to assess attainment of the dry weather and wet weather TMDL wasteload allocations and numeric targets.
  - c. Compliance with Wasteload Allocations. Assessment of compliance with wasteload allocations. This includes:
    - 1) Calculated bacteria loadings using flow rate results and bacteria densities from monitoring conducted at the Permittees outfalls/discharge locations using the following equation:

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:
  - i. For Permittees who discharge to a beach segment, fecal coliform and Enterococcus.
  - ii. 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 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-1<sup>17</sup> 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:
  - 1) 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

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<sup>17</sup> Water Contact Recreation (REC-1) - Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible.

geometric means calculated from samples collected during the dry season.

2) 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; and
- 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.
- 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

<b>Watershed</b>	<b>Waterbody</b>	<b>Segment or Area</b>
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
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

<b>Watershed</b>	<b>Waterbody</b>	<b>Segment or Area</b>
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
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 <sup>a,b</sup> (MPN/100 mL)	Wet Weather Days Single Sample Maximum Allowable Exceedance Frequency <sup>c</sup>	Dry Weather Days 30-Day Geometric Mean <sup>b</sup> (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.

**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 <sup>c</sup>	Dry Weather Days 30-Day Geometric Mean <sup>b</sup> (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:

- 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 Basin Plan.
- d. 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.

**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 <sup>a,b</sup>	Single Sample Maximum Allowable Exceedance Frequency <sup>c</sup>	30-Day Geometric Mean <sup>b</sup> (MPN/100 mL)	30-Day Geometric Mean Allowable Exceedance Frequency
Total Coliform <sup>d</sup>	10,000	22%	1,000	0%
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	104 <sup>e</sup> / 61 <sup>f</sup>	22%	35 <sup>e</sup> / 33 <sup>f</sup>	0%

Table Notes:

- a. 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.

#### **G4.9.3 TMDL for Sediment in Los Peñasquitos Lagoon**

Responsible Permittees: Marine Corps Air Station Miramar, San Diego Veterans Administration Medical Center, University of California San Diego, North County Transit District, and any other Permittees identified by future permit amendments.

Impaired Water Body: Los Peñasquitos Lagoon

TMDL 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.

Waste Load Allocations:

1. The TMDL sediment wasteload allocation of 2,580 tons/year and is assigned collectively to all responsible permittees identified in the TMDL.
2. Permittees 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. By January 1, 2025, Permittees shall update and implement its 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. By January 1, 2025, 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 their 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 their sediment loadings to their proportional load responsibility from the total watershed wasteload allocation. Permittees shall assess whether their sediment loadings met or exceeded their proportional load responsibility. Permittees shall assess whether their sediment loadings met or exceeded their proportional load responsibility from the watershed wasteload allocation during the wet season.
5. Permittees that can demonstrate that its 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. c

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.