



**Lake Tahoe
Pollutant Load Reduction Plan Update**

March 2023

FINAL

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18. Abstract:

This 2022 Pollutant Load Reduction Plan (PLRP) Update document details how Caltrans will achieve the fifteen-year (2026) implementation milestone of the Lake Tahoe Total Maximum Daily Load (TMDL). This milestone consists of reducing the baseline fine sediment particle, total nitrogen and total phosphorus loads by 34 percent, 21 percent, and 19 percent, respectively, by September 30, 2026 (end of water year 2026). To demonstrate the required pollutant reductions, Caltrans proposes to register additional road catchments where advanced road operation strategies are implemented.

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List of Acronyms

BMP	Best Management Practice
Caltrans	California Department of Transportation
CRC	Characteristic Runoff Concentration
CSLT	City of South Lake Tahoe
EA	Expenditure Authorization (project number)
ED	Eldorado County
ECP	Erosion Control Project
EIP	Environmental Improvement Program
FSP	Fine Sediment Particles
GIS	Geographic Information System
Lahontan	Lahontan Regional Water Quality Control Board
LCCP	Lake Clarity Crediting Program
MS4	Municipal Separate Storm Sewer System
NDEP	Nevada Division of Environmental Protection
NHC	Northwest Hydraulic Consultants
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
PL	Placer County
PLRM	Pollutant Load Reduction Model
PLRP	Pollutant Load Reduction Plan
RAM	Rapid Assessment Method
RCS	Road Condition Score
SHOPP	State Highway Operation and Protection Program
State Board	California State Water Resources Control Board
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
TRPA	Tahoe Regional Planning Agency
TSS	Total Suspended Solids
UPC	Urban Planning Catchment
WQIP	Water Quality Improvement Project
13267 Order	California Water Code Section requesting information or reports

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Section 1

Background

The California State Water Resources Control Board (State Board) incorporated Lake Tahoe Total Maximum Daily Load (TMDL) load reduction milestones for stormwater runoff into the California Department of Transportation (Caltrans) Municipal National Pollutant Discharge Elimination System (NPDES) Permit. This statewide permit (Order No. 2012-0011-DWQ, NPDES Permit Number CAS000003) is now expired and in the process of renewal. It is anticipated that the renewed permit will continue to include the EPA adopted requirements of the Lake Tahoe TMDL.

The NPDES permit regulates stormwater and non-stormwater discharges from the State highway system and discharges from Caltrans' properties and facilities associated with operation and maintenance of the State highway system. Caltrans' properties and facilities include but are not limited to: maintenance stations/yards; equipment storage areas; storage facilities; fleet vehicle parking and maintenance areas; and warehouses with material storage areas.

This PLRP Update document describes how Caltrans will achieve the 15-year pollutant load reduction required for compliance with the Lake Tahoe TMDL. The 15-year milestone consists of reducing the baseline fine sediment particle (FSP), total nitrogen (TN), and total phosphorus (TP) loads by 34 percent, 21 percent, and 19 percent, respectively, before September 30, 2026. The 15-year milestone is referred to as the Clarity Challenge and is a major TMDL milestone in the successful implementation of the Lake Tahoe TMDL.

The load reduction estimates, and other information presented in this PLRP Update are also reflective of the 2015 improvements to the Lake Tahoe Stormwater Tools Improvement Project, including the use of the updated version of the Lake Tahoe Pollutant Load Reduction Model (PLRM Version 2.1). This PLRP Update is divided into the following sections:

Section 1 provides background information summarizing previous baseline load estimates; current catchment registration and load reduction; and the load reduction requirements specified in the NPDES permit.

Section 2 presents Caltrans' PLRP to meet the 2026 load reduction milestone per the requirements of the NPDES permit (2012-0011-DWQ), which describes:

- Catchment registration schedule;
- Proposed pollutant control measures;

Section 1 • Background

- Load reduction estimates using PLRM Version 2.1;
- Load reduction schedule; and
- Annual adaptive management.

Section 3 discusses the next anticipated PLRP Update that will be prepared and submitted in early 2027. The 2027 update will detail how Caltrans intends to achieve the 20-year (2031) pollutant reduction milestones required for compliance with the Lake Tahoe TMDL.

1.1 Initial Baseline Condition Load Estimate (PLRM Version 1.1)

On February 9, 2011, the Lahontan Regional Water Quality Control Board (Lahontan) issued an Order to Submit Technical Reports in accordance with California Water Code – Lake Tahoe Urban Stormwater Implementation (13267 Order) to Caltrans and the other Tahoe Basin Municipal Separate Storm Sewer System (MS4) permittees (Placer County, El Dorado County and City of South Lake Tahoe). The 13267 Order required each jurisdiction to estimate a baseline pollutant load discharged to Lake Tahoe for FSP, TP, and TN. The period from October 1, 2003 to May 1, 2004 was defined by the 13267 Order and the MS4 permit as the “baseline condition” and the point of reference for estimating baseline pollutant loading. Caltrans prepared the California Department of Transportation Lake Tahoe Total Maximum Daily Load Baseline Pollutant Load Estimate on February 1, 2012 (Caltrans, 2012a).

After submittal of the February 2012 Baseline Report to Lahontan, it was realized that certain standard LCCP guidelines were not incorporated into the modeling effort. In response, Caltrans updated the PLRM Version 1.1 baseline condition models for consistency with the LCCP guidelines and Lahontan 13267 Order. The revisions resulted in an initial baseline FSP load of 597,000 lbs/year, as presented in Table 1-1. This baseline load estimate was then used to calculate load reduction requirements specified in the 2014 PLRP. The details of these modeling efforts and revisions can be found in the PLRP dated July 15, 2014. For comparative purposes, Table 1-1 also presents 2016 revised baseline modeling results using PLRM Version 2.1. Further description of the PLRM Version 2.1 modeling is provided in Section 1.2.

Table 1-1 Caltrans initial and revised baseline pollutant load estimate. The revised baseline load will be used to establish load reductions to meet the TMDL milestones.

Load Estimate	Pollutant Loading			
	FSP	TP	TN	Units
Initial Baseline Load Estimate (2014) PLRM V1	597,000	1,730	5,940	lbs/year
	270,700	790	2,700	kg/year
	2.98E+19	NA	NA	# particles/year
Revised Baseline Load Estimate (2016) PLRM V2	617,600	1,720	5,370	lbs/year
	280,400	780	2,440	kg/year
	3.09E+19	NA	NA	# particles/year

1.2 Revised Baseline Condition Load Estimate (PLRM Version 2.1)

The Lake Tahoe Stormwater Tools Improvement Project resulted in significant revisions to the load estimation tool (PLRM Version 2.1), the implementation guidance document (Lake Clarity Crediting Program Handbook Version 2.0), and the online catchment registration accounting system (CAP), all required components per the Lahontan 13267 Order. Released in 2015, these were used to revise the estimate of baseline loads and load reduction requirements presented in this PLRP Update. The primary difference between PLRM Version 1.1 and Version 2.1 is the method for calculating pollutant concentrations in roadway runoff. For PLRM Version 1.1, roadway Characteristic Runoff Concentrations (CRCs) were dependent on user inputs for road abrasive application strategy and sweeping effectiveness. For PLRM Version 2.1, the CRCs are calculated using a Road Condition Score (RCS) that correlates with measurements collected using the Road Rapid Assessment Methodology (Road RAM). The revised modeling using PLRM Version 2.1 results in a baseline FSP load of 617,600 lbs/year, an increase of 20,600 lbs/year compared to 2014 baseline load estimates. The PLRM Version 2.1 baseline load estimate was then used to calculate the load reduction requirements presented in this PLRP Update. Revised baseline pollutant loads separated by county and highway (state route) number are presented in Table 1-2.

Table 1-2 PLRM V2 Caltrans Baseline pollutant load separated by County and State Route (Note: FSP numbers have been rounded to the nearest 100).

County	State Route	Pollutant Loading (lbs/year)		
		FSP	TP	TN
El Dorado	50	190,000	510	1,560
	89	156,900	450	1,430
Total El Dorado		346,900	960	2,990
Placer	28	169,000	480	1,500
	89	94,100	260	800
	267	7,600	20	80
Total Placer		270,700	760	2,380
Total Lake Tahoe		617,600	1,720	5,370

1.3 Pollutant Load Reduction Requirements

Based on the science supporting the Lake Tahoe TMDL, Lahontan established 5-year load reduction milestones to assess each California jurisdiction’s progress toward meeting overall load reduction goals (Lahontan and NDEP, 2010: p. 10-4). Load reduction milestones for FSP, TP and TN have been established based on attainment of California’s Lake Tahoe transparency standard (roughly a clarity depth of 97 feet) over an estimated 65-year implementation period. The load reductions shown in Table 1-3 are for the first three (5-year, 10-year, and 15-year) load reduction milestones. These milestones represent the first fifteen years of Lake Tahoe TMDL implementation and are incorporated into the current Caltrans NPDES permit. The load reduction associated with each milestone are required to be earned by September 30 of each milestone year. Going forward, the load reductions achieved at each milestone will be maintained and increased to achieve each subsequent 5-year milestone.

Table 1-3 Lake Tahoe TMDL load reduction requirements for Caltrans through third milestone, as a percentage of baseline load.

	Milestone	Pollutant Load Reduction		
		FSP	TP	TN
Load Reduction Requirements	2016	10%	7%	8%
	2021	21%	14%	14%
	2026	34%	19%	21%

Lahontan developed the Lake Clarity Crediting Program (LCCP) to support the Lake Tahoe TMDL. The LCCP specifies the process to connect implementation of water quality improvement actions to corresponding estimated pollutant load reductions (Lahontan and NDEP, 2021). Through this program, Lake Clarity Credits have been defined as a

mechanism to provide flexibility for regulated jurisdictions to achieve required load reductions. Lahontan uses the LCCP as an accounting system for Lake Clarity Credits to track compliance with stormwater regulatory measures.

The pollutant load reductions necessary for Caltrans to meet its 5-year, 10-year, and 15-year load reduction milestones are shown in Table 1-4. The reductions, in units of lbs/year and Lake Clarity Credits, were calculated based on the PLRM Version 2.1 revised baseline load estimate (Table 1-2). The load reduction requirements are subject to refinement if new information becomes available about the sources and transport of fine sediment particles and nutrients in the Tahoe Basin. Various assumptions made during the development of the baseline conditions in PLRM Version 2.1 models may also be subject to future refinement.

Table 1-4 Load reduction requirements for Caltrans for first three milestones based on revised baseline load estimate.

	Milestone	Pollutant Loading			Units	Lake Clarity Credits ¹
		FSP	TP	TN		
Load Reduction Requirements ²	2016	61,700	121	429	lbs/year	309
	2021	129,700	242	750	lbs/year	648
	2026	210,000	327	1,128	lbs/year	1050

¹ One Lake Clarity Credit = 200 lbs/year reduction in FSP (Lahontan and NDEP, 2021).

² The 648 credits required to meet the 2021 milestone will be maintained and increased to achieve the 2026 milestone. The 1050 credits needed to meet the 2026 milestone reflects the entire 34% required reduction in FSP baseline loading.

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Section 2

Pollutant Load Reduction Plan

This document incorporates the best available information to develop a strategy to meet the 2026 Lake Tahoe TMDL load reduction milestone, based on experiences and lessons learned during implementation and registration of credits toward the 5-year milestone (2016) and 10-year milestone (2021). Caltrans intends to earn the necessary 1050 Lake Clarity Credits by:

- Registering additional road catchments where advanced operation and maintenance activities will occur,
- Maintaining credits provided by currently registered Water Quality Improvement Projects (WQIPs), and
- Participating in a credit sharing program with the City of South Lake Tahoe.

Details of this approach are provided in this section.

2.1 Catchment Registration Schedule

The revised Lake Tahoe TMDL Stormwater Tools were released in 2015, and Caltrans has applied them as required to meet the first (2016), second (2021) load reduction milestones. The road catchments registered to meet the 2016 and 2021 TMDL milestones are summarized in Tables 2-1 and 2-2 respectively. The same road catchments previously registered in 2016 were proposed for registration to meet the 2021 TMDL milestone; however, these road catchments were registered using an improved RCS as described in Section 2.3.1. In 2016, Caltrans also registered one WQIP and cooperated in a credit sharing program with the City of South Lake Tahoe (CSLT) for the Bijou WQIP. Lake Clarity Credits from both were maintained for the 2021 TMDL milestone. In Tables 2-1, 2-2, and 2-3 representatively modeled road segments in PLRM Version 2.1 have been grouped into Urban Planning Catchments (UPCs) and given a standard naming convention following the format of “Highway Number_County_start post mile – end post mile”, e.g., 50_ED_70.2-75.2.

Table 2-3 presents the catchments proposed for registration to meet the 2026 TMDL milestone. An additional 5.7 miles of Highway 28 and 8.4 miles of Highway 89 are included to meet the 2026 TMDL milestone. All road catchments will be registered with the same RCS score (2.5) used for the 2021 TMDL milestone. Caltrans also proposes to maintain current registrations for one WQIP (EIP 988) and will continue to receive Lake Clarity Credits for the Bijou project per the credit sharing agreement with CSLT.

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Figure 2-1 shows the overall extent of Caltrans’ highways in the Lake Tahoe Basin, and an overview of all the road segments proposed for registration to meet the 2026 milestone. Figures 2-2, 2-3, and 2-4 provide detailed maps of the roadway segments, the WQIP, and credit sharing projects designated for registration to meet the 2026 milestone. The proposed UPC registrations shown in these figures correspond with those presented in Table 2-3.

Table 2-1 2016 Caltrans catchment registration summary.

Project/Highway (Road Class)	UPC	Modeled FSP Load Reduction (lbs/yr)	Annual Lake Clarity Credits
Road Operations Registration			
Hwy 50 (South Shore)	50_ED_70.2-75.21	16,200	81
	50_ED_75.49-78.59	25,200	126
	50_ED_79.05-80.39	6,400	32
Hwy 28 (North Shore)	28_PLA_6.08-8.55	13,000	65
	28_PLA_9.45-10.92	6,800	34
Road Operations Subtotal		67,600	338
Credit Sharing Registration			
Bijou (CSLT) ¹	50_ED_78.59-79.05	12,000	60
Water Quality Improvement Project (WQIP) Registration			
EIP 988	28_PLA_2.54-6.08	2,800	14
2016 Registration Totals		82,400	412

¹ The Bijou project was included in the City of South Lake Tahoe’s 2016 registration. Per the credit sharing agreement, Caltrans was awarded 60 Lake Clarity Credits for the Bijou project by Lahontan.

Table 2-2 2021 Caltrans catchment registration summary.

Project/Highway (Road Class)	UPC	Modeled FS P Load Reduction (lbs/yr)	Annual Lake Clarity Credits
Road Operations Registration			
Hwy 50 (South Shore)	50_ED_69.54-78.59	79,850	399
	50_ED_79.05-80.39	9,400	47
Hwy 28 (North Shore)	28_PLA_6.08-10.92	46,550	233
Road Operations Subtotal		135,800	679
Credit Sharing Registration			
Bijou (CSLT) ¹	50_ED_78.59-79.05	11,200	56
Water Quality Improvement Project (WQIP) Registration			
EIP 988	28_PLA_2.54-6.08	2,800	14
2021 Registration Totals		149,800	749

¹ For the Bijou credit sharing agreement, Caltrans was awarded 56 Lake Clarity Credits by Lahontan in 2021.

Section 2 • Pollutant Load Reduction Plan

Table 2-3 2026 Caltrans load reduction proposed strategy and catchment registration schedule.

Project Name/Highway (Road Class)	UPC	Modeled FS P Load Reduction (lbs/yr)	Annual Lake Clarity Credits	Percent of 2026 Goal (1050 Credits)	Planned Registration Timeline
Road Operations Registration					
Hwy 50 (South Shore)	50_ED_69.54-80.39	89,230	446	42%	Currently Registered
Hwy 28 (North Shore)	28_PLA_0.34-6.08	41,986	210	20%	Prior to 9/30/2025
	28_PLA_6.08-10.92	45,449	227	22%	Currently Registered
Hwy 89 (West Shore)	89_PLA_0-8.43	32,537	163	16%	Prior to 9/30/2025
Road Ops Subtotal		209,202	1,046	100%	
Credit Sharing Registration					
Bijou (CSLT) ¹	50_ED_78.59-79.05	10,600	53	5%	Currently Registered
Water Quality Improvement Project (WQIP) Registration					
EIP 988	28_PLA_2.54-6.08	2,800	7	1%	Currently Registered
2026 Registration Totals		222,602	1,106	106%	

¹ For the Bijou credit sharing agreement, Caltrans anticipates 53 Lake Clarity Credits by Lahontan in 2026.

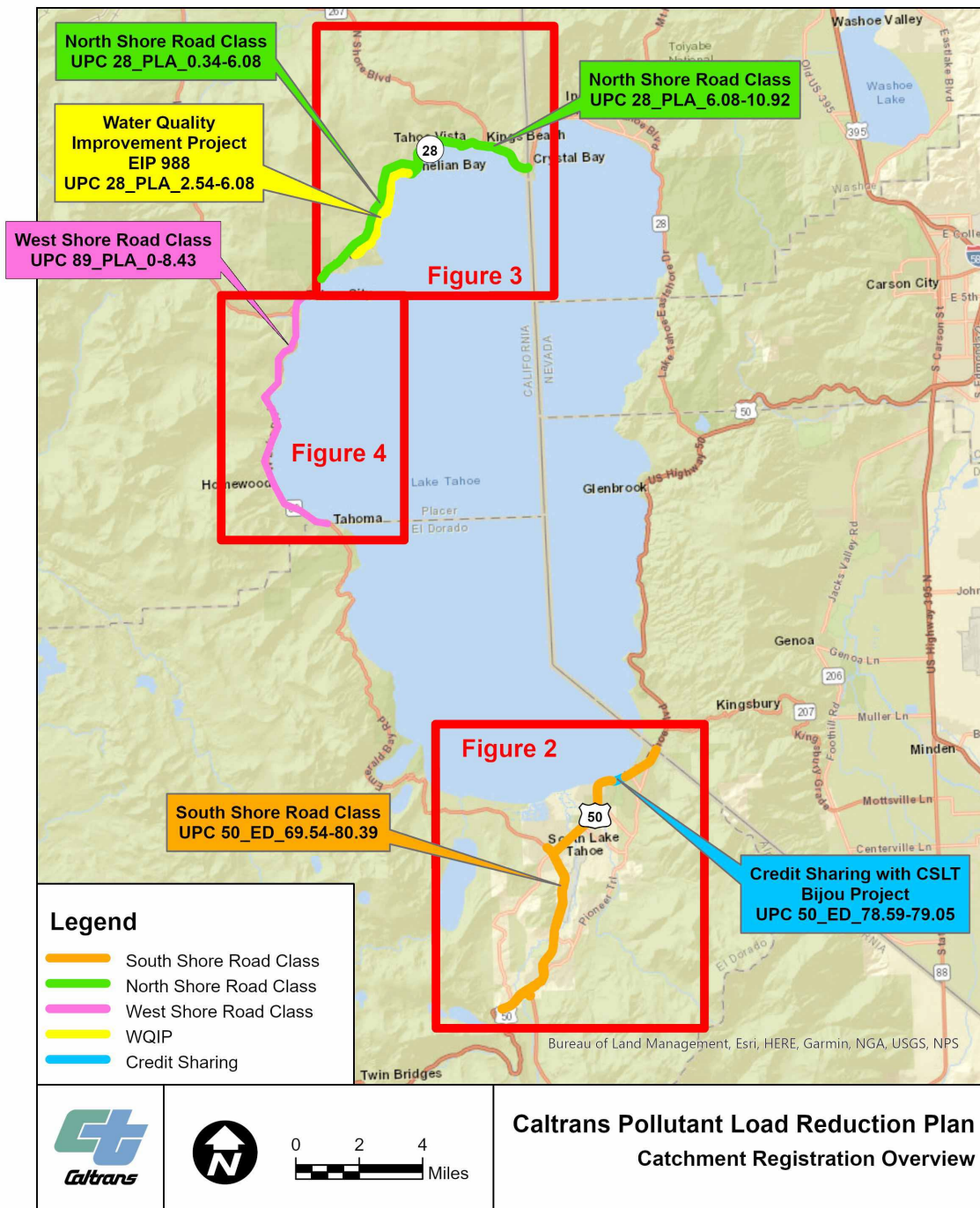


Figure 2-1
Overview of Caltrans 2026 Catchment Registration Locations

Section 2 • Pollutant Load Reduction Plan

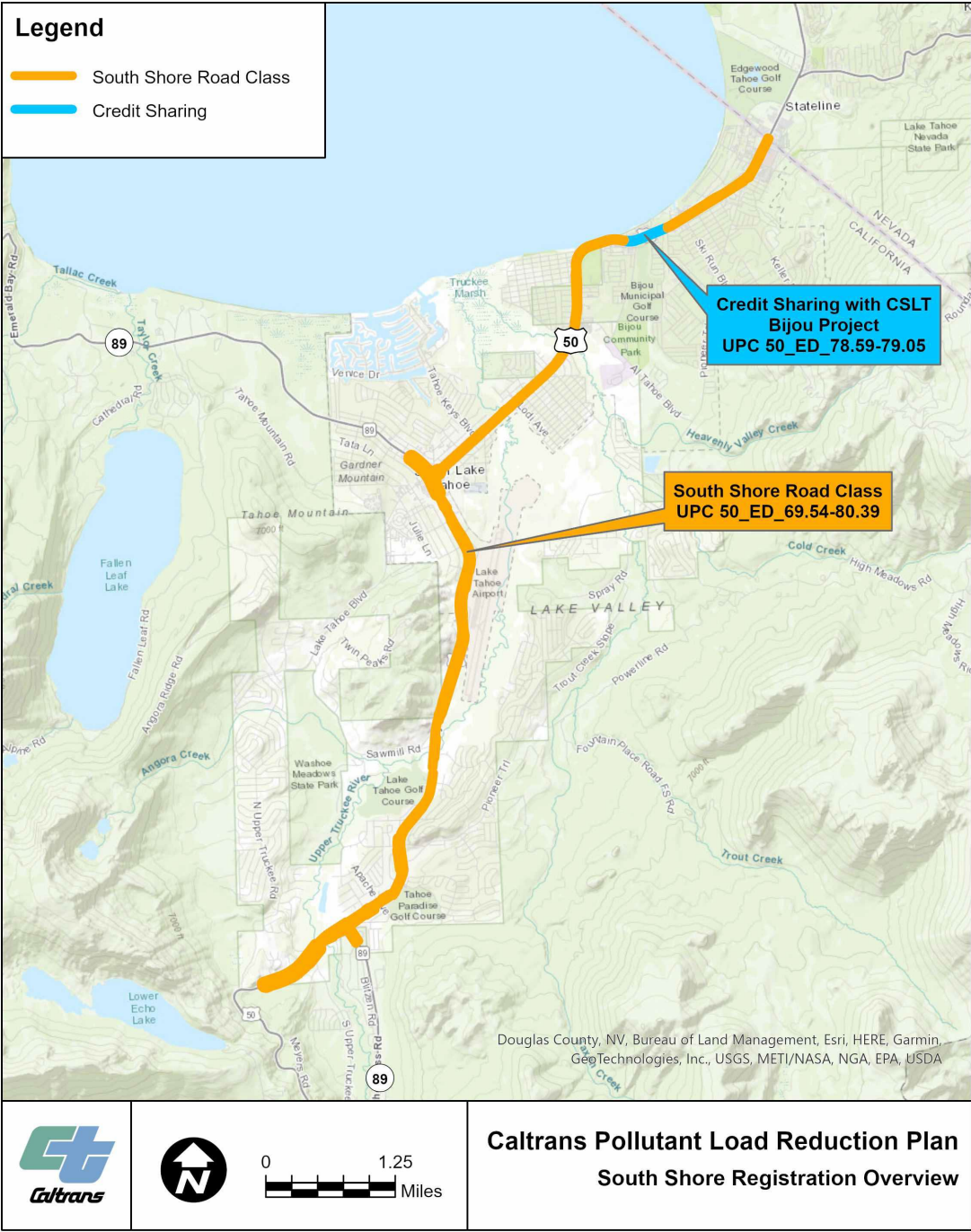


Figure 2-2
Overview of Caltrans 2026 South Shore Road Class and WQIP Registration

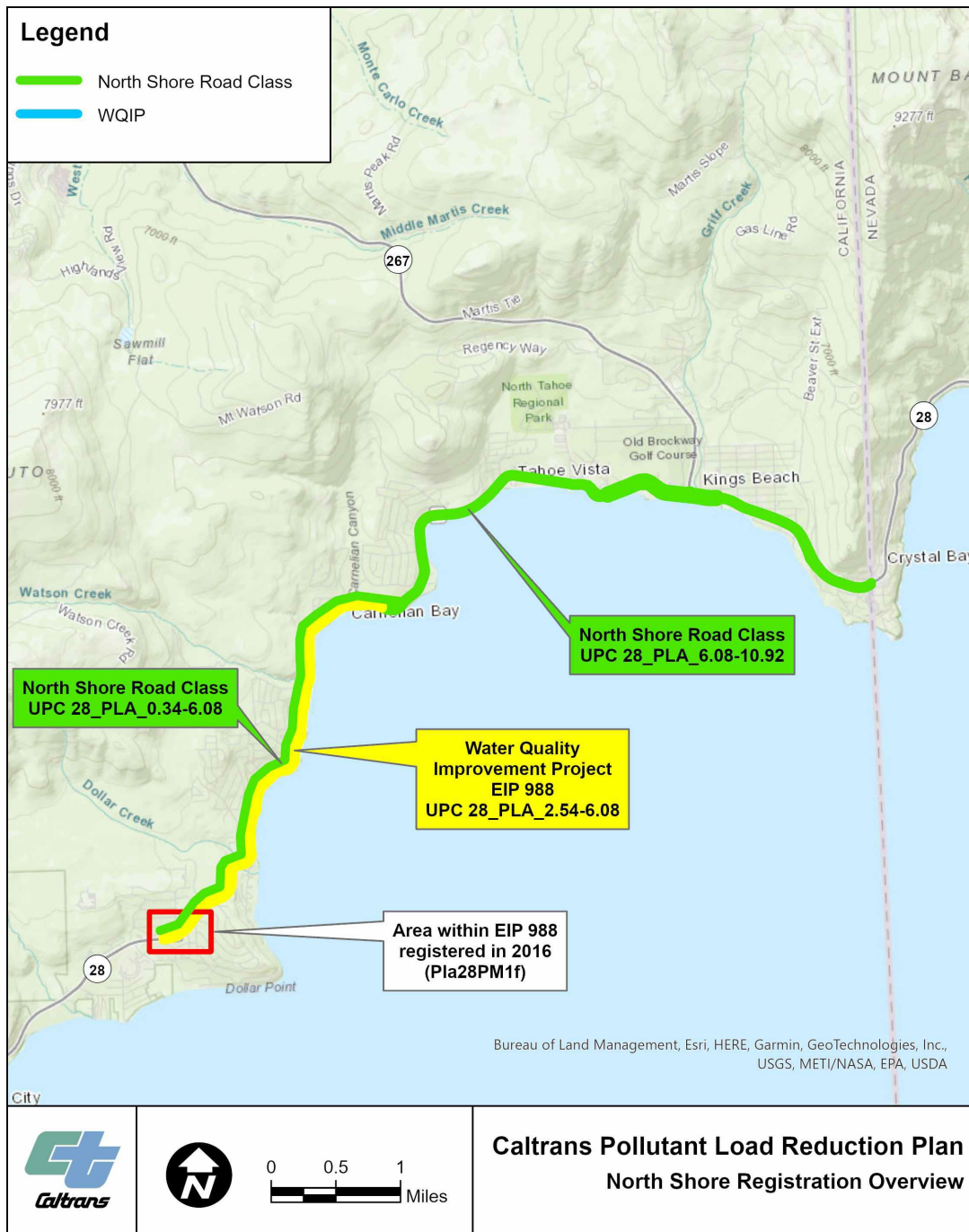


Figure 2-3
Overview of Caltrans 2026 North Shore Road Class Registration



Figure 2-4
Overview of Caltrans 2026 West Shore Road Class Registration

2.2 Proposed Pollutant Control Measures

Caltrans intends to meet the NPDES permit requirements for the 15-year load reduction milestone through a combination of a) improved road operations; b) credit sharing from a water quality improvement project (WQIP) in cooperation with the City of South Lake Tahoe; and c) maintaining two treatment Best Management Practices (BMPs) associated with the Caltrans Environmental Improvement Program (EIP) project 988 on Highway 28 (EIP 988). The following discussion summarizes each action. A more detailed discussion of the individual actions and key PLRM modeling assumptions are discussed in Section 2.3.

- 1. Improved Road Operations:** Jurisdictions have been encouraged by regulators and research to improve road operations for water quality through decreased application of abrasives, increased frequency of sweeping, more efficient sweepers, and use of road abrasive sources containing less FSP. Caltrans intends to meet a significant portion of the load reduction requirements in the third permit term through advanced road operations, including: reducing the amount of road abrasive applied; improving the specification to use a road abrasive material with less FSP in the source material; road surface temperature monitoring; and increasing sweeping frequency. To meet the increased load reduction requirements for the third milestone, Caltrans will be adding 14.6 miles of roadway catchments to the 2021 registration for which advanced operations will be made. This includes an additional 0.5 miles along Highway 50 and 5.7 miles along Highway 28. A UPC along Highway 89 which totals 8.4 miles will also be incorporated. In addition, the Road RAM condition assessments continue to show that improved road operations are having an impact on the amount of FSP, and the same RCS will be maintained for the 2026 TMDL milestone.
- 2. Credit Sharing of Bijou Environmental Improvement Program (EIP) Project with City of South Lake Tahoe:** Caltrans entered into a Cooperative Agreement (03-0479) on March 1, 2012 with the City of South Lake Tahoe (CSLT) to build the Bijou Area Erosion Control Project (ECP), Phase 1. Caltrans contributed \$4,735,000 using State Highway Operation and Protection Program (SHOPP) funds toward the project construction capital costs. The City funded one hundred percent of the construction capital and support costs exceeding Caltrans' contribution and all future operations and maintenance (O&M) costs. The project was registered through the LCCP by the City, who will assign a certain number of credits annually to Caltrans in accordance with the Cooperative Agreement. A total of 120 credits were generated by this project, but since CSLT is performing all ongoing operations and maintenance, Caltrans will receive a smaller percentage of the total credits each year. In 2021, Caltrans was eligible to receive 47 percent of the total credits generated by this project (56 credits). In 2026, Caltrans is eligible to receive 44% of the total credits (53 credits).

- 3. Caltrans Environmental Improvement Program Project 988 (EIP 988):** For the 10-year milestone, Caltrans registered two infiltration basins installed as part of EIP 988 on Highway 28 from post mile 2.54-6.08. Along with construction of the infiltration basins, EIP 988 consisted of highway shoulder stabilization and a series of catch basins and sand vaults. The condition of both infiltration basins are continually assessed using BMP Rapid Assessment Methodology (BMP RAM) which has concluded these basins are still effective at infiltrating stormwater discharge.

2.3 Pollutant Load Reduction Estimates

The UPCs and associated pollutant controls that Caltrans intends to register pursuant to the Lake Clarity Crediting Program to achieve the 2026 load reduction milestone are shown in Figures 2-2, 2-3, and 2-4. For the 2021 TMDL milestone update, the PLRM Version 2.1 baseline model inputs were modified to reflect the intended levels of road operations and maintenance practices within the catchments proposed for registration. The changes that were made to these baseline models are described in detail below.

2.3.1 Improved Road Operations and Maintenance

Among developed land uses in the Tahoe Basin, research supporting the Lake Tahoe TMDL identified urban roads as the primary source of pollutants per unit area for FSP (Lahontan and NDEP, 2010). Additional research has identified the winter application of traction abrasives and subsequent pulverization of abrasives into FSP as a significant source of this pollutant (2NDNATURE, 2010; Kuhns et al., 2010). Reductions in abrasive mass applied and/or increasing the recovery of abrasive materials after application can be effective strategies to reduce the FSP loads generated from the Tahoe Basin roads (2NDNATURE, 2010; Kuhns et al., 2010). In the PLRM, road maintenance operations, specifically abrasive application strategies and street sweeping frequencies, influence the estimated FSP characteristic runoff concentrations (CRC) emanating from roads within the catchment.

According to the PLRM Version 2.1 User's Manual (NHC, 2021), CRCs are calculated according to road shoulder erosion potential and road condition scores that correlate with RCSs collected using the Road Rapid Assessment Methodology (Road RAM). The RCSs generated by Road RAM measurements range from 0.5 (most pollutant generation) to 5.0 (least pollutant generation). These scores reflect the conditions of the paved road surface as it relates to the potential for pollutant generation. The definition of road condition does not include the pervious road shoulder or the connectivity of impervious area to downstream receiving waters (NHC, 2021).

Caltrans' road operation and maintenance efforts are aimed at applying a reduced quantity of abrasives to the roads and implementing an improved road abrasive that contains lower FSP concentration. This source control strategy is based on the fact that

reducing the amount of FSP applied to the roadways in the form of winter traction abrasives will result in less FSP load in stormwater runoff from those roadways (Lahontan and NDEP, 2014). It is expected that participation in the Road Operation Effectiveness Project and ongoing research and collection of runoff monitoring data (Caltrans, 2013) will continue to demonstrate this load reduction.

UPC Registration

- A. The Caltrans road segments planned for registration to meet the 15-year load reduction milestone through improved road operations and maintenance are shown in Figures 2-2, 2-3 and 2-4 and include the following individual UPCs:
South Shore Road Operations: Highway 50 from Stateline through South Lake Tahoe (El Dorado County);
UPC 50_ED_69.54-80.39 (10.85 miles)
- B. North Shore Road Operations: Highway 28 in Placer County from Tahoe City through North Lake Tahoe to the Nevada state line:
UPC 28_PL_0.34-10.92 (10.58 miles)
- C. West Shore Road Operations: Highway 89 in Placer County from Tahoma to Tahoe City: UPC 89_PLA_0-8.43 (8.43 miles)

The pollutant load reductions that will be achieved by the improved roadway operations within these three UPCs were calculated by setting the PLRM model inputs to correspond to the anticipated roadway conditions. The same RCS of “2.5” used for the 2021 PLRP update will be maintained for the 2026 TMDL milestone. This value reduces the modeled pollutant loads generated by the roadways over the baseline conditions (modeled with RCSs of 1.4 or 1.7). The improved road conditions that equate to the increased RCS will be achieved through advanced road operations and maintenance activities, as detailed below. Road RAM observations collected to date indicate that an RCS of 2.5 is attainable on the above referenced UPCs.

Advanced Abrasive Controls

Within the registered catchments, the following road operations, representing improvements from the baseline condition, will be performed:

1. Pre-Season Preparation and Operator Training

Pre-season checks involve examining systems before the season starts to make sure that routine maintenance was done and that systems work per manufacturer’s specifications. Field sensing units can be calibrated in the field and do not require returning to the manufacturer. Tailgate meetings are held by the maintenance supervisor to ensure field staff understands protocols, procedures, and strategies for optimizing deicing and abrasives applications before major storm events.

2. Road Temperature Sensing

Deicing and abrasives application operations are directly impacted by pavement temperature. Pavement temperature influences when a road surface treatment will begin or end, what type of treatment is appropriate, and generally provides insight as to how a selected treatment option is likely to perform; this then allows operational adjustments during an event based on actual data. All Caltrans trucks and abrasives spreaders are equipped with temperature sensors which monitor highway and air temperatures; this onboard direct feedback system allows operators and maintenance staff to determine the most effective deicing and abrasive application strategy, for a given stretch of highway, while making real-time adjustments as conditions change.

The mobile temperature sensors utilized in the field feature a non-contact infrared sensor for measuring pavement temperature and ambient (air) temperature. They are typically mounted to a mirror bracket or underside of the vehicle. The sensor systems are equipped with a dash-mounted light-emitting diode (LED) display which presents continuous readings of the surrounding conditions. To further enhance field operations, all maintenance vehicles and abrasives spreaders are equipped with two-way radios, so changing weather conditions are relayed to operators and real-time adjustments to abrasives application strategies can be modified and optimized accordingly.

3. Improved Abrasive Specification

Caltrans conducted an intensive four-year study of roadway traction abrasives to evaluate the potential for reducing the load of fine sediment in stormwater runoff from its roadways by using alternative sources with lower FSP concentrations (Caltrans, 2014b). Caltrans is now using an improved abrasive specification and alternative sources of road abrasive material for all roads in the Tahoe Basin. Study results indicate the new abrasives material specification now being implemented by Caltrans results in materials that contain 95 percent less FSP than the abrasives applied under the previous specification (Caltrans, 2014b).

Improved Sweeping Practices

For the UPCs planned for registration to meet Caltrans' 2026 load reduction milestone, it is assumed that Caltrans will continue use traditional mechanical broom sweepers as part of normal road operation and maintenance activities. Caltrans will operate mechanical broom sweepers at an increased frequency to remove accumulated sediments from roadways prior to runoff events that transport FSP to Lake Tahoe. The effectiveness of these sweeping activities will be evaluated by performing road condition assessments as described below.

Improvements to street sweeping technologies and practices have been identified as a promising approach to address load reduction goals for FSP. The use of high-efficiency (vacuum or regenerative air) street sweepers is being encouraged by regulatory agencies as a cost-effective source control to remove FSP from roadways before they are entrained by stormwater runoff and transported to Lake Tahoe. Caltrans is testing new sweeper types and methods to improve the overall efficiency of sweeping operations and removal of FSP from Caltrans roadways. Caltrans may implement high-efficiency sweepers in the future, and PLRM modeling may need to be revised at that time to reflect these potential improvements in FSP reduction.

Road Operations Registration and Road Condition Assessments

As previously discussed, Caltrans remodeled all roads in the jurisdiction using the updated version of PLRM (Version 2.1). This updated version of PLRM requires users to enter baseline and expected RCS values. The baseline RCS values were specified by Lahontan through the TMDL documents and the expected RCS values were identified by Caltrans by evaluating the results of recent Road RAM condition assessments and other field studies and observations. Based on the previous Road RAM results, Caltrans is confident that the anticipated RCS values of 2.5 are achievable.

Road RAM condition assessments are being performed four times annually in accordance with the LCCP. These assessments are intended to verify the RCS assumptions used to estimate load reductions and Lake Clarity Credits presented herein. Within the registered catchments, Caltrans will continue to implement an inspection program appropriate to assess the improved road operations. Road RAM is the currently approved method to assess, score and document road conditions. With the large additional areas proposed to be registered, safety and cost associated with working on highways with traffic control requirements continues to be a concern. Caltrans will continue to evaluate alternatives for safer and more efficient condition assessment methods.

2.3.2 Credit Sharing

Caltrans entered into a Cooperative Agreement with the City of South Lake Tahoe to share the Lake Clarity Credits associated with the registration of the Bijou Area Erosion Control Project (ECP), Phase 1. Based on the Cooperative Agreement and the results of the PLRM model for the Bijou Area ECP, a total of 120 credits were generated by this project, and Caltrans was eligible to receive 50 percent of these credits in 2016. Since CSLT is performing all operations and maintenance for this project, Caltrans will receive a smaller percentage of the total credits each year. In 2021, Caltrans was eligible to receive 47 percent of the total credits generated by this project (56 credits). In 2026, Caltrans will be eligible to receive 44% of the total credits (53 credits). The Bijou Area ECP PLRM model has been thoroughly described by the City of South Lake Tahoe (CSLT, 2013) and quality assured by PLRM developers. Registration, maintenance, and condition assessments will be performed by CSLT and verified by Caltrans staff to ensure the

project is performing as anticipated and to justify the full award of allotted Lake Clarity Credits.

2.3.3 Treatment BMPs

Caltrans registered two treatment BMPs (infiltration basins) in 2016 that were installed at part of Caltrans project EIP 988. This project extends through nine Caltrans roadway catchments, but the two infiltration basins registered are both located within one Caltrans roadway catchment (Pla28PM1f). Although many treatment BMPs have been constructed within EIP 988, including infiltration basins, catch basins, and sand vaults, only the two infiltration basins are included in this PLRP Update. Caltrans anticipates modeling, registering, and acquiring credit for the remaining treatment BMPs in the future.

Modeling Description

Catchment Pla28PM1f encompasses about 3.4 acres. To isolate the BMPs being registered, this catchment was divided into 4 segments; modeled segments for this PRLP Update are Pla281fMidN (1 acre) and Pla28PM1fMidS (0.7 acre); the remaining segments Pla28PM1fEast (1.4 acre) and Pla28PM1fWest (0.4 acre) were not modeled as part of the PLRP Update. Segments Pla28PM1fMidN and Pla28PM1fMidS discharge to two separate infiltration basins; expected load reductions and credits achieved by the two infiltration basins are summarized in Table 2-3.

Table 2-4 Baseline and post project runoff volumes and pollutant loads as modeled by PLRM for EIP 988.

Caltrans Catchment	PLRM Model	Outfall	Baseline FSP	Expected FSP	Expected Load Reduction (lbs)	Credits Registered
Pla28PM1f	Pla28PM1fWest	1	742	333	0	0
	Pla28PM1fMidS	2	1,118	0	507	2.5
	Pla28PM1fMidN	3	1,676	3	904	4.5
	Pla28PM1fEast	4	2,222	1,418	0	0
	TOTAL		5,758	1,754	1,411	7

The total number of credits for the treatment BMPs modeled in these two segments is 7, which correlates with an expected load reduction of 1,400 lbs FSP. The two infiltration basins registered treat between 3–9 credits each and are therefore designated as “Key” per the Lake Clarity Crediting Program (Page A-11). “Key” treatment BMPs must be inspected to calculate actual credits generated.

Condition Assessments and Maintenance

Caltrans intends to inspect these basins in accordance with the combined protocols described in the BMP RAM User Manual V2 (2ND Nature 2017), CASQA BMP Handbook TC-11 (Infiltration Basin) and Caltrans Storm Water Quality Handbook, Maintenance Staff Guide (2012). The primary measure of effectiveness is infiltration, which can be evaluated through observation of standing water and sediment accumulation. Both the CASQA and Caltrans inspection and maintenance procedures should be considered acceptable equivalents to guidance in the BMP RAM User Manual and are sufficient for Caltrans' NPDES permit. These inspections are used to assess condition/performance and initiate maintenance. Inspections of the BMPs will take place annually during spring, summer or fall.

Caltrans will initiate maintenance of these treatment BMPs on an as-needed basis based on the results of the required condition assessments described above. These key BMPs will be maintained by Caltrans maintenance staff using a vactor truck, hand crews, and other methods, as necessary, to remove excess sediment from the BMPs and restore infiltration rates. It should be noted that pre-treatment sediment traps provide removal of coarse sediments prior to runoff entering the infiltration basins. The pre-treatment step is expected to maintain the functionality of the infiltration basins for extended periods of time (10 – 20 years, or more).

2.4 Load Reduction Schedule

According to the NPDES permit, pollutant load reductions shall be measured in accordance with the LCCP Handbook. The LCCP Handbook outlines the use of the suite of Stormwater Tools to measure load reductions and to demonstrate compliance in registered UPCs. Caltrans has used the updated Stormwater Tools, in close coordination with their developers. Assuming the LCCP Handbook and Stormwater Tools are maintained in their revised condition and other refinements are made, catchment registration will occur between 2022 and 2023.

2.5 Annual Adaptive Management

Caltrans continues to track abrasive applications and amount of material recovered by sweeping. Various types of condition assessments and monitoring activities will continue to be conducted to determine whether constructed or implemented measures including source control, conveyance, and treatment measures are functioning as designed, and to integrate study results into future load reduction estimates, CAP registration documents, and credit declarations. Findings and results from these activities will be used to assess the feasibility of expanding the use of advanced road operations to be a more prominent load reduction strategy for future load reduction milestones. Caltrans intends to evaluate the cost effectiveness and water quality benefits of high-efficiency sweepers and improved traction abrasives. Caltrans will continue to collect water quality monitoring

data from roads for potential refinement of PLRM parameters including assumed characteristic runoff concentrations (CRCs) and treatment BMP characteristic effluent concentrations (CECs). Data collected through other regional stormwater monitoring programs are also aimed at verifying and calibrating these key PLRM assumptions.

2.6 Cost of Lake Tahoe TMDL Implementation

There are significant costs associated with the implementation of actions necessary to meet the load reduction milestones specified in the Lake Tahoe TMDL. As detailed in the Lake Tahoe TMDL Synthesis of Findings (Lahontan and NDEP, 2014), the need for improvement in the integration and alignment of the Stormwater Tools is a priority, as well as the need to reduce the administrative costs.

The Lake Tahoe TMDL implementation activities that must take place prior to catchment registration are as follows:

- **Pollutant Load Reduction Modeling:** All baseline and existing conditions catchment representations must be modeled in PLRM Version 2.1 to estimate anticipated load reductions for registration. Preliminary modeling using PLRM Version 2.1 has been completed and results have been presented herein. Models may be revised in the future based on new information, changing conditions, and results from condition assessments.
- **Best Management Practice Rapid Assessment Methodology (BMP RAM):** Estimate benchmark and threshold BMP RAM parameters for the BMPs that account for load reductions of >25% of the overall load reduction (Essential BMPS), and for those that account for load reductions of 5-25% of the overall UPC load reduction (Key BMPs). This will require initial and annual field measurements to establish and measure these parameters and will also require the BMP RAM online database to be populated with this information, using field parameters and a geographic information system (GIS).
- **Road Rapid Assessment Methodology (Road RAM):** Road RAM, or an alternative method approved by Lahontan, will be performed on all roads slated for registration of road operations. Road segments will need to be input into Road RAM, using GIS, Microsoft Excel, and the online Road RAM database. Road RAM measurements will be performed per the schedule defined in the LCCP.
- **Lake Tahoe Information System (LT Info):** The data developed by conducting the activities and using the three tools described above will be uploaded into LT Info. The measured RAM scores will be uploaded to this system to maintain an up-to-date record and the anticipated Lake Clarity Credits to be earned.

In addition to the above activities, the more significant TMDL implementation costs include the additional maintenance resources for improved roadway operations and construction of water quality improvement projects.

Caltrans will continue to identify and track these costs and conduct cost-benefit analyses for the various TMDL implementation activities. It is anticipated that ongoing implementation will include cost saving refinements to the program and stabilization of these annual costs. Caltrans will continue to work with other implementing and regulatory agencies to identify opportunities to improve efficiency, safety, and technical quality of the program's implementation.

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Section 3

Pollutant Load Reduction Plan Update

This document satisfies the requirement to update this Pollutant Load Reduction Plan in 2022, to describe plans to achieve the pollutant load reduction requirements for the 15-year load reduction milestone. It is expected that the next NPDES Permit issued to Caltrans will require future PLRP updates to meet the 2031 (20-year) and 2036 (25-year) milestones. Caltrans will develop future PLRP Updates as required by its NPDES Permit.

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Section 4

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District	Regional Board	TMDL Watershed	Pollutant	Agency/Municipality Name	Project Name	Caltrans Area Treated (acres)	MS4 Area Treated (acres)	BMP Type	Caltrans Funding Contribution	Total Project Cost	Construction Completion	Municipal Coordination Agreement Date	Cooperative Implementation Agreement or Cooperative Agreement Number	Project WLR (Zinc)	Caltrans ROW WLR (Zinc)	Caltrans Watershed WLA Wet Dry	WLA Units	Project Sediment Load Reduction (ton/year)	Temperature Load Reduction (riparian acres)
1	1	Shasta River (Dissolved Oxygen and Temperature)	Dissolved Oxygen and Temperature	CalTrout	Hole in the Ground Water Quality and Flow Enhancement Project	TBD	TBD	Restoration	\$ 1,935,280	\$ 1,935,280	TBD	TBD	TBD	NA	NA	NA	NA	NA	20
1	1	Shasta River (Dissolved Oxygen and Temperature)	Dissolved Oxygen and Temperature	Shasta Valley Resource Conservation District	Shasta Valley Tailwater Reduction Planning Project	TBD	TBD	Restoration	\$ 240,000	\$ 240,000	TBD	TBD	TBD	NA	NA	NA	NA	NA	2.4
2	1	Scott River (Sediment and Temperature)	Sediment and Temperature	CalTrout	Lower French Creek Sediment Reduction and Habitat Restoration Project	TBD	TBD	Restoration	\$ 549,482	\$ 549,482	TBD	TBD	TBD	NA	NA	NA	NA	NA	5.5
2	1	Scott River (Sediment and Temperature)	Sediment and Temperature	CalTrout	Big Mill Creek-East Fork Sediment Reduction and Habitat Restoration (Sediment and Temperature)	TBD	TBD	Restoration	\$ 1,163,900	\$ 1,163,900	TBD	TBD	TBD	NA	NA	NA	NA	22.6	NA
1	1	South Fork Eel River (Temperature and Sediment)	Sediment and Temperature	Mendocino County Resource Conservation District	MCRCD Eel River TMDL Proposal: Jack of Hearts Road Assessment	TBD	TBD	Restoration	\$ 29,225	\$ 29,225	TBD	TBD	TBD	NA	NA	NA	NA	17	NA
1	1	Middle Fork Eel River (Temperature and Sediment)	Sediment and Temperature	Mendocino County Resource Conservation District	MCRCD Eel River TMDL Proposal: Eel River Ranch Road Implementation	TBD	TBD	Restoration	\$ 312,228	\$ 312,228	TBD	TBD	TBD	NA	NA	NA	NA	5	NA
1	1	South Fork Eel River (Temperature and Sediment)	Sediment and Temperature	Mendocino County Resource Conservation District	MCRCD Eel River TMDL Proposal: Jack of Hearts Road Implementation	TBD	TBD	Restoration	\$ 812,016	\$ 812,016	TBD	TBD	TBD	NA	NA	NA	NA	372	NA
2	1	Scott River (Sediment and Temperature)	Sediment and Temperature	Scott River Watershed Council	Scott River Recovery Action Plan Project (Sediment)	TBD	TBD	Restoration	\$ 1,887,082	\$ 1,887,082	TBD	TBD	TBD	NA	NA	NA	NA	26.9	5
2	1	Klamath River in California (Temperature, Dissolved Oxygen, Nutrient, and Microcystin)	Temperature, Dissolved Oxygen, Nutrient, and Microcystin	Salmon River Restoration Council	Windler Bar Habitat Enhancement Project	TBD	TBD	Restoration	\$ 1,000,000	\$ 1,000,000	TBD	TBD	TBD	NA	NA	NA	NA	NA	10
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Hayward	Arf	26	414	Hydrodynamic Separator (HDS)	Included in Tennyson	Included in Tennyson	2024 (In Construction)	5/5/2021	ALA0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	Alameda County	Estudillo Canal	256.084	2620	Multiple Gross Solids Removal Devices in Parallel	\$ 2,175,000	\$ 2,175,000	2019 Operational	6/24/2020	AC0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	Alameda County Public Works Agency	Large Trash Capture Program: Via Arriba, Lobert, Redwood Road, Norbridge & Walker, Mattox & Birch	84	487	Debris Separating Baffle Box Other LTC	\$ 9,500,000	TBD	2025-2026	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Concord	Hillcrest Park	90	539	Debris Separating Baffle Box (DSBB)	\$ 5,100,000	\$ 5,100,000	2023 Operational	6/17/2020	CON0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of East Palo Alto	Alto's O'Connor Pump Station	39.072	864	Trash Screen	\$ 521,000	\$ 521,000	2020 Operational	6/29/2020	EPA0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of East Palo Alto	EPA/Merlo Park Newbridge St/Saratoga Ave	19.613	725.3	Full Trash Capture Device	\$ 1,500,000	TBD	In Design	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Emeryville	MacArthur	3.8	77.4	Debris Separating Baffle Box (DSBB)	\$ 680,000	\$ 680,000	2023 Operational	6/18/2021	EME0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Hayward	Tennyson	80	407	Hydrodynamic Separator (HDS)	\$ 3,800,000	\$ 3,800,000	2023 Operational	5/5/2021	ALA0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Hayward	Cotter Way	20	600	Hydrodynamic Separator (HDS)	Included in Tennyson	Included in Tennyson	2023 Operational	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Livermore	Southfront, El Charro	18	259	Debris Separating Baffle Box 5 mm Louvered Screen	\$ 1,480,000	TBD	2025 (Design)	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Oakland	Cary	40.7	739	Debris Separating Baffle Box (DSBB)	\$ 5,891,403	TBD	2024 (In Construction)	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Oakland	Mandela	17	610	Debris Separating Baffle Box (DSBB)	\$ 6,990,825	TBD	2024 (In Construction)	6/4/2021	OAK0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Oakland	Port of Oakland	18.95	483	HDS	\$ 8,000,000	TBD	In Design	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Palo Alto	Embarcadero	21.6	186.9	Hydrodynamic Separator (HDS)	\$ 774,837	\$ 774,837	2023 Operational	6/15/2021	SCL0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Richmond Phase I	Marina Bay @ Regatta S @ S. Polaris	74	960	Hydrodynamic Separator (HDS)	\$ 2,500,000	\$ 2,500,000	2018 Operational	3/21/2017	R10001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Richmond Phase II	Mesker Ditch Cutting Blvd @ S. 3rd St. Bayview	79	3460	Hydrodynamic Separator (HDS)	\$ 5,678,133	\$ 5,678,133	2020/2023 Operational	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of San Jose	HDS Units at Various Locations	163.6	2839	Hydrodynamic Separator (HDS)	\$ 5,500,000	\$ 5,500,000	2019 Operational	6/25/2018	SJ0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of San Jose	LTC Phase VIII	163.922	617	HDS	\$ 11,137,500	TBD	In Design	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of San Jose	LTC Phase VII Jose Figueres Ave/ Alexian Dr, Eastridge Loop/ Eastridge Blvd, Charcot Ave/ Hartog Dr, Blossom Hill Rd/ US85, Airport Blvd/ Guadalupe River, San Antonio St/ Scharff Ave	246.689	1233	Full Trash Capture Device	\$ 12,500,000	\$ 12,500,000	2023 Operational	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of San Leandro	Merced Street	25	600	Multi-GSRD	\$ 3,500,000	TBD	2025 (Design)	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of San Mateo	Poplar Golf Course	16.039	333	Multiple Gross Solids Removal Devices in Parallel	\$ 330,000	\$ 330,000	2023 Operational	6/17/2020	SM0002	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of San Mateo	Pacific Boulevard, South of 41st	6.662	192	Gross Solids Removal Device (GSRD)	\$ 630,000	TBD	2025 (Design)	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of San Mateo Phase I	Poplar Dore	12	765	Debris Separating Baffle Box (DSBB)	\$ 650,000	\$ 650,000	2018 Operational	6/19/2018	SM0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of San Mateo Phase I	Coyote Point	26	Included in Poplar Dore	Debris Separating Baffle Box (DSBB)	\$ 1,473,000	\$ 1,473,000	2018 Operational	6/19/2018	SM0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of San Pablo	Church Ln/Willow Rd	5.238	500	Full Trash Capture Device	\$ 445,000	TBD	In Design	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of South San Francisco	Memorial Park - Phase 1 and Phase 2	68	6336	Trash Box, Grit Chamber, and Infiltration Gallery	\$ 15,500,000	\$ 15,500,000	2022 Operational	4/26/2017 9/20/2019	SF0001SF0002	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	City of Suisun	Solano Green SW Infrastructure/ Amtrak Park and Ride	3.7	0	Bioretention	\$ 893,270	TBD	2024 (In Construction)	5/15/2022	SOL0002	NA	NA	NA	NA	NA	NA

District	Regional Board	TMDL Watershed	Pollutant	Agency/Municipality Name	Project Name	Caltrans Area Treated (acres)	MS4 Area Treated (acres)	BMP Type	Caltrans Funding Contribution	Total Project Cost	Construction Completion	Municipal Coordination Agreement Date	Cooperative Implementation Agreement or Cooperative Agreement Number	Project WLR (Zinc)	Caltrans ROW WLR (Zinc)	Caltrans Watershed WLA Wet Dry	WLA Units	Project Sediment Load Reduction (ton/year)	Temperature Load Reduction (riparian acres)
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	Contra Costa County	Caltrans HDS Pilot Willow Pass HDS	35	85	Hydrodynamic Separator (HDS)	\$ 2,000,000	TBD	2024 (In Construction)	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	Contra Costa County Phase I	Bay Point	20.659	115	Hydrodynamic Separator (HDS)	\$ 1,000,000	TBD	2024 (In Construction)	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	Contra Costa County Phase I	Tara Hills	41	139	Debris Separating Baffle Box (DSBB)	\$ 3,945,000	\$ 3,945,000	2023 Operational	6/24/2020	CC0001	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	Contra Costa County Phase I	Saranap	18.279	150	Hydrodynamic Separator (HDS)	Included in Tara Hills	Included in Tara Hills	2025 (Design)	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	Pittsburg	California Ave. SR-4/Willow Pass	20.48	819	Full Trash Capture Device	\$ 2,040,000	TBD	In Design	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	Vallejo Wastewater	Austin Creek Nets Salono, Sonoma, & Mono St	388.314	9500	Nets	\$ 4,000,000	\$ 4,000,000	2023 Operational	TBD	TBD	NA	NA	NA	NA	NA	NA
4	2	San Francisco Bay (Mercury and PCBs)	Mercury and PCBs	Various Cities around Marin	15 Local Projects	284.586	1794.6	Debris Separating Baffle Box (DSBB), Trash Nets, HDS	\$ 12,500,000	TBD	In Design	TBD	TBD	NA	NA	NA	NA	NA	NA
7	4	Ballona Creek (Metals (Ag, Cd, Cu, Pb, Zn) and Selenium)	Ag, Cd, Cu, Pb, Zn and Selenium	Culver City	Culver Blvd	23	773	Culver Blvd	\$ 522,916	\$ 14,200,000	2021	6/9/2021	CUL0001	1594.04 1.11	63.81 0.05	3562 357.2	g/day	NA	NA
7	4	RIO Hondo & San Gabriel	Ag, Cd, Cu, Pb, Zn and Selenium	El Monte	Garvey Avenue	7.65	54.74	TBD	\$ 1,500,000	TBD	2024	4/3/2023	ELM0001	TBD	TBD	TBD	TBD	NA	NA
7	4	San Gabriel River (Ag, Cd, Cu, Pb, Zn, and Selenium)	Ag, Cd, Cu, Pb, Zn and Selenium	LA Co DPW-1	Adventure Park	TBD	6985	Adventure Park	\$ 15,000,000	\$ 27,000,000	2023	5/1/2019	DPW0001	193.04 0.65	4.63 0.02	11.3	kg/day	NA	NA
7	4	Ballona Creek Estuary (Toxic Pollutants Ag, Cd, Cu, Pb, Zn, Chlordane, DDTs, Total PCBs, and Total PAHs)	Cu, Pb, Zn, DDT, PAHs, and PCBs	Culver City	Mesmer Low Flow Diversion	195	6093	Mesmer Low Flow Diversion	\$ 230,000	\$ 1,951,301	2022	6/22/2022	CUL0002	35.8	1.2	14	kg/y	NA	NA
7	4	Dominguez Channel & Greater Los Angeles & Long Beach Harbor Waters (Metals, DDT, PAHs, and PCBs)	Cu, Pb, Zn, DDT, PAHs, and PCBs	LA Co DPW-2	Alondra Park	185	4944	Alondra Park	\$ 15,000,000	\$ 41,500,000	2023	6/17/2020	DPW0002	0.49 0.327	0 0.018	358	g/d	NA	NA
7	4	Central Santa Monica Bay	DDT, PCBs, Debris, Bacteria	Inglewood	Edward Vincent Jr Park	TBD	TBD	TBD	\$ 10,000,000	TBD	TBD	TBD	TBD	NA	NA	NA	NA	NA	NA
7	4	South Santa Monica Bay	DDT, PCBs, Debris, Bacteria	Torrance	Torrance Airport Phase 2	TBD	TBD	TBD	\$ 3,000,000	TBD	TBD	TBD	TBD	NA	NA	NA	NA	NA	NA
7	4	Machado Lake (Pesticides and PCBs)	DDT, PCBs, Total N, Total P	City of Carson	Carriage Crest Park	TBD	1118	Carriage Crest Park	\$ 13,000,000	\$ 13,000,000	2020	6/8/2016	CA0001	NA	NA	358	varies	NA	NA
7	4	Los Cerritos (Metals)	Metals	City of Bellflower	Caruthers (Mayfair HS)	103.3	3256	Caruthers	\$ 13,000,000	\$ 13,000,000	2020	6/13/2016	BF0001	86.41 63.03	18.74 5.51	670	g/d	NA	NA
7	4	Los Cerritos (Metals)	Metals	City of Lakewood- 1	Bolivar Park	63.9	3209	Bolivar Park	\$ 11,000,000	\$ 11,000,000	2019	6/29/2015	LW0001	25.01 53.44	0.37 2.83	670	g/d	NA	NA
7	4	Los Cerritos (Metals)	Metals	City of Lakewood- 2	Mayfair Park	62.3	2274	Mayfair Park	\$ 15,000,000	\$ 15,000,000	2020	6/20/2016	LW0002	70.11 11.76	1.51 1.2	670	g/d	NA	NA
7	4	LA River and Tributaries (Metals)	Metals	City of Long Beach	LB MUST	192	11000	LB MUST	\$ 28,000,000	\$ 44,000,000	2022	4/19/2016	LB0001	3.3	2.2	37 0.0027	kg/d	NA	NA
7	4	Los Cerritos (Metals)	Metals	City of Signal Hill- 1&2	LB Airport Phase 1& 2	40.6	1925	LB Airport Phase 1& 2	\$ 15,250,000	\$ 15,250,000	2019	5/22/2018	SH0002	62.48 19.51	1.26 1.02	670	g/d	NA	NA
7	4	Ballona Creek	Trash, Metals, Bacteria	City of Los Angeles	Ballona Creek Water Quality Improvement Project (LFTF1 & LFTF2)	1078.88	65501.59	treat-and-release and water diversion functions during dry-weather	\$ 1,400,000	\$ 92,682,000	2025	TBD	TBD	NA	NA	TBD	TBD	NA	NA
7	4	Ballona Creek	Trash, Metals, Bacteria	Culver City	Syd Kronenthal Park Stormwater Capture Project	385	6862	Regional underground storage facility	\$ 11,300,000	\$ 18,000,000	2027	TBD	TBD	NA	NA	TBD	TBD	NA	NA
7	4	San Gabri+B32-R33el River	Trash, Metals, Bacteria	LADPW	Allen J Martin Park	0	307	TBD	\$ 10,000,000	\$ 32,500,000	2028	TBD	TBD	NA	NA	TBD	TBD	NA	NA
7	4	San Gabriel River	Trash, Metals, Bacteria	LADPW	Bassett High School Multi-Benefit Stormwater Capture Project	0	1150	TBD	\$ 20,000,000	\$ 90,600,000	2027	TBD	TBD	NA	NA	TBD	TBD	NA	NA
7	4	Upper Los Angeles River	Trash, Nutrients, Metals, Bacteria	City of Los Angeles	Broadway-Manchester Multi-Modal Green Street Project	9.9	204	Stormwater treatment, capture, reuse for onsite irrigation, and discharge to the sanitary sewer system	\$ 11,886,981	\$ 23,773,962	2026	TBD	TBD	NA	NA	TBD	TBD	NA	NA
7	4	Upper Los Angeles River	Trash, Nutrients, Metals, Bacteria	City of Los Angeles	Hollenbeck Park Lake Rehabilitation Project	13	460.1	Stormwater diversions, capture and treatment structures, and green street network components	\$ 15,000,000	\$ 44,592,953	2027	TBD	TBD	NA	NA	TBD	TBD	NA	NA
7	4	Upper LA River Watershed / Reach 3	Trash, Nutrients, Metals, Bacteria	South Pasadena	Arroyo Seco Project Project 2	TBD	TBD	TBD	\$ 3,114,685	\$ 7,786,712	TBD	TBD	TBD	NA	NA	TBD	TBD	NA	NA

Albion River Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
North Coast	Albion River	Sediment	D5, D5.1, D5.2, and D5.7.1 and D5.7.1.1

General Watershed Description²

The Albion River drains a 43 square mile watershed located in the northern California Coast Range in western Mendocino County, entering the Pacific Ocean at the town of Albion, about 16 miles south of Fort Bragg. It drains primarily from the east to the west, sharing ridges with the Big River watershed to the north and northeast and the Navarro River watershed to the southeast and south. There is relatively little human occupation in the watershed, with scattered ranches and residences, and only one small town, Comptche. The town of Albion is located at the base of the watershed, at Highway 1. Elevations within the Albion River watershed range from sea level at the basin outlet to 1,566 feet. The basin is almost entirely privately owned, with MRC owning about 54 percent of the watershed.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 233 for Reach 1 and 304 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with sediment load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed sediment load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Albion River Total Maximum Daily Load for Sediment*, December 2001.

³ Sources: Caltrans, *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021 and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Albion River Sediment TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Load Reductions and Sediment Load Reductions (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	27,529	2	0.007%	Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The TMDL does not include Caltrans-specific allocations nor proportionate contributions. On August 8, 2020, North Coast Water Board staff provided Caltrans-specific sediment LAs.</p> <p>Existing Load – 7 tons/year Load Allocation – 2 tons/year Reduction Needed – 74% Sediment Load Reduction – 5 tons/year</p>

TMDL Implementation Schedule

- Start Date: December 31, 2001
- Final Compliance Date per TSO: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A, Table A-2

Albion River Sediment TMDL

Plan to Achieve TMDL Compliance^{2,6,7}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the sediment WLA in the Albion River Watershed. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Albion River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Three SHOPP projects (PID, PAED, and/or PS&E) are planned in the Albion River watershed that include treatment BMPs.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Albion River Sediment TMDL

Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹⁰

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring shall be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans’ implementation of TMDL sediment reduction projects. The watershed-based monitoring program will include a number of monitoring locations and frequency of monitoring proportional to Caltrans’ sediment load in excess of its load allocation for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹⁰ Source: Permit Attachment F

Big River Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Big River	Sediment	D5, D5.1, D5.2, and D5.7.1 and D5.7.1.1

General Watershed Description²

The Big River drains a watershed of approximately 181 square miles located in the northern California Coast Range in western Mendocino County, entering the Pacific Ocean at the town of Mendocino, about 10 miles south of Fort Bragg. It drains primarily from the east to the west, sharing ridges with the Noyo and Caspar Creek watersheds to the north and the Albion River watershed to the south. Other than the town of Mendocino, there is relatively little human occupation in the watershed, with only scattered ranches and residences. Elevations within the Big River watershed range from sea level at the basin outlet to 2,725 feet. The largest property owners are private timber companies and a State-owned working forest. The remaining property owners include smaller industrial and nonindustrial timberland owners, several ranches, several public and quasi-public parcels, and residences. The watershed's topography is diverse along its length, varying from flat estuarine environments and uplifted marine terraces to rugged mountains with high relief in the eastern portion.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2018-2019	1.2

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 141 for Reach 2, 226 for Reach 1, 267 for Reach 3, and 268 for Reach 4

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with sediment load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed sediment load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Big River Total Maximum Daily Load for Sediment*, December 2001.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Big River Sediment TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Load Reductions and Sediment Load Reductions (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	115,970	123	0.11%	Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The TMDL does not include Caltrans-specific allocations nor proportionate contributions. On August 8, 2020, North Coast Water Board staff provided Caltrans-specific sediment LAs.</p> <p>Existing Load – 193 tons/year LA – 44 tons/year Reduction Needed – 77% Sediment Load Reduction – 149 tons/year</p>

TMDL Implementation Schedule

- Start Date: December 31, 2001
- Final Compliance Date per TSO: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A, Table A-2

Big River Sediment TMDL

Plan to Achieve TMDL Compliance^{2,6,7}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Three SHOPP projects (PID, PAED, and/or PS&E) are planned in the Big River watershed that include treatment BMPs.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
Biofiltration Swale	4
DPP Infiltration Area (DPPIA)	3
Total	7

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Big River Sediment TMDL

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹⁰

Caltrans can select and implements one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring shall be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment reduction projects. The watershed-based monitoring program will include a number of monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹⁰ Source: Permit Attachment F

Garcia River Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Garcia River	Sediment	D5, D5.1, D5.2, and D5.7.1 and D5.7.1.1

General Watershed Description²

The Garcia River is a watershed of approximately 73,223 acres in Mendocino County which discharges to the Pacific Ocean just north of the city of Point Arena, California. It is a forested watershed consisting of mixed conifer (primarily fir and redwood) and hardwood (primarily tan oak and madrone) forests. A defining feature of the basin is the San Andreas fault which is the principal factor controlling the drainage pattern of the Garcia River watershed, including the Garcia mainstem which follows the San Andreas fault itself for its last 15 miles or so. Historically, the Garcia River watershed has undergone two waves of timber cutting and a long history of dairy farming and ranching.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 223 for Reach 1, 299 for Reach 2, and 305 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with sediment load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed sediment load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board, *Reference Document for the Garcia River Watershed Water Quality Attainment Action Plan for Sediment*, September 2000.

³ Sources: Caltrans, *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021 and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Garcia River Sediment TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Load Reductions and Sediment Load Reductions (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities that may be outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	73,276	22	0.03%	Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The TMDL does not include Caltrans-specific allocations nor proportionate contributions. On August 8, 2020, North Coast Water Board staff provided Caltrans-specific sediment LAs.</p> <p>Existing Load – 251 tons/year LA – 100 tons/year Reduction Needed – 60% Sediment Load Reduction – 150 tons/year</p>

TMDL Implementation Schedule

- Start Date: December 31, 2001
- Final Compliance Date per TSO: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A, Table A-2

Garcia River Sediment TMDL

Plan to Achieve TMDL Compliance^{2,6,7}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities that may be outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Two SHOPP projects (PID, PAED, and/or PS&E) are planned in the Garcia River watershed that include treatment BMPs.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 1 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Garcia River Sediment TMDL

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹⁰

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring shall be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment reduction projects. The watershed-based monitoring program will include a number of monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹⁰ Source: Permit Attachment F

Gualala River Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Gualala River	Sediment	D5, D5.1, D5.2, and D5.7.1 and D5.7.1.1

General Watershed Description²

The Gualala River watershed, located in Northern California, flows into the Pacific Ocean near the Town of Gualala approximately 114 miles north of San Francisco and 17 miles south of Point Arena. The Gualala River drains approximately 300 square miles, or 191,145 acres, of mostly mountainous and rugged terrain in both Sonoma and Mendocino Counties. The county boundary runs down the center of the main stem Gualala River. The primary population centers are the towns of Gualala, Sea Ranch, Stewards Point, Annapolis and Plantation and are concentrated along the Pacific coastline. The primary land use is predominantly timber production, along with grazing and rural residential development. Orchards and vineyards are also present.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 229 for Reach 1, 298 for Reach 3, 300 for Reach 2, 302 for Reach 4 and 303 for Reach 5

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with sediment load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed sediment load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Gualala River Total Maximum Daily Load for Sediment*, December 2001.

³ Sources: Caltrans, *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021 and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Gualala River Sediment TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Load Reductions and Sediment Load Reductions (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	191,141	11	0.01%	Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The TMDL does not include Caltrans-specific allocations nor proportionate contributions. On August 8, 2020, North Coast Water Board staff provided Caltrans-specific sediment LAs.</p> <p>Existing Load – 171 tons/year LA – 21 tons/year Reduction Needed – 88% Sediment Load Reduction – 150 tons/year</p>

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A, Table A-2

Gualala River Sediment TMDL

TMDL Implementation Schedule

- Start Date: December 31, 2001
- Final Compliance Date per TSO: December 31, 2034

Plan to Achieve TMDL Compliance^{2,6,7}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Garcia River watershed that includes treatment BMPs.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 1 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Gualala River Sediment TMDL

Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹⁰

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring shall be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans’ implementation of TMDL sediment reduction projects. The watershed-based monitoring program will include a number of monitoring locations and frequency of monitoring proportional to Caltrans’ sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹⁰ Source: Permit Attachment F.

Klamath River Temperature, Dissolved Oxygen, Nutrients, and Microcystin TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Klamath River	Temperature, Dissolved Oxygen, Nutrients, and Microcystin	D3.2, D3.4, D5, D5.1, D5.2, D5.6, D5.7.1, and D5.7.1.2

General Watershed Description²

The Klamath River basin is 12,680 square miles in area. The Klamath River originates in southern Oregon and flows through northern California to meet the Pacific Ocean at Requa in Del Norte County, California. Forty-four percent of the watershed lies within the boundaries of Oregon, while the remaining 56% of the basin lies within the boundaries of California. The Klamath River basin is of vital economic and cultural importance to the states of Oregon and California, as well as the Klamath Tribes in Oregon; the Hoopa, Karuk, and Yurok Tribes in California; the Quartz Valley Indian Reservation in California, and the Resighini Rancheria in California. It provides fertile lands for a rich agricultural economy in the upper basin. Irrigation facilities within the U.S. Bureau of Reclamation’s Klamath Project support this economy, as does hydroelectric power provided via a system of five dams operated by PacifiCorp. The basin is the home spawning grounds of a once vast Tribal, sport, and commercial fishery and provides other aquatic resources of cultural significance to the local Indian Tribes. The watershed supports an active recreational industry, including activities that are specific to the Wild and Scenic portions of the river designated by both the state and federal governments in both Oregon and California. Finally, the watershed continues to support what were once more significant mining and timber industries. In the California portion of the Klamath River, increased water temperatures, elevated nutrient levels, low dissolved oxygen concentrations, elevated pH, potential ammonia toxicity, increased incidence of fish disease, an abundance of aquatic plant growth, high chlorophyll-a levels (both planktonic and periphytic algae), and high concentrations of potentially toxicogenic blue-green algae, particularly in the impounded reaches, decrease the quality and quantity of suitable habitat for fish and aquatic life, and have disrupted traditional cultural uses of the river by resident Tribes. These conditions contribute to the nonattainment of beneficial uses, including the most sensitive beneficial uses: those associated with the cold-water salmonid fisheries, cultural uses and practices, and recreation.

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	11.08
2015-2016	11.08
2016-2017	19.5
2017-2018	6
2018-2019	30.1
2020-2021	1.5
2021-2022	3.4

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

¹ Source: Permit Attachment D.

² Source: California North Coast Regional Water Quality Control Board *Klamath River Total Maximum Daily Loads Addressing Temperature, Dissolved Oxygen, Nutrient, and Microcystin Impairments in California*, March 2010.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A “CU” is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Klamath River Temperature, Dissolved Oxygen, Nutrients, and Microcystin TMDL

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 110 for Reach 21, 124 for Reach 22, 147 for Reach 23, 151 for Reach 1, 246 for Reach 19, 247 for Reach 25, 248 for Reach 3, 249 for Reach 12, 250 for Reach 2, 251 for Reach 7, 252 for Reach 9, 254 for Reach 18, 256 for Reach 17, 257 for Reach 17, 257 for Reach 10, 258 for Reach 13, 259 for Reach 26, 260 for Reach 15, 261 for Reach 4, 263 for Reach 8, 265 for Reach 14, 266 for Reach 5, 271 for Reach 11, 272 for Reach 24, 275 for Reach 16, 288 for Reach 6

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer shall determine Caltrans' progress towards compliance with temperature load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans shall provide the load reductions for any completed temperature load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Loads (Permit Attachment D Sections D5.7.1 and D5.7.1.2)	<ul style="list-style-type: none"> • Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans also works with the North Coast Regional Water Board to identify cooperative projects to reduce temperature loads through effectively increasing shade to streams. Caltrans works toward restoring riparian acreage, a goal of 61 acres of riparian shade.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans participates in the <i>Windler Bar Habitat Enhancement Project</i> , which has an assigned pollutant load reduction of 10 acres of riparian shade.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Temperature Total Maximum Daily Loads (Permit Attachment D Section D5.6)	<ul style="list-style-type: none"> • Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. • Because vegetation removal may also increase surface water temperatures, Caltrans: 1) preserves where feasible existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases; 2) provides effective shade near receiving waters susceptible to temperature increases; and 3) maintains site potential effective shade near receiving waters susceptible to temperature increases.

Klamath River Temperature, Dissolved Oxygen, Nutrients, and Microcystin TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1 and 2	1	6,406,004	703	0.01%	Temperature, Dissolved Oxygen, Nutrients, and Microcystin	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Temperature	<p>The temperature TMDL assigns LAs as the percent of shade along a stream segment and Caltrans' responsibility is riparian shade that cannot exist within the intersection of Caltrans' highways and streamside riparian corridor. Caltrans is required to conduct riparian restoration according to its proportional responsibility of 61 acres of riparian shade. Caltrans is identified as a responsible party based on land use for temperature WLAs.</p> <p>The following are Caltrans-specific proportional responsibility for restoration of riparian shade:</p> <ul style="list-style-type: none"> • Source: Excess Solar Radiation (expressed as effective shade) <ul style="list-style-type: none"> ○ Allocation: The shade provided by topography and full potential vegetation conditions at a site, with an allowance for natural disturbances such as floods, wind throw, disease, landslides, and fire. • Source: Increased Sediment Loads <ul style="list-style-type: none"> ○ Allocation: Zero temperature increase caused by substantial human-caused sediment-related channel alterations. • Source: Impounded Discharges <ul style="list-style-type: none"> ○ Allocation: Zero temperature increase above natural temperature.
Dissolved Oxygen, Nutrients (Total Phosphorus and Total Nitrogen), and Microcystin	No dissolved oxygen, nutrients, and microcystin WLAs are assigned specifically to Caltrans.

TMDL Implementation Schedule

- Start Date: December 28, 2010
- Final Compliance Date per TSO⁶: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A, Section A9.7.10.1.5

⁶ Final deadlines for achievement of LA are not specific in the TMDL or Action Plan. The TMDL was adopted on March 24, 2010; therefore, the start date was March 24, 2010. Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Klamath River Temperature, Dissolved Oxygen, Nutrients, and Microcystin TMDL

Plan to Achieve LAs and WLAs^{2,7,8,9}

Pollutant	Strategies to Achieve LAs and WLAs
Temperature	<ul style="list-style-type: none"> • Caltrans preserves existing riparian biotic conditions immediately adjacent to, and provides effective shade near, receiving waters susceptible to temperature increases. Any alteration of riparian biotic conditions that may increase sedimentation or reduce effective shade requires that Caltrans obtain written authorization by the applicable RWQCB Executive Officer or designee prior to beginning work. • Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans participates in one cooperative agreement project. <ul style="list-style-type: none"> ○ <i>The Windler Bar Habitat Enhancement Project:</i> <ul style="list-style-type: none"> ▪ This project is located along the North Fork Salmon River, approximately 10.5 river miles upstream of its confluence with the South Fork Salmon River near Forks of Salmon, California. The entire project area is located on United States Forest Service lands, within the Klamath National Forest. ▪ The Windler Bar project area was selected by the Salmon River Restoration Council (SRRC) for restoration due to its location along a reach of the North Fork Salmon that offers low-gradient habitat known to host both spawning and year-round rearing of juvenile salmonids, including coho and spring-run Chinook. The project is also anticipated to benefit other salmonids and aquatic species. The project will: 1) Create year-round rearing habitat on the river bar by enhancing high-flow and thermal refugia for juvenile salmonids; 2) Enhance thermal refugia in lower Cronan Gulch; 3) Enhance riparian vegetation; 4) Enhance spawning habitat; 5) Treat invasive species in Gallia Pond. ▪ The SRRC coordinates this work in partnership with Michael Love & Associates, the U.S. Forest Service, and the Karuk Tribe, to enhance and revegetate the Windler Bar complex floodplain, and to enhance Cronan Gulch and Gallia Pond. Caltrans will receive compliance credits for TMDL reductions and provide project funding support, and aquatic and riparian habitat along the Salmon River and its tributaries will benefit from decreased sediment and temperature contributions within a critical salmonid bearing watershed.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁹ Source: State Water Resources Control Board, *Water Quality Report Card, Microcystin in Klamath River*, November 2018.

Klamath River Temperature, Dissolved Oxygen, Nutrients, and Microcystin TMDL

Pollutant	Strategies to Achieve LAs and WLAs
Dissolved Oxygen, Nutrients, and Microcystin	<ul style="list-style-type: none"> • Caltrans addresses nutrient inputs into the Klamath River watershed through the control of sediment from its road and highway facilities. Monitoring results show total settleable solids were not detected in any of the samples at any of the sample sites. • Caltrans controls the discharge of nutrients through the control of sediment. Caltrans implements and maintains structural BMPs to mitigate dissolved oxygen, nutrients, and microcystin in the Klamath River watershed. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Klamath River watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Fifty SHOPP projects (PID, PAED, and/or PS&E) are planned in the Klamath River watershed that include treatment BMPs.
Fish Passage Remediation	<ul style="list-style-type: none"> • Caltrans locates, assesses, and remediates barriers to fish passages. Caltrans has completed three fish passage remediation projects within the Klamath River watershed.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Strip	22
Biofiltration Swale	17
DPP Infiltration Area (DPPIA)	5
Infiltration Trench	3
Open Grade Friction Course	1
Stabilization Area	10
Total	58

Existing Non-Structural BMPs¹¹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans Districts 1 and 2 prepare and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; Caltrans *TMDL Implementation Plan*, 2015.

Klamath River Temperature, Dissolved Oxygen, Nutrients, and Microcystin TMDL

Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹²

Caltrans participates in the Klamath Basin Water Quality Monitoring Program which strives to implement, coordinate and collaborate on water quality monitoring and research throughout the Klamath Basin. Monitoring activities focus on characterizing sources of impairment through the study of ecosystem elements, including water quality, fish populations and health, flows, benthos, and aquatic plant communities.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

¹² Source: Klamath Basin Monitoring Program, <https://kbmp.net/>.

Lost River Nitrogen, Biochemical Oxygen Demand, and pH TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Lost River	Nitrogen Biochemical Oxygen Demand, and pH	D5, D5.1, D5.2, D5.3

General Watershed Description²

The Lost River watershed, traversing the states of Oregon and California, encompasses an area of approximately 2,996 square miles. The watershed includes portions of Klamath and Lake counties in Oregon, and Modoc and Siskiyou counties in California. Approximately 56 percent of the watershed (roughly 1,667 square miles) lies in California, while 44 percent (roughly 1,328 square miles) is in Oregon. The Lost River originates in California at the outlet of Clear Lake, and flows north into Oregon, near the Malone Dam. This portion of the Lost River in California upstream of the Malone Dam, is referred to here as the Upper Lost River. Because California removed this from the 2006 section 303(d) list all listings for Upper Lost River in California, EPA is not establishing any TMDLs for the Upper Lost River in California. From the Oregon border, the Lost River (referred to here as the Lower Lost River) continues downstream of Malone Dam, flowing northwest, where it receives substantial inflow from Gerber Reservoir, and then turns westward toward the Harpold Dam. Beyond the Harpold Dam, the Lost River receives inflow of Klamath River water. The Lost River Diversion Dam can also divert water to the Klamath River. The Lower Lost River then reaches the Anderson Rose Dam just before crossing into California. In California, the Lower Lost River continues for approximately 6 miles south to Tule Lake Refuge.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 230 for Reach 1 and 231 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with temperature load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency *Lost River, California Total Maximum Daily Loads Nitrogen and Biochemical Oxygen Demand to address Dissolved Oxygen and pH Impairments*. December 30, 2008.

³ Sources: Caltrans, *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021 and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Lost River Nitrogen, Biochemical Oxygen Demand, and pH TMDL

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed temperature load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation, and Turbidity Total Maximum Daily Loads (Permit Attachment D Section D5.3)	<ul style="list-style-type: none"> • Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
2	1	508,266	388	0.08%	Nitrogen and Biochemical Oxygen Demand to address Dissolved Oxygen and pH	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Lost River Nitrogen, Biochemical Oxygen Demand, and pH TMDL

WLAs⁵

Pollutant	Caltrans WLA
Dissolved Inorganic Nitrogen	Lost River from border to Tule Lake Refuge = 0.3 average kilograms/day Tule Lake Refuge = 0.3 average kilograms/day Lower Klamath Refuge = 0.3 average kilograms/day
Carbonaceous Biochemical Oxygen Demand	Lost River from border to Tule Lake Refuge = 0.5 average kilograms/day Tule Lake Refuge = 0.5 average kilograms/day Lower Klamath Refuge = 0.5 average kilograms/day

TMDL Implementation Schedule

- Start Date: December 30, 2008
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{2,7,8}

Pollutant	Strategies to Achieve WLAs
Nitrogen and Biochemical Oxygen Demand to address Dissolved Oxygen and pH	<ul style="list-style-type: none"> • Caltrans is expected to comply with nitrogen and biochemical oxygen demand to address dissolved oxygen and pH impairments WLAs in the Lost River watershed. Caltrans controls the discharge of nitrogen and biochemical oxygen demand through the control of sediment. Also, Caltrans implements and maintains structural BMPs to mitigate sediment in the Lost River watershed. Additionally, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Lost River watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Monitoring results show no exceedances for total settleable solids samples. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems should be inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Five SHOPP project (PID, PAED, and/or PS&E) is planned in the Lost River watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 2 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.

⁵ Sources: Permit Attachment A

⁶ Final deadlines for achievement of the WLA are not specific in the TMDL or Action Plan. The TMDL was adopted on December 30, 2008; therefore, the start date was December 30, 2008. Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Lost River Nitrogen, Biochemical Oxygen Demand, and pH TMDL

- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹¹

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment reduction projects. The watershed-based monitoring program should plan to include several monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹¹ Sources: Permit Attachment F

Lower Eel River Temperature and Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Lower Eel River	Temperature and Sediment	D5, D5.1, D5.2, D5.6, and D5.7

General Watershed Description²

The Lower Eel River watershed is located in Humboldt County in Northwestern California. The nearly 300 square-mile watershed is approximately 200 miles north/northwest of San Francisco. The boundary of the watershed, as defined by these TMDLs, corresponds to the State of California’s Lower Eel River Hydrologic Area, which is composed of the Ferndale, Scotia, and Larabee Creek Hydrologic Subareas (HSAs). This portion of the Eel River basin extends from the South Fork Eel River tributary of the mainstem Eel River to the ocean and includes the Larabee Creek drainage area and all of the smaller tributaries. There are three distinctive areas within the Lower Eel River watershed, which correspond roughly to the upper, middle, and lower sections of the watershed: Larabee Creek, small tributaries, and the Salt River area. The first area, Larabee Creek, occupies the upstream and eastern portion of the watershed, and corresponds with the Larabee Creek HSA. Larabee Creek is a large tributary where open grasslands, oak, and associated ranching lands dominate the headwater tributaries. Closer to its confluence with the Lower Eel River, the landscape of the Larabee Creek drainage area transitions from Douglas-fir to redwood forest. The second area of the watershed consists of small tributaries that feed directly into the Lower Eel River. These small tributaries (such as Bear, Stitz, Jordan, and Greenlaw creeks) are located downstream of the confluence of the South Fork Eel River (within both the Scotia and Ferndale HSAs) and upstream of the estuary. The third area in the watershed includes the Salt River and is in the western half of the Ferndale HSA. Flow in the main channel of the Lower Eel River is altered by the Potter Valley Project upstream of the confluence with the Middle Fork Eel River. The major tributaries have no dams or major diversions.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2020-2021	1.93

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 144 for Reach 1 and 291 for Reach 2

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency Region IX *Lower Eel River Total Maximum Daily Loads for Temperature and Sediment* December 2007.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2020-2021. Note: A “CU” is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Lower Eel River Temperature and Sediment TMDL

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Regional Water Board Executive Officer will determine Caltrans' progress towards compliance with temperature load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed temperature load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Loads (Permit Attachment D Sections D5.7, D5.7.1 and D5.7.1.2)	<ul style="list-style-type: none"> • Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Regional Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans also works with the North Coast Regional Water Board to identify cooperative projects to reduce temperature loads through effectively increasing shade to streams. Caltrans will work toward restoring riparian acreage, a goal of 37 acres of riparian shade.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Temperature Total Maximum Daily Loads (Permit Attachment D Section D5.6)	<ul style="list-style-type: none"> • Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. • Because vegetation removal may also increase surface water temperatures, Caltrans: 1) preserves where feasible existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases; 2) provides effective shade near receiving waters susceptible to temperature increases; and 3) maintains site potential effective shade near receiving waters susceptible to temperature increases.

Lower Eel River Temperature and Sediment TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	191,102	456	0.24%	Temperature and Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The WLA is expressed as equivalent to the LAs. The U.S. EPA did not assign a specific sediment WLA to Caltrans. The TMDL includes LAs for various sediment discharge sources and provides a LA for all roads of 33 tons per square mile per year.</p> <p>Existing Load = 354 tons/year LA = 74 tons/ year Reduction Needed = 79% Sediment Load Reduction = 280 tons/year</p>
Temperature	<p>Point source WLAs are not assigned. Nonpoint sources are responsible for most heat loading in the watershed. The temperature TMDLs assign LAs as the percent of riparian shade along a stream segment.⁶</p> <p>Caltrans Proportional Responsibility of Riparian Shade for the Eel River, Lower Hydrologic Area = 37 acres</p>

TMDL Implementation Schedule

- Start Date: December 18, 2007
- Final Compliance Date per TSO⁷: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A, Section A9.7.4.1.4 and Section A9.7.10.1.1.

⁶ Sources: Permit Attachment D, Section D5.7.1.1 and D5.7.1.2.

⁷ Final deadlines for achievement of LA are not specific in the TMDL or Action Plan. The TMDL was adopted on December 18, 2007; therefore, the start date was December 18, 2007. Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Lower Eel River Temperature and Sediment TMDL

Plan to Achieve LAs^{2,8,9}

Pollutant	Strategies to Achieve LAs
Sediment	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the sediment WLA in the Lower Eel River Watershed. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Lower Eel River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Four SHOPP projects (PID, PAED, and/or PS&E) are planned in the Lower Eel River Watershed that will include treatment BMPs.
Temperature	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the temperature WLA by not altering the natural temperature. Caltrans preserves existing riparian biotic conditions immediately adjacent to, and provides effective shade near, receiving waters susceptible to temperature increases. Any alteration of riparian biotic conditions that may increase sedimentation or reduce effective shade that requires that Caltrans obtain written authorization by the applicable RWQCB Executive Officer or designee prior to beginning work. • According to the State Water Resources Control Board's Annual Performance Report, the Water Quality Report Card for Lower Eel River shows conditions are improving in the Lower Eel River tributaries as water quality data demonstrates that temperatures have been getting colder since the 1990s. Implementation of nonpoint source regulatory programs are also effectively ensuring protection of riparian shade.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Strip	8
Biofiltration Swale	4
Infiltration Trench	2
Total	14

Existing Non-Structural BMPs¹¹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan* (January 2015).

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Lower Eel River Temperature and Sediment TMDL

- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can either a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring shall be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans’ implementation of TMDL sediment reduction projects. The watershed-based monitoring program should plan to include several monitoring locations and frequency of monitoring proportional to Caltrans’ sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Sources: Permit Attachment F

Lower Eel River Temperature and Sediment TMDL

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Mad River Sediment and Turbidity TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Mad River	Sediment and Turbidity	D5, D5.1, D5.2, D5.7.1, and D5.7.1.1

General Watershed Description²

The Mad River flows northwest about 90 miles from its headwaters in Trinity County, at an elevation above 5,500 feet, to its mouth at the Pacific Ocean in McKinleyville. The lower and middle sections of the Mad River watershed are located in Humboldt County. It lies almost entirely east of Highway 101, approximately 300 miles northwest of San Francisco, 15 miles north and east of Eureka. The river flows northwesterly, through or alongside the towns of Kneeland, Blue Lake, McKinleyville, and Arcata within the lower watershed. The smaller town of Maple Creek is found in the middle portion, and communities of Mad River and Ruth lie within the upper watershed, on either end of the Ruth Reservoir, which impounds the Mad River. The Mad River watershed, as defined by these TMDLs, is 480 square miles in area. In the upper portion of the watershed, it is bounded by the South Fork Trinity River on the north and east, and by the Van Duzen River on the south and west. In the middle and lower portion of the watershed, it is bounded on the south and west by Yager Creek and other tributaries to the Van Duzen River, and tributaries to Elk River and Arcata Bay, including Freshwater Creek and Jacoby Creek. On the north and east, it is bordered by Redwood Creek in the middle portion of the watershed, and by Little River in the lower portion. The Mad River occasionally spills over into Arcata Bay in very high flow conditions via the Mad River Slough.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2017-2018	3.1
2018-2019	14.3
2020-2021	1

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 130 for Reach 5, 138 for Reach 2, 146 for Reach 1, 292 for Reach 6, 293 for Reach 3, 294 for Reach 4

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency Region IX *Mad River Total Maximum Daily Loads for Sediment and Turbidity*. December 21, 2007.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2017-2018, Fiscal Year 2018-2019, and Fiscal Year 2020-2021. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Mad River Sediment and Turbidity TMDL

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with temperature load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed temperature load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Loads (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1 and 2	1	239,360	318	0.13%	Sediment and Turbidity	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Mad River Sediment and Turbidity TMDL

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The WLA is expressed as equivalent to the LAs.</p> <p>Existing Load = 4,595 tons/year LA = 515 tons/ year Reduction Needed = 88% Sediment Load Reduction = 4,056 tons/year</p>
Turbidity	The turbidity WLA is represented in the total sediment load.

TMDL Implementation Schedule

- Start Date: December 21, 2007
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve LAs^{2,7,8}

Pollutant	Strategies to Achieve LAs
Sediment and Turbidity	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the sediment and turbidity WLAs in the Mad River Watershed. However, only six percent of the roads in the watershed are paved, and Caltrans' ROW area comprises 0.1 percent of the total watershed area, for which Caltrans actively mitigates sediment discharge. • Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Additionally, Caltrans implements structural BMPs, such as infiltration trenches, which are effective in removing sediment. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Twelve SHOPP projects (PID, PAED, and/or PS&E) are planned in the Mad River Watershed that will include treatment BMPs.

⁵ Sources: Permit Attachment A, Table A-2

⁶ Final deadlines for achievement of LA are not specific in the TMDL or Action Plan. The TMDL was adopted on December 21, 2007; therefore, the start date was December 21, 2007. Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan* (January 2015).

Mad River Sediment and Turbidity TMDL

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Infiltration Trench	1
DPP Infiltration Area (DPPIA)	1
Other BMP	1
Total	3

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains and contract hazardous response staff to manage and clean up spills. Caltrans Districts 1 and 2 prepare and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹¹

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Sources: Permit Attachment F

Mad River Sediment and Turbidity TMDL

reduction projects. The watershed-based monitoring program should plan to include several monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

Mad River Sediment and Turbidity TMDL

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Middle Fork Eel River Temperature and Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Middle Fork Eel River	Temperature and Sediment	D5, D5.1, D5.2, D5.6, and D5.7

General Watershed Description²

The Middle Main Eel River watershed area is located primarily in Mendocino, Trinity and Humboldt Counties in Northwestern California. It is east of Highway 101, approximately 150 miles northeast from San Francisco, and includes the towns of Alderpoint and Fort Seward. The watershed, as defined by this TMDL, is the area from Dos Rios to where the Eel meets the South Fork Eel. However, the larger tributaries of the North Fork and Middle Fork Eel are not included, as TMDLs were previously completed for these waterbodies in 2002 and 2003 respectively. The Middle Main Eel River TMDL area is 521 square miles. The watershed is rural and remote. This portion of the Eel is inaccessible for most of its length. Public roads cross near Dos Rios and then not until Alderpoint 65 miles downstream. Sixty percent of the natural vegetation is shrub, grassland and oak woodlands. The area's geology is underlain by the Franciscan terrain that dominates most of California's North Coast. Naturally unstable and prone to landslides, this type of geology is sensitive to human disturbance. The flow of the Main Eel is altered by the Potter Valley Project upstream of the Middle Fork Eel. The major tributaries of the Middle Fork and North Fork Eel have no dams or major diversions. The Potter Valley Project has two dams - the larger Scott Dam and associated Lake Pillsbury and 12 miles downstream the small Cape Horn Dam and Van Arsdale reservoir, where water is diverted adding water supplies to the Potter Valley Irrigation District and Sonoma County through Lake Mendocino and the Russian river. However, the diverted water is thought to be greater than the natural summer flow of the Eel as these flows are from the dam at Lake Pillsbury. The Potter 5 Valley Project has been in operation for approximately 90 years and is licensed by the Federal Energy Regulatory Commission (FERC). Pacific Gas and Electric (PG&E) was issued a new hydro power license in 1983, which contained certain flow requirements on the Eel.

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2016-2017	1.43
2018-2019	0.2

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 131 for Reach 1, 145 for Reach 3, 290 for Reach 2, 297 for Reach 4, and 301 for Reach 5

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with temperature and sediment load reductions in the North

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency Region IX *Middle Main Eel River and Tributaries (from Dos Rio to the South Fork) TMDLs for Temperature and Sediment*.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2016-2017 and Fiscal Year 2018-2019. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Middle Fork Eel River Temperature and Sediment TMDL

Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed temperature and sediment load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Loads (Permit Attachment D Sections D5.7.1 and D5.7.1.2)	<ul style="list-style-type: none"> • Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans also works with the North Coast Regional Water Board to identify cooperative projects to reduce temperature loads through effectively increasing shade to streams. Caltrans works toward restoring riparian acreage, a goal of 17 acres of riparian shade.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans is participating through financial contributions to the following cooperative agreement projects: Mendocino County Resource Conservation District's Eel River Ranch Road Project. This project has a sediment load reduction of 5 tons per year.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Temperature Total Maximum Daily Loads (Permit Attachment D Section D5.6)	<ul style="list-style-type: none"> • Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. • Because vegetation removal may also increase surface water temperatures, Caltrans: 1) preserves where feasible existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases; 2) provides effective shade near receiving waters susceptible to temperature increases; and 3) maintains site potential effective shade near receiving waters susceptible to temperature increases.

Middle Fork Eel River Temperature and Sediment TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	482,363	57	0.01%	Temperature and Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The WLA is expressed as equivalent to the LAs.</p> <p>Existing Load = 147 tons/year LA = 105 tons/ year Reduction Needed = 28% Sediment Load Reduction = 41 tons/year</p>
Temperature	<p>Although Caltrans is not assigned a specific allocation, roads in general are a source. The LA is best achieved by allowing trees to grow to provide the equivalent amount of shade that would be provided under natural conditions. The temperature TMDLs assign LAs as the percent of riparian shade along a stream segment.⁶</p> <p>Caltrans Proportional Responsibility of Riparian Shade for the Middle Fork Eel River = 17 acres</p>

TMDL Implementation Schedule

- Start Date: December 18, 2007
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve LAs^{2,8,9}

Pollutant	Strategies to Achieve LAs
Sediment	<ul style="list-style-type: none"> • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems.

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A, Section A9.7.10.1.2 and Attachment D, Section D5.7.

⁶ Sources: Permit Attachment D, Section D5.7.1.1 and Section D5.7.1.2.

⁷ Final deadlines for achievement of LAs are not specific in the TMDL or Action Plan. The TMDL was adopted on December 18, 2007; therefore, the start date was December 18, 2007. Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan* (January 2015).

Middle Fork Eel River Temperature and Sediment TMDL

Pollutant	Strategies to Achieve LAs
	<ul style="list-style-type: none"> • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Two SHOPP projects (PID, PAED, and/or PS&E) are planned in the Middle Fork Eel River watershed that will include treatment BMPs. • Caltrans participates in one cooperative agreement projects. <ul style="list-style-type: none"> ○ <i>Mendocino County Resource Conservation District's Eel River Ranch Road Implementation:</i> <ul style="list-style-type: none"> ▪ In 2020, Pacific Watershed Associates (PWA) staff inventoried approximately 1.5 miles of Eel River Ranch Road, a private road in Round Valley, to develop a comprehensive plan of action to identify and prevent on-going and future road-related erosion and sediment delivery from entering Mill Creek, an anadromous stream. Eel River Ranch Road lies on the streamside valley floor setting of Round Valley adjacent Mill Creek that includes critical spawning, rearing and migratory habitats for all species of salmonids and lamprey. As such, Mill Creek is an important stream to support the natural production of native salmonids in the Eel River watershed located within the Round Valley Indian Tribe territory.
Temperature	Caltrans is expected to be in compliance with the temperature WLA by not further altering the natural temperature. Caltrans preserves where feasible existing riparian biotic conditions immediately adjacent to, and provides effective shade near, receiving waters susceptible to temperature increases. Any alteration of riparian biotic conditions that may increase sedimentation or reduce effective shade that requires that Caltrans obtain written authorization by the applicable RWQCB Executive Officer or designee prior to beginning work.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Swale	1
Stabilization Area	2
Total	3

Existing Non-Structural BMPs¹¹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 1 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful"

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Middle Fork Eel River Temperature and Sediment TMDL

campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans’ implementation of TMDL sediment reduction projects. The watershed-based monitoring program should plan to include several monitoring locations and frequency of monitoring proportional to Caltrans’ sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Sources: Permit Attachment F

Middle Fork Eel River Temperature and Sediment TMDL

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Navarro River Sediment and Temperature TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Navarro River	Sediment and Temperature	D5, D5.1, D5.2, D5.6, and D5.7

General Watershed Description²

The Navarro River watershed is located in coastal southern Mendocino County, California, encompassing approximately 315 square miles. The Navarro River flows through the coastal range, the Anderson Valley, and enters the Pacific Ocean about fifteen miles south of the town of Mendocino. The population of the watershed is about 3,500 people, with most living in and around the towns of Boonville, Philo, and Navarro. Three geologic formations comprise most of the Navarro River watershed: the Melange Unit of the Franciscan Assemblage, the Coastal Belt of the Franciscan Assemblage, and alluvial fill. Elevations in the basin range from sea level to about 3,000 feet. Land-use in the watershed includes forestland, rangeland, agriculture, and a small percentage devoted to rural residential development.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2018-2019	0.71
2020-2021	0.93
2021-2022	0.72

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 118 for Reach 6, 121 for Reach 4, 127 for Reach 1, 137 for Reach 2, 143 for Reach 5 and 227 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with temperature load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed temperature load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency Region IX *Navarro River Total Maximum Daily Loads for Temperature and Sediment* December 2000.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2018-2019, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Navarro River Sediment and Temperature TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Loads (Permit Attachment D Sections D5.7.1 and D5.7.1.2)	<ul style="list-style-type: none"> Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. Caltrans also works with the North Coast Regional Water Board to identify cooperative projects to reduce temperature loads through effectively increasing shade to streams. Caltrans works toward restoring riparian acreage, a goal of 61 acres of riparian shade.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Temperature Total Maximum Daily Loads (Permit Attachment D Section D5.6)	<ul style="list-style-type: none"> Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. Because vegetation removal may also increase surface water temperatures, Caltrans: 1) preserves where feasible existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases; 2) provides effective shade near receiving waters susceptible to temperature increases; and 3) maintains site potential effective shade near receiving waters susceptible to temperature increases.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	202,101	166	0.08%	Temperature and Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Navarro River Sediment and Temperature TMDL

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The WLA is expressed as equivalent to the LAs. The U.S. EPA did not assign a specific sediment WLA to Caltrans.</p> <p>Existing Load = 2,868 tons/year LA = 1,364 tons/ year Reduction Needed = 52% Sediment Load Reduction = 1,504 tons/year</p>
Temperature	<p>Caltrans reduces temperature loads in each TMDL watershed by implementing TMDL BMPs and control projects that increase effective shade to streams. Increasing effective shade to streams is accomplished through restoring riparian acreage via TMDL BMPs and control projects. The riparian acreage to be restored is equal to the roadway area within the riparian setback.⁶</p> <p>Caltrans Proportional Responsibility of Riparian Shade for the Navarro River Hydrologic Area = 61 acres</p>

TMDL Implementation Schedule

- Start Date: December 18, 2007
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve LAs^{2,8,9}

Pollutant	Strategies to Achieve LAs
Sediment	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the sediment WLA in the Navarro River Watershed. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Navarro River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. Caltrans did not identify any slopes in the Navarro River Watershed that are prone to erosion. • Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Seven SHOPP projects (PID, PAED, and/or PS&E) are planned in the Navarro River Watershed that will include treatment BMPs.

⁵ Sources: Permit Attachment A, Section A9.7.10.1.6

⁶ Sources: Permit Attachment D, Section D5.7.1.2

⁷ Final deadlines for achievement of load allocation are not specific in the TMDL or Action Plan. The TMDL was adopted on December 18, 2007; therefore, the start date was December 18, 2007. Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan* (January 2015).

Navarro River Sediment and Temperature TMDL

Pollutant	Strategies to Achieve LAs
Temperature	<ul style="list-style-type: none"> Caltrans is expected to be in compliance with the temperature WLA by not altering the natural temperature. Caltrans preserves where feasible existing riparian biotic conditions immediately adjacent to, and provides effective shade near, receiving waters susceptible to temperature increases. Any alteration of riparian biotic conditions that may increase sedimentation or reduce effective shade that requires that Caltrans obtain written authorization by the applicable RWQCB Executive Officer or designee prior to beginning work.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Stabilization Area (SA)	1
Biofiltration Strip	8
Total	9

Existing Non-Structural BMPs¹¹

- Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 1 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans can select and implement one of the two monitoring options listed:

- Caltrans can either a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹² Sources: Permit Attachment F

Navarro River Sediment and Temperature TMDL

programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.

2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment reduction projects. The watershed-based monitoring program should plan to include several monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

Navarro River Sediment and Temperature TMDL

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Noyo River Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Noyo River	Sediment	D5, D5.1, D5.2, and D5.7.1 and D5.7.1.1

General Watershed Description²

The Noyo River watershed is a forested, coastal watershed in Mendocino County, California, which encompasses approximately 113 square miles immediately west of Willits. The Noyo River flows through the coastal range and out to the Pacific Ocean at Fort Bragg. Its logging history dates back to 1853 when the first water-powered mill was built in the lower Noyo River. Old growth logging continued into the early part of the 20th century. Second growth logging began in the 1960s, primarily in the lower main drainage area, and continues today. The California Western Railroad operates the Skunk Train that traverses the Noyo River watershed along the mainstem channel. Other minor land uses found in the basin include ranching and recreation. The primary beneficial use of concern is the salmonid fishery, particularly the coho salmon (*Oncorhynchus kisutch*) fishery.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (LA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 152 for Reach 2, 225 for Reach 1, 232 for Reach 4, 270 for Reach 3, and 274 for Reach 5

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with sediment load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed sediment load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Noyo Total Maximum Daily Load for Sediment*, December 16, 1999.

³ Sources: Caltrans, *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021 and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Noyo River Sediment TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Load Reductions and Sediment Load Reductions (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	72,559	62	0.09%	Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The TMDL does not include Caltrans-specific allocations nor proportionate contributions. On August 8, 2020, North Coast Water Board staff provided Caltrans-specific sediment LAs.</p> <p>Existing Load – 116 tons/year LA – 33 tons/year Reduction Needed – 71% Sediment Load Reduction – 83 tons/year</p>

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A, Table A-2

Noyo River Sediment TMDL

TMDL Implementation Schedule

- Start Date: December 16, 1999
- Final Compliance Date per TSO: December 31, 2034

Plan to Achieve TMDL Compliance^{2,6,7}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Noyo River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Four SHOPP projects (PID, PAED, and/or PS&E) are planned in the Noyo River Watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 1 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Noyo River Sediment TMDL

spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹⁰

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans’ implementation of TMDL sediment reduction projects. The watershed-based monitoring program will include a number of monitoring locations and frequency of monitoring proportional to Caltrans’ sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹⁰ Source: Permit Attachment F

Redwood Creek Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Redwood Creek	Sediment	D5, D5.1, D5.2, and D5.7.1 and D5.7.1.1

General Watershed Description²

Redwood Creek watershed is a 282 square mile forested watershed in Humboldt County, California. Redwood Creek flows into the Pacific Ocean near Orick. The watershed consists mostly of mountainous, forested terrain from sea level to about 5,300 feet elevation. Primary land uses are tourism and fishing on park lands and timber and livestock production on lands upstream of Redwood National Park. The watershed is approximately 65 miles in length. The cold-water fishery is identified by the Regional Water Board as a beneficial use of the Redwood Creek watershed. The creek historically supported large numbers of coho salmon, chinook salmon, steelhead trout, and other fish species. Sedimentation due to natural geologic instability, past and present land use practices, and other factors has contributed to the reduction and loss of habitat necessary to support cold water fish including salmonoids.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	0.64
2016-2017	1.12
2017-2018	4.44
2018-2019	70.64
2020-2021	0.34
2021-2022	0.9

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 132 for Reach 2, 220 for Reach 1, and 222 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with sediment load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed sediment load reduction projects.

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Redwood Creek Total Maximum Daily Load for Sediment*, December 30, 1998.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Redwood Creek Sediment TMDL

- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Load Reductions and Sediment Load Reductions (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	180,480	181	0.1%	Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Redwood Creek Sediment TMDL

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The TMDL does not include Caltrans-specific allocations nor proportionate contributions. On August 8, 2020, North Coast Water Board staff provided Caltrans-specific sediment LAs.</p> <p>Existing Load – 5,337 tons/year LA – 856 tons/year Reduction Needed – 84% Sediment Load Reduction – 4,481 tons/year</p>

TMDL Implementation Schedule

- Start Date: December 30, 1998
- Final Compliance Date per TSO: December 31, 2034

Plan to Achieve TMDL Compliance^{2,6,7}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the sediment WLA in the Redwood Creek Watershed. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Redwood Creek Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Additionally, Caltrans implements structural BMPs, such as biofiltration strips and biofiltration swales, which are effective in removing sediment. • Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Six SHOPP projects (PID, PAED, and/or PS&E) are planned in the Redwood Creek Watershed that include treatment BMPs. • According to the State Water Resources Control Board's Annual Performance Report, water quality conditions for sediment are improving in the Redwood Creek Watershed, as monitoring data indicate that since the implementation of the TMDL, 40 percent of the required sediment load reductions have been attained. According to the report, Redwood Creek Watershed sediment loads are decreasing at a rate of approximately 45 tons per square-mile per year. As of 2009, 70 percent (approximately 773 miles) of the roads in the watersheds have been assessed, of which about 120 miles of road erosion projects have been completed and 61 miles of roads have been decommissioned in the Redwood Creek Watershed.

⁵ Source: Permit Attachment A, Table A-2

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

Redwood Creek Sediment TMDL

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
Biofiltration Strip	6
Biofiltration Swale	6
DPP Infiltration Area (DPPIA)	1
Traction Sand Trap	9
Total	22

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 1 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution.. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹⁰

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹⁰ Source: Permit Attachment F

Redwood Creek Sediment TMDL

highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment reduction projects. The watershed-based monitoring program shall include a number of monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

Redwood Creek Sediment TMDL

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Scott River Temperature and Sediment TMDL

Summary Table of Permit Requirements

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Scott River	Temperature and Sediment	D3.2, D5, D5.1, D5.2, D5.6, and D5.7

General Watershed Description²

The Scott River drains a 520,184-acre (813 square miles) watershed in the Klamath Mountains in Siskiyou County in northern California, flowing generally northward into the Klamath River. The watershed shares divides with the Shasta River to the east, the Trinity River to the south, and the Salmon River to the west. The gently graded floor of Scott Valley, about 75 square miles, is traversed by some 30 miles of the mainstem Scott River and the lower reaches of tributaries. Surrounding this valley are steep mountains incised by steep-sided valleys carrying rushing streams. Elevations range from above 8,542 feet at China Mountain in the Scott Mountains on the southern boundary of the watershed down to the 2,500 - 3,200 foot range on the floor of Scott Valley. In the canyon section, downstream of Scott Valley, the Scott River descends to 1,600 feet in elevation where it enters the Klamath River. The lower Scott River, from River Mile (RM) zero to RM 21, known as the “canyon section”, flows mostly on bedrock and is confined in a steep-sided, rocky canyon at a gradient in the range of 45 to 55 feet per mile. From RM 21 to about RM 50 (through flat, open, agricultural Scott Valley) is the “valley section” of the river, which flows across the gentle plain of the Scott Valley floor, which has a gradient in the range of four to eight feet per mile.

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 113 for Reach 4, 134 for Reach 2, 262 for Reach 1, and 264 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with temperature load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed temperature load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board North Coast Region, *Staff Report for the Action Plan for the Scott River Watershed Sediment and Temperature Total Maximum Daily Loads*, December 7, 2005.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A “CU” is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Scott River Temperature and Sediment TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Loads (Permit Attachment D Sections D5.7.1 and D5.7.1.2)	<ul style="list-style-type: none"> • Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans also works with the North Coast Regional Water Board to identify cooperative projects to reduce temperature loads through effectively increasing shade to streams. Caltrans works toward restoring riparian acreage, a goal of 28 acres of riparian shade.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	<ul style="list-style-type: none"> • Caltrans is participating through financial contributions to the following cooperative agreement projects: <i>Big Mill Creek-East Fork Sediment Reduction and Habitat Restoration Project</i>, <i>Lower French Creek Habitat Enhancement and Sediment Reduction Project</i>, and the <i>Scott River Recovery Action Plan Project</i> (includes shade coverage). • The <i>Big Mill Creek-East Fork Sediment Reduction and Habitat Restoration Project</i> has a sediment load reduction of 22.6 tons per year. <i>The Lower French Creek Sediment Reduction and Habitat Restoration Project</i> has an assigned pollutant load reduction of 5.5 acres of riparian shade, while the <i>Scott River Recovery Action Plan Project</i> has a load reduction of 26.9 tons per year of sediment and 5 acres of riparian shade.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	<p>Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf. Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf.</p>
Requirements for Temperature Total Maximum Daily Loads (Permit Attachment D Section D5.6)	<ul style="list-style-type: none"> • Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. • Because vegetation removal may also increase surface water temperatures, Caltrans: 1) preserves existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases; 2) provides effective shade near receiving waters susceptible to temperature increases; and 3) maintains site potential effective shade near receiving waters susceptible to temperature increases.

Scott River Temperature and Sediment TMDL

TMDL Summary Information and Proposed Compliance Strategy

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
2	1	521,092	163	0.03%	Temperature and Sediment	No	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The WLA is expressed as equivalent to the LAs.</p> <p>Existing Load = 153 tons/year LA = 67 tons/ year Reduction Needed = 57% Sediment Load Reduction = 87 tons/year</p>
Temperature	<p>Caltrans plans to reduce temperature loads in each TMDL watershed by implementing TMDL BMPs and control projects that increase effective shade to streams. Increasing effective shade to streams will be accomplished through restoration of riparian acreage via TMDL BMPs and control projects. The riparian acreage to be restored is equal to the roadway area within the riparian setback.⁶</p> <p>Caltrans Proportional Responsibility of Riparian Shade for the Scott River = 28 acres</p>

TMDL Implementation Schedule

- Start Date: August 11, 2006
- Final Compliance Date: August 11, 2046

Plan to Achieve LAs^{2,7,8}

Pollutant	Strategies to Achieve LAs
Sediment	<ul style="list-style-type: none"> • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Scott River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis.

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A, Sections A9.7.4.1.15 and A9.7.10.1.7.

⁶ Sources: Permit Attachment D, Section D5.7.1.2.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan*, January 2015.

Scott River Temperature and Sediment TMDL

Pollutant	Strategies to Achieve LAs
	<ul style="list-style-type: none"> • Additionally, Caltrans implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • According to the State Water Resources Control Board's Annual Performance Report, water quality conditions for sediment are improving in the Scott River Watershed, as monitoring data indicate a decreasing trend of sediment levels. Fish screens on all diversions have been installed, livestock fencing has been constructed, off-stream stock water systems have been installed and instream and riparian habitats have been restored in the watershed. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Scott River watershed that includes treatment BMPs. • Caltrans participates in the following cooperative agreement projects. <ul style="list-style-type: none"> ○ <i>Big Mill Creek-East Fork Sediment Reduction and Habitat Restoration Project:</i> <ul style="list-style-type: none"> ▪ The Big Mill Creek- East Fork Habitat Restoration and Sediment Reduction Project will contribute to reducing sediment loads to Big Mill Creek – East Fork. The creek is a tributary to the Scott River. Caltrans total LA reduction responsibility under the Scott River Sediment TMDL is 87 tons per year and this project would meet 22.6 tons per year of that total load reduction responsibility, to be assigned immediately upon initiation of the project. Additionally, riparian restoration elements of the project will improve instream temperature conditions by blocking incoming solar radiation as riparian plantings mature over time to reach the potential effective shade at each planting site. The Department will be credited for additional load reduction credits that reflect the areal extent of riparian plantings following the completion of project planning once the full extent of propose riparian plantings is known. ▪ The Big Mill Creek- East Fork Habitat Restoration and Sediment Reduction Project will examine sediment and temperature TMDL contributing factors and the respective impacts to salmonid species within the lower East Fork Scott River through a detailed existing conditions assessment. This project's objectives include reducing sediment and increasing riparian health in both the East Fork Scott River and its tributary, Big Mill Creek, as well as restoring volitional fish passage to over two miles of salmonid (Coho) rearing habitat, currently blocked by a perched culvert on the Highway 3 crossing over Big Mill Creek. ○ <i>Lower French Creek Sediment Reduction and Habitat Restoration Project:</i> <ul style="list-style-type: none"> ▪ This project addresses sediment and temperature TMDL contributing factors and the respective impacts to salmonid species within lower French Creek. The goal of the project is to facilitate sediment transport through the reach, enhance riparian shading, and increase habitat complexity through installation of large wood structures and live willow stake plantings. ▪ California Trout (CalTrout) coordinates this work in partnership with the private landowner, the North Coast Regional Water Quality Control Board (NCRWQCB), and other state, federal, and local partners. Caltrans will receive compliance credits for TMDL reductions and provide project funding support, and the Scott River community will benefit from decreased sediment and temperature contributions within a critical salmonid bearing tributary. ○ <i>Scott River Recovery Action Plan Project:</i> <ul style="list-style-type: none"> ▪ The Scott River Recovery Action Plan Project (Project) holistically evaluates the fundamental hydro and geo-fluvial degradation of the entire Scott River, from the headwaters to the confluence of the Klamath River. A detailed existing condition analysis includes sediment, temperature, and bio-stimulatory impairments that have led to the current TMDL listings in order to develop a landscape scale plan for solutions to address them. The economic viability of the community, along with social justice, tribal cultural values, and public trust values are central to the process. An emphasis on the challenges from intensifying drought and long-term climate change impacts are paramount in understanding how to achieve minimum instream flows required for anadromous and other aquatic species. This project is the Valley's first-ever, holistic management action plan that will establish a sufficient "river process space" and the necessary restoration and water

Scott River Temperature and Sediment TMDL

Pollutant	Strategies to Achieve LAs
	<p>management actions for the mainstem Scott River to provide floodplain reconnection, groundwater recharge, and increased riparian corridor health.</p> <ul style="list-style-type: none"> ▪ The Scott River Watershed Council (SRWC) works with a broad range of stakeholders including landowners, agricultural producers, Tribes, environmental groups, and state and federal agencies to develop a comprehensive restoration action plan for the entire Scott River. By providing project funding support, Caltrans will receive compliance credits for TMDL reductions with decreased sediment and temperature impairments within a critical salmonid-bearing stream system. In addition, the Scott River community benefits from having an actionable tool that addresses the deep connection and reliance on a properly functioning ecosystem and long-term economic sustainability.
Temperature	Caltrans preserves existing riparian biotic conditions immediately adjacent to, and provides effective shade near, receiving waters susceptible to temperature increases. Any alteration of riparian biotic conditions that may increase sedimentation or reduce effective shade requires that Caltrans' obtain written authorization by the applicable RWQCB Executive Officer or designee prior to beginning work.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 2 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Scott River Temperature and Sediment TMDL

Monitoring¹¹

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment reduction projects. The watershed-based monitoring program should plan to include several monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

¹¹ Sources: Permit Attachment F.

Shasta River Temperature and Dissolved Oxygen TMDL

Summary Table of Permit Requirements

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Shasta River	Temperature and Dissolved Oxygen	D3.2, D5, D5.1, D5.2, D5.6, D5.7.1 and D5.7.1.2

General Watershed Description²

The Shasta River drains a 795 square mile basin in northern California, within Siskiyou County, and flows generally northward into the Klamath River. The Shasta River watershed is bounded to the north by the Siskiyou Range, to the west by the Klamath Mountains, to the east by the Cascade Range, and to the south by Mt. Shasta and Mt. Eddy. The watershed shares divides with the Scott River to the west, Butte Creek to the east, and the Trinity and Sacramento Rivers to the south.

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2021-2022	2.34

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 119 for Reach 2, 139 for Reach 1, and 140 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer shall determine Caltrans' progress towards compliance with temperature load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans shall provide the load reductions for any completed temperature load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Loads	<ul style="list-style-type: none"> • Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative

¹ Source: Permit Attachment D.

² Source: California North Coast Regional Water Quality Control Board *Staff Report for the Action Plan for the Shasta River Watershed Temperature and Dissolved Oxygen Total Maximum Daily Loads*, June 2006.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Shasta River Temperature and Dissolved Oxygen TMDL

Reporting Requirement Permit Section	Summary of Activities
(Permit Attachment D Sections D5.7.1 and D5.7.1.2)	<p>agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.</p> <ul style="list-style-type: none"> Caltrans also works with the North Coast Regional Water Board to identify cooperative projects to reduce temperature loads through effectively increasing shade to streams.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans participates in two cooperative agreement projects. The Hole in the Ground Water Quality and Flow Enhancement Project is led by CalTrout and is assigned a pollutant load reduction of 20 acres of riparian shade. The second project, the Shasta Valley Tailwater Reduction Planning Project, is led by the Shasta Valley Resource Conservation District and is assigned a pollutant load reduction of 2.4 acres of riparian shade.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Temperature Total Maximum Daily Loads (Permit Attachment D Section D5.6)	<ul style="list-style-type: none"> Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. Because vegetation removal may also increase surface water temperatures, Caltrans: 1) preserves where feasible existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases; 2) provides effective shade near receiving waters susceptible to temperature increases; and 3) maintains site potential effective shade near receiving waters susceptible to temperature increases.

TMDL Summary Information and Proposed Compliance Strategy

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
2	1	505,545	869	0.17%	Temperature	Yes (Temperature)	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Shasta River Temperature and Dissolved Oxygen TMDL

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Temperature	Point source WLAs are not assigned. Nonpoint sources are responsible for most heat loading in the watershed. The temperature TMDLs assign LAs as the percent of riparian shade along a stream segment. ⁶ Caltrans Proportional Responsibility of Riparian Shade = 131 acres
Dissolved Oxygen	No dissolved oxygen WLAs are assigned specifically to Caltrans.

TMDL Implementation Schedule

- Start Date: January 26, 2007
- Final Compliance Date per TSO⁷: December 31, 2034 (Temperature)

Plan to Achieve LAs and WLAs^{2,8,9}

Pollutant	Strategies to Achieve LAs and WLAs
Temperature	<ul style="list-style-type: none"> • Caltrans preserves where feasible existing riparian biotic conditions immediately adjacent to, and provides effective shade near, receiving waters susceptible to temperature increases. Any alteration of riparian biotic conditions that may increase sedimentation or reduce effective shade requires that Caltrans obtain written authorization by the applicable RWQCB Executive Officer or designee prior to beginning work. • According to the State Water Resources Control Board's Annual Performance Report, the Water Quality Report Card for the Shasta River watershed shows a decrease in stream temperatures at some locations. Additionally, the report states that conditions have improved in the upper watershed areas and 168 miles of riparian fencing has been installed along the Shasta River and five tributary segments to exclude livestock. • Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans participates in two cooperative agreement projects. <ul style="list-style-type: none"> ○ The <i>Hole in the Ground Water Quality and Flow Enhancement Project</i> is led by CalTrout and is assigned a pollutant load reduction of 20 acres of riparian shade. <ul style="list-style-type: none"> ▪ The Hole-in-the-Ground Water Quality and Flow Enhancement (Project) is a water quality and flow enhancement project located in the Shasta River upstream of the confluence with Parks Creek. There are roughly six miles of the Shasta River from the base of Dwinnell Dam to Parks Creek. This is a critical stream reach as it possesses cold water contributions from several spring systems that produce cool, nutrient rich water that drives productive habitats used by the endangered Southern Oregon/Northern California Coast (SONCC) Coho Salmon (<i>Oncorhynchus kisutch</i>) and other cold water dependent species. ▪ Hole-in-the-Ground (HIG) Ranch is situated along the upper Shasta River in an area with exceptional restoration potential for Coho as it contains some of the most valuable aquatic habitats in the region, including Clear Spring, a stable spring source that immediately discharges into the Shasta River. HIG Ranch is a participant in the multi-stakeholder Shasta Safe Harbor Agreement (SHA), which was signed in early February

⁵ Sources: Permit Attachment A, Section A9.7.10.1.8.

⁶ Sources: Permit Attachment A, Table A-4.

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan*, January 2015.

Shasta River Temperature and Dissolved Oxygen TMDL

Pollutant	Strategies to Achieve LAs and WLAs
	<p>2021, and affords ranchers regulatory protections against incidental “take” in exchange for ecological enhancements on their land - often in the form of dedicated cold water flow. This Project is one of the SHA’s highest priorities - where improvements to irrigation conveyance and delivery systems for ranchers will result in improved instream temperatures and expanded habitat for Coho.</p> <ul style="list-style-type: none"> ▪ California Trout (CalTrout) coordinates this work in partnership with Emmerson Investment Inc, Montague Water Conservation District (MWCD) and GS Black, Inc. Caltrans receives compliance credits for TMDL reductions and provides project funding support - the Shasta River community will benefit from improved instream habitat within a critical salmonid bearing area. ○ The <i>Shasta Valley Tailwater Reduction Planning Project</i> is led by the Shasta Valley Resource Conservation District and is assigned a pollutant load reduction of 2.4 acres of riparian shade. <ul style="list-style-type: none"> ▪ The Shasta River Tailwater Reduction Planning Project (Project) locates and quantifies the volume and impact of selected high-volume tailwater returns have on temperature and dissolved oxygen levels, both of which are pollutants listed in the Shasta River Total Maximum Daily Load (TMDL). Assessment of the location and quantification of tailwater returns informs further planning and design efforts by evaluating which sites have the largest impact on aquatic species, including Chinook and state and federally listed SONCC coho salmon. Building on existing work, namely the Shasta Valley Tailwater Reduction Plan (2011) and maps, a site-specific conditions assessment is completed for three to five high priority sites or ranches. Project objectives include reducing temperature spikes and dissolved oxygen incursions due to the unmitigated return of warm nutrient rich tailwater returning to the creek from irrigation and increasing riparian health. ▪ The Shasta Valley Resource Conservation District (SVRCD) coordinates this work in partnership with the private landowners, North Coast Regional Water Quality Control Board (NCRWQCB), and other state, federal, and local partners. Parks Creek is expected to be an area of focus, where anthropogenic impacts significantly contribute to sustained thermal and sediment loading. Caltrans receives compliance credits for TMDL reductions and provides project funding support, and aquatic and riparian habitat along the Shasta River and its tributaries benefit from decreased sediment and temperature contributions within a critical salmonid bearing watershed.
Dissolved Oxygen	<ul style="list-style-type: none"> • Caltrans controls fine sediment inputs to the Shasta River watershed to mitigate dissolved oxygen impairments. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • As an additional pollutant control measure, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Seven SHOPP projects (PID, PAED, and/or PS&E) are planned in the Shasta River watershed that will include treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Strip	5
Biofiltration Swale	1
Total	6

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Shasta River Temperature and Dissolved Oxygen TMDL

Existing Non-Structural BMPs¹¹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹²

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment reduction projects. The watershed-based monitoring program will include a number of monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Annual Reporting (Permit Attachment D Section D3.2 and Time Schedule Order)

- The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year (dissolved oxygen).
- The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035 (temperature).

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; Caltrans *TMDL Implementation Plan*, 2015.

¹² Source: Permit Attachment F.

Shasta River Temperature and Dissolved Oxygen TMDL

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South Fork Eel River Temperature and Sediment TMDL

Summary Table of Permit Requirements

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	South Fork Eel River	Temperature and Sediment	D5, D5.1, D5.2, D5.6, and D5.7

General Watershed Description²

The South Fork Eel River watershed covers northern Mendocino and southern Humboldt counties in northern California. The 689 square mile basin stretches approximately 58 miles from the Laytonville area in Mendocino County, up U.S. Highway 101 through Humboldt Redwoods State Park and the famed Avenue of the Giants in Humboldt County. The river itself winds for nearly 100 miles, flowing northward joining the Eel River near Weott. The Eel then meets the Pacific Ocean in 40 miles, about six miles south of Humboldt Bay. The watershed is known for its recreational opportunities: State Parks, white water kayaking, fishing and summer festivals draw international and local visitors alike. The landscape is varied - from gentle grassland areas and open oak woodlands removed from the coastal fog to steep slopes with deep and dense forests of redwood and fir. Approximately 20% is publicly owned by the California State Park system or the U.S. Department of Interior, Bureau of Land Management. Large timber companies own a relatively small percent of the watershed compared with many other north coast watersheds, mainly west of Highway 101. Ranches, dispersed rural residential areas, and townships make up the bulk of the area east of Highway 101.

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2017-2018	0.5
2018-2019	0.1
2021-2022	53.4

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 111 for Reach 2, 112 for Reach 3, 117 for Reach 4, 125 for Reach 1, and 129 for Reach 5

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with temperature load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed temperature load reduction projects.

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency Region IX *South Fork Eel River TMDLs for Temperature and Sediment*. December 16, 1999.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

South Fork Eel River Temperature and Sediment TMDL

- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Loads (Permit Attachment D Sections D5.7.1 and D5.7.1.2)	<ul style="list-style-type: none"> Caltrans works with the North Coast Region Water Board in the watershed to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. Caltrans also works with the North Coast Regional Water Board to identify cooperative projects to reduce temperature loads through effectively increasing shade to streams. Caltrans works toward restoring riparian acreage and has a goal of 143 acres of riparian shade.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	<ul style="list-style-type: none"> Caltrans is participating through financial contributions to the following cooperative agreement projects: <i>Red Mountain Sediment Reduction Project</i>, <i>Mendocino County Resource Conservation District's Ten Mile Creek Road Project</i>, and <i>Mendocino County Resource Conservation District's Jack of Hearts Creek Road Project</i>. The <i>Red Mountain Sediment Reduction Project</i> has a sediment load reduction of 1,395.2 tons per year. The <i>Ten Mile Creek Road Project</i> has a sediment load reduction of 391 tons per year. The <i>Jack of Hearts Creek Road Project</i> has a sediment pollutant load reduction of 389 tons per year.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	<ul style="list-style-type: none"> Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf. Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf.
Requirements for Temperature Total Maximum Daily Loads (Permit Attachment D Section D5.6)	<ul style="list-style-type: none"> Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. Because vegetation removal may also increase surface water temperatures, Caltrans: 1) preserves where feasible existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases; 2) provides effective shade near receiving waters susceptible to temperature increases; and 3) maintains site potential effective shade near receiving waters susceptible to temperature increases.

South Fork Eel River Temperature and Sediment TMDL

TMDL Summary Information and Proposed Compliance Strategy

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	441,197	748	0.17%	Temperature and Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The WLA is expressed as equivalent to the LAs.</p> <p>Existing Load = 18,027 tons/year LA = 4,871 tons/ year Reduction Needed = 73% Sediment Load Reduction = 13,157 tons/year</p>
Temperature	<p>Caltrans plans to reduce temperature loads in each TMDL watershed by implementing TMDL BMPs and control projects that increase effective shade to streams. Increasing effective shade to streams will be accomplished through restoration of riparian acreage via TMDL BMPs and control projects. The riparian acreage to be restored is equal to the roadway area within the riparian setback.⁶</p> <p>Caltrans Proportional Responsibility of Riparian Shade for the South Fork Eel River = 143 acres</p>

TMDL Implementation Schedule

- Start Date: December 16, 1999
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve LAs^{2,8,9}

Pollutant	Strategies to Achieve LAs
Sediment	<ul style="list-style-type: none"> • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the South Fork Eel River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A, Section A9.7.10.1.5.

⁶ Source: Permit Attachment D, Section D5.7.1.2.

⁷ Final deadlines for achievement of LA are not specific in the TMDL or Action Plan. The TMDL was adopted on December 16, 1999; therefore, the start date was December 16, 1999. Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan*, January 2015.

South Fork Eel River Temperature and Sediment TMDL

Pollutant	Strategies to Achieve LAs
	<p>to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems.</p> <ul style="list-style-type: none"> • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Nine SHOPP projects (PID, PAED, and/or PS&E) are planned in the South Fork Eel River Watershed that will include treatment BMPs. • Caltrans participates in the following cooperative agreement projects: <ul style="list-style-type: none"> ○ The <i>Ten Mile Creek Road Project</i> is led by Mendocino County Resource Conservation District (MCRCD) with the Pacific Watershed Associates (PWA). This project reduces 391 tons/year. <ul style="list-style-type: none"> ▪ In 2019, PWA staff inventoried approximately 4.2 miles of road within the Ten Mile Creek watershed near Laytonville, CA. These roads lie one mile north of town and cross Ten Mile Creek via a wet ford. Although a design is underway to install a bridge at the wet crossing, this project is to address all the 4.2 miles of road hydrologic connectivity issues that deliver fine sediment and road runoff to the adjacent Class I and II streams, as well as the 18 other site-specific road erosion and sediment delivery sites, which are mostly stream crossing sites (excludes the wet crossing site). ○ The <i>Jack of Hearts Creek Road Project</i> is led by Mendocino County Resource Conservation District (MCRCD) with the Pacific Watershed Associates (PWA). This project reduces 372 tons/year for the Road Implementation and 17 tons/year for the Road Assessment. <ul style="list-style-type: none"> ▪ Jack of Hearts Creek Road parallels Jack of Hearts (JOH) Creek, a tributary to the upper South Fork Eel River, both are considered by State and Federal resource agencies as important coho salmon habitat areas in the Eel River watershed. The lowest 4 miles of road lie along the JOH Creek valley floor and contain several tributary stream crossing sites and long segments of hydrologically connected road that discharge fine sediment to JOH Creek on an annual basis. Although these 4 miles are on private property, the road is co-managed by the U.S Department of the Interior, Bureau of Land Management (BLM). Approximately 6 miles of Jack of Hearts Creek Road will be assessed by PWA staff in 2022/2023, and implementation of the selected prioritized road storm-proofing treatment segments will be performed between 2023 and 2025 on at least 4 miles of the inventoried JOH road. ○ The <i>Red Mountain Road Sediment Reduction Project</i> is led by the Bureau of Land Management, Arcata Field Office and has an assigned pollutant load reduction of 1,395.2 tons/year. <ul style="list-style-type: none"> ▪ The Bureau of Land Management, Arcata, plans to upgrade road along 15 miles of Red Mountain Road in Mendocino County, California. The road traverses through three tributaries of the South Fork Eel River, with the bulk of the road mileage in the East Branch, South Fork Eel River. The road provides access to rural private residences, and recreational access to several tracts of public lands including the Red Mountain Wilderness Area. Twelve sites are proposed for treatment and will have a sediment saving of 938 cubic yards. ▪ Caltrans receives compliance credits for TMDL reductions and provides project funding support. This project has a significant reduction in chronic surface erosion and will improve sediment conditions to the South Fork Eel River and its Tributaries.
Temperature	<ul style="list-style-type: none"> • Caltrans preserves where feasible existing riparian biotic conditions immediately adjacent to, and provides effective shade near, receiving waters susceptible to temperature increases. Any alteration of riparian biotic conditions that may increase sedimentation or reduce effective shade requires that Caltrans obtain written authorization by the applicable RWQCB Executive Officer or designee prior to beginning work.

South Fork Eel River Temperature and Sediment TMDL

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Swale	2
Stabilization Area	1
Total	3

Existing Non-Structural BMPs¹¹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 1 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; Caltrans *TMDL Implementation Plan*, 2015.

¹² Source: Permit Attachment F.

South Fork Eel River Temperature and Sediment TMDL

reduction projects. The watershed-based monitoring program should plan to include several monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

South Fork Trinity River and Hayfork Creek Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	South Fork Trinity River and Hayfork Creek	Sediment	D5, D5.1, D5.2, D5.7, D5.7.1, and D5.7.1.1

General Watershed Description²

The South Fork Trinity River has historically been recognized as a major producer of chinook and coho salmon and steelhead trout (Pacific Watershed Associates, 1994). The South Fork originates in the North Yolla Bolly Mountains, about 50 miles southwest of Redding, and runs northwest for approximately 90 miles before reaching its confluence with the Trinity River near Salyer. It flows mostly through Trinity County, forming the boundary between Trinity and Humboldt Counties in its lower 12 miles. The South Fork and its main tributary, Hayfork Creek, are both undammed. The South Fork Trinity River is the largest undammed river in California, and constitutes 31 percent of the Trinity River sub-basin, and six percent of the Klamath basin (USDA Forest Service, 1998). The 56 mile stretch from Forest Glen to the mouth is protected by the California Wild and Scenic Rivers Act.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 122 for Reach 4, 135 for Reach 2, 142 for Reach 5, 149 for Reach 6, 269 for Reach 1, and 306 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with sediment load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed sediment load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

¹ Source: Permit Attachment D.

² Sources: U.S. Environmental Protection Agency Region IX, *South Fork Trinity River and Hayfork Creek Sediment Total Maximum Daily Loads*, December 1998. Pacific Watershed Associates, *Action Plan for Restoration of the South Fork Trinity River Watershed and its fisheries*, prepared for US Bureau of Reclamation and the Trinity River Task Force, February 1994. USDA Forest Service, *South Fork Coordinated Resources Management Plan, East Fork/Smoky Creek/South Fork Trinity River, Shasta Trinity National Forest*, Hayfork Ranger District, March 1998.

³ Sources: Caltrans, *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021 and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

South Fork Trinity River and Hayfork Creek Sediment TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Load Reductions and Sediment Load Reductions (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1 and 2	1	596,603	413	0.07%	Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The TMDL does not include Caltrans-specific allocations nor proportionate contributions. On August 8, 2020, North Coast Water Board staff provided Caltrans-specific sediment LAs.</p> <p>Existing Load – 1,983 tons/year LA – 358 tons/year Reduction Needed – 82% Sediment Load Reduction – 1,625 tons/year</p>

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A, Table A-2.

South Fork Trinity River and Hayfork Creek Sediment TMDL

TMDL Implementation Schedule

- Start Date: December 31, 1998
- Final Compliance Date per TSO: December 31, 2034

Plan to Achieve TMDL Compliance^{2,6,7}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the sediment WLA in the South Fork Trinity River and Hayfork Creek Watershed. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
Biofiltration Strip	3
Total	3

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans Districts 1 and 2 prepare and implement a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution.. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful”

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of December 6, 2022.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

South Fork Trinity River and Hayfork Creek Sediment TMDL

campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹⁰

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans’ implementation of TMDL sediment reduction projects. The watershed-based monitoring program will include a number of monitoring locations and frequency of monitoring proportional to Caltrans’ sediment load in excess of its load allocation for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹⁰ Source: Permit Attachment F

Ten Mile River Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Ten Mile River	Sediment	D5, D5.1, D5.2, D5.7, D5.7.1, and D5.7.1.1

General Watershed Description²

The Ten Mile River drains about 120 square miles of forested, coastal watershed in Mendocino County, California. The mouth of the Ten Mile River is about 10 miles north of Fort Bragg. The watershed elevation ranges from sea level to 3,240 feet at Strong Peak. It is entirely privately owned, with Hawthorne Timber Company, LLC (managed by Campbell Timberland Management, LLC), the successor to Georgia-Pacific West, owning about 85% of the watershed. Three small non-industrial timber owners and a handful of other residences are in the watershed. Average annual precipitation ranges from about 40 inches near the coast to greater than 70 inches at higher elevations in the northern and eastern portions of the watershed. Most precipitation occurs as rainfall. The terrain varies from the flat estuary and broad river floodplain to rugged mountainous topography with high relief (Graham Matthews & Associates, 2000).

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 224 for Reach 1, 273 for Reach 2, 286 for Reach 3, and 289 for Reach 4

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with sediment load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed sediment load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Ten Mile River Total Maximum Daily Load for Sediment*, December 2000. Graham Matthews & Associates, *Sediment Source Analysis and Preliminary Sediment Budget for the Ten Mile River, Mendocino County, Ca.*, prepared by Tetra Tech, Inc., 2000.

³ Sources: Caltrans TMDL Status Review Reports, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Ten Mile River Sediment TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Load Reductions and Sediment Load Reductions (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	76,632	7	0.01%	Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The TMDL does not include Caltrans-specific allocations nor proportionate contributions. On August 8, 2020, North Coast Water Board staff provided Caltrans-specific sediment LAs.</p> <p>Existing Load – 5 tons/year LA – 1 ton/year Reduction Needed – 76% Sediment Load Reduction – 4 tons/year</p>

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A, Table A-2 and Section A9.7.4.1.16.

Ten Mile River Sediment TMDL

TMDL Implementation Schedule

- Start Date: December 2000
- Final Compliance Date per TSO: December 31, 2034

Plan to Achieve TMDL Compliance^{2,6,7}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the sediment WLA in the Ten Mile River Watershed. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Ten Mile River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
Biofiltration Strip	1
Total	1

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful”

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Ten Mile River Sediment TMDL

campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹⁰

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans’ implementation of TMDL sediment reduction projects. The watershed-based monitoring program will include a number of monitoring locations and frequency of monitoring proportional to Caltrans’ sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹⁰ Source: Permit Attachment F

Trinity River Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Trinity River	Sediment	D5, D5.1, D5.2, D5.7, D5.7.1, and D5.7.1.1

General Watershed Description²

The Trinity River is the largest tributary to the Klamath River, draining an area of approximately 3,000 square miles, about 2000 of which are covered by this TMDL. The Trinity River has historically been recognized as a major producer of chinook and coho salmon and steelhead trout. The terrain is predominately mountainous and forested, with elevations ranging from 9,000 feet above sea level in the headwater areas, to less than 300 feet at the confluence with the Klamath River. The majority of the basin (approximately 70%) is under public ownership, including the Trinity Alps Wilderness areas, the Shasta-Trinity National Forest, Six Rivers National Forest, Bureau of Land Management, Bureau of Reclamation, and various state and county entities. The Hoopa Valley Tribe occupies 144 square miles of the lower basin, while industrial timber companies and other private landowners make up the remaining portions of the basin.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	11.08
2015-2016	11.08
2016-2017	19.5
2017-2018	0.4
2018-2019	29.1
2020-2021	2.8
2021-2022	1

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 114 for Reach 5, 115 for Reach 3, 120 for Reach 2, 150 for Reach 4, 153 for Reach 1, and 221 for Reach 6

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with sediment load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Trinity River Total Maximum Daily Load for Sediment*, December 20, 2001.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Trinity River Sediment TMDL

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed sediment load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Load Reductions and Sediment Load Reductions (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1 and 2	1	1,084,160	1,434	0.12%	Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Trinity River Sediment TMDL

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The TMDL does not include Caltrans-specific allocations nor proportionate contributions. On August 8, 2020, North Coast Water Board staff provided Caltrans-specific sediment LAs.</p> <p>Existing Load – 7,725 tons/year LA – 89 tons/year Reduction Needed – 85% Sediment Load Reduction – 6,875 tons/year</p>

TMDL Implementation Schedule

- Start Date: December 20, 2001
- Final Compliance Date per TSO: December 31, 2034

Plan to Achieve TMDL Compliance^{2,6,7}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the sediment WLA in the Trinity River Watershed. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Trinity River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Two projects (PID, PAED, and/or PS&E) are planned in the Trinity River watershed that include treatment BMPs.

⁵ Source: Permit Attachment A, Table A-2 and Section A9.7.4.1.17.

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

Trinity River Sediment TMDL

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
Biofiltration Strip	15
Biofiltration Swale	13
DPP Infiltration Area (DPPIA)	5
Infiltration Trench	3
Open Grade Friction Course	1
Other BMP	27
Stabilization Area	1
Traction Sand Trap	12
Total	77

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹⁰

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹⁰ Source: Permit Attachment F

Trinity River Sediment TMDL

2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment reduction projects. The watershed-based monitoring program will include a number of monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

Trinity River Sediment TMDL

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Upper Main Eel River and tributaries including Tomki Creek, Outlet Creek, and Lake Pillsbury Temperature and Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Upper Main Eel River and tributaries including Tomki Creek, Outlet Creek, and Lake Pillsbury	Temperature and Sediment	D5, D5.1, D5.2, D5.6, and D5.7

General Watershed Description²

The Upper Main Eel River watershed area is located primarily in Mendocino and Lake Counties in Northwestern California. It is primarily east of Highway 101, approximately 150 miles northeast from San Francisco, and includes the town of Willits. The Upper Main Eel watershed, as defined by this TMDL is the area from the headwaters of the Eel River in Mendocino National Forest above Lake Pillsbury down to Dos Rios, where the Upper Main Eel meets the Middle Fork Eel. The main tributaries are Tomki and Outlet Creeks. The Upper Main Eel River TMDL area is 688 square miles (approx. 440,384 acres) of which 359 square miles are in private ownership and 329 square miles in public ownership. The Potter Valley Project, a small hydroelectric plant and water diversion, is contained within the study area. The project has two dams - the larger Scott Dam and associated Lake Pillsbury and 12 miles downstream a smaller Cape Horn Dam and Van Arsdale reservoir, where water is diverted adding water supplies to the Potter Valley Irrigation District and Sonoma County through Lake Mendocino and the Russian River. The Potter Valley Project has been in operation for approximately 90 years and is licensed by the Federal Energy Regulatory Commission (FERC). Pacific Gas and Electric (PG&E) was issued a new hydro power license in 1983, which contained certain flow requirements. These flow requirements were changed with the most recent FERC order amending the license generally consistent with the National Marine Fisheries Service (NMFS) Biological Opinion under the Endangered Species Act. The areas' geology is underlain by the Franciscan terrain that dominates most of California's North Coast. Naturally unstable, this type of geology is sensitive to human disturbance. The Upper Main Eel watershed is relatively dry and warm, away from the influence of coastal fog.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2017-2018	3.3

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project-by-project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency Region IX *Upper Main Eel River and Tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury) TMDLs for Temperature and Sediment*. December 29, 2004.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Upper Main Eel River and tributaries including Tomki Creek, Outlet Creek, and Lake Pillsbury Temperature and Sediment TMDL

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 116 for Reach 2, 123 for Reach 3, 133 for Reach 1, 255 for Reach 4, 287 for Reach 5, 295 for Reach 6, and 296 for Reach 7

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with temperature load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed temperature load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Loads (Permit Attachment D Sections D5.7.1 and D5.7.1.2)	<ul style="list-style-type: none"> • Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans also works with the North Coast Regional Water Board to identify cooperative projects to reduce temperature loads through effectively increasing shade to streams. Caltrans works toward restoring riparian acreage, a goal of 127 acres of riparian shade.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Temperature Total Maximum Daily Loads (Permit Attachment D Section D5.6)	<ul style="list-style-type: none"> • Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. • Because vegetation removal may also increase surface water temperatures, Caltrans: 1) preserves where feasible existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases; 2) provides effective shade near receiving waters susceptible to temperature increases; and 3) maintains site potential effective shade near receiving waters susceptible to temperature increases.

Upper Main Eel River and tributaries including Tomki Creek, Outlet Creek, and Lake Pillsbury Temperature and Sediment TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	453,689	255	0.06%	Temperature and Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The WLA is expressed as equivalent to the LAs.</p> <p>Existing Load = 137 tons/year LA = 68 tons/ year Reduction Needed = 50% Sediment Load Reduction = 68 tons/year</p>
Temperature	<p>Caltrans plans to reduce temperature loads in each TMDL watershed by implementing TMDL BMPs and control projects that increase effective shade to streams. Increasing effective shade to streams will be accomplished through restoration of riparian acreage via TMDL BMPs and control projects. The riparian acreage to be restored is equal to the roadway area within the riparian setback.⁶</p> <p>Caltrans Proportional Responsibility of Riparian Shade for the Upper Main Eel River = 127 acres</p>

TMDL Implementation Schedule

- Start Date: December 29, 2004
- Final Compliance Date per TSO⁷: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A, Section A9.7.10.1.5

⁶ Sources: Permit Attachment D, Section D5.7.1.2

⁷ Final deadlines for achievement of LA are not specific in the TMDL or Action Plan. The TMDL was adopted on December 29, 2004; therefore, the start date was December 29, 2004. Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Upper Main Eel River and tributaries including Tomki Creek, Outlet Creek, and Lake Pillsbury Temperature and Sediment TMDL

Plan to Achieve LAs^{2,8,9}

Pollutant	Strategies to Achieve LAs
Sediment	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the sediment WLA in the Upper Main Eel River Watershed and implements control measures to prevent or minimize erosion and sediment discharge in the Upper Main Eel River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures will be developed and can include minor grading, seeding, and installation of major slope stabilization systems. Caltrans did not identify any slopes in the Upper Main Eel River Watershed which are prone to erosion. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Ten SHOPP projects (PID, PAED, and/or PS&E) are planned in the Upper Main Eel River Watershed that will include treatment BMPs.
Temperature	<ul style="list-style-type: none"> • Although there is no WLA for temperature, Caltrans is expected to be in compliance with temperature by not altering the natural temperature. Caltrans preserves where feasible existing riparian biotic conditions immediately adjacent to, and provides effective shade near, receiving waters susceptible to temperature increases. Any alteration of riparian biotic conditions that may increase sedimentation or reduce effective shade requires that Caltrans obtain written authorization by the applicable RWQCB Executive Officer or designee prior to beginning work.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Swale	10
Biofiltration Strip	12
Detention Basin	1
Traction Sand Trap	1
Total	24

Existing Non-Structural BMPs¹¹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan* (January 2015).

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Upper Main Eel River and tributaries including Tomki Creek, Outlet Creek, and Lake Pillsbury Temperature and Sediment TMDL

extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans’ implementation of TMDL sediment reduction projects. The watershed-based monitoring program should plan to include several monitoring locations and frequency of monitoring proportional to Caltrans’ sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Sources: Permit Attachment F

**Upper Main Eel River and tributaries including Tomki Creek, Outlet Creek, and Lake Pillsbury
Temperature and Sediment TMDL**

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Van Duzen River and Yager Creek Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
North Coast	Van Duzen River and Yager Creek	Sediment	D5, D5.1, D5.2, D5.7, D5.7.1, and D5.7.1.1

General Watershed Description²

The Van Duzen River basin (includes Yager Creek) is located in California’s North Coast Range, southeast of the City of Eureka and approximately 50 miles from the “triple junction” of the American, Pacific and Gorda tectonic plates near Cape Mendocino. The Van Duzen River drains an area of 429 square miles: 366 square miles are located in Humboldt County, and 63 square miles in Trinity County. Elevations within the watershed range from 5,906 feet at its headwaters at Red Lassic peak to 62 feet at its confluence with the Eel River. The Van Duzen River is 73.5 miles long and one of the few remaining free flowing rivers in California. State Highway 36 is the major transportation corridor, passing through the towns of Hydesville, Carlotta, Bridgeville and Dinsmore.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2017-2018	14.4

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 126 for Reach 2, 128 for Reach 1, 136 for Reach 3, 148 for Reach 4, 228 for Reach 6, 307 for Reach 5, and 308 for Reach 7

Region-Specific Requirements (Permit Attachment D Section D3.4)

The State Water Board Executive Director in consultation with North Coast Water Board Executive Officer will determine Caltrans' progress towards compliance with sediment load reductions in the North Coast Water Board region. For review and consideration of approval, Caltrans will provide the following documentation:

- For projects completed from the TMDL adoption date through the Permit's adoption date, Caltrans will provide the load reductions for any completed sediment load reduction projects.
- For projects completed under pre-approval by the Regional Water Board Executive Officer and after the Permit's adoption date, Caltrans will provide the load reduction for any activity at the time of completion (if in the Caltrans ROW) or upon contribution to the implementing entity (if outside the Caltrans ROW).

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Van Duzen River and Yager Creek Total Maximum Daily Load for Sediment*, December 16, 1999.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A “CU” is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Van Duzen River and Yager Creek Sediment TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
North Coast Water Board Sediment and Temperature Total Maximum Daily Load Reductions and Sediment Load Reductions (Permit Attachment D Sections D5.7.1 and D5.7.1.1)	Caltrans performs slope inspections and repairs slopes as necessary. Additionally, Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	1	274,130	379	0.14%	Sediment	Yes	Sediment and temperature load reductions accrued from funding Local Cooperative Watershed Improvement Projects approved by the North Coast RWQCB

Load Allocations (LAs)⁵

Pollutant	Caltrans LA
Sediment	<p>The TMDL does not include Caltrans-specific allocations nor proportionate contributions. On August 8, 2020, North Coast Water Board staff provided Caltrans-specific sediment LAs.</p> <p>Existing Load – 447 tons/year LA – 68 tons/year Reduction Needed – 85% Sediment Load Reduction – 379 tons/year</p>

TMDL Implementation Schedule

- Start Date: December 16, 1999
- Final Compliance Date per TSO: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A, Table A-2 and Section A9.7.4.1.19.

Van Duzen River and Yager Creek Sediment TMDL

Plan to Achieve TMDL Compliance^{2,67}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the sediment WLA in the Van Duzen River and Yager Creek Watershed. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Albion River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans works with the North Coast Regional Water Board to look for alternative project opportunities outside Caltrans ROW using cooperative agreements. This strategy is built around the North Coast Region Compliance Strategy which encourages the use of cooperative partnership projects. • According to the 2014 Water Quality Report Card, the 2006-2008 data demonstrate that suspended sediment load by average flow a year has decreased by 67 percent from pre-TMDL loads, indicating that conditions are improving. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Three SHOPP projects (PID, PAED, and/or PS&E) are planned in the Van Duzen River and Yager Creek watershed that includes treatment BMPs.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
Biofiltration Strip	3
Biofiltration Swale	9
DPP Infiltration Area (DPPIA)	6
Stabilization Area	1
Total	19

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information

⁶ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁷ Source: State Water Resources Control Board *Water Quality Report Card, Sediment in Van Duzen River*, October 2014

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Van Duzen River and Yager Creek Sediment TMDL

Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution.. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program and collection of applied traction sand both minimize sediment discharge to the watershed bodies.

Monitoring¹⁰

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can a) allocate a one-time funding contribution equivalent to ten percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans can contribute funding proportionate to its share of WLA among stakeholders for each TMDL sediment reduction project.
2. Caltrans will implement a watershed monitoring program associated with state highways within the North Coast region TMDL watersheds. State highways are broadly distributed and therefore the monitoring will be watershed-based to allow North Coast Water Board staff to assess water quality impacts from state highways and progress toward achieving TMDL targets from Caltrans' implementation of TMDL sediment reduction projects. The watershed-based monitoring program will include a number of monitoring locations and frequency of monitoring proportional to Caltrans' sediment load in excess of its LA for each TMDL watershed.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹⁰ Source: Permit Attachment F

Guadalupe River Mercury TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Francisco Bay	Guadalupe River	Mercury	D3.2

General Watershed Description²

The Guadalupe River watershed is located in the Eastern Santa Cruz Mountains, above the City of San Jose and draining to San Francisco Bay. This mountainous area in the central coast of California has numerous creeks that drain into several reservoirs before continuing downstream. The New Almaden Mining District is located near the headwaters of the central portion of the watershed. Guadalupe Creek flows adjacent to the western side of the mining district. Alamitos Creek is formed by several smaller creeks draining from the northeastern and eastern portions of the mining district. These two creeks drain into Lake Almaden and the Guadalupe River begins downstream of the lake. The river then flows 19 miles through heavily urbanized portions of San Jose, California. Three urban creeks (Ross, Canoas, and Los Gatos creeks) join the river before it discharges into South San Francisco Bay through Alviso Slough. This TMDL addresses seven waterbodies in the 170 square mile Guadalupe River watershed: Guadalupe Reservoir, Calero Reservoir, Almaden Reservoir, and Lake Almaden as well as Guadalupe Creek, Alamitos Creek, and the Guadalupe River upstream of tidal influence.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2021-2022	4.3

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined, and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking⁴

Reach Number Priority Ranking: 282 for Reach 1, 283 for Reach 3 and 284 for Reach 2.

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the Guadalupe River watershed.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	<ul style="list-style-type: none"> Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.

¹ Source: Permit Attachment D.

² Source: Source: United States Environmental Protection Agency, *Water Quality Progress Report Guadalupe River-Mercury*, 2010.

³ Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

⁴ Since the previous permit was adopted, four more TMDLs were adopted by the Regional Water Boards or were established by the U.S. EPA. Caltrans will update its existing TMDL Reach Prioritization List to include the four new TMDLs.

Guadalupe River Mercury TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4	2	108,800	2,277	2.1%	Mercury	No	e. Mass-Based Waste Load

WLAs⁶

Pollutant	Caltrans WLA
Mercury	0.2 mg of mercury per kg of suspended sediment

TMDL Implementation Schedule

- Start Date: June 1, 2010
- Final Compliance Date: June 1, 2030

Plan to Achieve WLAs^{2,7,8}

Pollutant	Strategies to Achieve WLAs
Mercury	<ul style="list-style-type: none"> • Caltrans is making progress towards achieving compliance with WLAs for mercury in the Guadalupe River watershed. • Caltrans controls the discharge of nutrients through the control of sediment. Caltrans implements and maintains structural best management practices (BMPs) to mitigate sediment in the Guadalupe River watershed. Additionally, Caltrans implements control measures to prevent or minimize erosion and sediment discharge by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains and not modifying natural runoff flow patterns. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	3
Biofiltration Swale	7
Detention Basin	4
Infiltration Basin	1
Total	15

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Sources: Permit Attachment A.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Guadalupe River Mercury TMDL

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 4 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution.. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Drain Inlet Cleaning** – District Maintenance crews clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and with equipment such as Vactor trucks.

Monitoring¹¹

Caltrans will select and implement one of the following mercury monitoring options:

- **Regional Monitoring:** Participate in mercury monitoring via the Regional Monitoring Program for Water Quality in San Francisco Bay.
- **Self-Monitoring:** Develop and implement a mercury monitoring plan to quantify the mercury loads or load reductions achieved through treatment, source control, and other management efforts.
- **Combination:** Caltrans will implement a combination of regional or self-monitoring.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

¹¹ Source: Permit Attachment F.

Guadalupe River Mercury TMDL

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Napa River Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Francisco Bay	Napa River	Sediment	D3.2

General Watershed Description²

The Napa River watershed covers an area of approximately 426 square miles and is contained by the ridge tops of the mountains to the north, west, and east. The watershed is an example of the northwest-southeast trending topography typical of the California Coastal Range. It provides many different habitats for fish and wildlife, including chaparral, riparian, freshwater, brackish and saltwater marsh, vernal pool, oak and pine woodland, and grassland communities. The Napa River runs through the center of the watershed on the valley floor as it drains numerous tributaries along a 55-mile run from high in the headwaters of Mt. St. Helena in the Mayacamas Mountain Range, to the San Pablo Bay. The river winds through varied landscapes of forested mountain slopes, vineyards, urban areas, open pasture, industrial zones, grasslands, and marshes.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2015-2016	5.72
2017-2018	0.3
2019-2020	34.97
2020-2021	3.24

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined, and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking

- Reach Number Priority Ranking: 22 for Reach 2, 26 for Reach 1 and 48 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the Napa River Watershed.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Section D3.2)	The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹ Source: Permit Attachment D.

² Source: Napa County Resource Conservation District, *Napa River Watershed*, May 11, 2008.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Napa River Sediment TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4	2	269,770	1,148	0.43%	Sediment	No	h. TMDL-Specific Demonstrations

WLAs⁵

Pollutant	Caltrans WLA
Sediment	600 tons/year

TMDL Implementation Schedule

- Start Date: January 20, 2011⁶

Plan to Achieve TMDL Compliance^{2,7,8}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans is making progress towards achieving compliance with the sediment WLA in the Napa River Watershed. The Regional Water Board determined that compliance with the stormwater permit will allow Caltrans to meet its waste allocation for sediment in the Napa River Watershed. As part of the stormwater permit requirements, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Napa River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Additionally, Caltrans implements structural best management practices (BMPs), biofiltration strips and biofiltration swales, which are effective in removing sediment. • Caltrans has also established a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems should be inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	17
Biofiltration Swale	21
Bioretention	1
Detention Basin	5
DPP Infiltration Area (DPPIA)	1
Total	45

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A.

⁶ The TMDL states that zero sediment reductions are needed. Caltrans is in compliance if they implement appropriate sediment control measures, participates in monitoring programs, and complies with the Permit.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Napa River Sediment TMDL

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 4 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution.. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program sand both minimize sediment discharge to the watershed bodies
- **Caltrans Stream Crossing Desktop Survey** – Caltrans conducted a survey to conserve native species and enhance the aesthetic and recreational values of waterbodies and their tributaries. There are an estimated 55 stream crossings in the Napa River Watershed and Caltrans roadways that cross waterbodies including State Routes 12, 29, 37, 80, 121, 128, and 221. The survey consisted of reviewing historical records of aerial imagery, street views, the Caltrans Stormwater Portal, 2015 Coastal Anadromous Fish Passage Assessment and Remediation Progress Report, and the State Highway Operation and Protection Program (SHOPP) lists. The crossings were also assessed based on visual observations such as the type of flow, size of the watershed, surrounding land use, channel side slopes, existing vegetation, channel bottom and structural integrity. After the survey, the crossings were ranked as high, medium, and low priority for repair. Projects to replace/repair high priority crossings are being scheduled, and field assessments will be performed.
- **Drain Inlet Cleaning** – District Maintenance crews clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and with equipment such as Vactor trucks.

Monitoring

The TMDL does not have monitoring requirements for Caltrans.

Annual Reporting (Permit Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Napa River Sediment TMDL

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Pescadero-Butano Fine Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
San Francisco Bay	Pescadero-Butano	Fine Sediment	D3.1 and D3.2

General Watershed Description²

The Pescadero-Butano watershed is underlain by faults and weak, erodible rocks, and is surrounded by actively uplifting ranges in a Mediterranean climate. As such, it naturally generates large amounts of sediment. Most of the underlying geologic units, which consist of sandstone and siltstone, decompose readily into fine or friable sediment particles that are easily transported. In their downstream reaches, Pescadero and Butano creeks feature wide alluvial valleys and flatlands that historically functioned as wet meadows. Under natural conditions, the majority of sediment – especially sand-sized and coarser particles – were deposited in the wet meadows and alluvial valley or other depositional areas such as bars in stream channels or fans at the mouth of tributary streams. These large extensive wet meadows and floodplains functioned like a sponge, storing water and sediment during high flows, slowly releasing water to downstream reaches and recharging groundwater. Land use changes over the last two centuries have resulted in excessive erosion from the uplands and the channels, as well as accelerated sedimentation in the lagoon, leading to a reduction in the quality and quantity of instream habitat. Primary factors contributing to this habitat loss are attributable to adverse impacts of land and channel management practices, and the loss of instream channel structure necessary to maintain, and to efficiently store, sort, and transport delivered sediment.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

No translation is necessary since this TMDL was established after the previous order.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 285 for Reach 2, 309 for Reach 1 and 310 for Reach 3.

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the Pescadero-Butano Watershed.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Prioritize Inventory of Reaches by Pollutant Category (Permit Attachment D Section D3.1)	Caltrans will update its existing Prioritized Inventory of Reaches and submit its updated inventory.
Annual TMDL Compliance Status Reports (Permit Section D3.2)	The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board San Francisco Bay Region, *Total Maximum Daily Load for Sediment and Habitat Enhancement Plan for Pescadero-Butano Watershed*, December 11, 2018.

³ Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Pescadero-Butano Fine Sediment TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4	2	52,124	297	0.28%	Fine Sediment	No	h. TMDL-Specific Demonstrations

WLAs⁵

Pollutant	Caltrans WLA
Sediment	50 tons/year

TMDL Implementation Schedule

- Start Date: May 21, 2019
- Final Compliance Date⁶: Evaluated from 2019-2029

Plan to Achieve TMDL Compliance^{2,7,8}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans is making progress towards achieving compliance with the sediment WLA in the Pescadero-Butano Watershed. The Regional Water Board determined that compliance with the Permit will allow Caltrans to meet its WLA for sediment in the Pescadero-Butano watershed. As part of the Permit requirements, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Pescadero-Butano Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Additionally, Caltrans implements structural best management practices (BMPs), biofiltration strips and biofiltration swales, which are effective in removing sediment. • Caltrans has also established a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems should be inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
None	–

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 4 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A.

⁶ A final compliance deadline was not included in this TMDL. Instead, waterbody attainment with sediment water quality objectives are to be evaluated using a 10-year averaging period starting in 2019 and ending in 2029.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Pescadero-Butano Fine Sediment TMDL

extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program both minimize sediment discharge to the watershed bodies.
- **Drain Inlet Cleaning** – District Maintenance crews clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and with equipment such as Vactor trucks.

Monitoring

The TMDL does not have any monitoring requirements for Caltrans.

Annual Reporting (Permit Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

Pescadero-Butano Fine Sediment TMDL

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Petaluma River Fecal Indicator Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
San Francisco Bay	Petaluma River	Fecal Indicator Bacteria	D3.1, D3.2, D3.3, D5, D5.1, D5.2, and D5.5

General Watershed Description²

The Petaluma River is located in southern Sonoma County and a small portion of northeastern Marin County. The river drains into the northwestern part of San Pablo Bay and is the eleventh largest small tributary to San Francisco Bay. The Petaluma River Watershed is approximately 19 miles long and 13 miles wide and encompasses approximately 146 square miles (378 square kilometers). Mountainous or hilly upland areas comprise 56 percent of the watershed, 33 percent of the watershed is valley, and the lower 11 percent is salt marsh.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

No translation is necessary since this TMDL was established after the previous order.

Prioritized Inventory of Reaches Ranking⁴

Reach Number Priority Ranking: 277 for Reach 1 and 278 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the Petaluma River watershed.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Prioritize Inventory of Reaches by Pollutant Category (Permit Attachment D Section D3.1)	Caltrans will update its existing Prioritized Inventory of Reaches to include the Petaluma River and submit the updated inventory for review and approval.
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year that will include a summary of the Petaluma River implementation activities for the reporting period.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually as needed that will include the Petaluma River.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed. Caltrans continues to seek partnerships with stakeholders in the watershed.

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board San Francisco Bay Region, *Total Maximum Daily Load for Bacteria in Petaluma River Watershed Staff Report for Basin Plan Amendment*, November 2019.

³ Sources: Caltrans, *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

⁴ Since the previous permit was adopted, four more TMDLs were adopted by the Regional Water Boards or were established by the U.S. EPA. Caltrans will update its existing TMDL Reach Prioritization List to include the four new TMDLs.

Petaluma River Fecal Indicator Bacteria TMDL

Reporting Requirement Permit Section	Summary of Activities
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Bacteria TMDLs (Permit Attachment D Section D5.5)	<p>Caltrans will implement its Homeless Encampment Policy and participate in the regional monitoring program. The Division of Maintenance's Policy Directive (MPD 1001-R1) on the Encampment Removal Policy includes the following activities:</p> <ul style="list-style-type: none"> • Site assessment to determine the prioritization for homeless encampment removal • Notifying homeless encampment about upcoming removal • Removing the homeless encampment, including disposing of items that pose an immediate health or safety risk, such as human waste and other hazardous items • Documenting encampment removal <p>For more information on this policy, refer to the TMDL Compliance Plan's attachments.</p>

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4	2	94,933	837	0.88%	Fecal Indicator Bacteria	No	b. Receiving Water Quality Monitoring

WLAs⁶

Pollutant	Caltrans WLA
Bacteria	<p><u>Estuarine Waters Enterococcus</u>: Geometric mean less than 30 Statistical Threshold Value = 110 colony forming unit per 100 mL</p> <p><u>Freshwater E. Coli</u>: Geometric mean less than 100 Statistical Threshold Value = 320 colony forming unit per 100 mL</p>

TMDL Implementation Schedule

- Start Date: May 10, 2021
- Final Compliance Date: May 10, 2027

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Sources: Permit Attachment A.

Petaluma River Fecal Indicator Bacteria TMDL

Plan to Achieve WLAs^{2,7,8}

Pollutant	Strategies to Achieve WLAs
Bacteria	<ul style="list-style-type: none"> Caltrans is making progress towards achieving compliance with the Petaluma River Watershed WLAs for bacteria. Caltrans implements, monitors, and maintains BMPs to minimize the discharge of bacteria (i.e., fecal pathogens) to surface waters within each applicable reach. Caltrans strategies will include participation in cooperative agreements and/or structural BMP implementation.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	63
Biofiltration Swale	60
Bioretention	9
Detention Basin	2
Total	134

Existing Non-Structural BMPs¹⁰

- Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 4 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- Drain Inlet Cleaning** – District Maintenance crews clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and with equipment such as Vactor trucks.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Petaluma River Fecal Indicator Bacteria TMDL

Monitoring¹¹

- Caltrans will submit a bacteria water quality monitoring plan for the Petaluma River and its tributaries.
- Caltrans plans to collaborate on a single cooperative plan.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

¹¹ Source: California Regional Water Quality Control Board *Final Revised Basin Plan Amendment Total Maximum Daily Load for Bacteria in the Petaluma River Watershed with Executive Officer Corrections* May 19, 2020.

Richardson Bay Pathogens TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Francisco Bay	Richardson Bay	Pathogens	D3.2

General Watershed Description²

Richardson Bay is a small arm of San Francisco Bay located just northeast of the Golden Gate in southern Marin County. It is widely used for recreational activities including boating, kayaking, rowing, and swimming. The Bay has poor pollutant dispersion capability and low assimilative capacity due to its enclosed shape, shallowness, and minimal tidal flushing action. Although close to the Pacific Ocean, the Bay is protected from strong tides and winds by the Marin Headlands and Tiburon Peninsula and provides an important shelter for sea birds and migratory waterfowl during the winter months. It provides habitat and refuge for harbor seals, spawning grounds for herring, and important spawning and feeding areas for other fishes, including year-round residents, migrating anadromous fishes, and pelagic ocean visitors. Richardson Bay contains San Francisco Bay's second largest remaining eelgrass bed (officially designated Essential Fish Habitat). Surrounding upland areas provide habitat for a wide range of aquatic and wildlife species in a diverse array of ecosystems, from open water estuary to shallow mudflats, to tidal marshes, and rocky intertidal shoreline. The TMDL Staff report states that the source of bacteria in highway runoff is wildlife.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2017-2018	42.5
2018-2019	1.7

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined, and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 214 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the Richardson Bay watershed.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Section D3.2)	The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board San Francisco Bay Region, *Pathogens in Richardson Bay Total Maximum Daily Load (TMDL) Staff Report for Proposed Basin Plan Amendment*, July, 2008.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Richardson Bay Pathogens TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4	2	10,763	164	1.5%	Pathogens	No	b. Receiving Water Quality Monitoring and/or d. Discharge Sampling and/or f. Allowable Exceedance Days

WLAs⁵

Pollutant	Caltrans WLA
Pathogens	<ul style="list-style-type: none"> • Less than 14 most probable number per 100 millimeters, and • A 90th percentile limit of less than 43 most probable number per 100 millimeters.

TMDL Implementation Schedule

- Start Date: December 18, 2009
- Final Compliance Date⁵: A final compliance date is not specified in the TMDL. The TMDL states that monitoring results, progress toward attaining TMDL load allocations, and progress towards implementation measures will be evaluated through review of annual reports required under this Order. The TMDL was approved on December 18, 2009; therefore, the final compliance deadline is December 18, 2009.

Plan to Achieve TMDL Compliance^{2,6,7}

Pollutant	Strategies to Achieve TMDL Compliance
Pathogens	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the pathogen waste load allocation in the Richardson Bay Watershed because they are in compliance with their Permit. As part of the Permit requirements, Caltrans implements a stormwater management plan to reduce the discharge of pollutants to the maximum extent practical within the Richardson Bay Watershed. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.

Existing Installed Structural Best Management Practices (BMPs)⁸

Treatment BMP Type	Number of BMPs
Biofiltration Swale	2
Total	2

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A.

⁶ Sources: State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in October 2014. Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Richardson Bay Pathogens TMDL

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 4 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Drain Inlet Cleaning** – District Maintenance crews clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and with equipment such as Vactor trucks.

Monitoring

The TMDL does not have monitoring requirements for Caltrans.

Annual Reporting (Permit Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Richardson Bay Pathogens TMDL

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San Francisco Bay Mercury TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Francisco Bay	San Francisco Bay	Mercury	D3.2, D3.3, D5.3, D5, D5.1, D5.2, and D5.8.2

General Watershed Description²

The San Francisco Bay is located on the Central Coast of California. It is a broad and shallow natural embayment. The northern part of the Bay has more flushing than the southern portion because the Sacramento and San Joaquin rivers discharge into the northern segment, while smaller, local watersheds provide freshwater to the southern part. The northern and southern portions of the Bay are linked by the Central Bay, which provides the connection to the Pacific Ocean. All segments of San Francisco Bay are included in this TMDL, including marine and estuarine waters adjacent to the Bay (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, and South San Francisco Bay including the Lower South Bay). Three additional mercury impaired waterbodies that are specific areas within these larger segments are also included in this TMDL (Castro Cove, Oakland Inner Harbor, and San Leandro Bay).

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	2.1
2015-2016	35.6
2016-2017	7.5
2017-2018	117.7
2018-2019	271
2019-2020	154.7
2020-2021	3.5
2021-2022	17.9

Translation of CU to Waste Load Allocations (WLAs)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined, and will be inserted once it is finalized. Note that this TMDL's targets are based on acres and not concentration or loads.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 77 for Reach 8, 81 for Reach 11, 85 for Reach 12, 94 for Reach 2, 96 for Reach 1, 97 for Reach 4, 99 for Reach 10, 100 for Reach 13, 103 for Reach 9, 105 for Reach 7, 109 for Reach 6, 189 for Reach 5, and 192 for Reach 3

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency, *Water Quality Progress Report San Francisco Bay-Mercury*, 2008.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

San Francisco Bay Mercury TMDL

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the San Francisco Bay Watershed.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year that includes a summary of San Francisco Bay Mercury TMDL watershed implementation activities, including the project status of best management practices (BMPs) and controls (per Permit Attachment D Section D5.8).
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually as needed, including the following: <ul style="list-style-type: none"> • Permit Attachment F monitoring requirements • Polychlorinated and Biphenyls and Mercury TMDL Compliance Plan – Discuss BMPs planned in 2,970 acres of ROW and the reporting period from the Permit Adoption Date through February 12, 2028 and the Permit Attachment D Sections D5.8.2.a.–d. (see below for more information).
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans participates in 13 regional partnership projects in San Mateo, South San Francisco, Richmond, San Jose, Daly City, Concord, Contra Costa, Oakland, Hayward, Emeryville, Palo Alto, and Oakland.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed BMP and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
San Francisco Bay Water Board Mercury and PCBs TMDLs (Permit Attachment D Section D5.8.2)	Caltrans is developing a schedule for planned implementation control measures to treat 2,970 acres by February 12, 2028, for mercury.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4	2	2,400,544	13,475	0.56%	Mercury	No	e. Mass-Based Waste Load and h. TMDL-Specific Demonstrations

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

San Francisco Bay Mercury TMDL

WLAs⁵

Pollutant	Caltrans WLA
Mercury	<p>No WLAs specific to Caltrans. Instead, Caltrans' WLA shares an unspecified portion that is assigned to city or municipal NPDES permits in which Caltrans' roads or facilities reside. Caltrans will treat 2,970 acres of ROW that drains directly or indirectly to San Francisco Bay. Caltrans roadways are within the following entities with the following WLAs:</p> <p>Santa Clara Valley Urban Runoff Pollution Prevention Program = 23 kg/year Alameda Countywide Clean Water Program = 20 kg/year Contra Costa Clean Water Program = 11 kg/year San Mateo County Stormwater Pollution Prevention Program = 8.4 kg/year Vallejo Sanitation District = 1.6 kg/year Fairfield-Suisun Urban Runoff Management Program = 1.6 kg/year American Canyon = 0.14 kg/year Sonoma County Area = 1.6 kg/year Napa County Area = 1.6 kg/year Marin County Area = 3.3 kg/year Solano County Area = 0.81 kg/year San Francisco County Area = 8.8 kg/year</p>

TMDL Implementation Schedule

- Start Date: February 12, 2008
- Final Compliance Date: February 12, 2028

Plan to Achieve WLAs^{2,6,7,8}

Pollutant	Strategies to Achieve WLAs
Mercury	<ul style="list-style-type: none"> • Caltrans is making progress towards achieving compliance with WLAs for mercury in the San Francisco Bay watershed. Caltrans controls the discharge of nutrients through the control of sediment. Caltrans implements and maintains structural BMPs to mitigate sediment in the San Francisco Bay watershed. Additionally, Caltrans implements control measures to prevent or minimize erosion and sediment discharge by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains and not modifying natural runoff flow patterns. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites.

⁵ Sources: Permit Attachment A and Source: California Regional Water Quality Control Board San Francisco Bay Region, *Water Quality Control Plan (Basin Plan) for San Francisco Bay Basin*, 2019.

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁸ State Water Board Resources Control Board, *Water Quality Report Card, Mercury in San Francisco Bay*, December 2015.

San Francisco Bay Mercury TMDL

Pollutant	Strategies to Achieve WLAs
	<ul style="list-style-type: none"> Existing data suggests that elevated contaminant concentrations in the San Francisco Bay margins may be partially responsible for the unchanging concentrations of legacy contaminants (PCBs and mercury) in open San Francisco Bay sediments and biota despite efforts to reduce sources of these contaminants. Caltrans also participates in 13 regional partnership projects in San Mateo, South San Francisco, Richmond, San Jose, Daly City, Concord, Contra Costa, Oakland, Hayward, Emeryville, Palo Alto, and Oakland. As an additional pollution control measure, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. There are 90 SHOPP projects (PID and above) planned in the San Francisco Bay watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	3
Biofiltration Strip	310
Biofiltration Swale	267
Bioretention	69
Detention Basin	14
DPP Infiltration Area (DPPIA)	4
Infiltration Basin	4
Infiltration Trench	12
Open Grade Friction Course	1
Stabilization Area	3
Total	687

Existing Non-Structural BMPs¹⁰

- Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 4 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

San Francisco Bay Mercury TMDL

public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Drain Inlet Cleaning** – District Maintenance crews clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and with equipment such as Vactor trucks.

Monitoring¹¹

The San Francisco Bay Regional Monitoring Program conducts monitoring relevant to evaluating progress toward meeting the mercury sediment, human health, and wildlife targets. Other monitoring options are acceptable if the monitoring approach used to evaluate progress toward meeting the mercury TMDL targets include the following:

- The suspended sediment target (0.2 mg mercury per kg dry sediment) shall be compared to the annual median San Francisco Bay suspended sediment mercury concentration.
- The human health target is a fish tissue mercury concentration (0.2 mg mercury per kg fish tissue).
- The wildlife target is fish tissue mercury concentration (0.03 mg mercury per kg fish). This target applies to average wet weight whole fish concentrations in three to five centimeters length fish.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

¹¹ Source: California Regional Water Quality Control Board San Francisco Bay Region, *Water Quality Control Plan (Basin Plan) for San Francisco Bay Basin*, 2019. Numeric targets are described in Section 7.2.2.2 of the San Francisco Bay Region Basin Plan.

San Francisco Bay Mercury TMDL

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San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Francisco Bay	San Francisco Bay	PCBs	D3.2, D3.3, D5, D5.1, D5.2, D5.4, and D5.8

General Watershed Description²

The San Francisco Bay is located on the Central Coast of California. It is a broad and shallow natural embayment. The northern part of the Bay has more flushing than the southern portion because the Sacramento and San Joaquin rivers discharge into the northern segment, while smaller, local watersheds provide freshwater to the southern part. The northern and southern portions of the Bay are linked by the Central Bay, which provides the connection to the Pacific Ocean. The Bay is subdivided in segments: Sacramento and San Joaquin Delta, Suisun Bay, Carquinez Strait, San Pablo Bay, Richardson Bay, Central Bay, Lower Bay and South Bay. The northern reach of the San Francisco Bay (Suisun Bay, Carquinez Strait, and San Pablo Bay) is partially to well-mixed while the South Bay (Lower and South Bay) is a tidally oscillating lagoon. The Central Bay is most influenced by water exchange with the ocean.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2015-2016	35.6
2017-2018	108.4
2018-2019	38
2019-2020	156.2
2020-2021	3.6
2021-2022	28.9

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned CUs under the previous order to WLAs is being determined, and will be inserted once it is finalized. Note that this TMDL's targets are based on acres and not concentration or loads.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 81 for Reach 11, 85 for Reach 12, 94 for Reach 2, 99 for Reach 10, 100 for Reach 13, 174 for Reach 8, 175 for Reach 1, 176 for Reach 14, 177 for Reach 4, 178 for Reach 9, 179 for Reach 7, 180 for Reach 6, 193 for Reach 5, and 194 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the San Francisco Bay watershed.

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency *Water Quality Progress Report San Francisco Bay-Mercury 2008* and California Regional Water Quality Control Board San Francisco Bay Region *TMDL for PCBs in San Francisco Bay Final Staff Report for Proposed Basin Plan Amendment* February 13, 2008.

³ Sources: Caltrans, *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year that includes a summary of San Francisco Bay PCBs TMDL watershed implementation activities.
TMDL Compliance (Permit Attachment D Section D3.3)	<p>Caltrans will develop, implement, and update a TMDL Compliance Plan annually as needed, including the following:</p> <ul style="list-style-type: none"> • Permit Attachment F monitoring requirements • Polychlorinated and Biphenyls and Mercury TMDL Compliance Plan – Discuss best management practices (BMPs) planned in 2,970 acres of ROW and the reporting period from the Permit Adoption Date through February 12, 2028 and the Permit Attachment D Sections D5.8.2.a.–d. (see below for more information).
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	<ul style="list-style-type: none"> • Caltrans participates in the San Francisco Bay Regional Monitoring Program conducts monitoring relevant to evaluating progress toward meeting the PCBs human health and wildlife targets. • Caltrans participates in 13 regional partnership projects in San Mateo, South San Francisco, Richmond, San Jose, Daly City, Concord, Contra Costa, Oakland, Hayward, Emeryville, Palo Alto, and Oakland.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	<p>Caltrans affirms the appropriate maintenance is conducted on each type of installed BMP and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf. Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf.</p>
Requirements for Toxic Pollutants/ Pesticides/ Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans will control toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • BMPs will also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil. Caltrans may also use media filtration systems to treat runoff.
San Francisco Bay Water Board Mercury and PCBs TMDLs (Permit Attachment D Section D5.8)	<ul style="list-style-type: none"> • Caltrans is developing a standard operating procedure to identify, remove and properly dispose of polychlorinated biphenyl-containing caulk prior to or during the demolition, replacement, or rehabilitation of existing roadways, bridges, or other structures in the right-of-way (ROW) containing such material. • Caltrans is developing a schedule for planned implementation control measures to treat 2,970 acres by March 29, 2030, for PCBs.

San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4	2	2,180,480	27,000	1.2%	PCBs	No	e. Mass-Based Waste Load and h. TMDL-Specific Demonstrations

WLAs⁵

Pollutant	Caltrans WLA
PCBs	All stormwater runoff sources ⁶ = 2 kg/year Caltrans proportional responsibility = 0.025 kg/year

TMDL Implementation Schedule

- Start Date: March 29, 2010
- Final Compliance Date: March 29, 2030

Plan to Achieve WLAs^{2,7,8}

Pollutant	Strategies to Achieve WLAs
PCBs	<ul style="list-style-type: none"> • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the San Francisco Bay watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCBs WLAs in the San Francisco Bay watershed. • Toxic pollutants have a high affinity for adherence to fine sediment. A major source of toxic impairments is due to historical loading from the pollutants adhering to sediment. Therefore, the appropriate control measures for toxics are to control erosion and prevent or minimize the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the San Francisco Bay watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Existing data suggests that elevated contaminant concentrations in the Bay margins may be partially responsible for the unchanging concentrations of legacy

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A, Section A9.7.5.1.1.

⁶ Caltrans-specific contribution is not specified.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan*, January 2015.

San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL

Pollutant	Strategies to Achieve WLAs
	<p>contaminants (PCBs and mercury) in open Bay sediments and biota despite efforts to reduce sources of these contaminants.</p> <ul style="list-style-type: none"> • Caltrans participates in the San Francisco Bay Regional Monitoring Program conducts monitoring relevant to evaluating progress toward meeting the PCBs human health and wildlife targets. • Caltrans also participates in 13 regional partnership projects in San Mateo, South San Francisco, Richmond, San Jose, Daly City, Concord, Contra Costa, Oakland, Hayward, Emeryville, Palo Alto, and Oakland. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Sixty-three SHOPP projects (PID, PAED, and/or PS&E) are planned in the San Francisco Bay watershed that will include treatment BMPs. • Caltrans participates in cooperative implementation agreements with local MS4 to perform remediation of PCBs-contaminated hot spots.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	3
Biofiltration Strip	311
Biofiltration Swale	276
Bioretention	69
Detention Basin	14
DPP Infiltration Area (DPPIA)	0
Infiltration Basin	4
Infiltration Trench	12
Open Grade Friction Course	1
Total	694

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 4 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL

spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Drain Inlet Cleaning** – District Maintenance crews clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and with equipment such as Vactor trucks.

Monitoring¹¹

Caltrans participates in the San Francisco Bay Regional Monitoring Program which conducts monitoring relevant to evaluating progress toward meeting the PCBs human health and wildlife targets.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

¹¹ Source: California Regional Water Quality Control Board San Francisco Bay Region, *Water Quality Control Plan (Basin Plan) for San Francisco Bay Basin*, 2019. Numeric targets are described in Section 7.2.2.2 of the San Francisco Bay Region Basin Plan.

San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL

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San Francisco Bay Urban Creeks Diazinon and Pesticide Toxicity TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Francisco Bay	San Francisco Bay Urban Creeks	Diazinon and Pesticide Toxicity	D3.2

General Watershed Description²

The San Francisco Bay Urban Creeks is comprised of 37 creeks with an approximate area of 53.84 square miles. These creeks have been identified as impaired by diazinon and pesticide toxicity. The term “urban creeks,” as used here, refers to freshwater streams that flow through urban areas, including incorporated cities and towns and unincorporated areas with similar land use intensities. This strategy applies to all San Francisco Bay Region urban creeks.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2015-2016	29.92
2017-2018	42.81
2018-2019	31.95
2019-2020	115.89
2021-2022	26.00

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 94 for Reach 2, 96 for Reach 1, 208 for Reach 7, 209 for reach 3, 210 for Reach 6, 211 for Reach 8, 212 for Reach 4, 213 for Reach 5

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the San Francisco Bay watershed.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	<ul style="list-style-type: none"> Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.

¹ Source: Permit Attachment D.

² Source: Source: California Regional Water Quality Control Board, San Francisco Bay Region *Diazinon and Pesticide-Related Toxicity in Bay Area Urban Creeks*, November 9, 2005.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

San Francisco Bay Urban Creeks Diazinon and Pesticide Toxicity TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4 and 5	2	1,394,431	14,150	1%	Diazinon and Pesticide Toxicity	No	g. No Discharge (Diazinon) and h. TMDL-Specific Demonstrations (Pesticide Toxicity).

WLAs⁵

Pollutant	Caltrans WLA
Diazinon	100 ng/L (one-hour average)
Pesticide-related Toxicity	The targets require that toxicity not exceed 1.0 acute or chronic toxic units, as determined through standard toxicity tests.

TMDL Implementation Schedule

- Start Date: May 16, 2007
- Final Compliance Date: Review attainment strategy and TMDL targets every 5 years to determine if compliance modifications are necessary

Plan to Achieve WLAs^{2,6,7,8}

Pollutant	Strategies to Achieve WLAs
Diazinon	<ul style="list-style-type: none"> • Caltrans is in compliance with the diazinon WLA in the San Francisco Bay and Urban Creeks watershed. Diazinon is known as a pesticide used in agriculture and Caltrans' policy is to not use diazinon within its ROW. Monitoring results show that diazinon was not detected in water quality samples. Additionally, Caltrans' Integrated Pest Management Plan has an ecosystem-based strategy that focuses on long-term control of pests or their damage through a combination of techniques, such as biological controls, habitat manipulation, modification of cultural practices, and use of pest resistant plant varieties.
Pesticide Toxicity	<ul style="list-style-type: none"> • Caltrans is making progress towards achieving compliance with pesticide waste load allocations in the San Francisco Bay and Urban Creeks watershed since pesticide usage has been regulated. Additionally, Caltrans does not use pesticides within its ROW. • Although Caltrans does not use pesticides within its ROW, Caltrans complies with the Permit which specifies practices for the safe handling and use of pesticides, including compliance with federal, State and local regulations, and label directions. Caltrans is also required to perform site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in storm water runoff in the San Francisco Bay and Urban Creeks watershed. Additionally, Caltrans implements and maintains structural best management practices (BMPs) to mitigate pesticides in the San Francisco Bay and Urban Creeks watershed. • As an additional mitigation measure, Caltrans reduces the sediment transport of pesticides by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the San Francisco Bay and Urban Creeks watershed by protecting

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A.

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁸ Source: State Water Resources Control Board, *Water Quality Report Card, Pesticide Toxicity in San Francisco Bay Urban Creeks*, December 2015.

San Francisco Bay Urban Creeks Diazinon and Pesticide Toxicity TMDL

Pollutant	Strategies to Achieve WLAs
	<p>hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.</p> <ul style="list-style-type: none"> • Caltrans has also established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Additionally, Caltrans has an Integrated Pest Management Plan, which has an ecosystem-based strategy that focuses on long-term control of pests or their damage through a combination of techniques, such as biological control, habitat manipulation, modification of cultural practices, and use of pest resistant plant varieties.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	3
Biofiltration Strip	176
Biofiltration Swale	171
Bioretention	61
Detention Basin	8
Infiltration Trench	1
Total	420

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans Districts 4 and 5 prepare and implement a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

San Francisco Bay Urban Creeks Diazinon and Pesticide Toxicity TMDL

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Drain Inlet Cleaning** – District Maintenance crews clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and with equipment such as Vactor trucks.

Monitoring

The TMDL does not have monitoring requirements for Caltrans. Caltrans participates in the San Francisco Bay Regional Monitoring Program.

Annual Reporting (Permit Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

San Pedro Creek and Pacifica State Beach Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Francisco Bay	San Pedro Creek and Pacifica State Beach	Bacteria	D3.2

General Watershed Description²

San Pedro Creek is a perennial stream in Pacifica that runs from the Santa Cruz Mountains through the San Pedro Valley to its mouth at Pacifica State Beach at the southern end of Pacifica. It drains a 5,114-acre (about 8-square mile) basin and is composed of five main tributaries that delineate seven sub watersheds (McDonald, 2004). The Creek has four major forks: the North, Middle, South, and Sanchez Forks. The San Pedro Creek watershed is bordered by the Pacific Ocean to the northwest and by mountains on the three remaining sides. Pacific Coast Highway crosses the watershed at its northwestern edge. Urban development covers most of the valley floor and extends up onto some hillsides. The watershed is approximately 33% developed (residential, commercial, mixed urban or built-up, and other urban or built-up) (Matuk 2001).

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

No translation is necessary due to no CUs earned previously.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 206 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the San Pedro Creek and Pacifica State Beach watershed.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4	2	5,252	16	0.3%	Bacteria	No	h. TMDL-Specific Demonstrations

¹ Source: Permit Attachment D.

² Source: State of California Regional Water Quality Control Board San Francisco Bay Region, *Total Maximum Daily Load for Bacteria in San Pedro Creek and at Pacifica State Beach Final Staff Report for Proposed Basin Plan Amendment*, November 2012. McDonald K.N., *San Pedro Creek Flood Control project: Integrative Analysis of Natural Hazard response. A thesis submitted to the faculty of San Francisco State University in partial fulfillment of the requirements for the degree of Master of Arts in Geography*, San Francisco, California, 2004. Matuk, V., *Water Quality in San Pedro Creek Watershed, Pacifica, California. A thesis submitted to the faculty of San Francisco State University in partial fulfillment of the requirements for the degree of Master of Arts in Geography*, San Francisco, California, 2001.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

⁴ ROW area includes impervious and pervious areas.

San Pedro Creek and Pacifica State Beach Bacteria TMDL

WLAs^{2,5}

Pollutant	Watershed WLA
Bacteria	Caltrans' existing best management practices (BMPs) and stormwater NPDES permit requirements, as of the effective date of the TMDL, are sufficient to attain and maintain its portion of the WLA. The <i>San Pedro Creek and Pacifica State Beach Bacteria TMDL Staff Report</i> (November 2012) states the following: "Stormwater discharges from Caltrans' stretch of Highway 1 crossing the northwestern edge of the San Pedro Creek watershed are not believed to be a significant source of indicator bacteria because that section of the highway does not include any typical bacteria-generating sources such as homeless encampments, restroom facilities, garbage bins, etc. Therefore, we do not think that Caltrans would need to implement any additional pollution prevention measures in addition to what they currently are, but they are receiving a wasteload allocation".

TMDL Implementation Schedule

- Start Date: August 1, 2013
- Final Compliance Dates: August 1, 2021 (Pacifica State Beach TMDL) and August 1, 2028 (San Pedro Creek TMDL)

Plan to Achieve WLAs^{2,5,6}

Pollutant	Strategies to Achieve WLAs
Bacteria	<ul style="list-style-type: none"> • Caltrans is in compliance with bacteria WLAs for dry-weather flows in the San Pedro and Pacifica State Beach Watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. Caltrans is making progress towards achieving compliance with bacteria WLAs for wet-weather flows in the San Pedro and Pacifica State Beach watershed. • Caltrans minimizes wet-weather discharges from its ROW into receiving waterbodies impaired for bacteria by implementing treatment BMPs and source control/preemptive activities such as street sweeping, cleanup of illegal dumping, prohibition of non-storm water discharges, and public education.

Existing Installed Structural BMPs⁷

Treatment BMP Type	Number of BMPs
Biofiltration Strip	2
Biofiltration Swales	5
Detention Basin	1
Total	8

Existing Non-Structural BMPs⁸

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 4 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.

⁵ Source: Permit Attachment A.

⁶ Sources: Caltrans *TMDL Implementation Plan*, January 2015; Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁸ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

San Pedro Creek and Pacifica State Beach Bacteria TMDL

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Drain Inlet Cleaning** – District Maintenance crews clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and with equipment such as Vactor trucks.

Monitoring⁹

The TMDL does not have monitoring requirements for Caltrans.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

⁹ Source: Permit Attachment F.

San Pedro Creek and Pacifica State Beach Bacteria TMDL

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Sonoma Creek Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Francisco Bay	Sonoma Creek	Sediment	D3.2

General Watershed Description²

The Sonoma Creek watershed, in California's Coast Range north of San Pablo Bay, covers an area of approximately 166 square miles. The watershed ranges in elevation from sea level to the peak of Bald Mountain (2,739 feet). It lies in a valley bounded by Sonoma Mountain to the west and the Mayacamas Mountains to the east. The mainstem of Sonoma Creek flows in a southeasterly direction from headwaters on Sugarloaf Ridge through Sonoma Valley before discharging to San Pablo Bay. The Sonoma Creek watershed includes about 465 miles of streams mapped by the USGS (Sonoma Ecology Center et al., 2004). The watershed supports the following Beneficial Uses, as defined in the Basin Plan: cold freshwater habitat, warm freshwater habitat, water contact recreation, noncontact water recreation, fish migration, preservation of rare and endangered species, fish spawning, and wildlife habitat. It provides habitat for several native species of concern, including steelhead trout, Chinook salmon, and California freshwater shrimp. Compared to other San Francisco Bay Area streams, the watershed is relatively free of concrete channelization, major flood control projects, and water supply structures. However, historical ditching and draining of the valley floor has fundamentally altered the routing of peak flows and sediment in lower Sonoma Creek, with consequent and significant increases in sediment delivery, flooding and degradation of aquatic habitat quality.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

No translation is necessary due to no CUs earned previously.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 11 for Reach 1 and 12 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the Sonoma Creek watershed.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Section D3.2)	The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board San Francisco Bay Region, *Sonoma Creek Watershed Sediment Total Maximum Daily Load and Habitat Enhancement Plan*, December 3, 2008. Sonoma Ecology Center, Stillwater Sciences, and UC Berkeley Department of Earth and Planetary Sciences, *Draft Sonoma Creek Watershed Limiting Factors Analysis*, 2004. Eldridge, CA: SEC

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Sonoma Creek Sediment TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4	2	106,592	284	0.28%	Sediment	No	h. TMDL-Specific Demonstrations

WLAs⁵

Pollutant	Caltrans WLA
Sediment	100 tons/year

TMDL Implementation Schedule

- Start Date: September 8, 2010
- Final Compliance Date⁶: Evaluated over a five to 10-year averaging period from 2010-2020

Plan to Achieve TMDL Compliance^{2,7,8}

Pollutant	Strategies to Achieve TMDL Compliance
Sediment	<ul style="list-style-type: none"> • Caltrans is making progress towards achieving compliance with the sediment WLA in the Sonoma Creek Watershed. The Regional Water Board determined that compliance with the stormwater permit will allow Caltrans to meet its waste allocation for sediment in the Sonoma Creek Watershed. As part of the stormwater permit requirements, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Sonoma Creek Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Additionally, Caltrans implements structural best management practices (BMPs), biofiltration strips and biofiltration swales, which are effective in removing sediment. • Caltrans has also established a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems should be inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	7
Biofiltration Swale	6
Open Grade Friction Course	1
Total	14

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 4 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A.

⁶ A final compliance deadline was not included in this TMDL. Instead, waterbody attainment with sediment water quality objectives is to be evaluated over a five to 10-year averaging period, which runs from 2010 through 2020.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Sonoma Creek Sediment TMDL

- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program minimize sediment discharge to the watershed bodies
- **Caltrans Stream Crossing Desktop Survey** – Caltrans conducted a survey to conserve native species and enhance the aesthetic and recreational values of waterbodies and their tributaries. There are an estimated 18 stream crossings in the Sonoma Creek Watershed and Caltrans roadways that cross waterbodies including State Routes 12, 37, 116, and 121. The survey consisted of reviewing historical records of aerial imagery, street views, the Caltrans Stormwater Portal, 2015 Coastal Anadromous Fish Passage Assessment and Remediation Progress Report, and the State Highway Operation and Protection Program (SHOPP) lists. The crossings were also assessed based on visual observations such as the type of flow, size of the watershed, surrounding land use, channel side slopes, existing vegetation, channel bottom and structural integrity. After the survey, the crossings were ranked as high, medium and low priority for repair. Projects to replace/repair high priority crossings are being scheduled, and field assessments will be performed.
- **Drain Inlet Cleaning** – District Maintenance crews clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and with equipment such as Vactor trucks.

Monitoring

The TMDL does not have monitoring requirements for Caltrans.

Annual Reporting (Permit Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

Sonoma Creek Sediment TMDL

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Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary) Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
Central Coast	Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary)	Sediment	D3.2, D3.3, D5, D5.1, D5.2, and D5.3

General Watershed Description²

Morro Bay is a natural embayment located on the central coast of California about 60 miles north of Point Conception and about 100 miles south of Monterey Bay. The Bay is situated approximately in the middle of Estero Bay in San Luis Obispo County. It was formed in the last 10,000 to 15,000 years by the submergence of the river mouth at the confluence of Chorro and Los Osos Creeks, the two main drainages in the watershed. Under natural conditions, two narrow entrances to the Bay existed on either side of Morro Rock. The north entrance was artificially closed in the early 1900's, as discussed further under tidal circulation and sediment flushing. The contributing watershed area for Morro Bay is estimated to be over 49,000 acres. Chorro Creek drains 65 percent of the watershed and Los Osos Creek drains the remaining 35 percent. The watershed's highest elevation is 2,763 feet above sea level and its farthest point from the Bay is approximately 10 miles. The geology of the watershed is a mix of igneous, metamorphic and sedimentary rock less than 200 million years old.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

To be determined

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 163 for Reach 2, 165 for Reach 1, and 243 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not Applicable

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control

¹ Source: Permit Attachment D.

² Source: State of California Central Coast Regional Water Quality Control Board, *Morro Bay Total Maximum Daily Load for Sediment (including Chorro Creek, Los Osos Creek, and the Morro Bay Estuary)*, April 2002.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary) Sediment TMDL

Reporting Requirement Permit Section	Summary of Activities
	measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation and Turbidity Total Maximum Daily Loads (Permit Attachment D Section D5.3)	<ul style="list-style-type: none"> • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Morro Bay Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans established a program to inspect roadside slopes for erosion on a five-year cycle and implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
5	3	49,942	121	0.24%	Sediment	No	h. TMDL-Specific Demonstrations

WLAs⁵

Pollutant	Caltrans WLA
Sediment	No point sources of sediment exist within the Morro Bay Watershed. No specific WLAs are assigned to Caltrans. Discharges that comply with Caltrans' respective NPDES stormwater permits are meeting their portion of shared responsibility for achieving sediment load reduction.

TMDL Implementation Schedule

- Start Date: January 20, 2004
- Final Compliance Date: 2053

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: State of California Central Coast Regional Water Quality Control Board, *Morro Bay TMDL for Sediment (including Chorro Creek, Los Osos Creek and the Morro Bay Estuary) Staff Report*, April 2002; Permit Attachment A.

Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary) Sediment TMDL

Plan to Achieve WLAs^{2,6,7}

Pollutant	Strategies to Achieve WLAs
Sediment	<ul style="list-style-type: none"> Caltrans is in compliance with sediment WLA in the Morro Bay watershed because they are meeting their portion of shared responsibility for achieving sediment load reductions through compliance with the Caltrans stormwater permit. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Morro Bay Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs⁹

- Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 5 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

**Morro Bay (includes Chorro Creek, Los Osos Creek, and the
Morro Bay Estuary) Sediment TMDL**

Monitoring

No monitoring activities are performed within this watershed.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

San Lorenzo River (includes Carbonera, Lompico, and Shingle Mill Creeks) Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Central Coast	San Lorenzo River (includes Carbonera, Lompico, and Shingle Mill Creeks) (shared TMDL)	Sediment	D3.2, D3.3, D5, D5.1, D5.2, and D5.3

General Watershed Description²

The San Lorenzo River drains an area of 138 square miles in northern Santa Cruz County. The river flows southward to empty into Monterey Bay at the City of Santa Cruz. Much of the watershed is rugged and forested as is typical of the Coast Range south of San Francisco. Elevations range from sea level to above 3,000 feet within the San Lorenzo River Watershed. The river drops from an elevation 2,900 feet to sea level in 22 miles, dropping the first 2,000 feet in only three miles. Most of the tributaries enter the river from the east where the drainage area is underlain with sedimentary rocks. Major tributaries from the east include Branciforte, Carbonera, Zayante, Newell and Bear Creeks. Boulder and Fall Creeks are the two major streams that drain the western portion of the watershed that is underlain by granitic rock.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	2.6
2016-2017	7.9
2017-2018	15.8
2018-2019	1.3
2019-2020	2.4
2020-2021	0.85
2021-2022	2.8

Translation of CU to Waste Load Allocation (WLA)

To be determined

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 154 for Reach 2, 155 for Reach 5, 159 for Reach 3, 161 For Reach 4, and 162 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not Applicable

¹ Source: Permit Attachment D.

² Source: State of California Central Coast Regional Water Quality Control Board, *San Lorenzo River Total Maximum Daily Load for Sediment (including: Carbonera Creek, Lompico Creek, and Shingle Mill Creek)*, September 20, 2002, via: https://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/docs/san_lorenzo/sediment/slr_sed_tmdl_proj_rpt.pdf

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

San Lorenzo River (includes Carbonera, Lompico, and Shingle Mill Creeks) Sediment TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance Plan (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation and Turbidity Total Maximum Daily Loads (Permit Attachment D Section D5.3)	<ul style="list-style-type: none"> • Caltrans will prevent or minimize erosion and sediment discharge. • Caltrans will control discharges for construction sites. • For the San Lorenzo River watershed, Caltrans will complete an inventory and assessment of the condition of drainage infrastructure for its facilities.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
4 and 5	3	87,927	546	0.62%	Sediment	No	h. TMDL-Specific Demonstrations

WLAs⁵

Pollutant	Caltrans WLA
Sediment	No point sources of sediment exist within the San Lorenzo River Watershed. No specific WLAs are assigned to Caltrans. Discharges that comply with Caltrans' respective NPDES stormwater permits are meeting their portion of shared responsibility for achieving sediment load reduction.

TMDL Implementation Schedule

- Start Date: May 16, 2003
- Final Compliance Date: May 16, 2028

Existing Installed Structural BMPs⁶

Treatment BMP Type	Number of BMPs
Open Graded Friction Course	1
Stabilization Area	70
Total	71

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Permit Attachment A.

⁶ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023 and confirmed/updated with District 5 NPDES Coordinator.

San Lorenzo River (includes Carbonera, Lompico, and Shingle Mill Creeks) Sediment TMDL

Existing Non-Structural BMPs⁷

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 5 prepare and implement a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Sediment	<ul style="list-style-type: none"> • Caltrans is in compliance with sediment WLAs in the San Lorenzo River watershed because Caltrans in compliance with their stormwater permit. Although there is no specific WLA, compliance with the stormwater permit is deemed to be sufficient to meet the Caltrans sediment TMDL requirements in the San Lorenzo River Watershed. As part of the stormwater permit, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the San Lorenzo River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect culverts on a five-year cycle. As of 2022, Caltrans has repaired or replaced culverts that were in need of repair and in turn there has been improvement in the slope failures along Caltrans ROW within the watershed. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan.

⁷ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan*, January 2015.

San Lorenzo River (includes Carbonera, Lompico, and Shingle Mill Creeks) Sediment TMDL

Pollutant	Strategies to Achieve WLAs
	<ul style="list-style-type: none">• Caltrans will prepare an inventory and assessment of its drainage infrastructure facilities within the San Lorenzo River watershed. The inventory and assessment will include a schedule for completing necessary upgrades to its drainage infrastructure facilities and will be submitted to the State Board Executive Director and the Central Coast Regional Board Executive Officer within 12 months of the Permit effective date.

Monitoring

No monitoring activities are performed within this watershed.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

Inventory and Assessment Report

Refer to the Inventory and Assessment Report in the attachments that includes a schedule for completing necessary upgrades to the drainage infrastructure.

Ballona Creek Metals (Silver, Cadmium, Copper, Lead, Zinc, and Selenium) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Ballona Creek	Metals (Silver, Cadmium, Copper, Lead, and Zinc)	D5, D5.1, D5.2, and D5.4

General Watershed Description²

The Ballona Creek Watershed is approximately 128 square miles and highly urbanized. It includes 540 acres of downstream wetlands. It is a flood protection, concrete-lined channel that drains the Los Angeles basin, from the Santa Monica Mountains on the north, the Harbor Freeway (110) on the east, and the Baldwin Hills on the south. The Estuary portion, from Centinela Avenue to its outlet, is soft-bottomed and includes the Ballona Wetlands. The Ballona Creek Watershed totals about 130 square miles. Its land use consists of 64% residential, 8% commercial, 4% industrial, and 17% open space. The major tributaries to the Ballona Creek include Centinela Creek, Sepulveda Canyon Channel, Benedict Canyon Channel, and numerous storm drains. The watershed is comprised of all or parts of the Cities of Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, West Hollywood, and unincorporated Los Angeles County. The average dry weather flow at the mouth of Ballona Creek is 25 cubic feet of water per second. The average wet weather flow can be 10 times higher, or even more during large rain events.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	2.75
2015-2016	18.35
2016-2017	10.54
2017-2018	1.8
2018-2019	8.2
2019-2020	16.3
2020-2021	0.2

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 4 for Reach 1, 13 for Reach 2, and 195 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: City of Los Angeles LA Sanitation and Environment *Ballona Creek Total Maximum Daily Load Project* (2023); Los Angeles County Public Works *Ballona Creek Watershed* (2023).

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, and Fiscal Year 2020-2021. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Ballona Creek Metals (Silver, Cadmium, Copper, Lead, Zinc, and Selenium) TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1) ⁴	Caltrans participates in the <i>Mesmer Low Flow Diversion Project and Culver Boulevard Project</i> through financial contributions. Additionally, Caltrans works with local MS4s and partners in the watershed to look for other cooperative partnership projects or regional TMDL compliance project opportunities that may be outside Caltrans ROW.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing best management practices that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. BMPs reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	81,795	1,143	1.4%	Metals (Silver, Cadmium, Copper, Lead, and Zinc)	Yes	b. Receiving Water Quality Monitoring and/or d. Discharge Sampling

WLAs⁶

Pollutant	Dry-Weather Watershed WLA	Wet-Weather WLA
Copper	Ballona Creek = 19.6 grams/day Sepulveda Canyon Channel = 7.3 grams/day	1.806×10^{-7} multiplied by the daily storm volume in liters
Lead	Ballona Creek = 10.8 grams/day Sepulveda Canyon Channel = 4.0 grams/day	1.012×10^{-6} multiplied by the daily storm volume in liters
Zinc	Ballona Creek = 246.2 grams/day Sepulveda Canyon Channel = 91.3 grams/day	1.381×10^{-6} multiplied by the daily storm volume in liters

TMDL Implementation Schedule

- Start Date: December 22, 2005, revised October 26, 2015
- Final Compliance Date per TSO⁷: December 31, 2034

⁴ Source: District 7 Current/Completed CIAs Summary in TMDL Compliance Plan Appendix F.

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Source: Permit Attachment A

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Ballona Creek Metals (Silver, Cadmium, Copper, Lead, Zinc, and Selenium) TMDL

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Metals (Silver, Cadmium, Copper, Lead, Zinc, and Selenium)	<ul style="list-style-type: none"> • Caltrans is in compliance with metals WLAs for dry-weather in the Ballona Creek watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. • Caltrans implements appropriate control measures to reduce the discharge of dissolved fraction metals, such as physical structures that prevent contaminated runoff from reaching receiving waters. • As an additional mitigation measure, Caltrans reduces the sediment transport of metals and selenium by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Ballona Creek watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Over twenty SHOPP projects (PID, PAED, and/or PS&E) are planned in the Ballona Creek watershed that will include treatment BMPs.

Existing Installed Structural Best Management Practices (BMPs)¹⁰

Treatment BMP Type	Number of BMPs
Austin Sand Filter	9
Biofiltration Swale	29
DPP Infiltration Area (DPPIA)	1
Infiltration Basin	4
Total	43

Existing Non-Structural BMPs¹¹

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in October 2014.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Ballona Creek Metals (Silver, Cadmium, Copper, Lead, Zinc, and Selenium) TMDL

extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program to minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Ballona Creek Trash TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Ballona Creek	Trash	D5, D5.1, D5.2, and 5.9

General Watershed Description²

The Ballona Creek Watershed is approximately 128 square miles and highly urbanized. It includes 540 acres of downstream wetlands. It is a flood protection, concrete-lined channel that drains the Los Angeles basin, from the Santa Monica Mountains on the north, the Harbor Freeway (110) on the east, and the Baldwin Hills on the south. The Estuary portion, from Centinela Avenue to its outlet, is soft-bottomed and includes the Ballona Wetlands. The Ballona Creek Watershed totals about 130 square miles. Its land use consists of 64% residential, 8% commercial, 4% industrial, and 17% open space. The major tributaries to the Ballona Creek include Centinela Creek, Sepulveda Canyon Channel, Benedict Canyon Channel, and numerous storm drains. The watershed is comprised of all or parts of the Cities of Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, West Hollywood, and unincorporated Los Angeles County. The average dry weather flow at the mouth of Ballona Creek is 25 cubic feet of water per second. The average wet weather flow can be 10 times higher, or even more during large rain events.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	161.89
2015-2016	18.35
2016-2017	10.54
2018-2019	2.9
2019-2020	16.33

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 4 for Reach 1 and 13 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: City of Los Angeles LA Sanitation and Environment *Ballona Creek Total Maximum Daily Load Project* (2023); Los Angeles County Public Works *Ballona Creek Watershed* (2023).

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Ballona Creek Trash TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices (BMPs), and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads (Permit Attachment D Section 5.9)	<p>Caltrans implements:</p> <ul style="list-style-type: none"> • Trash control measures by installing, operating, and maintaining full capture systems or other treatment or institution controls for storm drains that capture runoff from significant trash generating areas. • Trash reduction allocations equivalent to 1,222 gallons per year for the Ballona Creek Watershed.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	83,820	1,176	1.4%	Trash	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Watershed WLA
Trash	The WLA is zero trash.

TMDL Implementation Schedule

- Start Date: June 30, 2016
- Final Compliance Date per TSO⁶: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Ballona Creek Trash TMDL

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Trash	<ul style="list-style-type: none"> • Caltrans uses several types of trash removal devices, including the construction of Austin sand filters, gross solids removal devices, infiltration trenches, and infiltration basins which have a full capture efficiency. Caltrans also employs biofiltration swales, which have partial trash removal efficiency. Additionally, Caltrans employs non-structural BMPs in the Ballona Creek Watershed to mitigate trash including sweeping, drain inlet cleaning, trash collection, storm drain stenciling, slope/soil stabilization, covered trash bins, public education, and public participation. Moreover, Caltrans has increased the frequency of the Adopt-A-Highway program as well as increased sweeping and litter pick-up frequency in the Ballona Creek watershed to treat beyond the minimum permit requirements. Caltrans also collaborates with the California Public Education Campaign to further engage in public education. Programs such as the Caltrans Parolee Program, California Conservation Corps, District Crew Collection, and Storm Drain Maintenance activities also help remove trash from the Caltrans ROW. • According to the State Water Resources Control Board's <i>Annual Performance Report</i>, water quality conditions are improving in the Ballona Creek Watershed and trash abatement continues to increase. Additionally, the report states that qualitative observations have shown a significant reduction of trash since adoption of the TMDL. There is a significant improvement in the reduction in trash. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Over twenty SHOPP projects (PID, PAED, and/or PS&E) are planned in the Ballona Creek watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	9
GSRD – Inclined Screen	60
GSRD – Linear Radial	15
Infiltration Basin	4
Total	88

Existing Non-Structural BMPs^{10,11}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in December 2015.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Sources: Caltrans *Annual Report* Fiscal Year 2021-2022.

Ballona Creek Trash TMDL

- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Adopt-A-Highway Program** – The Adopt-A-Highway Program provides an avenue for individuals, organizations, and businesses to help maintain sections of roadside for various activities, including litter removal, within California's State Highway System. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 3,758 cubic yards of trash through the Adopt-A-Highway Program.
- **SPP Litter Control Program** – SPP Litter Control are subcontractors that include Back to Work programs, Probationers/Parolees, Veteran's Outreach Program, Homeless, At-Risk Youth, Court Referrals, Inmates, Work Release/Work Furlough, and California Conservation Corps. These are funded through State Highway Account. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 33,146 cubic yards of trash through this program.
- **District Crew Collection** – Caltrans crews conduct manual cleanup of trash and litter from the ROW. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 36,750 cubic yards of trash.
- **Slope/Soil Stabilization Area** – Soil stabilization methods are installed to stabilize areas disturbed by grading operations, to reduce loss of soil due to water or wind, and to prevent water pollution.
- **Storm Drain Maintenance** – Caltrans cleans the storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and by Vactor trucks. Caltrans District 7 performs additional inspection and cleaning through its Enhanced Annual Storm Drain Inlet Inspection and Cleaning Program in metropolitan areas. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 60 cubic yards of trash from Storm Drain Maintenance activities.
- **Clean California** - Clean California is providing funding for transformative state and local beautification projects in communities across California, with a focus on historically underserved areas, that will improve the aesthetics of public spaces, facilitate community pride, and reduce trash regeneration. Maintenance personnel constantly monitor their areas of responsibility to detect and report deficiencies to, or needs of, the highway system. To ensure the overall levels of maintenance are pursued, periodic inspection trips by key personnel are required. Maintenance supervisors travel all highways in the section, including ramps and collector systems, at least once a week to observe overall conditions and detect deficiencies. Known or potential problem areas require more frequent inspections. Weekly inspections are an integral part of the supervisor's work planning and scheduling activities. The Area Superintendent observes overall conditions to assure conformance with the established maintenance levels. Maintenance personnel utilize their continuous driving visual assessments in their areas of responsibility along with the quarterly LOS scores to adaptively manage the deployment of resources to maximize litter production.

Ballona Creek Trash TMDL

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Ballona Creek Trash TMDL

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Ballona Creek Estuary Toxic Pollutants (Silver, Cadmium, Copper, Lead, Zinc, Chlordane, Dichlorodiphenyltrichloroethane [DDT], Total Polychlorinated Biphenyls [PCBs], and Total Polycyclic Aromatic Hydrocarbons [PAHs]) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Ballona Creek	Toxic Pollutants (Silver, Cadmium, Copper, Lead, Zinc, Chlordane, DDT, Total PCBs, and Total PAHs)	D5, D5.1, D5.2, D5.4, and D5.10

General Watershed Description²

The Ballona Creek Watershed is approximately 128 square miles and highly urbanized. It includes 540 acres of downstream wetlands. It is a flood protection, concrete-lined channel that drains the Los Angeles basin, from the Santa Monica Mountains on the north, the Harbor Freeway (110) on the east, and the Baldwin Hills on the south. The Estuary portion, from Centinela Avenue to its outlet, is soft-bottomed and includes the Ballona Wetlands. The Ballona Creek Watershed totals about 130 square miles. Its land use consists of 64% residential, 8% commercial, 4% industrial, and 17% open space. The major tributaries to the Ballona Creek include Centinela Creek, Sepulveda Canyon Channel, Benedict Canyon Channel, and numerous storm drains. The watershed is comprised of all or parts of the Cities of Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, West Hollywood, and unincorporated Los Angeles County. The average dry weather flow at the mouth of Ballona Creek is 25 cubic feet of water per second. The average wet weather flow can be 10 times higher, or even more during large rain events.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	2.75
2015-2016	18.35
2017-2018	1.8
2018-2019	8.2
2019-2020	16.3
2020-2021	0.24

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 4 for Reach 1, 13 for Reach 2

¹ Source: Permit Attachment D.

² Sources: City of Los Angeles LA Sanitation and Environment *Ballona Creek Total Maximum Daily Load Project (2023)*; Los Angeles County Public Works *Ballona Creek Watershed (2023)*.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Ballona Creek Estuary Toxic Pollutants (Silver, Cadmium, Copper, Lead, Zinc, Chlordane, Dichlorodiphenyltrichloroethane [DDT], Total Polychlorinated Biphenyls [PCBs], and Total Polycyclic Aromatic Hydrocarbons [PAHs]) TMDL

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1) ⁴	Caltrans participates in the <i>Mesmer Low Flow Diversion Project and Culver Boulevard Project</i> through financial contributions. Additionally, Caltrans works with local MS4s and partners in the watershed to look for other cooperative partnership projects or regional TMDL compliance project opportunities that may be outside Caltrans ROW.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/ Pesticides/ Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing best management practices that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • Best management practices reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following best management practices options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement best management practices in its right-of-way to meet the TMDL allocations; or • Implement a combination of items 1 or 2.

⁴ Source: District 7 Current/Completed CIAs Summary in TMDL Compliance Plan Appendix F.

Ballona Creek Estuary Toxic Pollutants (Silver, Cadmium, Copper, Lead, Zinc, Chlordane, Dichlorodiphenyltrichloroethane [DDT], Total Polychlorinated Biphenyls [PCBs], and Total Polycyclic Aromatic Hydrocarbons [PAHs]) TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	81,795	1,143	1.4%	Toxic Pollutants (Silver, Cadmium, Copper, Lead, Zinc, Chlordane, DDT, Total PCBs, and Total PAHs)	Yes	b. Receiving Water Quality Monitoring and/or d. Discharge Sampling

WLAs⁶

Pollutant	Grouped Watershed WLA ⁷	Caltrans' Specific WLA
Metals	<u>Mass-Based Allocations:</u> Cadmium = 8.4 kg/year Copper = 238.8 kg/year Lead = 328 kg/year Silver = 7.02 kg/year Zinc = 1,054 kg/year	Cadmium = 0.11 kg/year Copper = 3.2 kg/year Lead = 4.4 kg/year Silver = 0.09 kg/year Zinc = 14 kg/year
Organics	<u>Grouped Waste Allocations:</u> Chlordane = 9.13 kg/year DDT = 13.35 kg/year Total PCBs = 22.48 kg/year	Total Chlordane = 0.12 g/year Total DDT = 0.18 g/year Total PCBs = 0.30 g/year

TMDL Implementation Schedule

- Start Date: December 22, 2005, revised October 26, 2015
- Final Compliance Date per TSO⁸: December 31, 2034

Plan to Achieve WLAs^{9,10}

Pollutant	Strategies to Achieve WLAs
Metals (Silver, Cadmium, Copper, Lead, Zinc, and Selenium)	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with metals WLAs in the Ballona Creek Estuary watershed. Heavy metals have a high affinity for adherence to fine sediment. Therefore, the appropriate control measures for heavy metals are to control erosion and prevent or minimize the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Ballona Creek Estuary watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Source: Permit Attachment A

⁷ WLAs are assigned to the point sources, which are grouped together. Grouped mass-based WLAs are assigned to NPDES stormwater permittees, which includes Caltrans, Los Angeles County, and NPDES General Construction and General Industrial stormwater permittees in the watershed.

⁸ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁹ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

¹⁰ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watersheds last updated in October 2014.

Ballona Creek Estuary Toxic Pollutants (Silver, Cadmium, Copper, Lead, Zinc, Chlordane, Dichlorodiphenyltrichloroethane [DDT], Total Polychlorinated Biphenyls [PCBs], and Total Polycyclic Aromatic Hydrocarbons [PAHs]) TMDL

Pollutant	Strategies to Achieve WLAs
Total PCBs, and Total PAHs	<ul style="list-style-type: none"> • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the Ballona Creek Estuary watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCBs WLAs in the Ballona Creek Estuary watershed. • Although Caltrans does not use pesticides within its ROW, minimal usage of herbicides occurs within its ROW and may contain PAHs. However, PAHs have been regulated and their usage is minimal. Therefore, Caltrans is expected to be in compliance with PAHs WLAs in the Ballona Creek Estuary watershed. • Toxic pollutants have a high affinity for adherence to fine sediment. A major source of toxic impairments is due to historical loading from the pollutants adhering to sediment. Therefore, the appropriate control measures for toxics are to control erosion and prevent or minimize the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Ballona Creek Estuary watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Chlordane and DDT	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with chlordane and DDTs WLAs in the Ballona Creek Estuary watershed since DDTs are no longer in production and their usage has been regulated. Additionally, Caltrans does not use chlordane or DDTs within its ROW. • A major source of pesticide impairments is due to historical loading from the pollutants adhering to sediment. Although Caltrans does not use pesticides within its ROW, Caltrans complies with Permit Attachment C Section C3.5.3.2 which specifies practices for the safe handling and use of pesticides, including compliance with federal, State and local regulations, and label directions. Caltrans is also required to perform site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in storm water runoff in the Ballona Creek Estuary watershed. • As an additional mitigation measure, Caltrans reduces the sediment transport of chlordane and DDTs by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Ballona Creek Estuary watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> • Caltrans implements and maintains structural BMPs to mitigate sediment in the Ballona Creek Estuary watershed. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Over twenty SHOPP projects (PID, PAED, and/or PS&E) are planned in the Ballona Creek watershed that will include treatment BMPs.

Ballona Creek Estuary Toxic Pollutants (Silver, Cadmium, Copper, Lead, Zinc, Chlordane, Dichlorodiphenyltrichloroethane [DDT], Total Polychlorinated Biphenyls [PCBs], and Total Polycyclic Aromatic Hydrocarbons [PAHs]) TMDL

Existing Installed Structural Best Management Practices (BMPs)¹¹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	9
Biofiltration Swale	29
DPP Infiltration Area (DPPIA)	1
Infiltration Basin	4
Total	43

Existing Non-Structural BMPs¹²

- Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program to minimize sediment discharge to the watershed bodies.

Monitoring¹³

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

¹¹ Source: All BMP data was exported from the Caltrans Portal as of December 6, 2022.

¹² Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹³ Source: Permit Attachment F.

Ballona Creek Estuary Toxic Pollutants (Silver, Cadmium, Copper, Lead, Zinc, Chlordane, Dichlorodiphenyltrichloroethane [DDT], Total Polychlorinated Biphenyls [PCBs], and Total Polycyclic Aromatic Hydrocarbons [PAHs]) TMDL

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

Ballona Creek, Ballona Estuary, and Sepulveda Channel Indicator Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Ballona Creek	Indicator Bacteria	D5, D5.1, D5.2, D5.5, and D5.10

General Watershed Description²

The Ballona Creek Watershed is approximately 128 square miles and highly urbanized. It includes 540 acres of downstream wetlands. It is a flood protection, concrete-lined channel that drains the Los Angeles basin, from the Santa Monica Mountains on the north, the Harbor Freeway (110) on the east, and the Baldwin Hills on the south. The Estuary portion, from Centinela Avenue to its outlet, is soft-bottomed and includes the Ballona Wetlands. The Ballona Creek Watershed totals about 130 square miles. Its land use consists of 64% residential, 8% commercial, 4% industrial, and 17% open space. The major tributaries to the Ballona Creek include Centinela Creek, Sepulveda Canyon Channel, Benedict Canyon Channel, and numerous storm drains. The watershed is comprised of all or parts of the Cities of Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, West Hollywood, and unincorporated Los Angeles County. The average dry weather flow at the mouth of Ballona Creek is 25 cubic feet of water per second. The average wet weather flow can be 10 times higher, or even more during large rain events.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	2.8
2015-2016	18.4
2017-2018	1.8
2018-2019	7.9
2019-2020	16.3
2020-2021	0.24

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 4 for Reach 1, 13 for Reach 2, and 195 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: City of Los Angeles LA Sanitation and Environment *Ballona Creek Total Maximum Daily Load Project* (2023); Los Angeles County Public Works *Ballona Creek Watershed* (2023).

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Ballona Creek, Ballona Estuary, and Sepulveda Channel Indicator Bacteria TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Bacteria Total Maximum Daily Loads (Permit Attachment D Section 5.5)	<p>Caltrans continues to implement, monitor, and maintain BMPs to minimize the discharge of bacteria (i.e., fecal pathogens) to surface waters within each applicable reach. Potential sources of bacteria include stormwater runoff from untreated human and pet wastes, which may occur at homeless encampments and other areas. Caltrans will implement one or more of the following:</p> <ul style="list-style-type: none"> • Caltrans' Homeless Encampment Policy (Chapter 1, section 1.07.3(B) of Caltrans' Maintenance Manual) or subsequent policies addressing encampment removal and cleanup. • Cooperative agreement participation, such as leases to local municipalities for homeless services, where available. • Structural BMPs, such as retention, detention, diversion, infiltration, filtration, vegetated treatment, and similar.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following best management practices options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement best management practices in its right-of-way to meet the TMDL allocations; or • Implement a combination of items 1 or 2.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres) ⁴	Caltrans ROW Area in TMDL (acres) ^{4,5}	Percent of Caltrans ROW in TMDL Watershed ⁴	TMDL Pollutant	TSO	Compliance Strategy
7	4	81,980	1,206	1.5%	Indicator Bacteria	Yes	b. Receiving Water Quality Monitoring and/or d. Discharge Sampling and/or f. Allowable Exceedance Days

⁴ Source: Permit Attachment A

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Ballona Creek, Ballona Estuary, and Sepulveda Channel Indicator Bacteria TMDL

WLAs^{4,6}

Pollutant	Dry-Weather WLA	Wet-Weather (Critical Condition) WLA
Ballona Creek Estuary-Bacteria	<ul style="list-style-type: none"> Zero exceedance days for summer dry-weather Nine exceedance days (daily sampling) or two exceedance days (weekly sampling) 	<ul style="list-style-type: none"> 17 exceedance days (daily sampling) or three exceedance days (weekly sampling)
Ballona Creek Reach 2 and Sepulveda Channel-Bacteria	<ul style="list-style-type: none"> Five exceedance days (daily sampling) or one exceedance day (weekly sampling) 	<ul style="list-style-type: none"> 15 exceedance days (daily sampling) or two exceedance days (weekly sampling)
Ballona Creek Reach 1-Bacteria	<ul style="list-style-type: none"> No more than 10% of 4,000/100 ml 	<ul style="list-style-type: none"> No more than 10% of 4,000/100 ml

TMDL Implementation Schedule

- Start Date: July 2, 2014
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Bacteria	<ul style="list-style-type: none"> Caltrans is in compliance with bacteria WLAs for dry-weather flows in the Ballona Creek watershed. Caltrans minimizes wet-weather discharges from its ROW into receiving waterbodies impaired for bacteria by implementing treatment BMPs and source control/preemptive activities such as street sweeping, clean-up of illegal dumping, prohibition of non-storm water discharges, and public education on littering. Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Over twenty SHOPP projects (PID, PAED, and/or PS&E) are planned in the Ballona Creek, Ballona Estuary, and Sepulveda Channel watershed that will include treatment BMPs.

Existing Installed Structural Best Management Practices (BMPs)¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Swale	26
DPP Infiltration Area (DPPIA)	1
Infiltration Basin	4
Total	31

Existing Non-Structural BMPs¹¹

- Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.

⁶ The WLA for the rolling 30-day geometric mean is zero (0) days of allowable exceedances for all locations. In addition to assigning TMDLs for the impaired reaches, WLAs and LAs are assigned to the tributaries to these impaired reaches. Exceedance days are based on the reference year.

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in September 2013.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Ballona Creek, Ballona Estuary, and Sepulveda Channel Indicator Bacteria TMDL

Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.

- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Ballona Creek Wetlands Sediment and Invasive Exotic Vegetation TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Ballona Creek Wetlands	Sediment and Invasive Exotic Vegetation	D5, D5.1, D5.2, D5.3, and D5.10

General Watershed Description²

The Ballona Creek Watershed is approximately 128 square miles and highly urbanized. It includes 540 acres of downstream wetlands. It is a flood protection, concrete-lined channel that drains the Los Angeles basin, from the Santa Monica Mountains on the north, the Harbor Freeway (110) on the east, and the Baldwin Hills on the south. The Estuary portion, from Centinela Avenue to its outlet, is soft-bottomed and includes the Ballona Wetlands. The Ballona Creek Watershed totals about 130 square miles. Its land use consists of 64% residential, 8% commercial, 4% industrial, and 17% open space. The major tributaries to the Ballona Creek include Centinela Creek, Sepulveda Canyon Channel, Benedict Canyon Channel, and numerous storm drains. The watershed is comprised of all or parts of the Cities of Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, West Hollywood, and unincorporated Los Angeles County. The average dry weather flow at the mouth of Ballona Creek is 25 cubic feet of water per second. The average wet weather flow can be 10 times higher, or even more during large rain events.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	2.8
2015-2016	18.4
2016-2017	51.2
2017-2018	1.8
2018-2019	8.2
2019-2020	16.3
2020-2021	0.2

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 4 for Reach 1 and 13 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: City of Los Angeles LA Sanitation and Environment *Ballona Creek Total Maximum Daily Load Project* (2023); Los Angeles County Public Works *Ballona Creek Watershed* (2023).

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Ballona Creek Wetlands Sediment and Invasive Exotic Vegetation TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation, and Turbidity Total Maximum Daily Loads (Permit Attachment D Section 5.3)	<ul style="list-style-type: none"> • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Morro Bay Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans implements an established program to inspect roadside slopes for erosion on a five-year cycle and implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following best management practices options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement best management practices in its right-of-way to meet the TMDL allocations; or • Implement a combination of items 1 or 2.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres) ⁴	Caltrans ROW Area in TMDL (acres) ^{4,5}	Percent of Caltrans ROW in TMDL Watershed ⁴	TMDL Pollutant	TSO	Compliance Strategy
7	4	81,980	1,206	1.5%	Sediment Invasive Exotic Vegetation	Yes	h. TMDL-Specific Demonstrations

⁴ Source: Permit Attachment A

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Ballona Creek Wetlands Sediment and Invasive Exotic Vegetation TMDL

WLAs^{4,6}

Pollutant	Watershed WLA
Sediment	The TMDL specifically targets group compliance. The Ballona Creek Watershed covers approximately 81,980 acres, of which Caltrans has 1,206 acres of right-of-way (approximately 1.5 percent). Therefore, compliance may be demonstrated through 1.5 percent participation in group compliance activities or through a demonstration that Caltrans has treated its contributing right-of-way area for sediment.
Invasive Exotic Vegetation	Watershed load allocation = 0 or 10 percent coverage of invasive exotic plant species. There is no WLA specific to Caltrans for invasive species.

TMDL Implementation Schedule

- Start Date: March 26, 2012
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Sediment and Invasive Exotic Vegetation	<ul style="list-style-type: none"> • Compliance with the stormwater permit is deemed to be sufficient to meet the Caltrans sediment WLA in the Ballona Creek Wetlands watershed. Therefore, Caltrans is expected to achieve compliance with this TMDL because they are in compliance with their stormwater permit. As part of the stormwater permit, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Ballona Creek Wetlands Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Additionally, Caltrans implements structural BMPs, such as Austin sand filters, biofiltration swales, infiltration basins, and infiltration trenches, which are effective in removing sediment. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Over twenty SHOPP projects (PID, PAED, and/or PS&E) are planned in the Ballona Creek Wetlands watershed that will include treatment BMPs.

Existing Installed Structural Best Management Practices (BMPs)¹⁰

Treatment BMP Type	Number of BMPs
Austin Sand Filter	9
Biofiltration Swale	29
DPP Infiltration Area (DPPIA)	1

⁶ The WLA for the rolling 30-day geometric mean is zero days of allowable exceedances for all locations. In addition to assigning TMDLs for the impaired reaches, WLAs and LAs are assigned to the tributaries to these impaired reaches. Exceedance days are based on the reference year.

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Ballona Creek Wetlands Sediment and Invasive Exotic Vegetation TMDL

Treatment BMP Type	Number of BMPs
Infiltration Basin	4
Stabilization Area	32
Total	75

Existing Non-Structural BMPs¹¹

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program to minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹² Source: Permit Attachment F.

Calleguas Creek and its Tributaries and Mugu Lagoon Metals and Selenium TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Calleguas Creek and its Tributaries and Mugu Lagoon	Metals and Selenium	D5, D5.1, D5.2, D5.4, and D5.10

General Watershed Description²

Calleguas Creek and its tributaries are located in southeast Ventura County and a small portion of western Los Angeles County. Calleguas Creek drains an area of approximately 343 square miles from the Santa Susana Pass in the east to Mugu Lagoon in the southwest. The main surface water system drains from the mountains in the northeast part of the watershed toward the southwest where it flows through the Oxnard Plain before emptying into the Pacific Ocean through Mugu Lagoon. The watershed, which is elongated along an east-west axis, is about thirty miles long and fourteen miles wide. The Santa Susana Mountains, South Mountain, and Oak Ridge form the northern boundary of the watershed; the southern boundary is formed by the Simi Hills and Santa Monica Mountains. Land uses in the Calleguas Creek watershed include agriculture, high and low density residential, commercial, industrial, open space, and a Naval Air Base located around Mugu Lagoon. The watershed includes the cities of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Most of the agriculture is located in the middle and lower watershed with the major urban areas (Thousand Oaks and Simi Valley) located in the upper watershed. The current land use in the watershed is approximately 26% agriculture, 24% urban, and 50% open space. Patches of high-quality riparian habitat are present along the length of Calleguas Creek and its tributaries.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	17.05
2015-2016	60.06
2016-2017	22.32
2018-2019	5.4
2020-2021	42.55
2021-2022	0.8

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

¹ Source: Permit Attachment D.

² Source: Los Angeles Regional Water Quality Control Board and the United States Environmental Protection Agency, prepared by Larry Walker Associates on Behalf of the Calleguas Watershed Management Plan. March 29, 2006.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Calleguas Creek and its Tributaries and Mugu Lagoon Metals and Selenium TMDL

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 87 for Reach 6, 88 for Reach 4, 92 for Reach 5, 102 for Reach 3, 104 for Reach 2, and 107 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing best management practices that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • Best management practices also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following best management practices options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement best management practices in its right-of-way to meet the TMDL allocations; or • Implement a combination of items 1 or 2.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	220,214	1,111	0.5%	Metals and Selenium	Yes	b. Receiving Water Quality Monitoring and/or e. Mass-Based Waste Load

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Calleguas Creek and its Tributaries and Mugu Lagoon Metals and Selenium TMDL

WLAs⁵

Pollutant	Dry-Weather Watershed WLA	Wet-Weather WLA
Copper	<p><u>Calleguas and Conejo Creek, Low Flow</u> = $0.04 \times \text{WER} - 0.02$</p> <p><u>Calleguas and Conejo Creek, Average Flow</u> = $0.12 \times \text{WER} - 0.02$</p> <p><u>Calleguas and Conejo Creek, Elevated Flow</u> = $0.18 \times \text{WER} - 0.03$</p> <p><u>Revolon Slough, Low Flow</u> = $0.03 \times \text{WER} - 0.01$</p> <p><u>Revolon Slough, Average Flow</u> = $0.06 \times \text{WER} - 0.03$</p> <p><u>Revolon Slough, Elevated Flow</u> = $0.13 \times \text{WER} - 0.02$</p>	<p><u>Calleguas Creek</u> = $(0.00054 \times Q^2 \times 0.032 \times Q - 0.17) \times \text{WER} - 0.06$</p> <p><u>Revolon Slough</u> = $(0.0002 \times Q^2 + 0.0005 \times Q) \times \text{WER}$</p>
Nickel	<p><u>Calleguas and Conejo Creek, Low Flow</u> = 0.100 lbs/day</p> <p><u>Calleguas and Conejo Creek, Average Flow</u> = 0.120 lbs/day</p> <p><u>Calleguas and Conejo Creek, Elevated Flow</u> = 0.440 lbs/day</p> <p><u>Revolon Slough, Low Flow</u> = 0.050 lbs/day</p> <p><u>Revolon Slough, Average Flow</u> = 0.069 lbs/day</p> <p><u>Revolon Slough, Elevated Flow</u> = 0.116 lbs/day</p> <p>Note: WER = 1 for dry weather</p>	<p><u>Calleguas Creek</u> = $0.014 \times Q^2 + 0.82 \times Q$</p> <p><u>Revolon Slough</u> = $0.027 \times Q^2 + 0.47 \times Q$</p> <p>Note: Mugu Lagoon and Canejo Creek WER = 1.51 Revolon Slough WER = 1 Q = daily storm value</p>

TMDL Implementation Schedule

- Start Date: March 26, 2007, revised October 13, 2016, approved June 9, 2017
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Metals (Total Copper and Nickel)	<ul style="list-style-type: none"> • Caltrans is in compliance with metals (Copper and Nickel) WLAs for dry-weather in the Calleguas Creek, its tributaries and Mugu Lagoon watersheds, since Caltrans does not contribute any dry-weather discharge from its ROW. • Caltrans is in compliance with copper and nickel WLAs for wet-weather in the Calleguas Creek, its tributaries and Mugu Lagoon watersheds. Monitoring data shows concentrations of copper did not exceed WLAs. Cooperative monitoring results for compliance analysis demonstrates that for the most part, the Calleguas Creek Watershed is in compliance with applicable metal WLAs.
Selenium	Caltrans is in compliance with selenium WLAs for dry-weather in the Calleguas Creek, its tributaries and Mugu Lagoon watersheds, since Caltrans does not contribute any dry-weather discharge from its ROW.
Additional measures to achieve WLAs for all pollutants	<ul style="list-style-type: none"> • Caltrans implements appropriate control measures to reduce the discharge of dissolved fraction metals, such as physical structures that prevent contaminated runoff from reaching receiving waters. • As additional measures, Caltrans reduces the sediment transport of metals by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Calleguas Creek, its tributaries and Mugu Lagoon watersheds by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis.

⁵ Source: Permit Attachment A

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in October 2020.

Calleguas Creek and its Tributaries and Mugu Lagoon Metals and Selenium TMDL

Pollutant	Strategies to Achieve WLAs
	<ul style="list-style-type: none"> • Caltrans implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Over twenty SHOPP projects (PID, PAED, and/or PS&E) are planned in the Calleguas Creek, its tributaries and Mugu Lagoon watersheds that will include treatment BMPs.

Existing Installed Structural Best Management Practices (BMPs)⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	23
Biofiltration Strip	28
Biofiltration Swale	74
DPP Infiltration Area (DPPIA)	18
Infiltration Basin	1
Infiltration Trench	1
Total	145

Existing Non-Structural BMPs¹⁰

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Calleguas Creek and its Tributaries and Mugu Lagoon Metals and Selenium TMDL

- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program to minimize sediment discharge to the watershed bodies.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region. Caltrans participates in the Calleguas Creek Watershed TMDL Monitoring Program (CCWTMP). The CCWTMP is a coordinated effort between stakeholders responsible for implementing TMDLs in the Calleguas Creek Watershed.

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹¹ Source: Permit Attachment F.

Calleguas Creek and its Tributaries and Mugu Lagoon Metals and Selenium TMDL

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Calleguas Creek and its Tributaries and Mugu Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), and Siltation TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Calleguas Creek and its Tributaries and Mugu Lagoon	Organochlorine Pesticides, PCBs, and Siltation	D5, D5.1, D5.2, D5.4, and D5.10

General Watershed Description²

Calleguas Creek and its tributaries are located in southeast Ventura County and a small portion of western Los Angeles County. Calleguas Creek drains an area of approximately 343 square miles from the Santa Susana Pass in the east to Mugu Lagoon in the southwest. The main surface water system drains from the mountains in the northeast part of the watershed toward the southwest where it flows through the Oxnard Plain before emptying into the Pacific Ocean through Mugu Lagoon. The watershed, which is elongated along an east-west axis, is about thirty miles long and fourteen miles wide. The Santa Susana Mountains, South Mountain, and Oak Ridge form the northern boundary of the watershed; the southern boundary is formed by the Simi Hills and Santa Monica Mountains. Land uses in the Calleguas Creek watershed include agriculture, high and low density residential, commercial, industrial, open space, and a Naval Air Base located around Mugu Lagoon. The watershed includes the cities of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Most of the agriculture is located in the middle and lower watershed with the major urban areas (Thousand Oaks and Simi Valley) located in the upper watershed.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	17.05
2015-2016	60.06
2018-2019	5.4
2020-2021	42.55
2021-2022	0.8

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 87 for Reach 6, 88 for Reach 4, 92 for Reach 5, 102 for Reach 3, 104 for Reach 2, and 107 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: Los Angeles Regional Water Quality Control Board and the United States Environmental Protection Agency, prepared by Larry Walker Associates on Behalf of the Calleguas Watershed Management Plan, March 29, 2006.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Calleguas Creek and its Tributaries and Mugu Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), and Siltation TMDL

Specific Reporting Requirements^{1,4}

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans has a cooperative monitoring agreement with stakeholders responsible for implementing TMDLs in the Calleguas Creek Watershed (Nitrogen, Organic Compounds, PCBs, Toxicity, Metals, and Selenium TMDL Monitoring).
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/ Pesticides/ Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing best management practices that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • Best management practices also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following best management practices options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement best management practices in its right-of-way to meet the TMDL allocations; or • Implement a combination of items 1 or 2.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	220,214	1,111	0.5%	Organochlorine Pesticides, PCBs, and Siltation	Yes	e. Mass-Based Waste Load

⁴ Source: Caltrans *Annual Report*, Fiscal Year 2021-2022 and LA Regional Water Quality Control Board *Calleguas Creek Watershed TMDL Compliance Monitoring Program Ninth Year Annual Monitoring Report July 2016-2017*. December 15, 2017.

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Calleguas Creek and its Tributaries and Mugu Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), and Siltation TMDL

WLAs⁶

Pollutant	Mugu Lagoon (nanogram per gram [ng/g])	Calleguas Creek (ng/g)	Revolon Slough (ng/g)	Arroyo Las Posas (ng/g)	Arroyo Simi (ng/g)	Conejo Creek (ng/g)
Total Chlordane	3.3	3.3	0.9	3.3	3.3	3.3
4,4-DDD ⁷	2	2	2	2	2	2
4,4-DDE ⁷	2.2	1.4	1.4	1.4	1.4	1.4
4,4-DDT ⁷	0.3	0.3	0.3	0.3	0.3	0.3
Dieldrin	4.3	0.2	0.1	0.2	0.2	0.2
Total PCBs	180	120	130	120	120	120
Toxaphene	360	0.6	1	0.6	0.6	0.6
Total PCBs ⁷	180	120	130	120	120	120
Toxaphene	360	0.6	1	0.6	0.6	0.6

Pollutant	Watershed WLA
Siltation	2,496 tons/year

TMDL Implementation Schedule

- Start Date: March 26, 2007, revised October 13, 2016, approved June 9, 2017
- Final Compliance Date per TSO⁸: December 31, 2034

⁶ Source: Permit Attachment A

⁷ DDD = Dichlorodiphenyldichloroethane, DDE = Dichlorodiphenyldichloroethylene, DDT = Dichlorodiphenyltrichloroethane, PCBs = Polychlorinated Biphenyls

⁸ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Calleguas Creek and its Tributaries and Mugu Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), and Siltation TMDL

Plan to Achieve WLAs^{9,10}

Pollutant	Strategies to Achieve WLAs
Organochlorine Pesticides	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the organochlorine pesticides WLAs in the Calleguas Creek watershed since their usage has been regulated. Additionally, Caltrans does not use organochlorine pesticides within its ROW. Monitoring results show no exceedances of the interim WLAs for organochlorine pesticides. • Although Caltrans does not use pesticides within its ROW, Caltrans complies with Permit Attachment C Section C3.5.3.2 which specifies practices for the safe handling and use of pesticides, including compliance with federal, state and local regulations, and label directions. Caltrans is also required to perform site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in storm water runoff in the Calleguas Creek watershed. • A major source of pesticide impairments in the Calleguas Creek watershed is due to historical loading from the pollutants adhering to sediment. As an additional mitigation measure, Caltrans reduces the sediment transport of organochlorine pesticides by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Calleguas Creek watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • The State Water Resources Control Board's Annual Performance Report Fiscal Year 2019-2020 watershed report card for Calleguas Creek OC Pesticides and PCBs indicates that conditions are improving.
PCBs	<ul style="list-style-type: none"> • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the Calleguas Creek watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCBs WLAs in the Calleguas Creek watershed. Monitoring results show no exceedances of the interim WLAs for PCBs. • Toxic pollutants have a high affinity for adherence to fine sediment. A major source of PCB impairments in the Calleguas Creek watershed is due to historical loading from the pollutants adhering to sediment. Therefore, the appropriate control measures for toxic pollutants are to control erosion and prevent or minimize the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Calleguas Creek watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • The State Water Resources Control Board's Annual Performance Report Fiscal Year 2019-2020 watershed report card for Calleguas Creek OC Pesticides and PCBs indicates that conditions are improving.
Siltation	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with siltation WLAs in the Calleguas Creek watershed. Caltrans controls siltation through the control of sediment. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Calleguas Creek watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • The State Water Resources Control Board's Annual Performance Report Fiscal Year 2019-2020 watershed report card for Calleguas Creek OC Pesticides and PCBs indicates that conditions are improving, and additional reduction efforts in Revolon Slough will be required by dischargers other than Caltrans.

⁹ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

¹⁰ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in October 2020.

Calleguas Creek and its Tributaries and Mugu Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), and Siltation TMDL

Pollutant	Strategies to Achieve WLAs
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> • Caltrans implements and maintains structural BMPs to mitigate sediment in the Calleguas Creek watershed. Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Over twenty SHOPP projects (PID, PAED, and/or PS&E) are planned in the Calleguas Creek watershed that will include treatment BMPs.

Existing Installed Structural Best Management Practices (BMPs)¹¹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	23
Biofiltration Strip	28
Biofiltration Swale	74
DPP Infiltration Area (DPPIA)	18
Infiltration Basin	1
Infiltration Trench	1
Total	145

Existing Non-Structural BMPs¹²

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America

¹¹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹² Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Calleguas Creek and its Tributaries and Mugu Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), and Siltation TMDL

Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹³

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region. Caltrans participates in the Calleguas Creek Watershed TMDL Monitoring Program (CCWTMP). The CCWTMP is a coordinated effort between stakeholders responsible for implementing TMDLs in the Calleguas Creek Watershed.

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹³ Source: Permit Attachment F.

Colorado Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), Sediment Toxicity, Polycyclic Aromatic Hydrocarbons (PAHs), and Metals TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Colorado Lagoon	Organochlorine Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals	D5, D5.1, D5.2, D5.4, and D5.10

General Watershed Description²

The Colorado Lagoon is located within the City of Long Beach, Southern California. The Lagoon is a 15-acre, V-shaped tidal lagoon connected to Alamitos Bay and the Pacific Ocean via a box culvert to Marine Stadium. It serves three main functions: 1) hosting sensitive estuarine habitat; 2) providing public recreation; and 3) retaining and conveying storm flows. The lagoon is abundant in wildlife and acts as an important stop for thousands of migratory birds, including endangered species every year. In addition, the lagoon is heavily utilized for recreational activities, including swimming, fishing, wildlife viewing, and picnicking. The Colorado Lagoon watershed is approximately 1,172 acres and divided into five subbasins that discharge stormwater and urban dry weather runoff to the Colorado Lagoon. Each of the sub-basins are served by a major storm sewer trunkline and supporting appurtenances that collect and transport stormwater and urban dry weather runoff to the Colorado Lagoon. Surface water runoff within the watershed occurs as overland runoff into curb inlets and catch basins, and as sheet flow from near shore areas. Each sub-basin discharges to the Colorado Lagoon through individual storm drainage systems.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Translation of CU to Waste Load Allocation (WLA)³

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 190 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board Los Angeles Region, *Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals TMDL Draft*, July 23, 2009.

³ Sources: Caltrans, TMDL Status Review Reports, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Colorado Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), Sediment Toxicity, Polycyclic Aromatic Hydrocarbons (PAHs), and Metals TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/ Pesticides/ Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing best management practices that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • Best management practices also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following best management practices options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement best management practices in its right-of-way to meet the TMDL allocations; or • Implement a combination of items 1 or 2.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	1,104	13	1.2%	Organochlorine Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals (Pb and Zn)	Yes	e. Mass-Based Waste Load

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Colorado Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), Sediment Toxicity, Polycyclic Aromatic Hydrocarbons (PAHs), and Metals TMDL

WLAs⁵

Pollutant	Final Mass-Based WLAs Line 1 Storm drain ⁶ (mg/year)	Final Concentration-Based WLAs ⁷ (µg/dry kg)
Dieldrin	0.15	0.02
Chlordane	3.65	0.50
Dichlorodiphenyltrichloroethane (DDT)	11.52	1.58
PCBs	165.49	22.7
PAHs	29,321.50	4,022
Lead	340,455.99	46,700
Zinc	1,093,541.72	150,000

TMDL Implementation Schedule

- Start Date: June 14, 2011
- Final Compliance Date per TSO⁸: December 31, 2034

Plan to Achieve WLAs^{9,10}

Pollutant	Strategies to Achieve WLAs
PAHs and PCBs	<ul style="list-style-type: none"> • Although Caltrans does not use pesticides within its ROW, minimal usage of herbicides occurs within its ROW and may contain PAHs. However, PAHs have been regulated and their usage is minimal. Therefore, Caltrans is expected to be in compliance with PAHs WLAs in the Colorado Lagoon watershed. • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the Colorado Lagoon watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCBs WLAs in the Colorado Lagoon watershed. • Toxic pollutants have a high affinity for adherence to fine sediment. Therefore, the appropriate control measures for toxics are to control erosion and prevent or minimize the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Colorado Lagoon watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.

⁵ Source: Permit Attachment A

⁶ Mass-based WLAs are assigned to Caltrans and the City of Long Beach.

⁷ Concentration-based WLAs for sediment are assigned to MS4 permittees, including The City of Long Beach, Los Angeles County Flood Control District, and Caltrans. Concentration-based WLAs are pollutant concentrations within sediment.

⁸ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁹ Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

¹⁰ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in October 2017.

Colorado Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), Sediment Toxicity, Polycyclic Aromatic Hydrocarbons (PAHs), and Metals TMDL

Pollutant	Strategies to Achieve WLAs
Organochlorine Pesticides	<ul style="list-style-type: none"> Caltrans is expected to be in compliance with chlordane, DDTs, and dieldrin WLAs in the Colorado Lagoon watershed since chlordane, DDTs, and dieldrin are no longer in production and their usage has been regulated. Additionally, Caltrans does not use chlordane, DDTs, or dieldrin within its ROW. Although Caltrans does not use pesticides within its ROW, Caltrans complies with Permit Attachment C Section C3.5.3.2 which specifies practices for the safe handling and use of pesticides, including compliance with federal, State, and local regulations, and label directions. Caltrans is also required to perform site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides to prevent pesticide discharge in storm water runoff in the Colorado Lagoon watershed. As an additional mitigation measure, Caltrans reduces the sediment transport of chlordane, DDTs, and dieldrin by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Colorado Lagoon watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Lead and Zinc	<ul style="list-style-type: none"> Caltrans is working towards compliance with lead and zinc WLAs in the Colorado Lagoon watershed. Heavy metals have a high affinity for adherence to fine sediment. Therefore, the appropriate control measures for heavy metals are to control erosion and prevent or minimize the discharge of fine sediment. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Colorado Lagoon watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. Additionally, Caltrans implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Two SHOPP projects (PID, PAED, and/or PS&E) are planned in the Colorado Lagoon watershed that include treatment BMPs.

Existing Installed Structural Best Management Practices (BMPs)¹¹

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs¹²

- Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework

¹¹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹² Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Colorado Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs), Sediment Toxicity, Polycyclic Aromatic Hydrocarbons (PAHs), and Metals TMDL

and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.

- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair to minimize sediment discharge to the watershed bodies.

Monitoring¹³

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹³ Source: Permit Attachment F.

**Colorado Lagoon Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs),
Sediment Toxicity, Polycyclic Aromatic Hydrocarbons (PAHs), and Metals TMDL**

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Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants: Metals (Copper, Lead, Zinc), Polychlorinated Biphenyls (PCBs), Dichlorodiphenyltrichloroethane (DDT), Polycyclic Aromatic Hydrocarbons (PAHs) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters	Toxic pollutants: metals (Copper, Lead, Zinc), PCBs, DDT, and PAHs	D3.2, D3.3, D5, D5.1, D5.2, D5.4 and D5.10

General Watershed Description²

The Dominguez Channel Watershed drains an area of approximately 133 square miles in southwestern Los Angeles. The watershed is composed of two hydrologic subunits. The two subunits drain primarily via an extensive network of underground storm drains. The northern subunit drains into the Dominguez Channel while the southern subunit drains directly into the Los Angeles and Long Beach Harbor Area. The headwaters of the Dominguez Channel consist of an underground storm drain system which daylight approximately 0.25 miles north of the Hawthorne Municipal Airport. The Dominguez Channel drains approximately 62 percent of the watershed before discharging to Los Angeles Harbor.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2015-2016	64.44
2016-2017	134.16
2018-2019	16.18
2019-2020	10.18

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 86 for Reach 2, 98 for Reach 1, and 106 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: Los Angeles Regional Water Quality Control Board and the United States Environmental Protection Agency *Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDLs*. May 5, 2011.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants: Metals (Copper, Lead, Zinc), Polychlorinated Biphenyls (PCBs), Dichlorodiphenyltrichloroethane (DDT), Polycyclic Aromatic Hydrocarbons (PAHs) TMDL

Specific Reporting Requirements^{1,4}

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans develops, implements, and updates a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1) ⁵	Caltrans participates in the Alondra Park Project through financial contributions. Caltrans also participates in the Dominguez Channel Bathymetry Study. Additionally, Caltrans works with local MS4s and partners in the watershed to look for other cooperative partnership projects or regional TMDL compliance project opportunities that may be outside Caltrans ROW.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/ Pesticides/ Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing best management practices that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • Best management practices also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following best management practices options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement best management practices in its right-of-way to meet the TMDL allocations; or • Implement a combination of items 1 or 2.

⁴ Source: Caltrans *Annual Report*, Fiscal Year 2021-2022.

⁵ Source: District 7 Current/Completed CIAs Summary in TMDL Compliance Plan Appendix F.

Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants: Metals (Copper, Lead, Zinc), Polychlorinated Biphenyls (PCBs), Dichlorodiphenyltrichloroethane (DDT), Polycyclic Aromatic Hydrocarbons (PAHs) TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁶	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	76,242	1,442	1.9%	Toxic Pollutants: Metals (Cu, Pb, Zn), DDT, PAHs, and PCBs	No	b. Receiving Water Quality Monitoring and/or e. Mass-Based Waste Load

WLAs⁷

Dry Weather Sediment Mass-Based WLAs for Toxic Pollutants

Waterbody	PAHs (kilograms per year [kg/yr])	DDTs (grams per year [g/yr])	PCBs (g/yr)	Total Chlordane (micrograms per year [µg/yr])	Dieldrin (µg/yr)	Toxaphene (µg/yr)
Dominguez Channel Estuary	0.0023	0.004	0.004	-	-	-
Consolidated Slip	0.00009	0.00014	0.00006	-	-	-
Inner Harbor	0.0017	0.0010	0.0011	-	-	-
Outer Harbor	0.00021	0.000010	0.00004	-	-	-
Fish Harbor	0.000021	0.0000010	0.000006	-	-	-
Cabrillo Marina	0.0000016	0.00000028	0.00000024	-	-	-
San Pedro Bay	0.077	0.002	0.019	-	-	-
Los Angeles River Estuary	0.333	0.014	0.047	-	-	-
Dominguez Channel	-	-	-	0.5	0.02	0.10

Dry Weather Sediment Mass-Based WLAs for Metals

Waterbody	Total Copper (kg/yr)	Total Lead (kg/yr)	Total Zinc (kg/yr)	Cadmium (kg/yr)	Mercury (kg/yr)
Dominguez Channel Estuary	0.384	0.93	4.7	1.2	-
Consolidated Slip	0.043	0.058	0.5	-	-
Inner Harbor	0.032	0.641	2.18	-	-
Outer Harbor	0.0018	0.052	0.162	-	-
Fish Harbor	0.0000005	0.00175	0.0053	-	-
Cabrillo Marina	0.00019	0.0028	0.007	-	-
San Pedro Bay	0.88	2.39	9.29	-	-
Los Angeles River Estuary	5.1	9.5	34.8	-	-
Fish Harbor	-	-	-	-	0.15

⁶ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁷ Source: Permit Attachment A

Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants: Metals (Copper, Lead, Zinc), Polychlorinated Biphenyls (PCBs), Dichlorodiphenyltrichloroethane (DDT), Polycyclic Aromatic Hydrocarbons (PAHs) TMDL

Wet Weather Freshwater Mass-Based WLAs for Metals

Waterbody	Total Copper (grams per day [g/day])	Total Lead (g/day)	Total Zinc (g/day)
Dominguez Channel (includes all upstream reaches and tributaries above Vermont Avenue)	32.3	142.6	232.6

Torrance Lateral Sub-Watershed Concentration-Based WLAs for Metals

Media (units)	Total Copper	Total Lead	Total Zinc
Water (microgram/liter, unfiltered)	9.7	142.6	232.6
Sediment (milligram/kilogram, dry)	31.6	35.8	121

TMDL Implementation Schedule

- Start Date: March 23, 2012
- Final Compliance Date: March 23, 2032

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
DDTs	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with DDT WLAs in the Dominguez Channel, Greater Los Angeles and Long Beach Harbor Waters watershed since DDTs are no longer in production and its usage has been regulated. Additionally, Caltrans does not use DDTs within its ROW. • Although Caltrans does not use pesticides within its ROW, Caltrans complies with Provision E.2.h.3) b) of the Permit which specifies practices for the safe handling and use of pesticides, including compliance with federal, State and local regulations, and label directions. Caltrans is also required to perform site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in storm water runoff in the Dominguez Channel, Greater Los Angeles and Long Beach Harbor Waters watershed. • As an additional mitigation measure, Caltrans reduces the sediment transport of DDTs by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Dominguez Channel, Greater Los Angeles and Long Beach Harbor Waters by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Metals (Cu, Pb, Zn)	<ul style="list-style-type: none"> • Caltrans is in compliance with metals (Cu, Pb, Zn) WLAs for dry-weather in the Dominguez Channel, Greater Los Angeles and Long Beach Harbor Waters, since Caltrans does not contribute any dry-weather discharge from its ROW. • Caltrans is making progress towards compliance with metals (Cu, Pb, Zn) WLAs for wet-weather in the Dominguez Channel, Greater Los Angeles and Long Beach Harbor Waters. Caltrans implements appropriate control measures to reduce the discharge of dissolved fraction metals, such as physical structures that prevent contaminated runoff from reaching receiving waters. • Metals have a high affinity for adhering to fine sediment and controlling the discharge of fine sediment can effectively mitigate metals in water. Caltrans implements control measures to minimize erosion and sediment discharge in the Dominguez Channel, Greater Los Angeles and Long Beach Harbor watersheds by protecting hillsides, intercepting and filtering runoff,

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in September 2018.

Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants: Metals (Copper, Lead, Zinc), Polychlorinated Biphenyls (PCBs), Dichlorodiphenyltrichloroethane (DDT), Polycyclic Aromatic Hydrocarbons (PAHs) TMDL

Pollutant	Strategies to Achieve WLAs
	avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
PAHs and PCBs	<ul style="list-style-type: none"> • Although Caltrans does not use pesticides within its ROW, minimal usage of herbicides occurs within its ROW and may contain PAHs. However, PAHs have been regulated and their usage is minimal. Therefore, Caltrans is expected to be in compliance with PAHs WLAs in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters watershed. • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCBs WLAs in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters watershed. • Toxic pollutants have a high affinity for adherence to fine sediment. Therefore, the appropriate control measures for toxics are to control erosion and prevent or minimize the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> • Caltrans implements and maintains structural BMPs to mitigate sediment in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters watershed. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Additionally, Caltrans participates and funds cooperative implementation efforts within the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters watershed in order to further mitigate the discharge of metals, DDT, PAHs, and PCBs into the watershed. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Forty-six SHOPP projects (PID, PAED, and/or PS&E) are planned in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters that will include treatment BMPs.

Existing Installed Structural Best Management Practices (BMPs)¹⁰

Treatment BMP Type	Number of BMPs
Austin Sand Filter	14
Biofiltration Strip	9
Biofiltration Swale	69
Detention Basin	4
DPP Infiltration Area (DPPIA)	13
Infiltration Basin	2

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants: Metals (Copper, Lead, Zinc), Polychlorinated Biphenyls (PCBs), Dichlorodiphenyltrichloroethane (DDT), Polycyclic Aromatic Hydrocarbons (PAHs) TMDL

Treatment BMP Type	Number of BMPs
Other	3
Total	114

Existing Non-Structural BMPs¹¹

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region. Currently Caltrans participates in the cooperative monitoring agreement for the Dominguez Channel Bathymetry Study.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹² Source: Permit Attachment F.

Legg Lake Trash TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Legg Lake	Trash	D5, D5.1, D5.2, 5.9, and D5.10

General Watershed Description²

Legg Lake, built in 1963, is located in the Whittier Narrows Flood Control Basin. Whittier Narrows Dam is to the south of the Lake. The Rio Hondo and the San Gabriel River flow by the lake's east and west boundaries, respectively. Legg Lake has an average depth of three feet along the edge of the Lake and up to 10 feet near the center of the Lake. Whittier Narrows is managed by the Los Angeles County Department of Parks and Recreation for park and recreational purposes. The primary sources of water in Legg Lake are runoff from the San Gabriel River and nearby wells because the flood control basin also serves as a conservation pool for groundwater recharge. In addition, two storm drains collecting runoff from the cities of El Monte and South El Monte discharge to Legg Lake at its northeast end.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 14 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board Los Angeles Region *Trash Total Maximum Daily Load* March 20, 2007.

³ Sources: Caltrans, *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Legg Lake Trash TMDL

Reporting Requirement Permit Section	Summary of Activities
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads (Permit Attachment D Section 5.9)	Caltrans implements: <ul style="list-style-type: none"> • Trash control measures by installing, operating, and maintaining full capture systems or other treatment or institution controls for storm drains that capture runoff from significant trash generating areas. • Trash reduction allocations equivalent to 586.92 gallons per year for the Legg Lake watershed.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	Caltrans implements one of the following best management practices options: <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement best management practices in its right-of-way to meet the TMDL allocations; or • Implement a combination of the options above.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	1,249	40	3.2%	Trash	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Watershed WLA
Trash	The WLA is zero trash.

TMDL Implementation Schedule

- Start Date: February 27, 2008
- Final Compliance Date per TSO⁶: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Legg Lake Trash TMDL

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Trash	<ul style="list-style-type: none"> • Caltrans employs several types of trash removal devices in the Legg Lake Watershed, including GSRDs which have full capture removal efficiencies. Caltrans also employs non-structural BMPs in the Legg Lake Watershed to mitigate trash including sweeping, drain inlet cleaning, trash collection, storm drain stenciling, covered trash bins, public education, and public participation. Additionally, Caltrans has increased the frequency of the Adopt-A-Highway program to treat beyond the minimum permit requirements. Caltrans also collaborates with the California Public Education Campaign to further engage in public education. Moreover, programs such as the Caltrans Parolee Program, California Conservation Corps, District Crew Collection, and Storm Drain Maintenance activities help remove trash from the Caltrans ROW. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Two SHOPP projects (PID, PAED, and/or PS&E) are planned in the Legg Lake Watershed that will include treatment BMPs.

Existing Installed Structural Best Management Practices (BMPs)⁹

Treatment BMP Type	Number of BMPs
GSRD - Inclined Screen	1
Total	1

Existing Non-Structural BMPs^{10,11}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Sources: Caltrans *Annual Report* Fiscal Year 2021-2022.

Legg Lake Trash TMDL

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Adopt-A-Highway Program** – The Adopt-A-Highway Program provides an avenue for individuals, organizations, and businesses to help maintain sections of roadside for various activities, including litter removal, within California's State Highway System. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 3,758 cubic yards of trash through the Adopt-A-Highway Program.
- **SPP Litter Control Program** – SPP Litter Control are subcontractors that include Back to Work programs, Probationers/Parolees, Veteran's Outreach Program, Homeless, At-Risk Youth, Court Referrals, Inmates, Work Release/Work Furlough, and California Conservation Corps. These are funded through State Highway Account. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 33,146 cubic yards of trash through this program.
- **District Crew Collection** – Caltrans crews conduct manual cleanup of trash and litter from the ROW. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 36,750 cubic yards of trash.
- **Storm Drain Maintenance** – Caltrans cleans the storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and by vactor trucks. Caltrans District 7 performs additional inspection and cleaning through its Enhanced Annual Storm Drain Inlet Inspection and Cleaning Program in metropolitan areas. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 60 cubic yards of trash from Storm Drain Maintenance activities.
- **Clean California** – Clean California is providing funding for transformative state and local beautification projects in communities across California, with a focus on historically underserved areas, that will improve the aesthetics of public spaces, facilitate community pride, and reduce trash regeneration. Maintenance personnel constantly monitor their areas of responsibility to detect and report deficiencies to, or needs of, the highway system. To ensure the overall levels of maintenance are pursued, periodic inspection trips by key personnel are required. Maintenance supervisors travel all highways in the section, including ramps and collector systems, at least once a week to observe overall conditions and detect deficiencies. Known or potential problem areas require more frequent inspections. Weekly inspections are an integral part of the supervisor's work planning and scheduling activities. The Area Superintendent observes overall conditions to assure conformance with the established maintenance levels. Maintenance personnel utilize their continuous driving visual assessments in their areas of responsibility along with the quarterly LOS scores to adaptively manage the deployment of resources to maximize litter production.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Long Beach City Beaches and Los Angeles River Estuary Indicator Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Long Beach City Beaches and Los Angeles River Estuary	Indicator Bacteria	D5, D5.1, D5.2, D5.5 and D5.10

General Watershed Description²

The Long Beach City (LBC) beaches and Los Angeles River (LAR) Estuary are located within Los Angeles County in southern California. Jurisdictions draining directly to these impairments include the cities of Long Beach and Signal Hill. Other surrounding jurisdictions, such as Los Angeles County and several incorporated cities within the County, drain to the Los Angeles River (LAR) which ultimately drains to the LAR Estuary. Additionally, parts of Orange County and, specifically, the City of Seal Beach drain to the San Gabriel River (SGR), which discharges southeast of the LBC beaches. Located along the shorelines of the San Pedro Bay, the LBC beaches and LAR Estuary serve as an important recreation and tourism resource for the City of Long Beach and the greater Los Angeles region. In total, the impairment of the LBC beaches affects 13 beaches and extends 4.7 miles along the coastline between the LAR Estuary and SGR Estuary. The impaired stretch of the LBC beaches sits within the San Pedro Bay and is nestled between the LAR on the west, and Alamitos Bay and SGR to the east. Only a small area drains directly to the LBC beaches and this direct drainage covers an area of approximately 505 acres and is entirely within the jurisdiction of the City of Long Beach. The LAR Estuary connects the Los Angeles River to San Pedro Bay. It begins where the concrete-lined river ends near Willow Street and flows to Queensway Bay before entering San Pedro Bay. During high tide, the LAR Estuary receives most of its flow from either the LAR or San Pedro Bay. A relatively small area along either bank drains directly to the LAR Estuary (approximately 6,000 acres in total land area).

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2015-2016	7.67
2016-2017	15.37
2019-2020	5.29

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 199 for Reach 2 and 235 for Reach 1

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency *Long Beach City Beaches and Los Angeles River Estuary TMDLs for Indicator Bacteria*, March 26, 2012.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Long Beach City Beaches and Los Angeles River Estuary Indicator Bacteria TMDL

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed. Additionally, Caltrans works with local MS4s and partners in the watershed to look for other cooperative partnership projects or regional TMDL compliance project opportunities that may be outside Caltrans ROW.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Bacteria Total Maximum Daily Loads (Permit Attachment D Section 5.5)	Caltrans implements, monitors, and maintains BMPs to minimize the discharge of bacteria (i.e., fecal pathogens) to surface waters within each applicable reach. Potential sources of bacteria include stormwater. Runoff from untreated human and pet wastes, which may occur at homeless encampments and other areas. Caltrans implements one or more of the following: <ul style="list-style-type: none"> • Caltrans' Homeless Encampment Policy (Chapter 1, section 1.07.3(B) of Caltrans' Maintenance Manual) or subsequent policies addressing encampment removal and cleanup. • Cooperative agreement participation, such as leases to local municipalities for homeless services, where available. • Structural BMPs, such as retention, detention, diversion, infiltration, filtration, vegetated treatment, and similar.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	Caltrans implements one of the following best management practices options: <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement best management practices in its right-of-way to meet the TMDL allocations; or • Implement a combination of above options.

Long Beach City Beaches and Los Angeles River Estuary Indicator Bacteria TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres) ⁴	Caltrans ROW Area in TMDL (acres) ^{4,5}	Percent of Caltrans ROW in TMDL Watershed ⁴	TMDL Pollutant	TSO	Compliance Strategy
7	4	6,968	101	1.4%	Indicator Bacteria	No	f. Allowable Exceedance Days

WLAs^{4,6}

Pollutant	Summer Dry Sampling WLA	Winter Dry and Wet Sampling WLA
Indicator Bacteria, Los Angeles River Estuary	Zero allowable exceedance days for daily and weekly sampling.	Winter Dry Daily Sampling = 9 allowable exceedance days Winter Dry Weekly Sampling = 2 allowable exceedance days Winter Wet Daily Sampling = 17 allowable exceedance days Winter Wet Weekly Sampling = 3 allowable exceedance days
Indicator Bacteria, Long Beach City Beaches	No WLAs are specific to Caltrans in the Long Beach City Beaches watershed because Caltrans has jurisdiction of some areas in the Los Angeles River Estuary direct drainage, but not in the Long Beach City Beaches direct drainage.	-

TMDL Implementation Schedule

- Start Date and Final Compliance Date⁷: March 26, 2012

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Bacteria	<ul style="list-style-type: none"> Caltrans is in compliance with indicator bacteria WLAs for dry-weather flows in the Long Beach City Beaches and Los Angeles River Estuary watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. Caltrans minimizes wet-weather discharges from its ROW into receiving waterbodies impaired for bacteria by implementing treatment BMPs and source control/preemptive activities such as street sweeping, clean-up of illegal dumping, prohibition of non-storm water discharges, and public education on littering as described above. Additionally, Caltrans participates and funds cooperative implementation efforts within the Long Beach City Beaches and Los Angeles River Estuary watershed in order to further mitigate the discharge of indicator bacteria into the watershed. Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Eleven SHOPP projects (PID, PAED, and/or PS&E) are planned in the Long Beach City Beaches and Los Angeles River Estuary watershed that will include treatment BMPs.

⁴ Source: Permit Attachment A

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ The WLA for the rolling 30-day geometric mean is zero days of allowable exceedances for all locations. In addition to assigning TMDLs for the impaired reaches, WLAs and LAs are assigned to the tributaries to these impaired reaches. Exceedance days are based on the reference year.

⁷ The TMDL did not include an implementation schedule; therefore, the final compliance deadline was March 26, 2012.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

Long Beach City Beaches and Los Angeles River Estuary Indicator Bacteria TMDL

Existing Installed Structural Best Management Practices (BMPs)¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Swale	5
Detention Basin	1
Total	6

Existing Non-Structural BMPs¹¹

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹² Source: Permit Attachment F.

Los Angeles Area (Echo Park Lake) Nitrogen, Phosphorus, Chlordane, Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Los Angeles Area (Echo Park Lake)	Nitrogen, Phosphorus, Chlordane, Dieldrin, PCBs, and Trash TMDL	D5, D5.1, D5.2, D5.3, D5.4, D5.9, and D5.10

General Watershed Description²

Echo Park Lake is located in the Los Angeles River. The waterbody was originally constructed as the Arroyo de los Reyes reservoir in 1898 and became Echo Park Lake in 1907. The lake now has a surface area of 14.1 acres (based on Southern California Association of Governments [SCAG] 2005 land use), an average depth of five feet (estimated from 2009 sampling events and the Urban Lakes Study, and a volume of 70.5 ac-ft (calculated from the land use estimated surface area and estimated average depth). Two primary storm drains provide inflows to the lake; the lake then discharges to a storm drain that ultimately reaches the Los Angeles River. The Echo Park Lake watershed is 784 acres in size and ranges in elevation from 115 meters to 229 meters. The subwatershed draining the northern part of the watershed is 614 acres, and the southern subwatershed drains 170 acres. Most of the wet weather and dry weather flows from the northwestern and northeastern storm drains are diverted around the lake.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2019-2020	1

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 5 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: United States Environmental Protection Agency *Los Angeles Area Lakes TMDLs*, March 2012.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Los Angeles Area (Echo Park Lake) Nitrogen, Phosphorus, Chlordane, Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation, and Turbidity Total Maximum Daily Loads (Permit Attachment D Section 5.3)	<ul style="list-style-type: none"> • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Echo Park Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle and implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing best management practices that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • Best management practices also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads (Permit Attachment D Section 5.9)	<p>Caltrans implements:</p> <ul style="list-style-type: none"> • Trash control measures by installing, operating, and maintaining full capture systems or other treatment or institution controls for storm drains that capture runoff from significant trash generating areas. • Trash reduction allocations equivalent to 150 gallons per year for the Echo Park Lake watershed.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following best management practices options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement best management practices in its right-of-way to meet the TMDL allocations; or • Implement a combination of options above.

Los Angeles Area (Echo Park Lake) Nitrogen, Phosphorus, Chlordane, Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	800	17	2.1%	Nitrogen, Phosphorus, Chlordane, Dieldrin, PCBs, and Trash	Yes	e. Mass-Based Waste Load and d. Discharge Sampling

WLAs⁵

Pollutant	Watershed WLA
Total Phosphorus	Northern Subwatershed = 0.608 lbs/year Southern Subwatershed = 0.051 lbs/year
Total Nitrogen	Northern Subwatershed = 4.77 lbs/year Southern Subwatershed = 0.403 lbs/year
PCBs, Suspended Sediment	Northern and Southern Subwatersheds = 1.77 µg/kg (dry weight) and 0.17 ng/L (concentrations in water column)
PCBs, Fish Tissue Targets	Northern and Southern Subwatersheds = 59.8 µg/kg (dry weight) and 0.17 ng/L (concentrations in water column)
Total Chlordane, Suspended Sediment	Northern and Southern Subwatersheds = 2.10 µg/kg (dry weight) and 0.59 ng/L (concentrations in water column)
Total Chlordane, Fish Tissue Targets	Northern and Southern Subwatersheds = 3.24 µg/kg (dry weight) and 0.59 ng/L (concentrations in water column)
Dieldrin, Suspended Sediment	Northern and Southern Subwatersheds = 0.80 µg/kg (dry weight) and 0.14 ng/L (concentrations in water column)
Dieldrin, Fish Tissue Targets	Northern and Southern Subwatersheds = 1.90 µg/kg (dry weight) and 0.14ng/L (concentrations in water column)
Trash	Zero trash

TMDL Implementation Schedule

- Start Date: March 26, 2012
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Total Nitrogen and Total Phosphorus	Caltrans is expected to be in compliance with nitrogen and phosphorus WLAs in the Echo Park Lake watershed. Caltrans controls the discharge of nitrogen and phosphorus through the control of sediment. Caltrans implements and maintains structural BMPs to mitigate sediment in the Echo Park Lake watershed. Additionally, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Echo Park Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

Los Angeles Area (Echo Park Lake) Nitrogen, Phosphorus, Chlordane, Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

Pollutant	Strategies to Achieve WLAs
Chlordane and Dieldrin	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with chlordane and dieldrin WLAs in the Echo Park Lake watershed since pesticides are no longer in production and their usage has been regulated. Additionally, Caltrans does not use chlordane or dieldrin within its ROW. • A major source of chlordane and dieldrin impairments in the Echo Park Lake watershed is due to historical loading from the pollutants adhering to sediment. Although Caltrans does not use pesticides within its ROW, Caltrans complies with Permit Attachment C Section C3.5.3.2 which specifies practices for the safe handling and use of pesticides, including compliance with federal, state and local regulations, and label directions. Caltrans also performs site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in storm water runoff in the Echo Park Lake watershed. Additionally, Caltrans implements and maintains structural BMPs to mitigate pesticides in the Echo Park Lake watershed. • As an additional mitigation measure, Caltrans reduces the sediment transport of chlordane by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Echo Park Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
PCBs	<ul style="list-style-type: none"> • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the Echo Park Lake watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCBs WLAs in the Echo Park Lake watershed. • A major source of PCBs in the Echo Park Lake watershed is due to historical loading from the pollutants adhering to sediment. Toxic pollutants have a high affinity for adherence to fine sediment. Therefore, the appropriate control measures for toxics are to control erosion and prevent or minimize the discharge of fine sediment. Additionally, Caltrans implements and maintains structural BMPs to mitigate pesticides in the Echo Park Lake watershed. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Echo Park Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Trash	<ul style="list-style-type: none"> • Caltrans employs non-structural BMPs in the Echo Park Lake Watershed to mitigate trash including sweeping, drain inlet cleaning, trash collection, storm drain stenciling, covered trash bins, public education, and public participation. Additionally, Caltrans has increased the frequency of the Adopt-A-Highway program to treat beyond the minimum permit requirements. Caltrans also collaborates with the California Public Education Campaign to further engage in public education. Moreover, programs such as the Caltrans Parolee Program, California Conservation Corps, District Crew Collection, and Storm Drain Maintenance activities help remove trash from the Caltrans ROW. • Caltrans implements source control BMPs such as the Adopt-A-Highway Program, California Conservation Corps, the Caltrans Parolee Program, District Crew Collection, roadway sweeping, Storm Drain Maintenance activities, and Public Education to further mitigate trash in the Echo Park Lake watershed.
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Echo Park Lake watershed that include treatment BMPs. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Echo Park Lake watershed that will include treatment BMPs.

Los Angeles Area (Echo Park Lake) Nitrogen, Phosphorus, Chlordane, Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

Existing Installed Structural Best Management Practices (BMPs)⁹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	1
Total	1

Existing Non-Structural BMPs^{10,11}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Adopt-A-Highway Program** – The Adopt-A-Highway Program provides an avenue for individuals, organizations, and businesses to help maintain sections of roadside for various activities, including litter removal, within California's State Highway System. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 3,758 cubic yards of trash through the Adopt-A-Highway Program.
- **SPP Litter Control Program** – SPP Litter Control are subcontractors that include Back to Work programs, Probationers/Parolees, Veteran's Outreach Program, Homeless, At-Risk Youth, Court Referrals, Inmates, Work Release/Work Furlough, and California Conservation Corps. These are funded through State Highway Account. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 33,146 cubic yards of trash through this program.
- **District Crew Collection** – Caltrans crews conduct manual cleanup of trash and litter from the ROW. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 36,750 cubic yards of trash.
- **Storm Drain Maintenance** – Caltrans cleans the storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and by Vactor trucks. Caltrans District 7 performs additional inspection and cleaning through its Enhanced Annual Storm Drain Inlet Inspection and Cleaning Program in metropolitan areas. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 60 cubic yards of trash from Storm Drain Maintenance activities.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Source: Caltrans *Annual Report*, Fiscal Year 2021-2022.

Los Angeles Area (Echo Park Lake) Nitrogen, Phosphorus, Chlordane, Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Los Angeles Area Lakes, North, Center, and Legg Lake Nitrogen and Phosphorus TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
Los Angeles	Los Angeles Area Lakes, North, Center, and Legg Lake	Nitrogen and Phosphorus	D5, D5.1, D5.2, D5.4, and D5.10

General Watershed Description²

North, Center, and Legg lakes are located in the Los Angeles River Basin in the Whittier Narrows Recreation Area (WNRA). The WNRA land is 1,283 acres leased to the County of Los Angeles Department of Parks and Recreation in 1957. Legg Lake (also called South Lake) was the first lake constructed in the 1950s (construction involved excavating below the groundwater level). Two additional lakes, Center Lake and North Lake, were constructed in 1967 and are connected to Legg Lake, depending on flow conditions. The northern most lake is North Lake (surface area of 22.9 acres, average depth of 6.8 feet, and volume of 156 ac-ft), which is fed by two storm drains, one of which can either flow into North Lake or bypass North Lake and flow directly to Mission Creek. North Lake itself also discharges to Mission Creek. During low flow periods, Center Lake (surface area of 10.8 acres, average depth of 11.8 feet, and volume of 127 ac-ft) contributes a small amount of flow to North Lake; this lake also discharges to Mission Creek. The southernmost lake, Legg Lake (surface area of 42.9 acres, average depth of 6.8 feet, and volume of 297 ac-ft) is continuously connected to Center Lake by a channel. Overflow from the lake system drains from Center Lake to Mission Creek.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2019-2020	2.9

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 14 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency *Los Angeles Lakes TMDLs*. March 2012.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Los Angeles Area Lakes, North, Center, and Legg Lake Nitrogen and Phosphorus TMDL

Reporting Requirement Permit Section	Summary of Activities
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices (BMPs), and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • BMPs also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs;</p> <ul style="list-style-type: none"> • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of options above.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	1,249	40	3.2%	Nitrogen and Phosphorus	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Dry-Weather Watershed WLA
Total Phosphorus	Direct to Center Lake = 4.6 pounds/year Direct to Legg Lake = 1.2 pounds/year Direct to North Lake = 19.1 pounds/year Northwestern = 9.4 pounds/year Northwestern = 10.9 pounds/year
Total Nitrogen	Direct to Center Lake = 15.5 pounds/year Direct to Legg Lake = 4.0 pounds/year Direct to North Lake = 64.1 pounds/year Northwestern = 29.3 pounds/year Northwestern = 34.0 pounds/year

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A

Los Angeles Area Lakes, North, Center, and Legg Lake Nitrogen and Phosphorus TMDL

TMDL Implementation Schedule

- Start Date: March 26, 2012
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Nitrogen and Phosphorus	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the nitrogen and phosphorus WLAs in the Los Angeles North, Center, and Legg Lake watershed. Caltrans controls the discharge of nitrogen and phosphorus through the control of sediment. Caltrans implements and maintains structural BMPs to mitigate sediment in the Los Angeles North, Center, and Legg Lake watershed. Additionally, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Los Angeles North, Center, and Legg Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Two SHOPP projects (PID, PAED, and/or PS&E) are planned in the Los Angeles North, Center, and Legg Lake watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	5
Biofiltration Swale	3
Total	8

Existing Non-Structural BMPs¹⁰

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Los Angeles Area Lakes, North, Center, and Legg Lake Nitrogen and Phosphorus TMDL

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹¹ Source: Permit Attachment F.

Los Angeles Area Lakes, Peck Road Park Lake Nitrogen, Phosphorus, Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Los Angeles Area Lakes, Peck Road Park Lake	Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash	D5, D5.1, D5.2, D5.3, D5.4, D5.9 and D5.10

General Watershed Description²

Peck Road Park Lake is located in the Los Angeles River Basin in the city of Arcadia. The lake was originally a gravel pit that was converted to a lake and park in 1975 by the Los Angeles County Parks and Recreation Department. Recreation is primarily limited to fishing; trout are periodically stocked by the California Department of Fish and Game. Visitors are not allowed to boat or swim in the lake. Bird feeding is another recreational activity at Peck Road Park Lake. While no bird feeding has been observed during recent fieldwork, birds do feed from trash cans and food litter at the park. The Arcadia Golf Course is located on the northwest shoreline and a recreational path encircles the lake. Two basins (north and south) connected by a narrow waterway have a surface area of 87.4 acres (based on Southern California Association of Governments [SCAG] 2005 land use), average depth of 30 feet (depth was calculated as an average of 2008 and 2009 sampling depths), and total volume of 2,622-acre feet (calculated from the land use estimated surface area and average sampling depths). Inflows to the Lake include Sawpit Wash, Santa Anita Wash, and diversions from the Santa Fe Flood Control Basin. Water leaving Peck Road Park Lake discharges into Rio Hondo Wash.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2015-2016	9.6
2019-2020	14.9
2021-2022	3

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 6 for Reach 2 and 15 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency *Los Angeles Lakes TMDLs*. March 2012.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

**Los Angeles Area Lakes, Peck Road Park Lake Nitrogen, Phosphorus,
Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin,
Polychlorinated Biphenyls (PCBs), and Trash TMDL**

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices (BMPs) and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation, and Turbidity Total Maximum Daily Loads (Permit Attachment D Section 5.3)	<ul style="list-style-type: none"> • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Peck Road Park Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle and implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • BMPs also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads (Permit Attachment D Section 5.9)	<p>Caltrans implements:</p> <ul style="list-style-type: none"> • Trash control measures by installing, operating, and maintaining full capture systems or other treatment or institution controls for storm drains that capture runoff from significant trash generating areas. • Trash reduction allocations equivalent to 950 gallons per year for the Peck Road Park Lake watershed.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following BMP options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of options above.

Los Angeles Area Lakes, Peck Road Park Lake Nitrogen, Phosphorus, Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	23,709	113	0.47%	Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Caltrans WLA
Nitrogen	<ul style="list-style-type: none"> Eastern Subwatershed = 1,165 pounds per year Western Subwatershed = 251 pounds per year
Phosphorus	<ul style="list-style-type: none"> Eastern Subwatershed = 158 pounds per year Western Subwatershed = 34.2 pounds per year
Chlordane	<ul style="list-style-type: none"> Eastern and Western Subwatersheds <ul style="list-style-type: none"> Suspended Sediment = 1.73 micrograms per kilogram dry weight Water Column = 0.59 nanograms per liter Eastern and Western Subwatersheds (if Fish Tissue Targets are Met) <ul style="list-style-type: none"> Suspended Sediment = 3.24 micrograms per kilogram dry weight Water Column = 0.59 nanograms per liter
DDT	<ul style="list-style-type: none"> Eastern and Western Subwatersheds <ul style="list-style-type: none"> Suspended Sediment = 5.28 micrograms per kilogram dry weight Water Column = 0.59 nanograms per liter
Dieldrin	<ul style="list-style-type: none"> Eastern and Western Subwatersheds <ul style="list-style-type: none"> Suspended Sediment = 0.43 micrograms per kilogram dry weight Water Column = 0.14 nanograms per liter Eastern and Western Subwatersheds (if Fish Tissue Targets are Met) <ul style="list-style-type: none"> Suspended Sediment = 1.9 micrograms per kilogram dry weight Water Column = 0.14 nanograms per liter
PCBs	<ul style="list-style-type: none"> Eastern and Western Subwatersheds <ul style="list-style-type: none"> Suspended Sediment = 1.29 micrograms per kilogram dry weight Water Column = 0.17 nanograms per liter Eastern and Western Subwatersheds (if Fish Tissue Targets are Met) <ul style="list-style-type: none"> Suspended Sediment = 59.8 micrograms per kilogram dry weight Water Column = 0.17 nanograms per liter
Trash	The WLA is zero trash.

TMDL Implementation Schedule

- Start Date: March 26, 2012
- Final Compliance Date per TSO⁶: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Los Angeles Area Lakes, Peck Road Park Lake Nitrogen, Phosphorus, Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Nitrogen and Phosphorus	Caltrans is expected to be in compliance with nitrogen and phosphorus WLAs in the Peck Road Park Lake watershed. Caltrans controls the discharge of nutrients through the control of sediment. Caltrans implements and maintains structural BMPs to mitigate sediment in the Los Angeles Area Peck Road Park Lake. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Peck Road Park Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
PCBs	<ul style="list-style-type: none"> • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the Peck Road Park Lake watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCB WLAs in the Peck Road Park Lake watershed. • Toxic pollutants have a high affinity for adherence to fine sediment. A major source of PCB impairments in the Peck Road Park Lake watershed is due to historical loading from the pollutants adhering to sediment. Therefore, the appropriate control measures for toxic pollutants are to control erosion and prevent or minimize the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Peck Road Park Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Additionally, Caltrans implements and maintains structural BMPs to mitigate sediment in the Peck Road Park Lake watershed.
Chlordane, DDTs, and Dieldrin	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with chlordane, DDTs, and dieldrin WLAs in the Peck Road Park Lake watershed since these organochlorine compounds are no longer in production and their usage has been regulated. Additionally, Caltrans does not use chlordane, DDTs, or dieldrin within its ROW. • Although Caltrans does not use pesticides within its ROW, Caltrans complies with Permit Attachment C Section C3.5.3.2, which specifies practices for the safe handling and use of pesticides, including compliance with federal, State and local regulations, and label directions. Caltrans is also required to perform site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in storm water runoff in the Peck Road Park Lake watershed. • A major source of chlordane, DDTs, and dieldrin impairments in the Peck Road Park Lake watershed is due to historical loading from the pollutants adhering to sediment. As an additional mitigation measure, Caltrans reduces the sediment transport of chlordane, DDTs, and dieldrin by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Peck Road Park Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Additionally, Caltrans implements and maintains structural BMPs to mitigate sediment in the Peck Road Park Lake watershed.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.
⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

Los Angeles Area Lakes, Peck Road Park Lake Nitrogen, Phosphorus, Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

Pollutant	Strategies to Achieve WLAs
Trash	Caltrans employs several types of trash removal devices in the Peck Road Park Lake Watershed, including Austin sand filters, biofiltration strips, biofiltration swales, DPPIA (design pollution prevention infiltration areas), gross solids removal devices, infiltration basins, and infiltration trenches. Caltrans also employs non-structural BMPs in the Peck Road Park Lake Watershed to mitigate trash including sweeping, drain inlet cleaning, trash collection, storm drain stenciling, covered trash bins, public education, and public participation. Additionally, Caltrans has increased the frequency of the Adopt-A-Highway program to treat beyond the minimum permit requirements. Caltrans also collaborates with the California Public Education Campaign to further engage in public education. Moreover, programs such as the Caltrans Parolee Program, California Conservation Corps, District Crew Collection, and Storm Drain Maintenance activities help remove trash from the Caltrans ROW.
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also implements source control BMPs such as the Adopt-A-Highway Program, California Conservation Corps, the Caltrans Parolee Program, District Crew Collection, roadway sweeping, Storm Drain Maintenance activities, and Public Education to further mitigate trash in the Peck Road Park Lake watershed. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Four SHOPP projects (PID, PAED, and/or PS&E) are planned in the Peck Road Park Lake watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	6
Biofiltration Strip	1
Biofiltration Swale	9
DPP Infiltration Area (DPPIA)	2
Gross Solids Removal Device – Inclined Screen	7
Infiltration Basin	1
Infiltration Trench	1
Total	27

Existing Non-Structural BMPs¹⁰

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Los Angeles Area Lakes, Peck Road Park Lake Nitrogen, Phosphorus, Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Polychlorinated Biphenyls (PCBs), and Trash TMDL

- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹¹ Source: Permit Attachment F.

Los Angeles Area Lakes, Puddingstone Reservoir Nitrogen, Phosphorus, Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Polychlorinated Biphenyls (PCBs), and Mercury TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Los Angeles Area Lakes, Puddingstone Reservoir	Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Mercury	D5, D5.1, D5.2, D5.3, D5.4, and D5.10

General Watershed Description²

Puddingstone Reservoir is located in the San Gabriel River Basin in Bonelli Regional Park. The park is located in the county of Los Angeles, immediately surrounded by the cities of San Dimas and Pomona. Located in a flood control basin, the dam was built in 1929 and the area surrounding the reservoir was converted to a park in 1972. Live Oak Wash is the major inflow to the reservoir, which discharges to Walnut Creek. The reservoir has a surface area of 252 acres (based on Southern California Association of Governments [SCAG] 2005 land use), a total volume of 6,200 acre-feet (based on Los Angeles County Department of Public Works volume estimates from 2000 and 2001), and an average depth of 24.6 feet (volume divided by surface area). Recreational uses include swimming, jet skiing, boating, and fishing. According to the California Department of Fish and Game (2009), the reservoir is periodically stocked with trout. Bird feeding may be another recreational activity at Puddingstone Reservoir; however, it has not been observed during recent fieldwork. The areas immediately surrounding the lake receive many visitors as they include a water theme park, equestrian facilities, golf course, and a lakeside RV park.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2021-2022	8.2

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 49 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency *Los Angeles Lakes TMDLs*. March 2012.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Los Angeles Area Lakes, Puddingstone Reservoir Nitrogen, Phosphorus, Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Polychlorinated Biphenyls (PCBs), and Mercury TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices (BMPs) and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation, and Turbidity Total Maximum Daily Loads (Permit Attachment D Section 5.3)	<ul style="list-style-type: none"> • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Los Angeles Area Puddingstone Reservoir watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle and implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • BMPs also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following BMP options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement BMPs in its right-of-way to meet the TMDL allocations; or • Implement a combination of options above.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	8,337	109	1.3%	Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Mercury	Yes	e. Mass-Based Waste Load

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Los Angeles Area Lakes, Puddingstone Reservoir Nitrogen, Phosphorus, Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Polychlorinated Biphenyls (PCBs), and Mercury TMDL

WLAs⁵

Pollutant	Caltrans WLA
Nitrogen	<ul style="list-style-type: none"> • Northern Subwatershed = 745 pounds per year • Southern Subwatershed = 68.2 pounds per year
Phosphorus	<ul style="list-style-type: none"> • Northern Subwatershed = 167 pounds per year • Southern Subwatershed = 14.8 pounds per year
Mercury	<ul style="list-style-type: none"> • Northern Subwatershed = 0.702 grams per year • Southern Subwatershed = 0.051 grams per year
PCBs	<ul style="list-style-type: none"> • Northern and Southern Subwatersheds <ul style="list-style-type: none"> ○ Suspended Sediment = 0.59 micrograms per kilogram dry weight ○ Water Column = 0.17 nanograms per liter • Northern and Southern Subwatersheds (if Fish Tissue Targets are Met) <ul style="list-style-type: none"> ○ Suspended Sediment = 59.8 micrograms per kilogram dry weight ○ Water Column = 0.17 nanograms per liter
Chlordane	<ul style="list-style-type: none"> • Northern and Southern Subwatersheds <ul style="list-style-type: none"> ○ Suspended Sediment = 0.75 micrograms per kilogram dry weight ○ Water Column = 0.57 nanograms per liter • Northern and Southern Subwatersheds (if Fish Tissue Targets are Met) <ul style="list-style-type: none"> ○ Suspended Sediment = 3.24 micrograms per kilogram dry weight ○ Water Column = 0.57 nanograms per liter
DDT	<ul style="list-style-type: none"> • Northern and Southern Subwatersheds <ul style="list-style-type: none"> ○ Suspended Sediment = 3.94 micrograms per kilogram dry weight ○ Water Column = 0.59 nanograms per liter • Northern and Southern Subwatersheds (if Fish Tissue Targets are Met) <ul style="list-style-type: none"> ○ Suspended Sediment = 5.28 micrograms per kilogram dry weight ○ Water Column = 0.59 nanograms per liter
Dieldrin	<ul style="list-style-type: none"> • Northern and Southern Subwatersheds <ul style="list-style-type: none"> ○ Suspended Sediment = 0.22 micrograms per kilogram dry weight ○ Water Column = 0.14 nanograms per liter • Northern and Southern Subwatersheds (if Fish Tissue Targets are Met) <ul style="list-style-type: none"> ○ Suspended Sediment = 1.90 micrograms per kilogram dry weight ○ Water Column = 0.14 nanograms per liter

TMDL Implementation Schedule

- Start Date: March 26, 2012
- Final Compliance Date per TSO⁶: December 31, 2034

⁵ Source: Permit Attachment A

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Los Angeles Area Lakes, Puddingstone Reservoir Nitrogen, Phosphorus, Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Polychlorinated Biphenyls (PCBs), and Mercury TMDL

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Nitrogen, Phosphorus, and Mercury	Caltrans is expected to be in compliance with nitrogen, phosphorus, and mercury WLAs in the Los Angeles Area Puddingstone Reservoir watershed. Caltrans controls the discharge of nitrogen, phosphorus, and mercury through the control of sediment. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Los Angeles Area Puddingstone Reservoir watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Chlordane, DDTs, and Dieldrin	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with chlordane, DDTs, and dieldrin WLAs in the Los Angeles Area Puddingstone Reservoir watershed since chlordane, DDTs, and dieldrin are no longer in production and their usage has been regulated. Additionally, Caltrans does not use chlordane, DDTs, or dieldrin within its ROW. • Although Caltrans does not use pesticides within its ROW, Caltrans complies with Permit Attachment C Section C3.5.3.2 which specifies practices for the safe handling and use of pesticides, including compliance with federal, State and local regulations, and label directions. Caltrans also performs site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in storm water runoff in the Los Angeles Area Puddingstone Reservoir watershed. • A major source of chlordane, DDT, and dieldrin impairments in the Los Angeles Area Puddingstone Reservoir watershed is due to historical loading from the pollutants adhering to sediment. As an additional mitigation measure, Caltrans reduces the sediment transport of chlordane, DDTs, and dieldrin by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Los Angeles Area Puddingstone Reservoir watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
PCBs	<ul style="list-style-type: none"> • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the Los Angeles Area Puddingstone Reservoir watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCBs WLAs in the Los Angeles Area Puddingstone Reservoir watershed. • Toxic pollutants have a high affinity for adherence to fine sediment. A major source of PCB impairments in the Los Angeles Area Puddingstone Reservoir watershed is due to historical loading from the pollutants adhering to sediment. Therefore, the appropriate control measures for toxic pollutants are to control erosion and prevent or minimize the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Los Angeles Area Puddingstone Reservoir watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> • Caltrans implements and maintains structural BMPs to mitigate sediment in the Los Angeles Area Puddingstone Reservoir watershed, including biofiltration strips, biofiltration swales, and design pollution prevention infiltration area. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Two SHOPP projects (PID, PAED, and/or PS&E) are planned in the Los Angeles Area Puddingstone Reservoir that will include treatment BMPs.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

Los Angeles Area Lakes, Puddingstone Reservoir Nitrogen, Phosphorus, Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Polychlorinated Biphenyls (PCBs), and Mercury TMDL

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	3
Biofiltration Swale	2
DPP Infiltration Area (DPPIA)	1
Other	1
Total	7

Existing Non-Structural BMPs¹⁰

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Source: Permit Attachment F.

**Los Angeles Area Lakes, Puddingstone Reservoir Nitrogen, Phosphorus,
Chlordane, Dichlorodiphenyltrichloroethane (DDT), Dieldrin,
Polychlorinated Biphenyls (PCBs), and Mercury TMDL**

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Los Angeles Area Lakes, Lake Sherwood Mercury TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
Los Angeles	Los Angeles Area Lakes, Lake Sherwood	Mercury	D5, D5.1, D5.2, D5.4, and D5.10

General Watershed Description²

Six subwatersheds comprise the total drainage area (10,792 acres) to Lake Sherwood, which ranges in elevation from 282 meters to 948 meters. TMDL subwatershed boundaries for Lake Sherwood were primarily based on a subwatershed boundary dataset maintained by the county of Los Angeles, which includes the portions of the subwatersheds that intersect with Ventura County. Lake Sherwood is located in the Santa Monica Bay Basin between Hidden Valley Wash and Potrero Canyon Creek in Ventura County. The lake was created in 1904 from the construction of a dam on the east side of the lake. In total, the private lake contains three islands, covers approximately 213 acres and reaches a maximum depth of 30 feet (USEPA, 2003). The lake is primarily fed by watershed runoff but also contains natural springs. Water loss occurs predominantly through evaporation; however, the lake does fill to capacity and discharge to Potrero Canyon Creek during most winters. The lake was drained for two years during the early 1980s and refilled during 1986 and 1987.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 182 for Reach 1, 240 for Reach 2, 241 for Reach 3, and 242 for Reach 4

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency *Los Angeles Lakes TMDLs*, March 2012.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Los Angeles Area Lakes, Lake Sherwood Mercury TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the best management practices (BMPs) and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/ Pesticides/ Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • BMPs also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following BMP options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMP projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of options above.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	10,792	4	0.04%	Mercury	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Dry-Weather Watershed WLA
Mercury	Carlisle Canyon Subwatershed = 0.014 g/year

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A

Los Angeles Area Lakes, Lake Sherwood Mercury TMDL

TMDL Implementation Schedule

- Start Date⁶: March 26, 2012
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Mercury	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the mercury WLA in the Los Angeles Area Lake Sherwood watershed. Caltrans controls the discharge of mercury through the control of sediment. Caltrans implements appropriate control measures to reduce the discharge of mercury, such as physical structures that prevent contaminated runoff from reaching receiving waters. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Los Angeles Area Lake Sherwood watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Los Angeles Area Lake Sherwood watershed that will include treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs¹¹

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater

⁶ U.S. EPA established the TMDL on March 26, 2012. An implementation schedule was not included; therefore, the final compliance deadline was March 26, 2012.

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Los Angeles Area Lakes, Lake Sherwood Mercury TMDL

pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program to minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Los Angeles River Trash TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Los Angeles River	Trash	D5, D5.1, D5.2, D5.9 and D5.10

General Watershed Description²

The Los Angeles River flows 51 miles from the western end of the San Fernando Valley to the Queensway Bay and Pacific Ocean at Long Beach. The headwaters are at the confluence of Arroyo Calabasas and Bell Creek. Arroyo Calabasas drains Woodland Hills, Calabasas, and Hidden Hills in the Santa Monica Mountains. Bell Creek drains the Simi Hills and receives flows from Chatsworth Creek. From the confluence of Arroyo Calabasas and Bell Creek, the Los Angeles River flows east through the southern portion of the San Fernando Valley, bends around the Hollywood Hills before it turns south onto the broad coastal plain of the Los Angeles Basin, eventually discharging into Queensway Bay and thence into San Pedro Bay West of Long Beach Harbor. Together with its several major tributaries, notably the Tujunga Wash, Burbank Western Channel, Arroyo Seco, Rio Hondo, and Compton Creek, the Los Angeles River drains an area of about 834 square miles. Of this area, the incorporated cities and unincorporated portion of Los Angeles County comprise 599 square miles. The remaining acreage consists of the Los Angeles National Forest and other uses. In the San Fernando Valley, the river flows east for approximately 16 miles along the base of the Santa Monica Mountains. Most of the Los Angeles River channel was lined with concrete between 1935 and 1959 for flood control purposes. This reach is lined in concrete except for a section of the river with a soft bottom at the Sepulveda Flood Control Basin. The Sepulveda Basin is a 2,150-acre open space, located upstream of the Sepulveda Dam. It is designed to collect flood waters during major storms. Because the area is periodically inundated, it remains in natural or semi-natural conditions and supports a variety of low-intensity uses. The US Army Corps of Engineers owns the entire basin and leases most of the area to the City of Los Angeles Department of Recreation and Parks, which has developed a multi-use recreational area that includes a golf course, playing fields, hiking trails, and bicycle paths.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	353.65
2015-2016	173.35
2016-2017	29.96
2018-2019	13.9
2019-2020	14.60
2020-2021	17.41
2021-2022	27.60

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board, Los Angeles Region, *Trash Total Maximum Daily Loads for the Los Angeles Watershed* (August 9, 2007).

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Los Angeles River Trash TMDL

accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 10 for Reach 2, 19 for Reach 1, 21 for Reach 4, 24 for Reach 5, 25 for Reach 3, 27 for Reach 7, 28 for Reach 11, 29 for Reach 6, 30 for Reach 10, 37 for reach 8, 38 for Reach 9, 39 for Reach 13, 40 for Reach 14 and 42 for Reach 12

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads (Permit Attachment D Section 5.9)	Caltrans implements: <ul style="list-style-type: none"> • Trash control measures by installing, operating, and maintaining full capture systems or other treatment or institution controls for storm drains that capture runoff from significant trash generating areas. • Trash reduction allocations equivalent to 59,421 gallons per year for the Los Angeles River Watershed.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section 5.10)	Caltrans complies with BMPs implementation requirements through one of the following options: <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects with other entities and agencies, which contribute to the construction and maintenance of regional structural BMP projects that will treat applicable TMDL pollutants for compliance with waste load locations; or • Implement BMPs in its right-of-way to meet the TMDL allocations; or • Implement a combination of options above, provided that Caltrans complies with the relevant TMDL.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	533,855	6,091	1.1%	Trash	Yes	e. Mass-Based Waste Load

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Los Angeles River Trash TMDL

WLAs⁵

Pollutant	Watershed WLA
Trash	Caltrans' baseline WLA is 59,421 gallons per year and 66,566 pounds per year. The WLA is zero trash.

TMDL Implementation Schedule

- Start Date: December 24, 2008
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Trash	<ul style="list-style-type: none"> • Caltrans uses several types of trash removal devices, including the construction of Austin sand filters, Delaware sand filters, and detention basins which have a full capture efficiency. Additionally, Caltrans employs non-structural BMPs in the Los Angeles River Watershed to mitigate trash including sweeping, drain inlet cleaning, trash collection, storm drain stenciling, slope/soil stabilization, covered trash bins, public education, and public participation. Moreover, Caltrans has increased the frequency of the Adopt-A-Highway program as well as increased sweeping and litter pick-up frequency in the Los Angeles River watershed to treat beyond the minimum permit requirements. Caltrans also collaborates with the California Public Education Campaign to further engage in public education. Programs such as the Caltrans Parolee Program, California Conservation Corps, District Crew Collection, and Storm Drain Maintenance activities also help remove trash from the Caltrans ROW. • According to the State Water Resources Control Board's <i>Annual Performance Report</i>, water quality conditions are improving in the Los Angeles Watershed and trash abatement continues to increase. Additionally, the report states that qualitative observations have shown a significant reduction of trash since adoption of the TMDL. A significant improvement in reducing trash has occurred, but more work is needed. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Over twenty SHOPP projects (PID, PAED, and/or PS&E) are planned in the Los Angeles River watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	69
Delaware Sand Filter	3
Detention Basin	9
Gross Solids Removal Device (GSRD) – Inclined Screen	196
GSRD – Linear Radial	41
Infiltration Basin	11
Other BMP	9
Total	338

⁵ Source: Permit Attachment A

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in December 2015.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Los Angeles River Trash TMDL

Existing Non-Structural BMPs^{10,11}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff to volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Adopt-A-Highway Program** – The Adopt-A-Highway Program provides an avenue for individuals, organizations, and businesses to help maintain sections of roadside for various activities, including litter removal, within California's State Highway System. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 3,758 cubic yards of trash through the Adopt-A-Highway Program.
- **SPP Litter Control Program** – SPP Litter Control are subcontractors that include Back to Work programs, Probationers/Parolees, Veteran's Outreach Program, Homeless, At-Risk Youth, Court Referrals, Inmates, Work Release/Work Furlough, and California Conservation Corps. These are funded through State Highway Account. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 33,146 cubic yards of trash through this program.
- **District Crew Collection** – Caltrans crews conduct manual cleanup of trash and litter from the ROW. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 36,750 cubic yards of trash.
- **Slope/Soil Stabilization Area** – Soil stabilization methods are installed to stabilize areas disturbed by grading operations, to reduce loss of soil due to water or wind, and to prevent water pollution.
- **Storm Drain Maintenance** – Caltrans cleans the storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and by Vactor trucks. Caltrans District 7 performs additional inspection and cleaning through its Enhanced Annual Storm Drain Inlet Inspection and Cleaning Program in metropolitan areas. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 60 cubic yards of trash from Storm Drain Maintenance activities.
- **Clean California** – Clean California is providing funding for transformative state and local beautification projects in communities across California, with a focus on historically underserved areas, that will improve the aesthetics of public spaces, facilitate community pride, and reduce trash regeneration. Maintenance personnel constantly monitor their areas of responsibility to detect and report deficiencies

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Sources: Caltrans *Annual Report* Fiscal Year 2021-2022.

Los Angeles River Trash TMDL

to, or needs of, the highway system. To ensure the overall levels of maintenance are pursued, periodic inspection trips by key personnel are required. Maintenance supervisors travel all highways in the section, including ramps and collector systems, at least once a week to observe overall conditions and detect deficiencies. Known or potential problem areas require more frequent inspections. Weekly inspections are an integral part of the supervisor's work planning and scheduling activities. The Area Superintendent observes overall conditions to assure conformance with the established maintenance levels. Maintenance personnel utilize their continuous driving visual assessments in their areas of responsibility along with the quarterly LOS scores to adaptively manage the deployment of resources to maximize litter production.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Los Angeles River Trash TMDL

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Los Angeles River and Tributaries Metals TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Los Angeles River and Tributaries	Metals	D5, D5.1, D5.2, D5.4 and D5.10

General Watershed Description²

The Los Angeles River flows 51 miles from the western end of the San Fernando Valley to the Queensway Bay and Pacific Ocean at Long Beach. The headwaters are at the confluence of Arroyo Calabasas and Bell Creek. Arroyo Calabasas drains Woodland Hills, Calabasas, and Hidden Hills in the Santa Monica Mountains. Bell Creek drains the Simi Hills and receives flows from Chatsworth Creek. From the confluence of Arroyo Calabasas and Bell Creek, the Los Angeles River flows east through the southern portion of the San Fernando Valley, bends around the Hollywood Hills before it turns south onto the broad coastal plain of the Los Angeles Basin, eventually discharging into Queensway Bay and thence into San Pedro Bay West of Long Beach Harbor. Together with its several major tributaries, notably the Tujunga Wash, Burbank Western Channel, Arroyo Seco, Rio Hondo, and Compton Creek, the Los Angeles River drains an area of about 834 square miles. Of this area, the incorporated cities and unincorporated portion of Los Angeles County comprise 599 square miles. The remaining acreage consists of the Los Angeles National Forest and other uses. In the San Fernando Valley, the river flows east for approximately 16 miles along the base of the Santa Monica Mountains. Most of the Los Angeles River channel was lined with concrete between 1935 and 1959 for flood control purposes. This reach is lined in concrete except for a section of the river with a soft bottom at the Sepulveda Flood Control Basin. The Sepulveda Basin is a 2,150-acre open space, located upstream of the Sepulveda Dam. It is designed to collect flood waters during major storms. Because the area is periodically inundated, it remains in natural or semi-natural conditions and supports a variety of low intensity uses. The US Army Corps of Engineers owns the entire basin and leases most of the area to the City of Los Angeles Department of Recreation and Parks, which has developed a multi-use recreational area that includes a golf course, playing fields, hiking trails, and bicycle paths.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	91.91
2015-2016	263.40
2016-2017	93.13
2017-2018	13.60
2018-2019	15.50
2019-2020	92.20
2020-2021	35.45
2021-2022	21.8

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board, Los Angeles Region, *Trash Total Maximum Daily Loads for the Los Angeles Watershed*, August 9, 2007.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Los Angeles River and Tributaries Metals TMDL

for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 10 for Reach 2, 19 for Reach 1, 21 for Reach 4, 24 for Reach 5, 25 for Reach 3, 27 for Reach 7, 28 for Reach 11, 29 for Reach 6, 30 for Reach 10, 37 for reach 8, 38 for Reach 9, 39 for Reach 13, 40 for Reach 14 and 42 for Reach 12

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1) ⁴	Caltrans participates in the <i>Long Beach Municipal Urban Stormwater Treatment Project</i> through financial contributions. Additionally, Caltrans works with local MS4s and partners in the watershed to look for other cooperative partnership projects or regional TMDL compliance project opportunities that may be outside Caltrans ROW.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/ Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • BMPs also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section 5.10)	<p>Caltrans complies with BMPs implementation requirements through one of the following options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with waste load locations; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of options above, provided that Caltrans complies with the relevant TMDL.

⁴ Source: District 7 Current/Completed CIAs Summary in TMDL Compliance Plan Appendix F.

Los Angeles River and Tributaries Metals TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	533,855	6,091	1.1%	Metals	Yes	b. Receiving Water Quality Monitoring and/or e. Mass-Based Waste Load

WLAs⁶

Final Mass-based Dry-Weather WLAs for Stormwater Systems as Total Recoverable Metals (kilograms per day)

Waterbody	Critical Flow (cubic feet per second)	Copper	Lead	Zinc
Los Angeles River Reach 6	7.20	0.53 x WER	0.33 x WER	-
Los Angeles River Reach 5	0.75	0.05 x WER	0.03 x WER	-
Los Angeles River Reach 4	5.13	0.32 x WER	0.12 x WER	-
Los Angeles River Reach 3	4.84	0.06 x WER	0.03 x WER	-
Los Angeles River Reach 2	3.86	0.13 x WER	0.07 x WER	-
Los Angeles River Reach 1	2.58	0.14 x WER	0.07 x WER	-
Bell Creek	0.79	0.06 x WER	0.04 x WER	-
Tujunga Wash	0.03	0.001 x WER	0.0002 x WER	-
Burbank Channel	3.3	0.15 x WER	0.07 x WER	-
Verdugo Wash	3.3	0.18 x WER	0.10 x WER	-
Arroyo Seco	0.25	0.01 x WER	0.01 x WER	-
Rio Hondo Reach 1	0.50	0.01 x WER	0.006 x WER	0.16 x WER
Compton Creek	0.90	0.04 x WER	0.02 x WER	-

Table Legend: WER = water effect ratio is equal to 1 (unitless)

Final Concentration-Based Reach-Specific Numeric Targets for Total Recoverable Metals (micrograms per liter)

Waterbody	Copper	Lead	Zinc
Los Angeles River Reach 6	WER ¹ X 30	WER ¹ X 19	-
Los Angeles River Reach 5	WER ¹ X 30	WER ¹ X 19	-
Los Angeles River Reach 4	WER ² X 26	WER ¹ X 10	-
Los Angeles River Reach 3 above Los Angeles-Glendale Water Reclamation Plan	WER ² X 23	WER ¹ X 12	-
Angeles River Reach 3 below Los Angeles-Glendale Water Reclamation Plan	WER ² X 26	WER ¹ X 12	-

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Source: Permit Attachment A

Los Angeles River and Tributaries Metals TMDL

Waterbody	Copper	Lead	Zinc
Los Angeles River Reach 2	WER ¹ X 22	WER ¹ X 11	-
Los Angeles River Reach 1	WER ² X 23	WER ¹ X 12	-
Bell Creek	WER ¹ X 30	WER ¹ X 19	-
Burbank Western Channel (above Water Reclamation Plant)	WER ² X 26	WER ¹ X 14	-
Burbank Western Channel (below Water Reclamation Plant)	WER ² X 19	WER ¹ X 9.1	-
Verdugo Wash	WER ² X 23	WER ¹ X 12	-
Compton Creek	WER ¹ X 19	WER ¹ X 8.9	-
Arroyo Seco	WER ² X 22	WER ¹ X 11	-
Rio Hondo Reach 1	WER ¹ X 13	WER ¹ X 5.0	WER ¹ X 131
Monrovia Canyon	-	WER ¹ X 8.2	-

Table Notes:

¹ Water effects ratio is equal to 1 (unit less)

² Water effects ratio for this constituent in this reach is 3.96

Table Legend: WER = water effect ratio

Final Mass-based Wet-Weather WLA, Total Recoverable Metals

Metal	WLA in Kilograms Per Day
Cadmium	(WER X 5.3×10^{-11} x daily volume in liters) – 0.03
Copper	(WER X 2.9×10^{-10} x daily volume in liters) – 0.2
Lead	(WER X 1.06×10^{-09} x daily volume in liters) – 0.07
Zinc	(WER X 2.7×10^{-09} x daily volume in liters) – 1.6

TMDL Implementation Schedule

- Start Date: December 12, 2016
- Final Compliance Date per TSO⁷: December 31, 2034

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Los Angeles River and Tributaries Metals TMDL

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Metals	<ul style="list-style-type: none"> • Caltrans is in compliance with metals WLAs for dry-weather in the Los Angeles River and Tributaries watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. • Caltrans is making progress towards compliance with metals wet-weather WLAs in the Los Angeles River and Tributaries watershed. Caltrans implements appropriate control measures to reduce the discharge of dissolved fraction metals, such as physical structures that prevent contaminated runoff from reaching receiving waters. • As an additional mitigation measure, Caltrans reduces the sediment transport of metals and selenium by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Los Angeles River and Tributaries watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans participates and funds cooperative implementation efforts within the Los Angeles River and Tributaries watershed in order to further mitigate the discharge of metals into the watershed. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Over twenty SHOPP projects (PID, PAED, and/or PS&E) are planned in the Los Angeles River and Tributaries that will include treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Austin Sand Filter	69
Biofiltration Strip	47
Biofiltration Swale	312
Delaware Sand Filter	3
Detention Basin	10
DPP Infiltration Area (DPPIA)	71
Infiltration Basin	11
Infiltration Trench	4
Other BMP	9
Total	536

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in October 2016.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Los Angeles River and Tributaries Metals TMDL

Existing Non-Structural BMPs^{11,12}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program to minimize sediment discharge to the watershed bodies.

Monitoring¹³

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹² Sources: Caltrans *Annual Report Fiscal Year 2021-2022*.

¹³ Source: Permit Attachment F.

Los Angeles River Watershed Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Los Angeles River	Bacteria	D3.2, D3.3, D5, D5.1, D5.2, D5.6 and D5.10

General Watershed Description²

The Los Angeles River flows 51 miles from the western end of the San Fernando Valley to the Queensway Bay and Pacific Ocean at Long Beach. The headwaters are at the confluence of Arroyo Calabasas and Bell Creek. Arroyo Calabasas drains Woodland Hills, Calabasas, and Hidden Hills in the Santa Monica Mountains. Bell Creek drains the Simi Hills and receives flows from Chatsworth Creek. From the confluence of Arroyo Calabasas and Bell Creek, the Los Angeles River flows east through the southern portion of the San Fernando Valley, bends around the Hollywood Hills before it turns south onto the broad coastal plain of the Los Angeles Basin, eventually discharging into Queensway Bay and thence into San Pedro Bay West of Long Beach Harbor. Together with its several major tributaries, notably the Tujunga Wash, Burbank Western Channel, Arroyo Seco, Rio Hondo, and Compton Creek, the Los Angeles River drains an area of about 834 square miles. Of this area, the incorporated cities and unincorporated portion of Los Angeles County comprise 599 square miles. The remaining acreage consists of the Los Angeles National Forest and other uses. In the San Fernando Valley, the river flows east for approximately 16 miles along the base of the Santa Monica Mountains. Most of the Los Angeles River channel was lined with concrete between 1935 and 1959 for flood control purposes. This reach is lined in concrete except for a section of the river with a soft bottom at the Sepulveda Flood Control Basin. The Sepulveda Basin is a 2,150-acre open space, located upstream of the Sepulveda Dam. It is designed to collect flood waters during major storms. Because the area is periodically inundated, it remains in natural or semi-natural conditions and supports a variety of low intensity uses. The US Army Corps of Engineers owns the entire basin and leases most of the area to the City of Los Angeles Department of Recreation and Parks, which has developed a multi-use recreational area that includes a golf course, playing fields, hiking trails, and bicycle paths.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	91.91
2015-2016	191.06
2016-2017	64.87
2017-2018	10.20
2018-2019	13.50
2019-2020	53.40
2020-2021	35.45
2021-2022	21.80

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board, Los Angeles Region, *Trash Total Maximum Daily Loads for the Los Angeles Watershed*, August 9, 2007.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Los Angeles River Watershed Bacteria TMDL

for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 10 for Reach 2, 19 for Reach 1, 21 for Reach 4, 24 for Reach 5, 25 for Reach 3, 27 for Reach 7, 28 for Reach 11, 29 for Reach 6, 630 for Reach 10, 37 for reach 8, 38 for Reach 9, 39 for Reach 13, 40 for Reach 14 and 42 for Reach 12

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section 3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance Plan (D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Temperature Total Maximum Daily Loads (Permit Attachment D Section 5.6)	Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. <ul style="list-style-type: none"> • Because vegetation removal may also increase surface water temperatures, Caltrans: 1) preserves existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases; 2) provides effective shade near receiving waters susceptible to temperature increases; and 3) maintains site potential effective shade near receiving waters susceptible to temperature increases.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section 5.10)	Caltrans complies with BMPs implementation requirements through one of the following options: <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with waste load locations; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of the options above, provided that Caltrans complies with the relevant TMDL.

Los Angeles River Watershed Bacteria TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	533,855	6,091	1.1%	Bacteria	No	e. Mass-Based Waste Load and/or h. TMDL-Specific Demonstrations.

WLAs⁵

Allowable Number of Exceedance Day	Daily Sampling	Weekly Sampling
Dry Weather	5	1
Non-High Flow Suspension Waterbodies Wet Weather	15	2
High Flow Suspension Waterbodies Wet Weather	10 (not including High Flow Suspension days)	2 (not including High Flow Suspension days)

TMDL Implementation Schedule

- Start Date: March 23, 2012
- The final compliance deadline ranges from September 23, 2020, to March 23, 2037, depending on the segment of the waterbody, as shown below:

Phase	Segment	Implementation Action	Compliance Date
Dry Weather, First Phase	B (Upper and Middle Reach 2 – Figueroa Street to Rosecrans Avenue)	Achieve final WLA or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	March 23, 2022
Dry Weather, Second Phase (if necessary) Load Reduction Strategy Only	B (Upper and Middle Reach 2 – Figueroa Street to Rosecrans Avenue)	Achieve final WLAs in Segment B or demonstrate that non-compliance is only due to upstream contributions and submit report to Regional Board	September 23, 2028
Dry Weather, First Phase	B Tributaries (Rio Hondo and Arroyo Seco)	Achieve final WLA or demonstrate that non-compliance is only due to upstream contributions and submit report to Regional Board	September 23, 2023
Second Phase (if necessary) – Load Reduction Strategy Only	B Tributaries (Rio Hondo and Arroyo Seco)	Achieve final WLAs Segment B tributaries or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	March 23, 2030
First Phase, Dry Weather	A (lower Reach 2 and Reach 1 – Rosecrans Avenue to Willow Street)	Achieve final WLA or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	March 23, 2024

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A

Los Angeles River Watershed Bacteria TMDL

Phase	Segment	Implementation Action	Compliance Date
Second Phase, Dry Weather	A (Lower Reach 2 and Reach 1 – Rosecrans Avenue to Willow Street)	Achieve final WLA in Segment A or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	September 23, 2031
Dry Weather, First Phase	A Tributary (Compton Creek)	Achieve interim (or final) WLA and submit report to Regional Board	September 23, 2025
Dry Weather, First Phase	A Tributary (Compton Creek)	Achieve final WLA or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	September 23, 2025
Dry Weather, Second Phase (if necessary)	A tributary (Load Reduction Strategy only)	Achieve final WLAs in Segment A tributary or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	March 23, 2032
Dry Weather, First Phase	E (Reach 6 – Los Angeles River Headwaters at the confluence with Bell Creek and Calabasas Creek to Balboa Boulevard)	Achieve final WLA or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	March 23, 2025
Dry Weather, Second Phase, Load Reduction Strategy (If Necessary)	E (Reach 6 – Los Angeles River Headwaters at the Confluence with Bell Creek and Calabasas Creek to Balboa Boulevard)	Achieve final WLAs in Segment E or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	September 23, 2031
Dry Weather, First Phase	E Tributaries (Dry Canyon Creek, McCoy Creek, Bell Creek, and Aliso Canyon Wash)	Achieve final WLA or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	March 23, 2029
Dry Weather, Second Phase (If Necessary), Load Reduction Strategy Only	E tributaries (Dry Canyon Creek, McCoy Creek, Bell Creek, and Aliso Canyon Wash)	Achieve final WLAs in Segment E tributaries or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	September 23, 2035
Dry Weather, First Phase	C (Lower Reach 4 and Reach 3 – Tujunga Avenue to Figueroa Street), C Tributaries (Tujunga Wash, Burbank Western Channel, and Verdugo Wash), D (Reach 5 and Upper Reach 4 – Balboa Boulevard to Tujunga Avenue), and D Tributaries (Bull Creek)	Achieve final WLA or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	September 23, 2030

Los Angeles River Watershed Bacteria TMDL

Phase	Segment	Implementation Action	Compliance Date
Dry Weather, Second Phase (If Necessary), Load Reduction Strategy Only	C (Lower Reach 4 and Reach 3 – Tujunga Avenue to Figueroa Street), C Tributaries (Tujunga Wash, Burbank Western Channel, and Verdugo Wash), D (Reach 5 and Upper Reach 4 – Balboa Boulevard to Tujunga Avenue), and D Tributaries (Bull Creek)	Achieve final WLAs in Segment C, Segment C tributaries, Segment D, and Segment D tributaries or demonstrate that non-compliance is due to upstream contributions and submit report to Regional Board	March 23, 2037
Dry Weather	All Los Angeles River Segments and Tributaries	Achieve final wet-weather WLAs and submit report to Regional Board demonstrating wet weather and dry weather compliance	March 23, 2037

Plan to Achieve WLAs^{6,7}

Pollutant	Strategies to Achieve WLAs
Bacteria	<ul style="list-style-type: none"> Caltrans minimizes wet-weather discharges from its ROW into receiving waterbodies impaired for bacteria by implementing treatment BMPs and source control/preemptive activities such as street sweeping, clean-up of illegal dumping, prohibition of non-storm water discharges, and public education on littering as described above. Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Over twenty SHOPP projects (PID, PAED, and/or PS&E) are planned in Los Angeles River watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
Biofiltration Strip	45
Biofiltration Swale	272
Detention Basin	8
DPP Infiltration Area (DPPIA)	61
Infiltration Basin	11
Infiltration Trench	3
Other BMP	9
Total	409

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Los Angeles River Watershed Bacteria TMDL

Existing Non-Structural BMPs^{9,10}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹⁰ Sources: Caltrans *Annual Report* Fiscal Year 2021-2022.

¹¹ Source: Permit Attachment F.

Los Cerritos Channel Metals (Copper, Lead, and Zinc) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Los Cerritos Channel	Metals	D5, D5.1, D5.2, D5.4, and D5.10

General Watershed Description²

Los Cerritos Channel is an open channel situated within the cities of Long Beach, Lakewood, Bellflower, Paramount, Downey, Signal Hill and Cerritos, as well as a small portion of Los Angeles County. The Channel is a concrete-lined conduit for freshwater until approximately Anaheim Road, where the Channel's tidal prism begins. From there it connects with Alamitos Bay through the Marine Stadium. Wetlands connect to the Channel a short distance from its lower end. The wetlands and portion of the Channel near the wetlands constitute an overwintering site for a great diversity of birds (up to 50 species). An endangered bird species, the Belding's Savannah Sparrow, may nest there and an area adjacent to the wetlands is a historic least tern colony site. One small marina is located in the Channel which is used by rowing teams and is a popular fishing area. Los Cerritos Channel was structured to quickly convey stormwater to its terminus in Alamitos Bay. Therefore, the relationship between rain events in the watershed and increased flow in the Channel is strong and immediate.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2016-2017	35.6
2019-2020	5.3

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 41 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: U.S. Environmental Protection Agency Region IX *Los Cerritos Channel Total Maximum Daily Loads* (March 2010).

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Los Cerritos Channel Metals (Copper, Lead, and Zinc) TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1) ⁴	Caltrans participates in the <i>Caruthers Park (Mayfair High School), Bolivar Park, Mayfair Park, and Long Beach Airport Phase 1 & 2 Projects</i> . Additionally, Caltrans works with local MS4s and partners in the watershed to look for other cooperative partnership projects or regional TMDL compliance project opportunities that may be outside Caltrans ROW.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • BMPs also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section 5.10)	Caltrans complies with BMPs implementation requirements through one of the following options: <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with waste load locations; or • Implement BMPs in its right-of-way to meet the TMDL allocations; or • Implement a combination of options above, provided that Caltrans complies with the relevant TMDL.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	17,725	175	0.99%	Metals (Copper, Lead, and Zinc)	Yes	e. Mass-Based Waste Load

⁴ Source: District 7 Current/Completed CIAs Summary in TMDL Compliance Plan Appendix F.

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Los Cerritos Channel Metals (Copper, Lead, and Zinc) TMDL

WLAs⁶

Pollutant	WLA
Copper (dry weather flow only)	0.070 x daily storm volume x 10 ⁻⁶
Lead (wet weather and dry weather)	0.397 x daily storm volume x 10 ⁻⁶
Zinc (wet weather and dry weather)	0.680 x daily storm volume x 10 ⁻⁶

TMDL Implementation Schedule

- Start Date: March 17, 2010
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Metals (Copper, Lead, and Zinc)	<ul style="list-style-type: none"> • Caltrans is in compliance with metals (Cu, Pb, Zn) WLAs for dry-weather in the Los Cerritos Channel watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. • Caltrans implements appropriate control measures to reduce the discharge of dissolved fraction metals, such as physical structures that prevent contaminated runoff from reaching receiving waters. • As an additional mitigation measure, Caltrans reduces the sediment transport of metals by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Los Cerritos Channel watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Austin Sand Filter	5
Biofiltration Swale	16
Detention Basin	2
Total	23

⁶ Source: Permit Attachment A

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in December 2015.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Los Cerritos Channel Metals (Copper, Lead, and Zinc) TMDL

Existing Non-Structural BMPs¹¹

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program to minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹² Source: Permit Attachment F.

Machado Lake Eutrophic Algae, Ammonia and Odors TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Machado Lake	Eutrophic Algae, Ammonia and Odors	D5, D5.1, D5.2, D5.3 and 5.10

General Watershed Description²

Machado Lake is located within the Machado Lake subwatershed which is approximately 20 square miles and positioned within the larger 110-square mile Dominguez Channel Watershed Management Area. The watershed is located in southern Los Angeles County and includes all or a portion of the following communities: Los Angeles, Torrance, Carson, Lomita, Rolling Hills, Rolling Hills Estates, Ranch Palos Verdes, Redondo Beach, Palos Verdes Estates, and Los Angeles County. The dominant land use in the Machado Lake Watershed is high-density single family residential, accounting for approximately 45 percent of the land use. Industrial, vacant, retail/commercial, multi-family residential, transportation, and educational institutions each account for five to seven percent of the land use, while “all other” accounts for the remaining 23 percent. Machado Lake is a receiving body of urban and stormwater runoff from a network of storm drains throughout the watershed.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2018-2019	16.18

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 17 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1) ⁴	Caltrans participates in the <i>Carriage Crest Park Project</i> through financial contributions. Additionally, Caltrans works with local MS4s and partners in the watershed to look for other cooperative partnership projects or regional TMDL compliance project opportunities that may be outside Caltrans ROW.

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board, Los Angeles Region *Machado Lake Pesticides and PCBs TMDL* (September 2010).

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

⁴ Source: District 7 Current/Completed CIAs Summary in TMDL Compliance Plan Appendix F.

Machado Lake Eutrophic Algae, Ammonia and Odors TMDL

Reporting Requirement Permit Section	Summary of Activities
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation and Turbidity Total Maximum Daily Loads (Permit Attachment D Section D5.3)	Caltrans conducts ongoing assessments of the performance and effectiveness of a representative fraction of each type of Caltrans installed BMPs and control measures. Where an assessment indicates that BMPs and/or control measures are inadequate to achieve WLAs and other performance standards, Caltrans implements adaptive management, which are modifications and improvement of control measures and BMPs necessary for compliance all TMDL-related requirements.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section 5.10)	Caltrans complies with BMPs implementation requirements through one of the following options: <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with waste load locations; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of the options above, provided that Caltrans complies with the relevant TMDL.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	14,820	255	1.7%	Eutrophic, Algae, Ammonia, and Odors	Yes	e. Mass-Based Waste Load

WLAs⁶

Pollutant	Watershed WLA
Eutrophic, Algae, Ammonia, and Odors	Caltrans' specific WLA is 0.1 milligrams per liter for total phosphorus and 1.0 milligrams per liter or total nitrogen.

TMDL Implementation Schedule

- Start Date: March 11, 2009
- Final Compliance Date per TSO⁷: December 31, 2034

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Source: Permit Attachment A

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Machado Lake Eutrophic Algae, Ammonia and Odors TMDL

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Algae, Eutrophic Conditions, and Nutrients	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with algae, eutrophic conditions, and nutrient WLAs in the Machado Lake watershed. Caltrans controls the discharge of algae, eutrophic conditions, and nutrients through the control of sediment. Caltrans implements and maintains structural BMPs to mitigate sediment in the Machado Lake watershed. Additionally, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Machado Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Machado Lake watershed that includes treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
DPP Infiltration Area (DPPIA)	2
Biofiltration Swale	4
Total	6

Existing Non-Structural BMPs^{11,12}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹² Sources: Caltrans *Annual Report* Fiscal Year 2021-2022.

Machado Lake Eutrophic Algae, Ammonia and Odors TMDL

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹³

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹³ Source: Permit Attachment F.

Machado Lake Pesticides and Polychlorinated Biphenyls (PCBs) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
Los Angeles	Machado Lake	Pesticides and PCBs	D5, D5.1, D5.2, D5.4 and 5.10

General Watershed Description²

Machado Lake is located within the Machado Lake subwatershed which is approximately 20 square miles and positioned within the larger 110-square mile Dominguez Channel Watershed Management Area. The watershed is located in southern Los Angeles County and includes all or a portion of the following communities: Los Angeles, Torrance, Carson, Lomita, Rolling Hills, Rolling Hills Estates, Ranch Palos Verdes, Redondo Beach, Palos Verdes Estates, and Los Angeles County. The dominant land use in the Machado Lake Watershed is high-density single family residential, accounting for approximately 45 percent of the land use. Industrial, vacant, retail/commercial, multi-family residential, transportation, and educational institutions each account for five to seven percent of the land use, while “all other” accounts for the remaining 23 percent. Machado Lake is a receiving body of urban and stormwater runoff from a network of storm drains throughout the watershed.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2018-2019	16.18

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 17 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1) ⁴	Caltrans participates in the <i>Carriage Crest Park Project</i> through financial contributions. Additionally, Caltrans works with local MS4s and partners in the watershed to look for other cooperative partnership projects or regional TMDL compliance project opportunities that may be outside Caltrans ROW.

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board, Los Angeles Region *Machado Lake Pesticides and PCBs TMDL* (September 2010).

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

⁴ Source: District 7 Current/Completed CIAs Summary in TMDL Compliance Plan Appendix F.

Machado Lake Pesticides and Polychlorinated Biphenyls (PCBs) TMDL

Reporting Requirement Permit Section	Summary of Activities
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges. • Caltrans implements BMPs designed to prevent the discharge of sediment, including BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section 5.10)	<p>Caltrans complies with BMPs implementation requirements through one of the following options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with waste load locations; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of the options above, provided that Caltrans complies with the relevant TMDL.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	14,820	255	1.7%	Pesticides and PCBs	Yes	e. Mass-Based Waste Load

WLAs⁶

Pollutant	Watershed WLA as a 3-Year Averaging Period (microgram per kilogram dry weight)
Total PCBs	59.8
DDT (all congeners)	4.16
DDE (all congeners)	3.16
DDD (all congeners)	4.88
Total DDT	5.28
Total Chlordane	3.24
Dieldrin	1.9

Table Legend:

PCBs = polychlorinated biphenyls

DDT = dichlorodiphenyltrichloroethane

DDD = dichlorodiphenyldichloroethane

DDE = dichlorodiphenyldichloroethylene

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Source: Permit Attachment A

Machado Lake Pesticides and Polychlorinated Biphenyls (PCBs) TMDL

TMDL Implementation Schedule

- Start Date: March 20, 2012
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Pesticides and PCBs	<ul style="list-style-type: none"> • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the Machado Lake watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCBs WLAs in the Machado Lake watershed. • Although Caltrans does not use pesticides within its ROW, minimal usage of herbicides occurs within its ROW. • Caltrans implements BMPs designed to prevent the discharge of sediment, including BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Machado Lake Watershed that includes treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
DPP Infiltration Area (DPPIA)	2
Biofiltration Swale	4
Total	6

Existing Non-Structural BMPs^{11,12}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹² Sources: Caltrans *Annual Report* Fiscal Year 2021-2022.

Machado Lake Pesticides and Polychlorinated Biphenyls (PCBs) TMDL

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹³

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹³ Source: Permit Attachment F.

Machado Lake Trash TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Machado Lake	Trash	D5, D5.1, D5.2, and 5.9

General Watershed Description²

Machado Lake is located within the Machado Lake subwatershed which is approximately 20 square miles and positioned within the larger 110-square mile Dominguez Channel Watershed Management Area. The watershed is located in southern Los Angeles County and includes all or a portion of the following communities: Los Angeles, Torrance, Carson, Lomita, Rolling Hills, Rolling Hills Estates, Ranch Palos Verdes, Redondo Beach, Palos Verdes Estates, and Los Angeles County. The dominant land use in the Machado Lake Watershed is high-density single family residential, accounting for approximately 45 percent of the land use. Industrial, vacant, retail/commercial, multi-family residential, transportation, and educational institutions each account for five to seven percent of the land use, while “all other” accounts for the remaining 23 percent. Machado Lake is a receiving body of urban and stormwater runoff from a network of storm drains throughout the watershed.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2018-2019	1.14

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 17 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board, Los Angeles Region *Machado Lake Pesticides and PCBs TMDL* (September 2010).

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Machado Lake Trash TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads (Permit Attachment D Section 5.9)	Caltrans implements: <ul style="list-style-type: none"> • Trash control measures by installing, operating, and maintaining full capture systems or other treatment or institution controls for storm drains that capture runoff from significant trash generating areas. • Trash reduction allocations equivalent to 4,215.84 gallons per year for the Machado Lake Watershed.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	14,820	255	1.7%	Trash	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Watershed WLA
Trash	Caltrans' baseline WLA is 4,215.84 gallons per year. The WLA is zero trash.

TMDL Implementation Schedule

- Start Date: February 27, 2008
- Final Compliance Date per TSO⁶: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A.

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Machado Lake Trash TMDL

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Trash	<ul style="list-style-type: none"> • Caltrans uses several types of trash removal devices, gross solids removal devices, which have a full capture efficiency. Additionally, Caltrans employs non-structural BMPs in the Machado Lake Watershed to mitigate trash including sweeping, drain inlet cleaning, trash collection, storm drain stenciling, slope/soil stabilization, covered trash bins, public education, and public participation. Moreover, Caltrans has increased the frequency of the Adopt-A-Highway program as well as increased sweeping and litter pick-up frequency in the Machado Lake watershed to treat beyond the minimum permit requirements. Caltrans also collaborates with the California Public Education Campaign to further engage in public education. Programs such as the Caltrans Parolee Program, California Conservation Corps, District Crew Collection, and Storm Drain Maintenance activities also help remove trash from the Caltrans ROW. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Machado Lake Watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Gross Solids Removal Device - Inclined Screen	1
Total	1

Existing Non-Structural BMPs^{10,11}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff to volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Sources: Caltrans *Annual Report* Fiscal Year 2021-2022.

Machado Lake Trash TMDL

the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Adopt-A-Highway Program** – The Adopt-A-Highway Program provides an avenue for individuals, organizations, and businesses to help maintain sections of roadside for various activities, including litter removal, within California's State Highway System. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 3,758 cubic yards of trash through the Adopt-A-Highway Program.
- **SPP Litter Control Program** – SPP Litter Control are subcontractors that include Back to Work programs, Probationers/Parolees, Veteran's Outreach Program, Homeless, At-Risk Youth, Court Referrals, Inmates, Work Release/Work Furlough, and California Conservation Corps. These are funded through State Highway Account. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 33,146 cubic yards of trash through this program.
- **District Crew Collection** – Caltrans crews conduct manual cleanup of trash and litter from the ROW. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 36,750 cubic yards of trash.
- **Slope/Soil Stabilization Area** – Soil stabilization methods are installed to stabilize areas disturbed by grading operations, to reduce loss of soil due to water or wind, and to prevent water pollution.
- **Storm Drain Maintenance** – Caltrans cleans the storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and by Vactor trucks. Caltrans District 7 performs additional inspection and cleaning through its Enhanced Annual Storm Drain Inlet Inspection and Cleaning Program in metropolitan areas. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 60 cubic yards of trash from Storm Drain Maintenance activities.
- **Clean California** – Clean California is providing funding for transformative state and local beautification projects in communities across California, with a focus on historically underserved areas, that will improve the aesthetics of public spaces, facilitate community pride, and reduce trash regeneration. Maintenance personnel constantly monitor their areas of responsibility to detect and report deficiencies to, or needs of, the highway system. To ensure the overall levels of maintenance are pursued, periodic inspection trips by key personnel are required. Maintenance supervisors travel all highways in the section, including ramps and collector systems, at least once a week to observe overall conditions and detect deficiencies. Known or potential problem areas require more frequent inspections. Weekly inspections are an integral part of the supervisor's work planning and scheduling activities. The Area Superintendent observes overall conditions to assure conformance with the established maintenance levels. Maintenance personnel utilize their continuous driving visual assessments in their areas of responsibility along with the quarterly LOS scores to adaptively manage the deployment of resources to maximize litter production.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Malibu Creek and Lagoon Sedimentation and Nutrients TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Malibu Creek and Lagoon	Sedimentation and Nutrients	D5, D5.1, D5.2, D5.3 and D5.6

General Watershed Description²

The Malibu Creek Watershed is located roughly 35 miles west of Los Angeles. Approximately two-thirds of the watershed is in northwestern Los Angeles County, and the remaining third is in southeastern Ventura County. The watershed contains about 69,900 acres and drains a 109-square mile area. Malibu Creek drains into Malibu Lagoon, and then into Santa Monica Bay. The Malibu Creek Watershed is the most ecologically significant watershed in Los Angeles County and the Santa Monica Mountains National Recreation Area (SMMNRA). The Malibu Creek Watershed provides a wide variety of habitats for threatened and endangered species and has long been a popular locale for public access and public recreation. Some animal species, such as the steelhead trout, tidewater goby and brown pelican are endangered. Many others, such as the snowy plover and peregrine falcon, are threatened. A large percentage of the watershed remains in natural habitat. It encompasses unincorporated portions of Ventura and Los Angeles Counties, and seven cities – Malibu, Calabasas, Agoura Hills, Thousand Oaks, and Westlake Village and portions of Simi Valley and Hidden Hills. The Malibu Creek Watershed extends north from Santa Monica Bay and through the Santa Monica Mountains to the Simi Hills and Santa Susanna Mountains providing a vital habitat and species corridor of regional and statewide significance.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	9.85
2016-2017	10.40
2017-2018	80.70
2018-2019	5.70

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 1 for Reach 3, 3 for Reach 5, 8 for Reach 4, 9 for Reach 1, and 16 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board, Los Angeles Region *Trash Total Maximum Daily Load for the Malibu Creek Watershed*, February 14, 2008.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Malibu Creek and Lagoon Sedimentation and Nutrients TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation and Turbidity Total Maximum Daily Loads (Permit Attachment D Section D5.3)	<ul style="list-style-type: none"> • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Malibu Creek and Lagoon watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle and implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.
Requirements for Temperature Total Maximum Daily Loads (Permit Attachment D Section 5.6)	<ul style="list-style-type: none"> • Caltrans implements sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. • Because vegetation removal may also increase surface water temperatures, Caltrans: 1) preserves existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases; 2) provides effective shade near receiving waters susceptible to temperature increases; and 3) maintains site potential effective shade near receiving waters susceptible to temperature increases.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	70,369	279	0.4%	Sedimentation and Nutrients	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Watershed WLA
Sedimentation and Nutrients	Caltrans' baseline WLA is 10,813 cubic feet per year.

TMDL Implementation Schedule

- Start Date: June 26, 2009
- Final Compliance Date per TSO⁶: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Malibu Creek and Lagoon Sedimentation and Nutrients TMDL

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Sediment	<ul style="list-style-type: none"> • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • The Malibu Creek Sediment and Nutrients Water Quality Report Card states that numeric targets for total nitrogen are frequently achieved in Malibu Creek at locations immediately upstream of both the Tapia Water Reclamation Facility and Las Virgenes Creek, in both winter and summer; numeric targets for total phosphorus are often, but less frequently, achieved at these locations. Numeric targets for total phosphorus are frequently achieved in Malibu Creek just upstream of the Tapia Water Reclamation Facility and below the confluence with Las Virgenes Creek in both winter and summer; inputs of total phosphorus from Las Virgenes Creek are generally low. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Malibu Creek watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	8
Biofiltration Strip	26
Biofiltration Swale	30
DPP Infiltration Area (DPPIA)	5
Stabilization Area	1
Total	70

Existing Non-Structural BMPs^{10,11}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in October 2017.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Sources: Caltrans *Annual Report* Fiscal Year 2021-2022.

Malibu Creek and Lagoon Sedimentation and Nutrients TMDL

divisions to control non-stormwater pollutants.

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have the ability to use emergency orders to rapidly repair and stabilize slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program to minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Malibu Creek Watershed Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Malibu Creek	Bacteria	D5, D5.1, D5.2, D5.5 and D5.10

General Watershed Description²

The Malibu Creek Watershed is located roughly 35 miles west of Los Angeles. Approximately two-thirds of the watershed is in northwestern Los Angeles County, and the remaining third is in southeastern Ventura County. The watershed contains about 69,900 acres, and drains a 109-square mile area. Malibu Creek drains into Malibu Lagoon, and then into Santa Monica Bay. The Malibu Creek Watershed is the most ecologically significant watershed in Los Angeles County and the Santa Monica Mountains National Recreation Area (SMMNRA). The Malibu Creek Watershed provides a wide variety of habitats for threatened and endangered species and has long been a popular locale for public access and public recreation. Some animal species, such as the steelhead trout, tidewater goby and brown pelican are endangered. Many others, such as the snowy plover and peregrine falcon, are threatened. A large percentage of the watershed remains in natural habitat. It encompasses unincorporated portions of Ventura and Los Angeles Counties, and seven cities – Malibu, Calabasas, Agoura Hills, Thousand Oaks, and Westlake Village and portions of Simi Valley and Hidden Hills. The Malibu Creek Watershed extends north from Santa Monica Bay and through the Santa Monica Mountains to the Simi Hills and Santa Susanna Mountains providing a vital habitat and species corridor of regional and statewide significance.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	9.85
2017-2018	59.80

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 1 for Reach 3, 3 for Reach 5, 8 for Reach 4, 9 for Reach 1, and 16 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board, Los Angeles Region *Trash Total Maximum Daily Load for the Malibu Creek Watershed*, February 14, 2008.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Malibu Creek Watershed Bacteria TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Bacteria Total Maximum Daily Loads (Permit Attachment D Section 5.5)	Caltrans implements, monitors, and maintains BMPs to minimize the discharge of bacteria (i.e., fecal pathogens) to surface waters within each applicable reach. Potential sources of bacteria include stormwater runoff from untreated human and pet wastes, which may occur at homeless encampments and other areas. Caltrans implements one or more of the following: <ul style="list-style-type: none"> • Caltrans' Homeless Encampment Policy (Chapter 1, section 1.07.3(B) of Caltrans' Maintenance Manual) or subsequent policies addressing encampment removal and cleanup. • Cooperative agreement participation, such as leases to local municipalities for homeless services, where available. • Structural BMPs, such as retention, detention, diversion, infiltration, filtration, vegetated treatment, and similar.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section 5.10)	Caltrans complies with BMPs implementation requirements through one of the following options: <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with waste load locations; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of the options above provided that Caltrans complies with the relevant TMDL.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	70,369	279	0.4%	Bacteria	Yes	f. Allowable Exceedance Days

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Malibu Creek Watershed Bacteria TMDL

Waste Load Allocations (WLAs)⁵

Allowable Exceedance Days for Single Sample Limits by Sampling Location

Location Name	Dry Weather Daily	Dry Weather Weekly	Wet Weather Daily	Wet Weather Weekly
LA RWB Triunfo Creek	5	1	15	2
LA RWB Lower Las Virgenes Creek	5	1	15	2
LA RWB Lower Medea Creek	5	1	15	2
LVMWD (R-9) Upper Malibu Creek, above Las Virgenes Creek	5	1	15	2
LVMWD (R-2) Middle Malibu Creek, below Tapia discharge 001	5	1	15	2
LVMWD (R-3) Lower Malibu Creek, 3 miles below Tapia	5	1	15	2
LVMWD (R-4) Malibu Lagoon, above PCH	5	1	15	2
LVMWD (R-11) Malibu Lagoon, below PCH	9	2	17	3
Other sampling stations as identified in the Compliance Monitoring Plan	5	1	15	2

Table Notes:

1. The number of allowable exceedances is based on the lesser of the reference system or the existing levels of exceedance based on historical monitoring data.
2. The allowable number of exceedance days is calculated based on the 90th percentile storm year in terms of wet days at the Los Angeles Airport meteorological station.
3. A dry day is defined as a non-wet day.
4. A wet day is defined as a day with a 0.1 inch or more of rain and the three days following the rain event.
5. The number of allowable exceedance days is for the winter dry-weather period. No exceedance days are allowed for the summer dry-weather period.

Sampling Station Legend:

LVMWD: Las Virgenes Municipal Water District
 LA RWB: Los Angeles Water Board
 PCH: Pacific Coast Highway.

TMDL Implementation Schedule

- Start Date: July 2, 2014
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Bacteria	<ul style="list-style-type: none"> • Caltrans minimizes wet-weather discharges from its ROW into receiving waterbodies impaired for bacteria by implementing treatment BMPs and source control/preemptive activities such as street sweeping, clean-up of illegal dumping, prohibition of non-storm water discharges, and public education on littering as described above. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Malibu Creek watershed that will include treatment BMPs.

⁵ Source: Permit Attachment A

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

Malibu Creek Watershed Bacteria TMDL

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	26
Biofiltration Swale	30
DPP Infiltration Area (DPPIA)	5
Total	61

Existing Non-Structural BMPs^{10,11}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Sources: Caltrans *Annual Report* Fiscal Year 2021-2022.

¹² Source: Permit Attachment F.

Malibu Creek Watershed Trash TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Malibu Creek	Trash	D5, D5.1, D5.2, 5.9 and D5.10

General Watershed Description²

The Malibu Creek Watershed is located roughly 35 miles west of Los Angeles. Approximately two-thirds of the watershed is in northwestern Los Angeles County, and the remaining third is in southeastern Ventura County. The watershed contains about 69,900 acres, and drains a 109-square mile area. Malibu Creek drains into Malibu Lagoon, and then into Santa Monica Bay. The Malibu Creek Watershed is the most ecologically significant watershed in Los Angeles County and the Santa Monica Mountains National Recreation Area (SMMNRA). The Malibu Creek Watershed provides a wide variety of habitats for threatened and endangered species and has long been a popular locale for public access and public recreation. Some animal species, such as the steelhead trout, tidewater goby and brown pelican are endangered. Many others, such as the snowy plover and peregrine falcon, are threatened. A large percentage of the watershed remains in natural habitat. It encompasses unincorporated portions of Ventura and Los Angeles Counties, and seven cities – Malibu, Calabasas, Agoura Hills, Thousand Oaks, and Westlake Village and portions of Simi Valley and Hidden Hills. The Malibu Creek Watershed extends north from Santa Monica Bay and through the Santa Monica Mountains to the Simi Hills and Santa Susanna Mountains providing a vital habitat and species corridor of regional and statewide significance.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2016-2017	6.84
2017-2018	20.9

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 1 for Reach 3, 3 for Reach 5, 8 for Reach 4, 9 for Reach 1, and 16 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board, Los Angeles Region *Trash Total Maximum Daily Load for the Malibu Creek Watershed*, February 14, 2008.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Malibu Creek Watershed Trash TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads (Permit Attachment D Section 5.9)	Caltrans implements: <ul style="list-style-type: none"> • Trash control measures by installing, operating, and maintaining full capture systems or other treatment or institution controls for storm drains that capture runoff from significant trash generating areas. • Trash reduction allocations equivalent to 10,813 gallons per year for the Malibu Creek Watershed.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section 5.10)	Caltrans complies with BMPs implementation requirements through one of the following options: <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with waste load locations; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of the options above, provided that Caltrans complies with the relevant TMDL.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	70,369	279	0.4%	Trash	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Watershed WLA
Trash	Caltrans' baseline WLA is 10,813 gallons per year. The WLA is zero trash.

TMDL Implementation Schedule

- Start Date: June 26, 2009
- Final Compliance Date per TSO⁶: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A.

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Malibu Creek Watershed Trash TMDL

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Trash	<ul style="list-style-type: none"> Caltrans uses several types of trash removal devices, including the construction of Austin sand filters and gross solids removal devices which have a full capture efficiency. Caltrans also employs biofiltration swales, which have partial trash removal efficiency. Additionally, Caltrans employs non-structural BMPs in the Malibu Creek Watershed to mitigate trash including sweeping, drain inlet cleaning, trash collection, storm drain stenciling, slope/soil stabilization, covered trash bins, public education, and public participation. Moreover, Caltrans has increased the frequency of the Adopt-A-Highway program as well as increased sweeping and litter pick-up frequency in the Malibu Creek watershed to treat beyond the minimum permit requirements. Caltrans also collaborates with the California Public Education Campaign to further engage in public education. Programs such as the Caltrans Parolee Program, California Conservation Corps, District Crew Collection, and Storm Drain Maintenance activities also help remove trash from the Caltrans ROW. Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Malibu Creek watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	8
Gross Solids Removal Device (GSRD) – Inclined Screen	1
GSRD – Linear Radial	1
Total	10

Existing Non-Structural BMPs^{10,11}

- Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Sources: Caltrans *Annual Report* Fiscal Year 2021-2022.

Malibu Creek Watershed Trash TMDL

raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Adopt-A-Highway Program** – The Adopt-A-Highway Program provides an avenue for individuals, organizations, and businesses to help maintain sections of roadside for various activities, including litter removal, within California's State Highway System. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 3,758 cubic yards of trash through the Adopt-A-Highway Program.
- **SPP Litter Control Program** – SPP Litter Control are subcontractors that include Back to Work programs, Probationers/Parolees, Veteran’s Outreach Program, Homeless, At-Risk Youth, Court Referrals, Inmates, Work Release/Work Furlough, and California Conservation Corps. These are funded through State Highway Account. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 33,146 cubic yards of trash through this program.
- **District Crew Collection** – Caltrans crews conduct manual cleanup of trash and litter from the ROW. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 36,750 cubic yards of trash.
- **Slope/Soil Stabilization Area** – Soil stabilization methods are installed to stabilize areas disturbed by grading operations, to reduce loss of soil due to water or wind, and to prevent water pollution.
- **Storm Drain Maintenance** – Caltrans cleans the storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and by Vactor trucks. Caltrans District 7 performs additional inspection and cleaning through its Enhanced Annual Storm Drain Inlet Inspection and Cleaning Program in metropolitan areas. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 60 cubic yards of trash from Storm Drain Maintenance activities.
- **Clean California** – Clean California is providing funding for transformative state and local beautification projects in communities across California, with a focus on historically underserved areas, that will improve the aesthetics of public spaces, facilitate community pride, and reduce trash regeneration. Maintenance personnel constantly monitor their areas of responsibility to detect and report deficiencies to, or needs of, the highway system. To ensure the overall levels of maintenance are pursued, periodic inspection trips by key personnel are required. Maintenance supervisors travel all highways in the section, including ramps and collector systems, at least once a week to observe overall conditions and detect deficiencies. Known or potential problem areas require more frequent inspections. Weekly inspections are an integral part of the supervisor’s work planning and scheduling activities. The Area Superintendent observes overall conditions to assure conformance with the established maintenance levels. Maintenance personnel utilize their continuous driving visual assessments in their areas of responsibility along with the quarterly LOS scores to adaptively manage the deployment of resources to maximize litter production.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Marina del Rey Harbor Toxic Pollutants (Copper, Lead, Zinc, Chlordane, Total Polychlorinated Biphenyls [PCBs], Total Dichlorodiphenyltrichloroethane [DDT], and Dichlorodiphenyldichloroethylene [DDE]) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Marina del Rey Harbor	Toxic Pollutants (Copper, Lead, Zinc, Chlordane, Total PCBs, Total DDT, and DDE)	D5, D5.1, D5.2, D5.4, and D5.10

General Watershed Description²

The Marina del Rey watershed is approximately 2.9 square miles located in the Santa Monica Bay, California. It is south of Venice and north of Playa del Rey, and approximately 15 miles southwest of downtown Los Angeles. The watershed includes the City of Los Angeles, Culver City and unincorporated areas of Los Angeles County. The climate is warm and dry most of the year with intermittent wet weather events typically between November and March.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 95 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
Cooperative Agreements (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board, Los Angeles Region, *Substitute Environmental Document for Toxic Pollutants in Marina del Rey Harbor Waters Total Maximum Daily Load*, November 5, 2013: https://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/95_New/SEDMdRHToxicsRevision_signed.pdf.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Marina del Rey Harbor Toxic Pollutants (Copper, Lead, Zinc, Chlordane, Total Polychlorinated Biphenyls [PCBs], Total Dichlorodiphenyltrichloroethane [DDT], and Dichlorodiphenyldichloroethylene [DDE]) TMDL

Reporting Requirement Permit Section	Summary of Activities
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section D5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • BMPs also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<ul style="list-style-type: none"> • Caltrans complies with the Permit Attachment F monitoring requirements and the implementation requirements noted below. • Caltrans complies with BMP implementation requirements through selecting one of the following options: <ul style="list-style-type: none"> ○ Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or ○ Implement BMPs in its ROW to meet the TMDL allocations; or ○ Implement a combination of the options above, provided that Caltrans complies with the relevant TMDL.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	1,879	33	1.8%	Toxic Pollutants (Copper, Lead, Zinc, Chlordane, and Total PCBs)	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Caltrans WLA
Copper	Total Mass-Based Metals in Stormwater = 2.06 kilograms/year
Lead	Total Mass-Based Metals in Stormwater = 2.83 kilograms/year
Zinc	Total Mass-Based Metals in Stormwater = 9.11 kilograms/year
Chlordane	Organics Mass-Based in Stormwater = 0.0005 grams/year
Total PCBs	Organics Mass-Based in Stormwater = 0.024 grams/year

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A.

Marina del Rey Harbor Toxic Pollutants (Copper, Lead, Zinc, Chlordane, Total Polychlorinated Biphenyls [PCBs], Total Dichlorodiphenyltrichloroethane [DDT], and Dichlorodiphenyldichloroethylene [DDE]) TMDL

Pollutant	Caltrans WLA
Total DDT	Organics Mass-Based in Stormwater = 0.0017 grams/year
DDE	Organics Mass-Based in Stormwater = 0.0024 grams/year

TMDL Implementation Schedule

- Start Date: March 16, 2006
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{2,7,8}

Pollutant	Strategies to Achieve WLAs
Copper, Lead, and Zinc	<ul style="list-style-type: none"> • Heavy metals have a high affinity for adhering to fine sediment. Therefore, the appropriate control measures for heavy metals are to control erosion and prevent or minimize the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Marina del Rey Harbor watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Total PCBs	<ul style="list-style-type: none"> • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the Marina del Rey Harbor watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCBs WLAs in the Marina del Rey Harbor watershed. • Toxic pollutants have a high affinity for adhering to fine sediment. Therefore, the appropriate control measures for toxic pollutants are controlling erosion and preventing or minimizing the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Marina del Rey Harbor watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Chlordane	<ul style="list-style-type: none"> • Caltrans is expected to comply with chlordane WLAs in the Marina del Rey Harbor watershed since these organochlorine compounds are no longer in production and their usage has been regulated. Additionally, Caltrans does not use chlordane within its ROW. • Although Caltrans does not use pesticides within its ROW, Caltrans complies with the Permit Attachment C Section C3.5.3.2, which specifies practices for the safe handling and use of pesticides, including compliance with federal, state and local regulations, and label directions. Caltrans is also required to perform site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in storm water runoff in the Marina del Rey Harbor watershed. • Caltrans reduces the sediment transport of chlordane by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Marina del Rey Harbor watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan* (January 2015).

Marina del Rey Harbor Toxic Pollutants (Copper, Lead, Zinc, Chlordane, Total Polychlorinated Biphenyls [PCBs], Total Dichlorodiphenyltrichloroethane [DDT], and Dichlorodiphenyldichloroethylene [DDE]) TMDL

Pollutant	Strategies to Achieve WLAs
Additional Measures to Achieve WLAs for all Pollutants	<ul style="list-style-type: none"> • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

⁹ Source: All BMP data was exported from the Caltrans Portal as of December 6, 2022.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Source: Permit Attachment F.

Marina del Rey Harbor, Mothers' Beach, and Back Basins Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Marina del Rey Harbor, Mothers' Beach, and Back Basins	Bacteria	D5, D5.1, D5.2, D5.5, and D5.10

General Watershed Description²

The Marina del Rey Watershed is comprised of five subwatersheds, but only subwatersheds 1A, 3 and 4 are tributary directly to the impaired back basins (Basins D, E, and F). The Control Programs proposed in this implementation plan are focus in these three priority subwatersheds. The Marina del Rey Watershed can be characterized by three main parts:

- The Harbor water area, including the docks, back basins, Marina Beach, and Oxford Retention Basin (Oxford Basin).
- The land adjacent to the Harbor back basins is the Los Angeles County unincorporated area, which includes individual parcels, streets, and other facilities.
- The land outside the Los Angeles County unincorporated area draining into the Harbor waters, including the Cities of Los Angeles and Culver City, and Caltrans right of ways.

Marina del Rey Harbor is open to the Santa Monica Bay through the Main Channel, and it shares a common breakwater with Ballona Creek. The Harbor consists of the Main Channel and eight back basins (A-H). Marina Beach is located in the west end of Basin D. Oxford Basin is situated at the north end of Marina del Rey Harbor and drains to Basin E through two slide gates and a culvert system. Oxford Basin serves as a retention basin for the surrounding watershed and the slide gates control tidal influence on its water level. County of Los Angeles Flood Control District (LACFCD) storm drain Project No. 52431 drains into the northeast corner of Oxford Basin and Project No. 3872 drains into the east side of Oxford Basin via Oxford Pump Plant. Project No. 3874 drains into Basin E via the Boone-Olive Pump Plant.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 95 for Reach 1

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board, Los Angeles Region, *Final Marina del Rey Harbor, Mother's Beach, and Back Basins Bacteria TMDL Implementation Plan*, October 31, 2005: https://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/2006-009/06_0330/Final%20IP.pdf.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Marina del Rey Harbor, Mothers' Beach, and Back Basins Bacteria TMDL

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
Cooperative Agreements (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Bacteria Total Maximum Daily Loads (Permit Attachment D Section D5.5)	Caltrans implements, monitors, and maintains BMPs to minimize the discharge of bacteria (i.e., fecal pathogens) to surface waters within each applicable reach. Potential sources of bacteria include stormwater runoff from untreated human and pet wastes, which may occur at homeless encampments and other areas. Caltrans implements one or more of the following: <ul style="list-style-type: none"> • Caltrans' Homeless Encampment Policy (Chapter 1, section 1.07.3(B) of Caltrans' Maintenance Manual) or subsequent policies addressing encampment removal and cleanup. • Cooperative agreement participation, such as leases to local municipalities for homeless services, where available. • Structural BMPs, such as retention, detention, diversion, infiltration, filtration, vegetated treatment, and similar.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<ul style="list-style-type: none"> • Caltrans complies with the Permit Attachment F monitoring requirements and the implementation requirements noted below. • Caltrans complies with BMP implementation requirements through selecting one of the following options: <ul style="list-style-type: none"> ○ Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or ○ Implement BMPs in its ROW to meet the TMDL allocations; or ○ Implement a combination of the items above, provided that Caltrans complies with the relevant TMDL.

Marina del Rey Harbor, Mothers' Beach, and Back Basins Bacteria TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	1,879	33	1.8%	Bacteria	Yes	f. Allowable Exceedance Days

WLAs⁵

Pollutant	Caltrans WLA
Bacteria	<p>Final Allowable Exceedance Days of the Numeric Targets by Sampling Location</p> <ul style="list-style-type: none"> • Marina del Rey Harbor-1: Mother's (Marina) Beach, at playground area <ul style="list-style-type: none"> ○ Summer Dry Weather Daily = 0 Allowable Exceedance Days of the Numeric Targets ○ Summer Dry Weather Weekly = 0 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Daily = 3 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Weekly = 1 Allowable Exceedance Day of the Numeric Targets ○ Wet Weather Daily = 17 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Weekly = 3 Allowable Exceedance Days of the Numeric Targets • Marina del Rey Harbor-2: Mothers' (Marina) Beach, at lifeguard tower <ul style="list-style-type: none"> ○ Summer Dry Weather Daily = 0 Allowable Exceedance Days of the Numeric Targets ○ Summer Dry Weather Weekly = 0 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Daily = 3 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Weekly = 1 Allowable Exceedance Day of the Numeric Targets ○ Wet Weather Daily = 17 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Weekly = 3 Allowable Exceedance Days of the Numeric Targets • Marina del Rey Harbor-3: Mothers' (Marina) Beach, between lifeguard tower and boat dock <ul style="list-style-type: none"> ○ Summer Dry Weather Daily = 0 Allowable Exceedance Days of the Numeric Targets ○ Summer Dry Weather Weekly = 0 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Daily = 3 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Weekly = 1 Allowable Exceedance Day of the Numeric Targets ○ Wet Weather Daily = 17 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Weekly = 3 Allowable Exceedance Days of the Numeric Targets • Marina del Rey Harbor-4: Basin D, near first slips outside swim area <ul style="list-style-type: none"> ○ Summer Dry Weather Daily = 0 Allowable Exceedance Days of the Numeric Targets ○ Summer Dry Weather Weekly = 0 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Daily = 3 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Weekly = 1 Allowable Exceedance Day of the Numeric Targets ○ Wet Weather Daily = 17 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Weekly = 3 Allowable Exceedance Days of the Numeric Targets • Marina del Rey Harbor-5: Basin E, in front of tide-gate from Oxford Basin <ul style="list-style-type: none"> ○ Summer Dry Weather Daily = 0 Allowable Exceedance Days of the Numeric Targets ○ Summer Dry Weather Weekly = 0 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Daily = 3 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Weekly = 1 Allowable Exceedance Day of the Numeric Targets ○ Wet Weather Daily = 17 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Weekly = 3 Allowable Exceedance Days of the Numeric Targets • Marina del Rey Harbor-6: Basin E, center of basin <ul style="list-style-type: none"> ○ Summer Dry Weather Daily = 0 Allowable Exceedance Days of the Numeric Targets ○ Summer Dry Weather Weekly = 0 Allowable Exceedance Days of the Numeric Targets

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A.

Marina del Rey Harbor, Mothers' Beach, and Back Basins Bacteria TMDL

Pollutant	Caltrans WLA
	<ul style="list-style-type: none"> ○ Winter Dry Weather Daily = 3 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Weekly = 1 Allowable Exceedance Day of the Numeric Targets ○ Wet Weather Daily = 17 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Weekly = 3 Allowable Exceedance Days of the Numeric Targets ● Marina del Rey Harbor-7: Basin E, in front of Boone-Olive Pump Outlet <ul style="list-style-type: none"> ○ Summer Dry Weather Daily = 0 Allowable Exceedance Days of the Numeric Targets ○ Summer Dry Weather Weekly = 0 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Daily = 9 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Weekly = 2 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Daily = 17 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Weekly = 3 Allowable Exceedance Days of the Numeric Targets ● Marina del Rey Harbor-8: Back of Main Channel <ul style="list-style-type: none"> ○ Summer Dry Weather Daily = 0 Allowable Exceedance Days of the Numeric Targets ○ Summer Dry Weather Weekly = 0 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Daily = 9 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Weekly = 2 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Daily = 17 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Weekly = 3 Allowable Exceedance Days of the Numeric Targets ● Marina del Rey Harbor-9: Basin F, center of basin <ul style="list-style-type: none"> ○ Summer Dry Weather Daily = 0 Allowable Exceedance Days of the Numeric Targets ○ Summer Dry Weather Weekly = 0 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Daily = 9 Allowable Exceedance Days of the Numeric Targets ○ Winter Dry Weather Weekly = 2 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Daily = 8 Allowable Exceedance Days of the Numeric Targets ○ Wet Weather Weekly = 1 Allowable Exceedance Days of the Numeric Targets

Notes: The number of allowable exceedances is based on the lesser of either the reference system or the existing levels of exceedance based on historical monitoring data. The allowable number of exceedance days during winter dry weather is calculated based on the 10th percentile storm year in terms of dry days at the Los Angeles Airport meteorological station. The allowable number of exceedance days during wet weather is calculated based on the 90th percentile storm year in terms of wet days at the Los Angeles Airport meteorological station. Sampling is done daily or weekly and is reported in number of days. Summer dry weather: April 1 to October 31. Winter dry weather: November 1 to March 31. A dry day is defined as a non-wet day. A wet day is defined as a day with a 0.1 inch or more of rain and the three days following the rain event.

TMDL Implementation Schedule

- Start Date: March 18, 2004
- Final Compliance Date per TSO⁶: December 31, 2034

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Marina del Rey Harbor, Mothers' Beach, and Back Basins Bacteria TMDL

Plan to Achieve WLAs^{2,7,8}

Pollutant	Strategies to Achieve WLAs
Bacteria	<ul style="list-style-type: none"> Caltrans is in compliance with indicator bacteria WLAs for dry-weather flows in Marina del Rey Harbor Mothers' Beach and Back Basins watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. Caltrans minimizes wet-weather discharges from its ROW into receiving waterbodies impaired for bacteria by implementing treatment BMPs and source control/preemptive activities such as street sweeping, clean-up of illegal dumping, prohibition of non-storm water discharges, and public education. Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs¹⁰

- Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁹ Source: All BMP data was exported from the Caltrans Portal as of December 6, 2022.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Source: Permit Attachment F.

Marina del Rey Harbor, Mothers' Beach, and Back Basins Bacteria TMDL

Annual Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

Revolon Slough and Beardsley Wash Trash TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Revolon Slough and Beardsley Wash	Trash	D5, D5.1, D5.2, D5.9, and D5.10

General Watershed Description²

Calleguas Creek and its tributaries, including Revolon Slough and Beardsley Wash, are located in the southeast Ventura County and a small portion of western Los Angeles County. Calleguas Creek drains an area of approximately 343 square miles from Santa Susana Mountains, South Mountain, and Oak Ridge at the northern side, and Simi Hills and Santa Monica Mountains at the south. Water within the Calleguas Creek watershed generally travels east-westerly 30 miles from northeast mountains toward southwest through Mugu Lagoon, empties into the Pacific Ocean. Revolon Slough starts as Beardsley Wash at the Camarillo Hills with an elevation of 260 feet above mean sea level near South Mountain. Beardsley Wash continues into Pleasant Valley and becomes Revolon Slough in the Oxnard Plain. The wash flowing through residential neighborhoods, Sterling Hills Golf Club and mostly agricultural areas, is a rip rapped channel for almost four miles and runs into Revolon Slough at Central Avenue in Camarillo close to Highway 101. The Slough is concrete lined just upstream of Central Avenue and remains lined for approximately four miles to Wood Road. From there, the slough resumes soft bottomed with rip-rapped sides. The lower mile to mile and a half of the slough to above Las Posas Road appears to be tidally influenced by inflows from Mugu Lagoon. Revolon Slough flows into Mugu Lagoon in a channel that runs parallel to Calleguas Creek near Pacific Coast Highway. The flows from Revolon Slough and Calleguas Creek only converge in the lagoon. All lands within Revolon Slough subwatershed are for agricultural use. The primary water sources for Beardsley Wash and Revolon Slough are agricultural and storm water.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 7 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board, Los Angeles Region, *Trash Total Maximum Daily Load for Revolon Slough and Beardsley Wash in the Calleguas Creek Watershed*, July 11, 2007: https://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/2007-007/07_0607/53_%20StaffRptFinal_072407.pdf.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Revolon Slough and Beardsley Wash Trash TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
Cooperative Agreements (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads (Permit Attachment D Section D5.9)	<p>Caltrans complies with the Revolon Slough and Beardsley Wash Trash TMDL by implementing the following:</p> <ul style="list-style-type: none"> • <u>Trash Control Measures</u> – Caltrans installs, operates, and maintains any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls for all storm drains that capture runoff from significant trash generating areas to achieve full capture equivalency as defined by the Trash Provisions in the Inland Surface Waters, Enclosed Bays and Estuaries of California Plan. Permit Attachment E contains information on what qualifies as a full capture system and how to demonstrate full capture equivalency. • <u>Trash Reduction Allocations</u> – Trash reduction allocations are the gallons per year of trash that Caltrans shall remove or reduce from discharges from its jurisdiction to satisfy its trash load allocations. Areas within Caltrans' jurisdiction include highway on- and off-ramps in high density residential, commercial, and industrial land uses, rest areas and park-and-rides, state highways in commercial and industrial land uses, and mainline highway segments. <ul style="list-style-type: none"> ○ Trash reduction allocation for Caltrans in Revolon Slough and Beardsley Wash is equivalent to 11,215.45 gallons per year.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<ul style="list-style-type: none"> • Caltrans complies with the Permit Attachment F monitoring requirements and the implementation requirements noted below. • Caltrans complies with BMP implementation requirements through selecting one of the following options: <ul style="list-style-type: none"> ○ Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or ○ Implement BMPs in its ROW to meet the TMDL allocations; or ○ Implement a combination of the options above, provided that Caltrans complies with the relevant TMDL.

Revolon Slough and Beardsley Wash Trash TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	39,358	240	0.61%	Trash	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Caltrans WLA
Trash	The point source discharge of trash to the Revolon Slough and Beardsley Wash watershed, shoreline, and channels is prohibited. The WLA is zero. Point source and nonpoint sources for trash were identified in the Revolon Slough and Beardsley Wash and were assigned allocations. For point sources, WLAs were assigned to NPDES stormwater permittees of the Ventura County municipal separate storm sewer system permit and Caltrans.
Baseline Trash	11,215.45 gallons per year

TMDL Implementation Schedule

- Start Date: February 27, 2008
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{2,7,8}

Pollutant	Strategies to Achieve WLAs
Trash	<ul style="list-style-type: none"> • Caltrans employs several types of trash removal devices in the Revolon Slough and Beardsley Wash Watershed, including Austin sand filters. Caltrans also employs non-structural BMPs in the Revolon Slough and Beardsley Wash Watershed to mitigate trash including sweeping, drain inlet cleaning, trash collection, storm drain stenciling, covered trash bins, public education, and public participation. Additionally, Caltrans implements the Adopt-A-Highway program more frequently to treat beyond the minimum permit requirements. Caltrans also collaborates with the California Public Education Campaign to further engage in public education. Moreover, programs such as the Caltrans Parolee Program, California Conservation Corps, District Crew Collection, and Storm Drain Maintenance activities help remove trash from the Caltrans ROW. • Additionally, monitoring occurred at each of the designated sites once monthly. An estimated amount of 136,570 pounds (54,628 gallons) of trash were removed via various City Trash-Control Measures implemented in 2015-2016. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Two SHOPP projects (PID, PAED, and/or PS&E) are planned in the Revolon Slough and Beardsley Wash Watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	1
Total	1

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A.

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁹ Source: All BMP data was exported from the Caltrans Portal as of December 6, 2022.

Revolon Slough and Beardsley Wash Trash TMDL

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design, and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Clean California** – Clean California is providing funding for transformative state and local beautification projects in communities across California, with a focus on historically underserved areas, that will improve the aesthetics of public spaces, facilitate community pride, and reduce trash regeneration. Maintenance personnel constantly monitor their areas of responsibility to detect and report deficiencies to, or needs of, the highway system. To ensure the overall levels of maintenance are pursued, periodic inspection trips by key personnel are required. Maintenance supervisors travel all highways in the section, including ramps and collector systems, at least once a week to observe overall conditions and detect deficiencies. Known or potential problem areas require more frequent inspections. Weekly inspections are an integral part of the supervisor's work planning and scheduling activities. The Area Superintendent observes overall conditions to assure conformance with the established maintenance levels. Maintenance personnel utilize their continuous driving visual assessments in their areas of responsibility along with the quarterly LOS scores to adaptively manage the deployment of resources to maximize litter production.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Source: Permit Attachment F.

San Gabriel River Metals (Copper, Lead, Zinc) and Selenium TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	San Gabriel River	Metals (Copper, Lead, Zinc) and Selenium	D5, D5.1, D5.2, D5.4, and D5.10

General Watershed Description²

The San Gabriel River receives drainage from a 682 square mile area of eastern Los Angeles County and has a main channel length of approximately 58 miles. Its headwaters originate in the San Gabriel Mountains with the East, West, and North Forks. The river flows through a heavily developed commercial and industrial area before emptying into the Pacific Ocean in Long Beach. The main tributaries of the river are Walnut Creek, San Jose Creek, and Coyote Creek.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	51.7
2015-2016	102.3
2016-2017	43.3
2017-2018	59.9
2018-2019	3.2
2019-2020	2.6
2020-2021	124.7
2021-2022	292.8

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 83 for Reach 1, 89 for Reach 2, 90 for Reach 3, 91 for Reach 4, 101 for Reach 5, and 108 for Reach 6

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Total Maximum Daily Loads for Metals and Selenium San Gabriel River and Impaired Tributaries*, March 26, 2007: https://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/Established/San%20Gabriel%20River%20Metals%20TMDL/final_sangabriel_metalstmdl_3-27-07.pdf.

³ Sources: Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

San Gabriel River Metals (Copper, Lead, Zinc) and Selenium TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
Cooperative Agreements (Permit Attachment D Sections D5 and D5.1) ⁴	Caltrans participates in the <i>Adventure Park Project</i> through financial contributions. Additionally, Caltrans works with local MS4s and partners in the watershed to look for other cooperative partnership projects or regional TMDL compliance project opportunities that may be outside Caltrans ROW.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section D5.4)	<p>Caltrans complies with this section by implementing the following:</p> <ul style="list-style-type: none"> • Toxic pollutants, pesticides, and metals may adhere to sediment in stormwater. Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges. Toxic pollutants include lead, selenium, zinc, and copper. • Caltrans implements BMPs designed to prevent the discharge of sediment, including BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<ul style="list-style-type: none"> • Caltrans complies with the Permit Attachment F monitoring requirements and the implementation requirements noted below. • Caltrans complies with BMP implementation requirements through selecting one of the following options: <ul style="list-style-type: none"> ○ Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or ○ Implement BMPs in its ROW to meet the TMDL allocations; or ○ Implement a combination of the options above, provided that Caltrans complies with the relevant TMDL.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7 and 12	4	410,487	3,881	0.95%	Metals (Copper, Lead, Zinc) and Selenium	Yes	e. Mass-Based Waste Load

⁴ Source: District 7 Current/Completed CIAs Summary in TMDL Compliance Plan Appendix F.

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

San Gabriel River Metals (Copper, Lead, Zinc) and Selenium TMDL

WLAs⁶

Pollutant	Caltrans WLA
Copper	<p><u>Wet Weather WLAs:</u></p> <ul style="list-style-type: none"> • San Gabriel River Reach 2: Applies when the maximum daily flow at United States Geological Survey station 11085000 is 260 cubic feet per second or greater. • Coyote Creek = Daily storm volume (equals total daily flow of Coyote Creek) x 27 micrograms per liter x 91.5% = kilograms per day <p><u>Dry Weather WLAs:</u></p> <ul style="list-style-type: none"> • San Gabriel River Estuary = 3.7 micrograms per liter • San Gabriel Reach 1 = 18 micrograms per liter • Coyote Creek = 20 micrograms per liter
Lead	<p><u>Wet Weather WLAs:</u></p> <ul style="list-style-type: none"> • Coyote Creek: Applies when the maximum daily flow at Los Angeles County Department of Public Works flow gauge station F345-R is 156 cubic feet per second or greater <ul style="list-style-type: none"> ○ Daily storm volume (equals total daily flow of Coyote Creek) x 106 micrograms per liter x 91.5% = kilograms per day • San Gabriel Reach 2: Applies when the maximum daily flow at United States Geological Survey station 11085000 is 260 cubic feet per second or greater. <ul style="list-style-type: none"> ○ Daily storm volume (equals total daily flow of San Gabriel Reach 2) x 166 micrograms per liter x 49% = kilograms per day
Zinc	<p><u>Wet Weather WLAs:</u></p> <ul style="list-style-type: none"> • Coyote Creek: Applies when the maximum daily flow at Los Angeles County Department of Public Works flow gauge station F345-R is 156 cubic feet per second or greater <ul style="list-style-type: none"> ○ Daily storm volume (equals total daily flow of Coyote Creek) x 158 micrograms per liter x 91.5% = kilograms per day
Selenium	<p>No specific selenium WLAs are assigned to Caltrans. Dry-weather WLA of five micrograms per liter for all combined municipal stormwater discharges to San Jose Creek. Dry-weather WLAs for the stormwater permittees are shared by the municipal separate storm sewer system permittees and Caltrans because there is not enough data on the relative extent of municipal separate storm sewer system and Caltrans areas. No proportional responsibility that is specific to Caltrans has been assigned.</p>

TMDL Implementation Schedule

- Start Date: March 26, 2007 (Metals and Selenium)
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve WLAs^{6,8,9}

Pollutant	Strategies to Achieve WLAs
Metals	<ul style="list-style-type: none"> • Caltrans is in compliance with metals (Cu, Pb, Zn) WLAs for dry-weather in the San Gabriel River and Impaired Tributaries, since Caltrans does not contribute any dry-weather discharge from its ROW. • Caltrans is working towards compliance with metals (Cu, Pb, Zn) WLAs for wet-weather in the San Gabriel River and Impaired Tributaries. Caltrans continues to implement appropriate control measures to reduce the discharge of dissolved fraction metals, such as physical structures that prevent contaminated runoff from reaching receiving waters.
Selenium	<ul style="list-style-type: none"> • Caltrans is in compliance with selenium WLAs for dry-weather in the San Gabriel River and Impaired Tributaries, since Caltrans does not contribute any dry-weather discharge from its ROW.

⁶ Sources: Permit Attachment A.

⁷ Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan* (January 2015).

San Gabriel River Metals (Copper, Lead, Zinc) and Selenium TMDL

Pollutant	Strategies to Achieve WLAs
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> • As an additional mitigation measure, Caltrans reduces the sediment transport of metals and selenium by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the San Gabriel River and Impaired Tributaries by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Twenty-six SHOPP projects (PID, PAED, and/or PS&E) are planned in the San Gabriel River and Impaired Tributaries that will include treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Austin Sand Filter	22
Biofiltration Strip	58
Biofiltration Swale	311
Delaware Sand Filter	1
Detention Basin	18
DPP Infiltration Area (DPPIA)	123
Infiltration Basin	35
Infiltration Trench	4
Other BMP	6
Total:	578

Existing Non-Structural BMPs¹¹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans Districts 7 and 12 prepare and implement a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of December 6, 2022.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

San Gabriel River Metals (Copper, Lead, Zinc) and Selenium TMDL

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Maintenance** – Sediment and metals are also minimized within the watershed through Caltrans maintenance activities. Caltrans District Directors have been using emergency orders to rapidly repair and stabilize significant slope failures, thus minimizing sediment discharge. Maintenance activities including slope inspection and repair program both minimize sediment discharge to the watershed bodies.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

San Gabriel River Metals (Copper, Lead, Zinc) and Selenium TMDL

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San Gabriel River, Estuary, and Tributaries Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	San Gabriel River, Estuary, and Tributaries	Bacteria	D3.1, D3.2, D3.3, D5, D5.1, D5.2, D5.5 and D5.10

General Watershed Description²

The San Gabriel River receives drainage from 689 square miles of eastern Los Angeles County and has a main channel length of approximately 58 miles. Its headwaters originate in the San Gabriel Mountains with the East, West, and North Forks. The river flows through a heavily developed commercial and industrial area before emptying into the Pacific Ocean at the boundary between Los Angeles and Orange Counties in Long Beach. The main tributaries of the river are Big and Little Dalton Wash, San Dimas Wash, Walnut Creek Wash, San Jose Creek, and Coyote Creek. Part of the Coyote Creek subwatershed is in Orange County and San Bernardino County and is under the authority of the Santa Ana Water Board.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2018-2019	3.2
2019-2020	2.6
2020-2021	124.7
2021-2022	292.8

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 83 for Reach 1, 89 for Reach 2, 90 for Reach 3, 91 for Reach 4, 101 for Reach 4, and 108 for Reach 6

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board Los Angeles Region, *Total Maximum Daily Loads for Indicator Bacteria in San Gabriel River, Estuary and Tributaries*, June 2015: https://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/111_new/Revised_Staff_Report_SGR.pdf.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

San Gabriel River, Estuary, and Tributaries Bacteria TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Prioritized Inventory of Reaches by Pollutant Category (Permit Attachment D Section D3.1)	Caltrans is updating and will submit its existing Prioritized Inventory of Reaches.
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance Plan (Permit Attachment D Section D3.3)	Caltrans includes a description of the compliance activities to be implemented in the San Gabriel River, Estuary, and Tributaries watershed in the TMDL Compliance Plan.
Cooperative Agreements (Permit Attachment D Sections D5 and D5.1)	Caltrans works with local MS4s and partners in the watershed to look for other cooperative partnership projects or regional TMDL compliance project opportunities that may be outside Caltrans ROW.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	<p>Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf.</p> <p>Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf.</p>
Requirements for Bacteria Total Maximum Daily Loads (Permit Attachment D Section D5.5)	<p>Caltrans implements, monitors, and maintains BMPs to minimize the discharge of bacteria (i.e., fecal pathogens) to surface waters within each applicable reach. Potential sources of bacteria include stormwater runoff from untreated human and pet wastes, which may occur at homeless encampments and other areas. Caltrans implements one or more of the following:</p> <ul style="list-style-type: none"> • Caltrans' Homeless Encampment Policy (Chapter 1, Section 1.07.3(B) of Caltrans' Maintenance Manual) or subsequent policies addressing encampment removal and cleanup. • Cooperative agreement participation, such as leases to local municipalities for homeless services, where available. • Structural BMPs, such as retention, detention, diversion, infiltration, filtration, vegetated treatment, and similar.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<ul style="list-style-type: none"> • Caltrans complies with the Permit Attachment F monitoring requirements and the implementation requirements noted below. • Caltrans complies with BMP implementation requirements through selecting one of the following options: <ul style="list-style-type: none"> ○ Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or ○ Implement BMPs in its ROW to meet the TMDL allocations; or ○ Implement a combination of the options above, provided that Caltrans complies with the relevant TMDL.

San Gabriel River, Estuary, and Tributaries Bacteria TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	410,487	3,881	0.95%	Bacteria	No	f. Allowable Exceedance Days

WLAs⁵

Pollutant	Caltrans WLA
Bacteria	<p>Caltrans is not assigned a specific load allocation for stormwater discharges, but Caltrans is jointly responsible for complying with the WLA.</p> <ul style="list-style-type: none"> • WLAs as Allowable Exceedance Days for Daily and Weekly Sampling in the San Gabriel River Estuary <ul style="list-style-type: none"> ○ Summer Dry-Weather <ul style="list-style-type: none"> ▪ Daily Sampling = 0 Allowable Exceedance Days ▪ Weekly Sampling = 1 Allowable Exceedance Day ○ Winter Wet-Weather <ul style="list-style-type: none"> ▪ Daily Sampling = 9 Allowable Exceedance Days ▪ Weekly Sampling = 2 Allowable Exceedance Days ○ Wet Weather <ul style="list-style-type: none"> ▪ Daily Sampling = 20 Allowable Exceedance Days ▪ Weekly Sampling = 3 Allowable Exceedance Days • WLAs as Allowable Exceedance Days as Single Sample Objectives in the San Gabriel River and its Tributaries <ul style="list-style-type: none"> ○ Dry Weather <ul style="list-style-type: none"> ▪ Daily Sampling = 5 Allowable Exceedance Days ▪ Weekly Sampling = 1 Allowable Exceedance Day ○ Non-High Flow Suspension <ul style="list-style-type: none"> ▪ Daily Sampling = 17 Allowable Exceedance Days ▪ Weekly Sampling = 3 Allowable Exceedance Days ○ High Flow Suspension Waterbodies Wet Weather <ul style="list-style-type: none"> ▪ Daily Sampling = 11 Allowable Exceedance Days ▪ Weekly Sampling = 2 Allowable Exceedance Days (not including High Flow Suspension days)

TMDL Implementation Schedule

- Start Date: April 14, 2014
- Final Compliance Date: June 14, 2036

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A.

San Gabriel River, Estuary, and Tributaries Bacteria TMDL

Plan to Achieve WLAs^{6,7}

Pollutant	Strategies to Achieve WLAs
Bacteria	<ul style="list-style-type: none"> • Caltrans implements, monitors, and maintains BMPs to minimize the discharge of bacteria (i.e., fecal pathogens) to surface waters within each applicable reach. • Caltrans strategies will include participation in cooperative agreements and/or structural BMP implementation. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Twenty-six SHOPP projects (PID, PAED, and/or PS&E) are planned in the San Gabriel River and Impaired Tributaries that will include treatment BMPs.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
Biofiltration Strip	60
Biofiltration Swale	336
Detention Basin	19
DPP Infiltration Area (DPPIA)	123
Infiltration Basin	35
Infiltration Trench	4
Other BMP	3
Total:	580

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

San Gabriel River, Estuary, and Tributaries Bacteria TMDL

Monitoring¹⁰

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

¹⁰ Source: Permit Attachment F.

San Gabriel River, Estuary, and Tributaries Bacteria TMDL

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Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Santa Clara River Estuary and Reaches 3, 5, 6, and 7	Indicator Bacteria	D5, D5.1, D5.2, D5.5, and D5.10

General Watershed Description²

The Santa Clara River is the largest river system in Southern California that remains in a relatively natural state. The river originates on the northern slope of the San Gabriel Mountains in Los Angeles County, traverses Ventura County, and flows into the Pacific Ocean between the cities of San Buenaventura (Ventura) and Oxnard. The watershed is approximately 1,600 square miles.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2016-2017	9.2
2017-2018	40.4
2020-2021	14.9
2021-2022	45.9

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 187 for Reach 4, 215 for Reach 3, 216 for Reach 1, 217 for Reach 2, 234 for Reach 6, and 236 for Reach 5

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreements (Permit Attachment D Sections D5 and D5.1)	Caltrans pursues opportunities to partner with local dischargers in the Santa Clara River Estuary and Reaches 3, 5, 6, and 7 watershed, and follow the approval procedures noted in the Permit.

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board Los Angeles Region, *Total Maximum Daily Loads for Indicator Bacteria in Santa Clara River Estuary and Reaches 3, 5, 6, and 7*, July 8, 2010: https://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/78_New/revise/Final%20Staff%20Report-SCR%20Bacteria%20TMDL.pdf.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL

Reporting Requirement Permit Section	Summary of Activities
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Bacteria Total Maximum Daily Loads (Permit Attachment D Section D5.5)	Caltrans implements, monitors, and maintains BMPs to minimize the discharge of bacteria (i.e., fecal pathogens) to surface waters within each applicable reach. Potential sources of bacteria include stormwater runoff from untreated human and pet wastes, which may occur at homeless encampments and other areas. Caltrans implements one or more of the following: <ul style="list-style-type: none"> • Caltrans' Homeless Encampment Policy (Chapter 1, Section 1.07.3(B) of Caltrans' Maintenance Manual) or subsequent policies addressing encampment removal and cleanup. • Cooperative agreement participation, such as leases to local municipalities for homeless services, where available. • Structural BMPs, such as retention, detention, diversion, infiltration, filtration, vegetated treatment, and similar.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<ul style="list-style-type: none"> • Caltrans complies with the Permit Attachment F monitoring requirements and the implementation requirements noted below. • Caltrans complies with BMP implementation requirements through selecting one of the following options: <ul style="list-style-type: none"> ○ Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or ○ Implement BMPs in its ROW to meet the TMDL allocations; or ○ Implement a combination of the options above, provided that Caltrans complies with the relevant TMDL.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	611,245	1,402	0.23%	Indicator Bacteria	Yes	f. Allowable Exceedance Days

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL

WLAs⁵

Pollutant	Caltrans WLA
Bacteria	<p>Caltrans is not assigned a specific load allocation for stormwater discharges, but Caltrans is jointly responsible for complying with the WLA.</p> <ul style="list-style-type: none"> • Santa Clara River Reaches 3, 5, 6, and 7 <ul style="list-style-type: none"> ○ Dry Weather: five allowable exceedance days of single sample objectives, and zero allowable exceedances of geometric mean objectives ○ Wet Weather: 16 allowable exceedance days of single sample objectives, and zero allowable exceedances of geometric mean objectives • Santa Clara River Estuary <ul style="list-style-type: none"> ○ Wet Weather: 25 allowable exceedance days of single sample objectives, and zero allowable exceedances of geometric mean objectives ○ Summer Dry Weather (April 1 – October 31): 10 allowable exceedance days of single sample objectives, and zero allowable exceedances of geometric mean objectives ○ Winter Wet Weather (November 1 – March 31): 12 allowable exceedance days of single sample objectives, and zero allowable exceedances of geometric mean objectives

TMDL Implementation Schedule

- Start Date: January 19, 2012
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Bacteria	<ul style="list-style-type: none"> • Caltrans is in compliance with indicator bacteria WLAs for dry-weather flows in the Santa Clara River Estuary and Reaches 3, 5, 6, and 7, since Caltrans does not contribute any dry-weather discharge from its ROW. • Caltrans is expected to be in compliance with indicator bacteria WLAs for wet-weather flows in the Santa Clara River Estuary and Reaches 3, 5, 6, and 7. • Caltrans minimizes wet-weather discharges from its ROW into receiving waterbodies impaired for bacteria by implementing treatment BMPs and source control/preemptive activities such as street sweeping, clean-up of illegal dumping, prohibition of non-storm water discharges, and public education. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Eight SHOPP projects (PID, PAED, and/or PS&E) are planned in the Santa Clara River Estuary and Reaches 3, 5, 6, and 7 that will include treatment BMPs.

⁵ Sources: Permit Attachment A.

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan* (January 2015).

Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	4
Biofiltration Swale	71
Detention Basin	4
DPP Infiltration Area (DPPIA)	114
Infiltration Basin	5
Infiltration Trench	36
Other BMP	1
Total:	235

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer also coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Source: Permit Attachment F.

Santa Clara River Reach 3 Chloride TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
Los Angeles	Santa Clara River Reach 3	Chloride	D3.2

General Watershed Description²

The Santa Clara River is the largest river system in southern California that remains in a relatively natural state and is a high quality resource for much of its length. The river originates in the northern slope of the San Gabriel Mountains in Los Angeles County, traverses Ventura County, and flows into the Pacific Ocean through the Santa Clara River Estuary between the cities of San Buenaventura and Oxnard. Santa Clara River Reach 3 extends upstream of Freeman Diversion to Street A Bridge and Fillmore.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2016-2017	5.8
2017-2018	22.3
2020-2021	7
2021-2022	1.5

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 215 for Reach 3, 216 for Reach 1, and 217 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Total Maximum Daily Load for Chloride in the Santa Clara River, Reach 3*, June 18, 2003: https://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/Established/Santa%20Clara%20River%20Reach%203%20Chloride%20TMDL/final%20SCR%20R3%20CI%20TMDL.pdf.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Santa Clara River Reach 3 Chloride TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	249,835	425	0.17%	Chloride	No	d. Discharge Sampling

WLAs⁵

Pollutant	Caltrans WLA
Chloride	<ul style="list-style-type: none"> Caltrans' WLA for Santa Clara River Reach 3 is 80 milligrams per liter. Caltrans is one of five minor point sources that discharge to Santa Clara River Reach 3. Caltrans is considered a minor discharger because the chloride concentrations are distributed at a low flow over a short period.

TMDL Implementation Schedule

- Start Date: June 18, 2003
- Final Compliance Date: June 18, 2003

Plan to Achieve WLAs^{6,7}

Pollutant	Strategies to Achieve WLAs
Chloride	<ul style="list-style-type: none"> Caltrans is in compliance with the chloride WLA in the Santa Clara River Reach 3 watershed. Chloride in the Santa Clara River Reach 3 watershed is primarily due to increased salt loadings from imported water, the use of self-regenerating water softeners, and the use of de-icers on roadways, which Caltrans does not implement within its ROW. Therefore, Caltrans is not required to implement additional measures to address chloride and is in compliance with WLAs for chloride without any additional control actions as long as they are in compliance with the Permit. Total loads from two water reclamation plants comprise approximately 80% of the total estimated load and other minor discharges (one of the five sources includes Caltrans) comprise less than 5% of the total estimated load under low flow conditions in the Santa Clara River Reach 3 watershed. Minor discharges are typically related to dewatering and construction projects that are covered by other NPDES permits. Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Four SHOPP projects (PID, PAED, and/or PS&E) are planned in the Santa Clara River Reach 3 watershed that include treatment best management practices (BMPs).

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
DPP Infiltration Area (DPPIA)	46
Infiltration Basin	4
Total:	50

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A.

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Santa Clara River Reach 3 Chloride TMDL

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹⁰

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹⁰ Source: Permit Attachment F.

Santa Clara River Reach 3 Chloride TMDL

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Santa Monica Bay Dichlorodiphenyltrichloroethane (DDT) and Polychlorinated Biphenyls (PCBs) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
Los Angeles	Santa Monica Bay	DDT and PCBs	D5, D5.1, D5.2, D5.4, and D5.10

General Watershed Description²

The Malibu Creek and Other Rural Watersheds Management Area include Malibu, Agoura Hills, Calabasas and Westlake Village. There are about 43 square miles of land in Ventura County (including the City of Thousand Oaks), which drain into the Malibu Creek watershed and ultimately to Santa Monica Bay, that are not covered by the LA County NPDES permit but are covered by the Ventura County NPDES Permit.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	12.6
2016-2017	10.5
2017-2018	78.8
2018-2019	12
2019-2020	16.3
2020-2021	0.24

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 31 for Reach 10, 32 for Reach 2, 33 for Reach 11, 34 for Reach 1, 43 for Reach 5, 44 for Reach 8, 45 for Reach 4, 46 for Reach 6, 47 for Reach 7, 50 for Reach 9, and 181 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region IX, *Santa Monica Bay Total Maximum Daily Loads for DDTs and PCBs*, March 26, 2012: https://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/Established/SantaMonica/FinalSantaMonicaBayDDTPCBsTMDL.pdf.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Santa Monica Bay Dichlorodiphenyltrichloroethane (DDT) and Polychlorinated Biphenyls (PCBs) TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Toxic Pollutants/ Pesticides/ Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> • Caltrans controls toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges through implementing BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. • BMPs also reduce dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following BMP options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMP projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of options above.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	266,010	2,184	0.82%	DDT and PCBs	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Caltrans WLA
DDT	0.75 grams per year
PCBs	3.9 grams per year

TMDL Implementation Schedule

- Start Date: March 26, 2012
- Final Compliance Date per TSO⁶: December 31, 2034

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A.

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Santa Monica Bay Dichlorodiphenyltrichloroethane (DDT) and Polychlorinated Biphenyls (PCBs) TMDL

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
DDT	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with DDT WLAs in the Santa Monica Bay watershed since DDT is no longer in production and its usage has been regulated. Additionally, Caltrans does not use DDT within its ROW. • Although Caltrans does not use pesticides within its ROW, Caltrans complies with Permit Attachment C Section C3.5.3.2 that specifies practices for the safe handling and use of pesticides, including compliance with federal, State and local regulations, and label directions. Caltrans also performs site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in storm water runoff in the Santa Monica Bay watershed. Additionally, Caltrans implements and maintains structural BMPs to mitigate pesticides in the Santa Monica Bay watershed. • Caltrans reduces the sediment transport of DDT by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Santa Monica Bay watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
PCBs	<ul style="list-style-type: none"> • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the Santa Monica Bay watershed. Additionally, Caltrans does not use PCBs within its ROW. Therefore, Caltrans is expected to be in compliance with PCBs WLAs in the Santa Monica Bay watershed. • Toxic pollutants have a high affinity for adherence to fine sediment. A major source of toxic impairments is due to historical loading from the pollutants adhering to sediment. Therefore, the appropriate control measures for toxics are to control erosion and prevent or minimize the discharge of fine sediment. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Santa Monica Bay watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> • Caltrans implements and maintains structural BMPs to mitigate sediment in the Santa Monica Bay watershed. • Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan* (January 2015).

Santa Monica Bay Dichlorodiphenyltrichloroethane (DDT) and Polychlorinated Biphenyls (PCBs) TMDL

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	16
Biofiltration Strip	26
Biofiltration Swale	58
DPP Infiltration Area (DPPIA)	18
Infiltration Basin	4
Total:	122

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹¹ Source: Permit Attachment F.

Santa Monica Bay Beaches Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Santa Monica Bay Beaches	Bacteria	D5, D5.1, D5.2, D5.5, and D5.10

General Watershed Description²

The Santa Monica Bay Watershed has 55 miles of coastline and beaches. Its northern boundary extends along the crest of the Santa Monica Mountains from the Ventura-Los Angeles County line on the west to the Ballona Creek Watershed on the east. South of Ballona Creek the natural drainage area is a narrow strip that extends south from Ballona Creek to the tip of the Palos Verdes Peninsula, bordered by the Pacific Ocean to the west and the Dominguez Channel Watershed to the east. The entire watershed has approximately 200 separate storm drain outlets that convey over 30 billion gallons of runoff to the Bay each year. The Santa Monica Bay Watershed contains 27 subwatersheds that are separated into seven jurisdictions. Topanga and Malibu Creeks are the two largest watercourses in this area. The creeks are fed both by tributary creeks and by channelized storm drains in and near developed areas. Portions of Malibu, Agoura Hills, Westlake Village, and Los Angeles are located in this part of the Watershed. The mid- and southern portions of the Watershed are more urban and contain portions of Los Angeles, Santa Monica, El Segundo, Manhattan Beach, Redondo Beach, Palos Verdes Estates and Rancho Palos Verdes. This area is highly developed with a network of storm drains carrying flows to the Bay.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	12.6
2017-2018	61.6
2018-2019	12
2019-2020	16.3
2020-2021	0.24

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 31 for Reach 10, 32 for Reach 2, 33 for Reach 11, 34 for Reach 1, 43 for Reach 5, 44 for Reach 8, 45 for Reach 4, 46 for Reach 6, 47 for Reach 7, 50 for Reach 9, and 181 for Reach 3

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

¹ Source: Permit Attachment D.

² Source: City of Los Angeles LA Sanitation and Environment, *Santa Monica Bay*, Accessed February 16, 2023.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Santa Monica Bay Beaches Bacteria TMDL

Specific Reporting Requirements^{1,4}

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans participates in the Santa Monica Bay Dry and Wet Weather Bacteria TMDL Coordinated Shoreline Water Quality Monitoring Program.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Bacteria Total Maximum Daily Loads (Permit Attachment D Section 5.5)	Caltrans implements, monitors, and maintains BMPs to minimize the discharge of bacteria (i.e., fecal pathogens) to surface waters within each applicable reach. Potential sources of bacteria include stormwater. Runoff from untreated human and pet wastes, which may occur at homeless encampments and other areas. Caltrans implements one or more of the following: <ul style="list-style-type: none"> • Caltrans' Homeless Encampment Policy (Chapter 1, section 1.07.3(B) of Caltrans' Maintenance Manual) or subsequent policies addressing encampment removal and cleanup. • Cooperative agreement participation, such as leases to local municipalities for homeless services, where available. • Structural BMPs, such as retention, detention, diversion, infiltration, filtration, vegetated treatment, and similar.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	Caltrans will implement one of the following BMPs options: <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of options above.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	266,010	2,184	0.82%	Bacteria	Yes	e. Mass-Based Waste Load

⁴ Source: Caltrans *Annual Report*, Fiscal Year 2021-2022.

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Santa Monica Bay Beaches Bacteria TMDL

WLAs⁶

Pollutant	Caltrans WLA
Bacteria, Leo Carillo (Reference Station)	<p><u>Summer Dry-Weather</u> Daily Sampling = 0 days Weekly Sampling = 0 days</p> <p><u>Winter Dry-Weather</u> Daily Sampling = 9 days Weekly Sampling = 2 days</p> <p><u>Wet-Weather (Critical condition for watershed)</u> Daily Sampling = 17 days Weekly Sampling = 3 days</p> <p>Note: There are 67 sample stations within the Santa Monica Bay Beaches watershed, each with their own WLA for winter dry-weather and wet-weather allowable number of exceedance days. Leo Carillo Beach, the reference location, has been used to represent the WLAs in the watershed. Caltrans indirectly discharges to the Santa Monica Bay Beaches Watershed through the local storm drain conveyance system. The above table is the allowable number of exceedance days for the single sample targets. In addition to the single sample targets, geometric mean targets, as set by the Basin Plan, may not be exceeded at any time.</p>

TMDL Implementation Schedule

- Start Date: July 2, 2014
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Bacteria	<ul style="list-style-type: none"> • Caltrans is in compliance with bacteria WLAs for dry-weather flows in the Santa Monica Bay Beaches watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. According to the California Water Board's <i>Annual Performance Report</i>, the Water Quality Report Card for Santa Monica Bay Beaches reports that since 2005, water quality data shows a significant improvement during dry weather. • Caltrans minimizes wet-weather discharges from its ROW into receiving waterbodies impaired for bacteria by implementing treatment BMPs and source control/preemptive activities such as street sweeping, clean-up of illegal dumping, prohibition of non-storm water discharges, and public education. • Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan.

⁶ Sources: Permit Attachment A.

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan*, January 2015; State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, Water Quality Report Card last updated in September 2012.

Santa Monica Bay Beaches Bacteria TMDL

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Strip	26
Biofiltration Swale	58
DPP Infiltration Area (DPPIA)	18
Infiltration Basin	4
Total	106

Existing Non-Structural BMPs¹¹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region. Caltrans participates in the Santa Monica Bay Dry and Wet Weather Bacteria TMDL Coordinated Shoreline Water Quality Monitoring Program.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of December 6, 2022.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹² Source: Permit Attachment F.

Santa Monica Bay Nearshore and Offshore Debris (Trash and Plastic Pellets) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Santa Monica Bay Nearshore and Offshore	Debris (Trash and Plastic Pellets)	D5, D5.1, D5.2, D5.9, and D5.10

General Watershed Description²

The Santa Monica Bay is an integral part of the larger geographic region commonly known as the Southern California Bight. It is bordered offshore by the Santa Monica Basin, to the north by the rocky headlands of Point Dume and to the south by the Palos Verdes Peninsula, and onshore by the Los Angeles Coastal Plain and the Santa Monica Mountains. The 414 square mile area of land that drains naturally to the Bay, known as the Santa Monica Bay watershed, is bordered on the north by the Santa Monica Mountains from the Ventura-Los Angeles County line to Griffith Park, extending south and west across the Los Angeles coastal plain to include the area east of Ballona Creek and north of Baldwin Hills. South of Ballona Creek, a narrow coastal strip between Playa del Rey and the Palos Verdes Peninsula forms the southern boundary of the watershed.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2017-2018	5.4

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 50 for Reach 9, 51 for Reach 13, 52 for Reach 11, 53 for Reach 12, 54 for Reach 7, 55 for Reach 14, 56 for Reach 2, 57 for Reach 15, 58 for Reach 1, 59 for Reach 3, 60 for Reach 16, 61 for Reach 5, 62 for Reach 8, 63 for Reach 6, 238 for Reach 4, and 245 for Reach 10

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board Los Angeles Region, *Santa Monica Bay Nearshore and Offshore Debris TMDL*, October 25, 2010: https://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/72_New/SMB%20Debris%20Staff%20Report%20102510.pdf.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Santa Monica Bay Nearshore and Offshore Debris (Trash and Plastic Pellets) TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practices (BMPs) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads (Permit Attachment D Section D5.9)	<p>Caltrans complies with the Santa Monica Bay Nearshore and Offshore Debris (Trash and Plastic Pellets) TMDL by implementing the following:</p> <ul style="list-style-type: none"> • <u>Trash Control Measures</u> – Caltrans complies with WLAs by installing, operating, and maintaining any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls for all storm drains that capture runoff from significant trash generating areas to achieve full capture equivalency as defined by the Trash Provisions in the Inland Surface Waters, Enclosed Bays and Estuaries of California Plan. Permit Attachment E contains information on what qualifies as a full capture system and how to demonstrate full capture equivalency. • <u>Trash Reduction Allocations</u> – Trash reduction allocations are the gallons per year of trash that Caltrans shall remove or reduce from discharges from its jurisdiction to satisfy its trash load allocations. Areas within Caltrans’ jurisdiction include highway on- and off-ramps in high density residential, commercial, and industrial land uses, rest areas and park-and-rides, state highways in commercial and industrial land uses, and mainline highway segments. <ul style="list-style-type: none"> ○ Trash reduction allocation for Caltrans in the Santa Monica Bay Nearshore and Offshore Debris (Trash and Plastic Pellets) TMDL is equivalent to 36,129 gallons per year.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	<p>Caltrans implements one of the following BMPs options:</p> <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of options above.

Santa Monica Bay Nearshore and Offshore Debris (Trash and Plastic Pellets) TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	126,801	704	0.56%	Debris (Trash and Plastic Pellets)	Yes	e. Mass-Based Waste Load

WLAs⁵

Pollutant	Caltrans WLA
Debris (Trash)	<ul style="list-style-type: none"> Point source discharge of trash to the Santa Monica Bay Nearshore and Offshore watershed, shoreline, and channels is prohibited. WLA = zero Baseline WLA: 36,129 gallons per year
Debris (Plastic Pellets)	<ul style="list-style-type: none"> None

TMDL Implementation Schedule

- Start Date: March 20, 2012
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Trash	<ul style="list-style-type: none"> Caltrans employs several types of trash removal devices in the Santa Monica Bay Nearshore and Offshore watershed, including Austin sand filters, biofiltration strips, biofiltration swales, and gross solids removal devices. Caltrans also employs non-structural BMPs in the Santa Monica Bay Nearshore and Offshore Watershed to mitigate trash including sweeping, drain inlet cleaning, trash collection, storm drain stenciling, slope/soil stabilization, covered trash bins, public education, and public participation. Additionally, Caltrans implements the Adopt-A-Highway program more frequently to treat beyond the minimum permit requirements. Caltrans also collaborates with the California Public Education Campaign to further engage in public education. Moreover, programs such as the Caltrans Parolee Program, California Conservation Corps, District Crew Collection, and Storm Drain Maintenance activities help remove trash from the Caltrans ROW. Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Three SHOPP projects (PID, PAED, and/or PS&E) are planned in the Santa Monica Bay Nearshore and Offshore Watershed that will include treatment BMPs.
Plastic Pellets	<ul style="list-style-type: none"> Caltrans is not responsible for compliance with the plastic pellets WLAs, because they are assigned to permittees of the Industrial Storm Water General Permit within the Santa Monica Bay watershed management area only.

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A.

⁶ Final deadlines for achievement of load allocation are not specific in the TMDL or Action Plan. The TMDL was adopted on March 20, 2012; therefore, the start date was March 20, 2012. Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan*, January 2015; State Water Resources Control Board's *Annual Performance Reports Fiscal Year 2019-2020*, Water Quality Report Card last updated in September 2012.

Santa Monica Bay Nearshore and Offshore Debris (Trash and Plastic Pellets) TMDL

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Austin Sand Filter	2
Total:	2

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants. The Caltrans *Annual Report* Fiscal Year 2021-2022 states that Caltrans District 7 has prevented 781 cubic yards of trash through the Public Education Program.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse. The Caltrans *Annual Report* Fiscal Year 2021-2022 states that Caltrans District 7 has removed 24,668 cubic yards of trash through roadway sweeping.
- **Adopt-A-Highway Program** – The Adopt-A-Highway Program provides an avenue for individuals, organizations, and businesses to help maintain sections of roadside for various activities including litter removal within California’s State Highway System. The Caltrans *Annual Report* Fiscal Year 2021-2022 states that Caltrans District 7 has removed 5,694 cubic yards of trash through the Adopt-A-Highway Program.
- **District Crew and Clean California Collection** – Caltrans crews conduct manual cleanup of trash and litter from the ROW. Clean California includes subcontractors that include Back to Work programs, Probationers/Parolees, Veteran’s Outreach Program, Homeless, At-Risk Youth, Court Referrals, Inmates, Work Release/Work Furlough, and California Conservation Corps. The Caltrans *Annual Report* Fiscal Year 2021-2022 states that Caltrans District 7 has removed 182,322 cubic yards of trash through District Crew and Clean California Collection.
- **Slope/Soil Stabilization Area** – Soil stabilization is placed to stabilize areas disturbed by grading operations, to reduce loss of soil due to the action of water or wind, and to prevent water pollution.
- **Storm Drain Maintenance** – Caltrans cleans the storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and by Vactor trucks. Caltrans District 7 performs additional inspection and cleaning through its Enhanced Annual Storm Drain Inlet Inspection

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); Caltrans *TMDL Implementation Plan* (2015); Caltrans *Annual Report* Fiscal Year 2021-2022, Appendix E; Caltrans *District 7 Litter Management Pilot Study* (June 2000); and Caltrans *Project Planning and Design Guide* (2016).

Santa Monica Bay Nearshore and Offshore Debris (Trash and Plastic Pellets) TMDL

and Cleaning Program in metropolitan areas. The Caltrans *Annual Report* Fiscal Year 2021-2022 states that Caltrans District 7 has removed 60 cubic yards of trash through Storm Drain Maintenance.

Monitoring¹¹

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹¹ Source: Permit Attachment F.

Santa Monica Bay Nearshore and Offshore Debris (Trash and Plastic Pellets) TMDL

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Upper Santa Clara River Chloride TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
Los Angeles	Upper Santa Clara River	Chloride	D3.2

General Watershed Description²

The Santa Clara River is the largest river system in southern California that remains in a relatively natural state and is a high quality resource for much of its length. The river originates in the northern slope of the San Gabriel Mountains in Los Angeles County, traverses Ventura County, and flows into the Pacific Ocean through the Santa Clara River Estuary between the cities of San Buenaventura and Oxnard. The upper reaches of the Santa Clara River include Reaches 5 and 6, which are located upstream of the Blue Cut gauging station, west of the Los Angeles - Ventura County line between the Cities of Fillmore and Santa Clarita. The upper boundary extends to Bouquet Canyon, upstream of the City of Santa Clarita.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2017-2018	22.3
2020-2021	7
2021-2022	1.5

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 218 for Reach 2 and 219 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not applicable

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.

¹ Source: Permit Attachment D.

² Source: California Regional Water Quality Control Board Los Angeles Region, *Upper Santa Clara River Chloride TMDL Reconsideration, Conditional Site-Specific Objectives for Chloride, and Interim Wasteload Allocations for Sulfate and Total Dissolved Solids Staff Report*, November 24, 2008: https://www.waterboards.ca.gov/rwqcb4/board_decisions/basin_plan_amendments/technical_documents/69_New/2008_1203/Revised_Draft_Staff_Report.pdf

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Upper Santa Clara River Chloride TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	264,851	581	0.22%	Chloride	No	d. Discharge Sampling

WLAs⁵

Pollutant	Caltrans WLA
Chloride	100 mg/L (3-month averaging period)
	Note: The WLA is a combined allocation for NPDES discharges and non-point sources.

TMDL Implementation Schedule

- Start Date: June 18, 2003
- Final Compliance Date⁵: July 1, 2019

Plan to Achieve WLAs^{6,7}

Pollutant	Strategies to Achieve WLAs
Chloride	<ul style="list-style-type: none"> • Caltrans is in compliance with the chloride WLA in the Upper Santa Clara River watershed. Chloride in the Upper Santa Clara River watershed is primarily due to increased salt loadings from imported water, the use of self-regenerating water softeners, and the use of de-icers on roadways, which Caltrans does not implement within its ROW. Therefore, Caltrans is not required to implement additional measures to address chloride and is in compliance with WLAs for chloride without any additional control actions as long as they are in compliance with the Permit. • As an additional pollutant control measure, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Twelve SHOPP projects (PID, PAED, and/or PS&E) are planned in the Upper Santa Clara River Watershed that will include treatment best management practices (BMPs).

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
DPP Infiltration Area (DPPIA)	65
Infiltration Trench	8
Total	73

Existing Non-Structural BMPs⁹

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: Permit Attachment A.

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Upper Santa Clara River Chloride TMDL

- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹⁰

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

¹⁰ Source: Permit Attachment F.

Upper Santa Clara River Chloride TMDL

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Ventura River Estuary Trash TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Ventura River Estuary	Trash	D5, D5.1, D5.2, D5.9, and D5.10

General Watershed Description²

The Ventura River and its tributaries drain approximately 226 square miles near coast in western Ventura County. The headwater of Ventura River runs from Santa Ynez Mountains with an elevation of 6,000 feet in the Los Padres National Forest, routing through Cities of Ojai, Oak View, down to the Pacific Ocean at City of Ventura. The Ventura River terminates at the Ventura River Estuary that includes wetlands. The Estuary area is defined north southerly between the Pacific Ocean and Main Street Bridge in the City of San Buenaventura, easterly adjacent to Seaside Wilderness Park where Ventura County Fairground is and which frequently hosts events and allows direct access to the estuary area, westerly next to Ventura Beach RV Park between Main Street and Highway 101, and Emma Wood State Park under oversight of California Department of Parks and Recreation. The Estuary is approximately 30 acres and includes a main lagoon that is separated from the ocean by a sand/cobble bar during the dry season. When full, the lagoon covers approximately 1.5 surface hectare and ranges in depth from two to seven feet. Flow in the Ventura River at entrance of estuary at Main Street maintains around five cubic feet per second (cfs) in the dry season and would go up to 60,000 cfs during storms, it is highly governed by precipitation, discharge from springs and seepage in and out of groundwater aquifers.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2016-2017	10.5

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 4 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board Los Angeles Region *Ventura River Estuary Trash TMDL*, March 2007:

https://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/2007-008/06%20Staff%20Report.pdf

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Ventura River Estuary Trash TMDL

Specific Reporting Requirements^{1,4}

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans participates in the Ventura River Estuary Trash TMDL cooperative monitoring agreement.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads (Permit Attachment D Section 5.9)	Caltrans implements: <ul style="list-style-type: none"> • Trash control measures by installing, operating, and maintaining full capture systems or other treatment or institution controls for storm drains that capture runoff from significant trash generating areas. • Trash reduction allocations equivalent to 2,049.86 gallons per year for the Ventura River Estuary Watershed.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	Caltrans implements one of the following BMPs options: <ul style="list-style-type: none"> • Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMPs projects that will treat applicable TMDL pollutants for compliance with WLAs; or • Implement BMPs in its ROW to meet the TMDL allocations; or • Implement a combination of options above.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	144,672	431	0.30%	Trash	Yes	e. Mass-Based Waste Load

WLAs⁶

Pollutant	Watershed WLA
Trash	The WLA is zero trash.

TMDL Implementation Schedule

- Start Date: February 27, 2008
- Final Compliance Date per TSO⁷: December 31, 2034

⁴ Source: Caltrans *Annual Report*, Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Source: Permit Attachment A

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Ventura River Estuary Trash TMDL

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Trash	<ul style="list-style-type: none"> • Significant improvements to the reduction of trash have occurred in the Ventura River Estuary watershed. Caltrans employs several types of trash removal devices in the Ventura River Estuary watershed, including Austin sand filters, gross solids removal devices, and infiltration basins. Caltrans also employs non-structural BMPs in the Ventura River Estuary watershed to mitigate trash including sweeping, drain inlet cleaning, trash collection, storm drain stenciling, covered trash bins, public education, and public participation. Additionally, Caltrans implements the Adopt-A-Highway program more frequently to treat beyond the minimum permit requirements. Caltrans also collaborates with the California Public Education Campaign to further engage in public education. Moreover, programs such as the Caltrans Parolee Program, California Conservation Corps, District Crew Collection, and Storm Drain Maintenance activities help remove trash from the Caltrans ROW. On a municipal level, Caltrans partners with the County of Ventura Public Works Agency to ensure additional water quality monitoring through the Municipal Coordination Plan. • Monitoring results show that a total of 22,800 pounds of trash were collected during the Minimum Frequency Assessment Collection and additional clean-up events. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Over five SHOPP projects (PID, PAED, and/or PS&E) are planned in the Ventura River Estuary watershed that will include treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Austin Sand Filter	4
GSRD - Inclined Screen	41
Infiltration Basin	3
Total	48

Existing Non-Structural BMPs^{11,4}

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board’s *Annual Performance Reports Fiscal Year 2019-2020*, Water Quality Report Card last updated in September 2018.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Ventura River Estuary Trash TMDL

coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.
- **Adopt-A-Highway Program** – The Adopt-A-Highway Program provides an avenue for individuals, organizations, and businesses to help maintain sections of roadside for various activities, including litter removal, within California's State Highway System. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 3,758 cubic yards of trash through the Adopt-A-Highway Program.
- **SPP Litter Control Program** – SPP Litter Control are subcontractors that include Back to Work programs, Probationers/Parolees, Veteran's Outreach Program, Homeless, At-Risk Youth, Court Referrals, Inmates, Work Release/Work Furlough, and California Conservation Corps. These are funded through State Highway Account. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 33,146 cubic yards of trash through this program.
- **District Crew Collection** – Caltrans crews conduct manual cleanup of trash and litter from the ROW. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 36,750 cubic yards of trash.
- **Slope/Soil Stabilization Area** – Soil stabilization methods are installed to stabilize areas disturbed by grading operations, to reduce loss of soil due to water or wind, and to prevent water pollution.
- **Storm Drain Maintenance** – Caltrans cleans the storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and by Vactor trucks. Caltrans District 7 performs additional inspection and cleaning through its Enhanced Annual Storm Drain Inlet Inspection and Cleaning Program in metropolitan areas. As of Fiscal Year 2021-2022, Caltrans District 7 has removed 60 cubic yards of trash from Storm Drain Maintenance activities.
- **Municipal Coordination Plan** – Caltrans coordinates with the County of Ventura Public Works Agency to ensure additional water quality monitoring through the implementation of the Municipal Coordination Plan. Caltrans participates in municipal coordination activities by attending meetings, taking part in special studies, and collaborating with local agencies. District staff attend meetings statewide with municipal stormwater permittees to coordinate the implementation of TMDLs, public education and outreach, regional planning, and other related activities.
- **Clean California** – Clean California is providing funding for transformative state and local beautification projects in communities across California, with a focus on historically underserved areas, that will improve the aesthetics of public spaces, facilitate community pride, and reduce trash regeneration. Maintenance personnel constantly monitor their areas of responsibility to detect and report deficiencies to, or needs of, the highway system. To ensure the overall levels of maintenance are pursued, periodic inspection trips by key personnel are required. Maintenance supervisors travel all highways in the section, including ramps and collector systems, at least once a week to observe overall conditions and detect deficiencies. Known or potential problem areas require more frequent inspections. Weekly inspections are an integral part of the supervisor's work planning and scheduling activities. The Area Superintendent observes overall conditions to assure conformance with the established maintenance levels. Maintenance personnel utilize their continuous driving visual assessments in their areas of responsibility along with the quarterly LOS scores to adaptively manage the deployment of resources to maximize litter production.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-

¹² Source: Permit Attachment F.

Ventura River Estuary Trash TMDL

Specific Monitoring Requirements for the Los Angeles Region. Caltrans participates in the Ventura River Estuary Trash TMDL cooperative monitoring agreement and submits results in the Ventura River Estuary TMDL Annual Monitoring Report.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

Ventura River Estuary Trash TMDL

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Ventura River and Its Tributaries Algae, Eutrophic Conditions, and Nutrients TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Los Angeles	Ventura River and Its Tributaries	Algae, Eutrophic Conditions, and Nutrients	D5, D5.1, D5.2, D5.3, and D5.10

General Watershed Description²

The Ventura River and its tributaries drain approximately 226 square miles near coast in western Ventura County. The headwater of Ventura River runs from Santa Ynez Mountains with an elevation of 6,000 feet in the Los Padres National Forest, routing through Cities of Ojai, Oak View, down to the Pacific Ocean at City of Ventura. The Ventura River terminates at the Ventura River Estuary that includes wetlands. The Estuary area is defined north southerly between the Pacific Ocean and Main Street Bridge in the City of San Buenaventura, easterly adjacent to Seaside Wilderness Park where Ventura County Fairground is and which frequently hosts events and allows direct access to the estuary area, westerly next to Ventura Beach RV Park between Main Street and Highway 101, and Emma Wood State Park under oversight of California Department of Parks and Recreation. The Estuary is approximately 30 acres and includes a main lagoon that is separated from the ocean by a sand/cobble bar during the dry season. When full, the lagoon covers approximately 1.5 surface hectare and ranges in depth from two to seven feet. Flow in the Ventura River at entrance of estuary at Main Street maintains around five cubic feet per second (cfs) in the dry season and would go up to 60,000 cfs during storms, it is highly governed by precipitation, discharge from springs and seepage in and out of groundwater aquifers.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2017-2018	1.4
2021-2022	1.2

Translation of CU to Waste Load Allocation (WLA)

Translation of previously earned CUs under the previous Permit to meet WLAs of the current Permit is being determined using reasonable assurance analysis to calculate waste load reductions on a project by project basis for local partnership projects. Caltrans is also identifying and evaluating past stormwater improvements to accurately capture all the treatment within and outside of Caltrans right-of-way (ROW) that would qualify for waste load reduction.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 2 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

None

¹ Source: Permit Attachment D.

² Sources: California Regional Water Quality Control Board Los Angeles Region *Ventura River Estuary Trash TMDL*, March 2007: https://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/2007-008/06%20Staff%20Report.pdf

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. Note: A "CU" is generally defined as one acre of treatment is equal to one CU. See Section 1.2 of this report for additional details.

Ventura River and Its Tributaries Algae, Eutrophic Conditions, and Nutrients TMDL

Specific Reporting Requirements^{1,4}

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document. This ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following the Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation and Turbidity Total Maximum Daily Loads (Permit Attachment D Section D5.3)	Caltrans conducts ongoing assessments of the performance and effectiveness of a representative fraction of each type of Caltrans installed BMPs and control measures. Where an assessment indicates that BMPs and/or control measures are inadequate to achieve WLAs and other performance standards, Caltrans implements adaptive management, which are modifications and improvement of control measures and BMPs necessary for compliance all TMDL-related requirements.
Requirements for Los Angeles Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.10)	Caltrans implements one of the following BMPs options: <ul style="list-style-type: none"> Participate, or continue to participate, in cooperative agreement projects (as defined in Permit Attachment B) with other entities and agencies, which contribute to the construction and maintenance of regional structural BMP projects that will treat applicable TMDL pollutants for compliance with WLAs; or Implement BMPs in its ROW to meet the TMDL allocations; or Implement a combination of options above.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
7	4	144,672	431	0.30%	Algae, Eutrophic Conditions, and Nutrients	Yes	e. Mass-Based Waste Load

WLAs⁶

Pollutant	Watershed WLA
Total Nitrogen, Dry-Weather	1.1 pounds/day
Total Phosphorus, Dry-Weather	0.11 pounds/day
Nitrate-as-Nitrogen Plus Nitrite, Wet-Weather	Estuary and Reach 1 = 7.4 milligrams/liter

TMDL Implementation Schedule

- Start Date: June 28, 2013
- Final Compliance Date per TSO⁷: December 31, 2034

⁴ Source: Caltrans *Annual Report*, Fiscal Year 2021-2022.

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Source: Permit Attachment A

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time

Ventura River and Its Tributaries Algae, Eutrophic Conditions, and Nutrients TMDL

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Algae, Eutrophic Conditions, and Nutrients	<ul style="list-style-type: none"> Caltrans is expected to be in compliance with algae, eutrophic conditions, and nutrient WLAs in the Ventura River watershed. Caltrans controls the discharge of algae, eutrophic conditions, and nutrients through the control of sediment. Caltrans implements and maintains structural BMPs to mitigate sediment in the Ventura River watershed. Additionally, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Ventura River watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Caltrans has a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities are prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Over five SHOPP projects (PID, PAED, and/or PS&E) are planned in the Ventura River watershed that include treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Austin Sand Filter	4
Biofiltration Swale	12
DPP Infiltration Area (DPPIA)	12
Infiltration Basin	3
Stabilization Area	1
Total	32

Existing Non-Structural BMPs¹¹

- Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans trains in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. Caltrans removes homeless encampments from its ROW according to the Encampment Prioritization Framework and adheres to all policies and protocols according to Maintenance Policy Directive 1001-R1, which was updated in 2022 and serves as the procedural guide for all encampment removal operations on the state ROW.

Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan*, January 2015.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Ventura River and Its Tributaries Algae, Eutrophic Conditions, and Nutrients TMDL

- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates with the Headquarters Public Information Officer and District NPDES Coordinators. The Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹²

Caltrans is required to submit a TMDL Monitoring Plan. The Monitoring Plan will address the requirements in Section F2 through F2.15 of the permit which include monitoring for compliance with TMDLs and Region-Specific Monitoring Requirements for the Los Angeles Region.

Reporting (Time Schedule Order)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.

¹² Source: Permit Attachment F.

Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch Mercury TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Central Valley	Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch	Mercury	D3.2, D3.3, D5, D5.1, D5.2, and D5.11.1

General Watershed Description²

The Cache Creek watershed is a 0.7-million-acre drainage in the Coast Range of California. It lies in Colusa, Lake, and Yolo counties. The watershed is separated into upper and lower basins. The upper basin is above the town of Rumsey. It has three primary drainages that have year-round flow: North Fork Cache Creek, South Fork Cache Creek (downstream of Clear Lake), and Bear Creek. Downstream of Rumsey is the lower basin, which contains farmland and several small communities. At the downstream end of the lower basin, Cache Creek flows into a settling basin and then into the Yolo Bypass, which subsequently drains into the Sacramento-San Joaquin Delta Estuary. This TMDL addresses four impaired streams in the Cache Creek Watershed. Harley Gulch is an ephemeral stream (with flow between October and June) that drains into Cache Creek just downstream of the North and South Fork Cache Creek tributaries. Farther downstream, Bear Creek drains from its headwaters into Cache Creek. This 39-mile creek travels through rangeland as well as some rugged terrain. Sulphur Creek drains into Bear Creek and is an intermittent stream with flowing water from October to June. Stretches of the stream are wet year-round due to the presence of springs. The total length of the impaired Cache Creek is 81 miles, spanning from Clear Lake (just upstream of the South Fork Cache Creek) to the Cache Creek Settling Basin.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	0.01
2018-2019	6.5
2020-2021	1.8

Translation of CU to Waste Load Allocation (WLA)

Caltrans is expected to be in compliance with the methylmercury WLA in the Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch watersheds because they are in compliance with their stormwater permit. Caltrans implements appropriate control measures to reduce the discharge of methylmercury, such as physical structures that prevent contaminated runoff from reaching receiving waters. In addition, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch watersheds by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Source controls are also implemented for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle.

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency *Water Quality Progress Report Cache Creek, Bear Creek, and Harley Gulch - Mercury*, June 15, 2015.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch Mercury TMDL

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 70 for Reach 6, 73 for Reach 4, 74 for Reach 1, 78 for Reach 2, 79 for Reach 3, 84 for Reach 9, 93 for Reach 8, 188 for Reach 7, 237 for Reach 5

Region-Specific Requirements (Permit Attachment D Section D3.4 and D5.11.1)

Caltrans will control sediment as required by the TMDL, as follows:

1. Control erosion from construction and maintenance activities using approved best management practices (BMPs) in the parts of the watershed.
2. Comply with the Caltrans' Stormwater Management Plan and implement BMPs to control erosion.
3. Perform pre-project assessments to identify areas with enriched mercury. Identify and implement additional BMPs for areas with enriched mercury.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed BMP and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Central Valley Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.11.1)	Caltrans will control sediment as required by the TMDL, as follows: <ol style="list-style-type: none"> 1. Control erosion from construction and maintenance activities using approved BMPs in the parts of the watershed 2. Comply with the Caltrans' Stormwater Management Plan and implement BMPs to control erosion 3. Perform pre-project assessments to identify areas with enriched mercury. Identify and implement additional BMPs for areas with enriched mercury.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1 and 3	5	745,640	1,468	0.2%	Mercury	No	h. TMDL-Specific Demonstrations

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015). This area may be updated as more information is gathered.

Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch Mercury TMDL

WLAs⁵

Pollutant	Watershed WLA (kg/year)
Methylmercury	None – No point sources exist in the watersheds; therefore, no WLA has been assigned to Caltrans.

TMDL Implementation Schedule

The Central Valley Water Board will review progress toward water body attainment with water quality objectives and Basin Plan requirements at least every five years. (The Central Valley Regional Board recognizes that it may take hundreds of years to achieve established mercury objectives.)

- Start Date: February 7, 2007
- Final Compliance Date: To Be Determined

Plan to Achieve WLAs^{6,7}

Pollutant	Compliance Strategies
Mercury	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with the methylmercury WLA in the Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch watersheds. Caltrans controls the discharge of methylmercury through the control of sediment. Caltrans implements appropriate control measures to reduce the discharge of methylmercury, such as physical structures that prevent contaminated runoff from reaching receiving waters. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch watersheds by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
Biofiltration Strip	24
Biofiltration Swale	4
DPP Infiltration Area (DPPIA)	15
Stabilization Area	1
Total	44

⁵ Source: *Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch TMDL for Mercury Staff Report* (2004); Resolution No. R5-2005-1046; and Order 2012-0011-DWQ as amended by Order WQ 2014-0006-EXEC, Order WQ 2014-0077-DWQ, and Order WQ 2015-0036-EXEC.

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Caltrans *TMDL Implementation Plan* (January 2015).

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch Mercury TMDL

Existing Non-Structural BMPs

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring

Per Permit Attachment F, turbidity monitoring will be performed for construction projects as required in the Construction General Permit.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

Clear Lake Nutrients TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Central Valley	Clear Lake	Nutrients	D3.2, D3.3, D5.1, and D5.11.3

General Watershed Description^{2,3}

Clear Lake is located in the Coast Range in Lake County, California, about 60 miles northwest of Sacramento. The approximately 282,239 acre watershed drains into Clear Lake, which is the largest natural lake located entirely within the borders of California. It extends 18 miles long, has a surface area of 68 square miles, and is divided into three arms, the Upper Arm, Oaks Arm and Lower Arm. Most (75%) of the watershed drains into the Upper Arm, which is the largest of the three arms. The two largest streams are Scotts Creek and Middle Creek, which join in the Middle Creek marsh area before draining to the Upper Arm through Rodman Slough. These two creeks drain 30% of the watershed. The average depth of the lake is 27 feet and the maximum depth is 60 feet. The lake's only outlet is through Cache Creek, which flows out of the Lower Arm and a dam on Cache Creek and is located five miles below the lake. Elevations within the watershed range from 4,299 feet at the top of Mount Konocti to 1,318 feet at the lake. The Clear Lake watershed is sparsely populated. Only 2.5% of the watershed is urbanized.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ⁴
2014-2015	0.01
2020-2021	1.76

Translation of CU to Waste Load Allocation (WLA)

Caltrans is in compliance with nutrient WLAs for the Clear Lake watershed because they are in compliance with their stormwater permit. Caltrans controls the discharge of nitrogen and phosphorus through the control of sediment. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Clear Lake Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.

Prioritized Inventory of Reaches Ranking

- Reach Number Priority Ranking: 18 for Reach 2, 20 for Reach 1, 35 for Reach 4, and 36 for Reach 3

Region-Specific Requirements (Permit Attachment D Sections D3.4 and D5.11.3)

Caltrans is assigned a phosphorous WLA of 100 kilograms per year in the Clear Lake Nutrients TMDL, which is managed by controlling sediment. For the Clear Lake Nutrients TMDL, the Caltrans will:

1. Control erosion from construction and maintenance activities using approved best management practices (BMPs).
2. Comply with Caltrans' Stormwater Management Plan and implement BMPs to control erosion.

¹ Source: Permit Attachment D.

² Source: Central Valley Regional Water Quality Control Board *Amendment to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control of Nutrients in Clear Lake*, June 2006.

³ Source: United States Environmental Protection Agency *Water Quality Progress Report-Clear Lake Mercury* 2003.

⁴ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Clear Lake Nutrients TMDL

Specific Reporting Requirements⁵

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Section D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Requirements for Central Valley Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.11.3)	<p>Caltrans is assigned a phosphorous WLA of 100 kilograms per year in the Clear Lake Nutrients TMDL, which is managed by controlling sediment. For the Clear Lake Nutrients TMDL, the Caltrans will:</p> <ol style="list-style-type: none"> 1. Control erosion from construction and maintenance activities using approved BMPs 2. Comply with Caltrans' Stormwater Management Plan and implement BMPs to control erosion

Caltrans District	RWQCB Number	TMDL Watershed Area (acres) ⁶	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁷	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
1	5	282,239	845	0.30%	Nutrients (Phosphorus)	No	h. TMDL-Specific Demonstrations

WLAs

Pollutant	Watershed WLA (kg/year)
Phosphorus	100 kg/year

TMDL Implementation Schedule

- The compliance deadline for phosphorus WLA in Clear Lake was required by September 21, 2017, ten years after the approval of the TMDL.

⁵ See Permit Attachment D for full requirements of each section.

⁶ Source: Central Valley Regional Water Quality Control Board *Staff Report for Amendment to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control of Nutrients in Clear Lake*, June 2006, which is posted:

https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/clear_lake_nutrients/cl_staff_june.pdf.

⁷ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Clear Lake Nutrients TMDL

Plan to Achieve WLAs^{8,9,10}

Pollutant	Strategies to Achieve WLAs
Phosphorus	<ul style="list-style-type: none"> • Based on monitoring results and the implemented management measures, Caltrans concluded the annual rate of phosphorus/sediment discharged from its ROW to Clear Lake complies with the TMDL WLAs. Therefore, Caltrans has met its WLA for the Clear Lake watershed. The Central Valley RWQCB agreed to Caltrans' determination of its compliance with the TMDL. Caltrans continues to plan erosion control activities and BMP implementation activities within the Clear Lake Watershed. • Caltrans has also established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. • The incorporation of design pollution prevention BMPs into projects within the Clear Lake watershed are evaluated and incorporated into projects to avoid and minimize sediment erosion and transport from the Caltrans ROW to Clear Lake. The following stormwater BMP categories and associated BMPs are incorporated into projects when feasible and required: <ul style="list-style-type: none"> ○ Down Slope Effects Related to Increased Flow Conveyance <ul style="list-style-type: none"> ▪ Peak flow attenuation methods and devices ▪ Increases in impervious surface ▪ Energy dissipation devices (e.g., RSP) ▪ Ditches, berms, dikes, and swales ○ Slope and Surface Protection <ul style="list-style-type: none"> ▪ Vegetation protection and establishment ▪ Benching/terracing ▪ Temporary sediment and erosion control during construction • At a meeting with the Central Valley Regional Board in 2015, it was agreed that the data collection phase to estimate baseline phosphorus loading is sufficiently complete and no additional monitoring of stormwater is required. It was also agreed that Caltrans efforts should focus on reducing sediment discharges to Clear Lake and its tributaries. Caltrans has since continued pollutant control efforts by implementation of stabilization and routine maintenance measures to prevent sediment discharge from the ROW. In addition, Caltrans will monitor turbidity at construction projects within this watershed per Permit Attachment F.¹¹

⁸ Sources: *Amendment to The WQCP for the Sacramento River and San Joaquin River Basins for The Control of Nutrients in Clear Lake Staff Report*, June 2006; and Order 2012-0011-DWQ as amended by Order WQ 2014-0006-EXEC, Order WQ 2014-0077-DWQ, and Order WQ 2015-0036-EXEC.

⁹ Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

¹⁰ Caltrans *TMDL Implementation Plan* (January 2015).

¹¹ Source: Caltrans *Total Maximum Daily Load Status Review Report*, Fiscal Year 2021-2022, October 1, 2022, and Permit Attachment F.

Clear Lake Nutrients TMDL

Existing Installed Structural BMPs¹²

Treatment BMP Type	Number of BMPs
Biofiltration Strip	24
Biofiltration Swale	3
DPP Infiltration Area (DPPIA)	15
Total	42

Existing Non-Structural BMPs^{13,14}

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans prepares and implements a Statewide Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Improved Erosion Control** – Well timed applications of erosion control materials, such as a combination of hydromulch, grass seed, jute netting and fiber rolls, will reduce the phosphorus load from cut slope runoff. It is recommended that an intensive cut slope evaluation take place to evaluate locations around the lake where this needs to be implemented.
- **Improved Maintenance Practices** – Based on the current average rainfall at Clear Lake, improved maintenance practices will likely be necessary to meet Caltrans' phosphorus load allocation of 100 kg/yr during years with above average rainfall. Maintenance practices need to be implemented to ensure that excess sediment is not transported to Clear Lake (i.e., timely cleaning of ditches). Implementing improved maintenance practices and soil stabilization measures would have the greatest impact.

Monitoring

Per Permit Attachment F, turbidity monitoring is performed for construction projects as required in the Construction General Permit.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

¹² Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹³ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

¹⁴ Sources: Caltrans *Clear Lake Nutrient Data Collection Final Monitoring Report Storm Seasons* (2014).

Sacramento - San Joaquin Delta Methylmercury TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Central Valley	Sacramento – San Joaquin Delta	Methylmercury	D3.2, D3.3, D5, D5.1, D5.2, and D5.11

General Watershed Description²

The Sacramento-San Joaquin Delta, along with the San Francisco Bay, forms the largest estuary on the west coast of North America. The Delta encompasses over 1,100 miles of river channels surrounding about 738,000 acres of diked islands and tracts in Alameda, Contra Costa, Sacramento, San Joaquin, Solano and Yolo counties. The Delta and its source watersheds comprise nearly 40% of the landmass of the State of California. The Sacramento, San Joaquin, Mokelumne, Cosumnes, and Calaveras rivers all flow into the Delta, carrying approximately 47% of the State’s total runoff. Major reservoirs and lakes in the Sacramento Basin include Shasta, Whiskeytown, Oroville, Englebright, Camp Far West, Folsom, Black Butte, Indian Valley, Clear Lake and Lake Berryessa. Major reservoirs and lakes in the San Joaquin Basin include Camanche, New Hogan, New Melones/Tulloch, Don Pedro, McClure, Burns, Bear, Owens, Eastman, Hensley, Millerton and Marsh Creek. The legal Delta encompasses the southern two thirds of the Yolo Bypass, a 73,300-acre floodplain on the west side of the lower Sacramento River. The Fremont and Sacramento Weirs route floodwaters from the Sacramento River and its associated tributary watersheds around the Sacramento urban area to the Yolo Bypass. Cache and Putah Creeks, Willow Slough, and the Knights Landing Ridge Cut from the Colusa Basin all drain directly to the Yolo Bypass. The Sacramento River contributes an average annual water volume of 18.3 million acre-feet and the Yolo Bypass and the San Joaquin River contribute an average of 5.8 million acre-feet. Agriculture and recreation are the two primary businesses in the Delta.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2018-2019	22.7
2021-2022	6.0

Translation of CU to Waste Load Allocation (WLA)

Caltrans is expected to be in compliance with methylmercury WLAs for the San Joaquin River Delta Estuary watershed because they are in compliance with their stormwater permit. Caltrans implements and maintains structural best management practices (BMPs) to mitigate sediment in the watershed. Additionally, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Sacramento-San Joaquin River Delta Estuary watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Caltrans has also established a program to inspect roadside slopes for erosion on a five-year cycle. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan.

¹ Source: Permit Attachment D.

² Source: California Environmental Protection Agency Regional Water Quality Control Board Central Valley Region *Sacramento – San Joaquin Delta Estuary TMDL for Methylmercury Staff Report* April 2010.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Sacramento - San Joaquin Delta Methylmercury TMDL

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 75 for Reach 2, 76 for Reach 3, and 191 for Reach 1

Region-Specific Requirements (Permit Attachment D Sections D3.4 and D5.11.2)

- Caltrans will provide the compliance status, plans, reports, and implementation via the Annual TMDL Compliance Status and TMDL Compliance Plan described in Permit Attachment D Sections D3.2 – D3.3. Monitoring requirements are provided in Permit Attachment F.
- Where the Caltrans storm sewer system is located within a Delta subarea but outside the jurisdiction of a municipal separate storm sewer system, Caltrans will comply with the urban (nonpoint source) runoff load allocations for each Delta subarea⁴ or if the Central Valley Water Board adopts revised load and WLAs in Phase 2 of the Delta Mercury Control Program and associated TMDL.

Specific Reporting Requirements⁵

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed BMP and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Central Valley Water Board Other Total Maximum Daily Loads (Permit Attachment D Section D5.11.2)	<ul style="list-style-type: none"> • Caltrans will provide the compliance status, plans, reports, and implementation via the Annual TMDL Compliance Status and TMDL Compliance Plan described in Permit Attachment D Sections D3.2 – D3.3. Monitoring requirements are provided in Permit Attachment F. • Where the Caltrans storm sewer system is located within a Delta subarea but outside the jurisdiction of a municipal separate storm sewer system, Caltrans will comply with the urban (nonpoint source) runoff load allocations for each Delta subarea⁶ or if the Central Valley Water Board adopts revised load and WLAs in Phase 2 of the Delta Mercury Control Program and associated TMDL.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁷	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
3, 4, and 10	5	738,162	2,457	0.33%	Methyl-mercury	No	h. TMDL-Specific Demonstrations

⁴ Refer to Delta subareas listed in Permit Attachment D Section D5.11.2.

⁵ See Permit Attachment D for the requirements of each section.

⁶ Refer to Delta subareas listed in Permit Attachment D Section D5.11.2.

⁷ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Sacramento - San Joaquin Delta Methylmercury TMDL

WLAs for Methylmercury⁸

Delta Subarea	Current Load (g/year)	Allocation (g/year)
Central Delta	0.14	0.14
March Creek	-	-
Mokelumne River	0.018	0.018
Sacramento River	0.62	0.62
San Joaquin River	0.0022	0.0022
West Delta	0.066	0.066
Yolo Bypass	-	-

TMDL Implementation Schedule

- Start Date: October 20, 2011
- Final Compliance Date: January 1, 2030

Plan to Achieve WLAs^{9,10}

Pollutant	Strategies to Achieve WLAs
Methylmercury	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with methylmercury WLAs in the Sacramento-San Joaquin River Delta Estuary watershed. Caltrans controls the discharge of methylmercury through the control of sediment. Caltrans implements and maintains structural BMPs to mitigate sediment in the Sacramento-San Joaquin River Delta Estuary watershed. Additionally, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Sacramento-San Joaquin River Delta Estuary watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Cooperative Implementation - Caltrans participates in the Central Valley Regional Board approved Delta Regional Monitoring Program for methylmercury reduction. Caltrans has established a cooperative monitoring agreement in which it contributes funding toward the Delta Regional Monitoring Program. • Caltrans has also established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One project (PID, PAED, and/or PS&E) is planned in the Sacramento - San Joaquin River Delta Estuary watershed that will include treatment BMPs per the <i>District Work Plan</i> Fiscal Year 2023-2024 prepared for District 4.

⁸ See Permit Attachment A.

⁹ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

¹⁰ Sources: Caltrans *TMDL Implementation Plan* (January 2015).

Sacramento - San Joaquin Delta Methylmercury TMDL

Existing Installed Structural BMPs¹¹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	26
Biofiltration Swale	12
Detention Basin	2
DPP Infiltration Area (DPPIA)	14
Infiltration Basin	3
Open Grade Friction Course	21
Total	78

Existing Non-Structural BMPs¹²

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 10 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring

Caltrans is approved to participate in the Central Valley Water Board approved Delta Regional Monitoring Program.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

¹¹ Source: BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹² Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Lake Tahoe Sediment and Nutrients (Total Phosphorus and Total Nitrogen) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutants	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
Lahontan	Lake Tahoe	Sediment and Nutrients	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.12

General Watershed Description²

Lake Tahoe is located near the crest of the Sierra Nevada range at an elevation of 6,229 feet above sea level. It is approximately 22 miles at its longest point from north to south and 12 miles at its maximum width, east to west. The drainage area is 200,650 acres with a lake surface area of 123,800 acres producing a watershed-to-lake ratio much smaller than found in many other typical watersheds. Consequently, a significant amount of precipitation falls directly on Lake Tahoe. The California–Nevada state line splits the Lake Tahoe basin, with about three-quarters of the basin’s area and about two-thirds of the lake’s area lying in California. The geologic basin that cradles the lake is characterized by mountains reaching over 10,500 feet (3,200 meters) above lake level, steep slopes, and erosive, granitic soils, with volcanic rocks and soils also present in some areas. Lake Tahoe is the eleventh-deepest lake in the world with a maximum depth of 1,645 feet (501 meters).

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	5.9
2015-2016	28.9
2017-2018	17.3
2018-2019	0.1
2020-2021	0.74

Translation of CU to Waste Load Allocation (WLA)

To be determined

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 158 for Reach 1 and 164 for Reach 2

Region-Specific Requirements (Permit Attachment D Sections D3.4 and D5.12)^{3,4}

- Caltrans followed the strategy and approach detailed in the 2014 Pollutant Load Reduction Plan (PLRP) and the 2017 PLRP Update to achieve compliance with the first and second implementation milestones (2016 and 2021, respectively). The 2021 milestone required reducing fine sediment particle (FSP), total nitrogen (TN), and total phosphorus (TP) loads by 21 percent, 14 percent, and 14 percent, respectively. These required load reductions equate to 648 Lake Clarity Credits (One Lake Clarity Credit = 200 pounds per year reduction in FSP). Caltrans met this requirement by being awarded a total of 727 Lake Clarity Credits for water year 2021 (October 1, 2020 to September 30, 2021).
- In 2022, Caltrans submitted a second PLRP Update⁴ describing how it will achieve the third, 15-year, pollutant load reduction milestone required for compliance with the Lake Tahoe TMDL. The 15-year milestone consists of reducing the baseline FSP, TN, and TP loads by 34 percent, 19 percent, and 21

¹ Source: Permit Attachment D.

² Source: State of California Lahontan Regional Water Quality Control Board and Nevada Division of Environmental Protection, *Lake Tahoe Total Maximum Daily Load Technical Report*, June 2010, and Lahontan Regional Water Quality Control Board input.

³ Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022, and Lahontan Regional Water Quality Control Board input.

⁴ Source: Caltrans *Draft Lake Tahoe Pollution Reduction Plan Update* (2022), and Lahontan Regional Water Quality Control Board input.

Lake Tahoe Sediment and Nutrients (Total Phosphorus and Total Nitrogen) TMDL

percent, respectively, before September 30, 2026. These required load reductions equate to 1,050 Lake Clarity Credits. The 15-year milestone is referred to as the Clarity Challenge and is considered a major TMDL milestone in demonstrating the successful implementation of the Lake Tahoe TMDL. To meet the Clarity Challenge, these milestones must be attained by 2026, followed by five years of monitoring.

Specific Reporting Requirements^{1,4}

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update its TMDL Compliance Plan annually.
Regional Water Board Specific Requirements (Permit Section D3.4)	Caltrans has submitted an updated PLRP describing how they will achieve the 15-year pollutant load reduction required for compliance with the Lake Tahoe TMDL.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	<ul style="list-style-type: none"> Caltrans participates in and contributes to a cooperative watershed monitoring program through the Lake Tahoe Regional Monitoring Program, known as the Regional Stormwater Monitoring Program (RSWMP). Caltrans entered into a Cooperative Agreement with the City of South Lake Tahoe to allocate the Lake Clarity Credits associated with the registration of the Bijou Area Erosion Control Project, Phase 1. Caltrans received approximately 40 Lake Clarity Credits annually until 2021.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan.
Requirements for Lahontan Water Board Lake Tahoe Sediment and Nutrients Total Maximum Daily Loads (Permit Attachment D Section D5.12)	<p>Pollutant Load Reduction⁵</p> <ul style="list-style-type: none"> Caltrans will continue to measure pollutant load reductions in accordance with the Lake Clarity Crediting Program Handbook. This includes registering road catchments where advanced road operations and treatment BMPs are being implemented. Caltrans will continue to perform condition assessments using Rapid Assessment Methodology (RAM) for both roadway catchments and treatment BMPs and will report the data to support pollutant load reductions to the online crediting platform (LT Info). Caltrans will continue to receive credits through its credit sharing agreement with the City of South Lake Tahoe. The City will conduct the condition assessments and reporting for this component. Caltrans reduction targets for fine sediment particles, total nitrogen, and total phosphorus were 21%, 14%, and 14%, respectively for the 10-year milestone that occurred in 2021. The Lake Tahoe TMDL Program surpassed its 2021 fine sediment particles and total phosphorus reduction goal, reducing loads by 23% and 18%, respectively. Pollutant controls reduced nitrogen loads by over 4,500 lbs/year, almost meeting its goal with a 13% reduction in total nitrogen loads.

⁵ Sources: California Environmental Protection Agency and Nevada Division of Environmental Protection. *Lake Tahoe TMDL Program 2022 Performance Report, A 10-year Review: A Decade of Meaningful Progress* (2022) and California Regional Water Quality Control Board *Water Quality Report Card Lahontan Region 6* (November 2017), and Lahontan Regional Water Quality Control Board input.

Lake Tahoe Sediment and Nutrients (Total Phosphorus and Total Nitrogen) TMDL

Reporting Requirement Permit Section	Summary of Activities
	<ul style="list-style-type: none"> • Caltrans plans to follow the 2022 updated PLRP describing how they will achieve the 15-year pollutant load reduction required for compliance with the Lake Tahoe TMDL. The Plan includes baseline load estimates, catchment registration schedule, proposed pollutant control measures, and pollutant load reduction estimates. This updated PLRP will be implemented for 2026-2031. • Caltrans' 15-year milestones consists of reduction loads for fine sediment particles, total nitrogen, total phosphorus by 34, 19, and 21 percent, respectively, by September 30, 2026. Reduction loads will help achieve the interim clarity goal of 78.7 feet by 2025. These required load reductions equate to 1,050 Lake Clarity Credits. • It is expected that the next NPDES Permit issued to Caltrans will require future PLRP updates to meet the 2031 (20-year) and the 2036 (25-year) milestones.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁶	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
3	6	233,585	538	0.23%	Sediment and Nutrients (Total Phosphorus and Total Nitrogen)	No	h. TMDL-Specific Demonstrations

WLAs

Pollutant	Caltrans WLA
Fine Sediment Particles	<p><u>2004 Baseline Load Estimate</u> = 271 (metric tons/year)</p> <p><u>Milestone Load Reductions:</u></p> <ul style="list-style-type: none"> • September 30, 2016 (5 years) = 10% • September 30, 2021 (10 years) = 21% • September 30, 2026 (15 years) = 34% <p><u>Standard Attainment:</u></p> <ul style="list-style-type: none"> • September 30, 2076 (65 years) = 71%
Total Nitrogen	<p><u>2004 Baseline Load Estimate</u> = 0.78 (metric tons/year)</p> <p><u>Milestone Load Reductions:</u></p> <ul style="list-style-type: none"> • September 30, 2016 (5 years) = 8% • September 30, 2021 (10 years) = 14% • September 30, 2026 (15 years) = 19% <p><u>Standard Attainment:</u></p> <p>September 30, 2076 (65 years) = 50%</p>
Total Phosphorus	<p><u>2004 Baseline Load Estimate</u> = 2.7 (metric tons/year)</p> <p><u>Milestone Load Reductions:</u></p> <ul style="list-style-type: none"> • September 30, 2016 (5 years) = 7% • September 30, 2021 (10 years) = 14% • September 30, 2026 (15 years) = 21% <p><u>Standard Attainment:</u></p> <p>September 30, 2076 (65 years) = 46%</p>

⁶ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Lake Tahoe Sediment and Nutrients (Total Phosphorus and Total Nitrogen) TMDL

TMDL Implementation Schedule

- Start Date: August 16, 2011
- Final Compliance Date: August 16, 2076

Plan to Achieve WLAs^{2,4,7,89}

Pollutant	Strategies to Achieve WLAs
Sediment, Total Phosphorus, and Total Nitrogen	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with sediment, total nitrogen, and total phosphorus WLAs in the Lake Tahoe Watershed. Caltrans controls the discharge of total nitrogen and total phosphorus through the control of sediment, since most sources of nitrogen and phosphorus are sediment-driven from sources such as erosion, construction, and runoff from roads. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Lake Tahoe Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Additionally, Caltrans implements structural BMPs, such as Austin sand filters, biofiltration swales, detention basins, infiltration basins, infiltration trenches, and traction sand traps, which are effective at removing sediment. Caltrans also conducts advanced roadway operations activities to reduce sediment discharge such as sweeping, using less traction sand, and using traction sand with less FSP. • Caltrans intends to achieve 2026 milestones by registering additional road catchments where advanced operation and maintenance activities will occur, participating in a credit sharing program with the City of South Lake Tahoe (CSLT) to maintain credits provided by currently registered Water Quality Improvement Projects (WQIPs), and maintaining two treatment BMPs associated with the Caltrans Environmental Improvement Program (EIP) Project 988 on Highway 28. • Caltrans plans add 14.6 miles of roadway catchments to the 2021 registration where advanced operations are implemented. This includes an additional 5.7 miles of Highway 28 and 8.4 miles of Highway 89. Caltrans also proposes to maintain current registrations for one WQIP and will continue to receive Lake Clarity Credits for the Bijou WQIP per the credit sharing agreement with CSLT. • Caltrans participates in a cooperative agreement with CSLT to build the Bijou Area Erosion Control Project (ECP) which will assign Caltrans credits annually. In 2026, Caltrans is eligible to receive 44% of the total credits. • Caltrans continually assesses and receives credit for two registered infiltration basins as part of the EIP 988 Project to ensure they are still effective at infiltrating stormwater. • Caltrans has also established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Three projects (within either the PID phase, PAED phase, and/or PS&E phase) are planned in the Lake Tahoe Watershed that will include treatment BMPs. • According to the State Water Resources Control Board's Annual Performance Report, the Water Quality Report Card for Lake Tahoe shows conditions for sediment and nutrients are improving since 2010. According to the 2017 report, there was an average annual clarity level of 73.1 feet, which is a 2.2 foot decline from 2012, attributed to lower than normal snow-to-rain ratio. Annual

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁹ Source: State Water Resource Control Board, *Water Quality Report Card, Sediment in Lake Tahoe* (November 2017)

Lake Tahoe Sediment and Nutrients (Total Phosphorus and Total Nitrogen) TMDL

Pollutant	Strategies to Achieve WLAs
	average clarity has improved since the lowest average of 64.1 feet in 1997. Additionally, local government and Caltrans have achieved the first 5-year load reduction milestone, a 10% reduction in fine sediment particles.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Swale	21
Delaware Sand Filter	4
Detention Basin	5
DPP Infiltration Area (DPPIA)	3
Infiltration Basin	14
Infiltration Trench	11
Other	11
Traction Sand Trap	472
Total	541

Existing Non-Structural BMPs¹¹

Non-Structural BMP	Description
Cleanup of Illegal Dumping	Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 3 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
Prohibition of Non-Stormwater Discharges	Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
Public Education	Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
Roadway Sweeping	Improvements to street sweeping technologies and practices have been identified as a promising approach to address load reduction goals for FSP. The use of high-efficiency street sweepers is being encouraged by regulatory agencies to remove FSP from roadways before they are entrained by stormwater runoff and transported to Lake Tahoe.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of March 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Lake Tahoe Sediment and Nutrients (Total Phosphorus and Total Nitrogen) TMDL

Non-Structural BMP	Description
Credit Sharing	Caltrans entered into a Cooperative Agreement with the City of South Lake Tahoe to allocate the Lake Clarity Credits associated with the registration of the Bijou Area Erosion Control Project, Phase 1. Caltrans received approximately 40 Lake Clarity Credits annually until 2021.
Pre-Season Preparation and Operator Training	Pre-season checks involve examining systems before the season starts to make sure that routine maintenance was done and that systems work per manufacturer's specifications. Tailgate meetings are held by the maintenance supervisor to ensure field staff understands protocols, procedures, and strategies for optimizing deicing and abrasives applications before major storm events.
Improved Abrasive Specification	Caltrans uses an improved abrasive specification and alternative sources of road abrasive material for all roads in the Tahoe Basin. This specification is currently under revision and will include a turbidity requirement and a lower percentage of fine sediment particles.
Road Temperature Sensing	De-icing and abrasives application operations are directly impacted by pavement temperature. All Caltrans trucks and abrasives spreaders are equipped with temperature sensors which monitor highway and air temperatures to allow operators and maintenance staff to determine the most effective de-icing and abrasives application strategy and to make real-time adjustments to the application as conditions change.
Water Quality Improvement Projects (WQIPs)	Eight WQIPs were completed through 2014, which included treatment control BMPs. As part of a WQIP, Caltrans performs maintenance for stormwater treatment BMPs installed. These operations include preventative maintenance, as well as regular maintenance indicators (inspections), inspection frequency (annual, semi-annual, seasonal), and required maintenance activities.

Monitoring³

- Caltrans participates in and contributes to a cooperative watershed monitoring program through the Lake Tahoe Regional Monitoring Program known as the Regional Stormwater Monitoring Program (RSWMP).
- Conduct monitoring activities in accordance with the statewide 3-year Stormwater Action Plan Supporting Study as described in the Stormwater Monitoring Plan.
- Conduct monitoring activities for compliance with the Lake Tahoe TMDL as a part of the Lake Clarity Crediting Program. The Lake Clarity Crediting Program implementation includes field data collection, analysis reporting activities, and the application of various associated modeling and registration tools.
- Partner with the Lake Tahoe Regional Monitoring Program.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

Truckee River Watershed Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutants	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
Lahontan	Truckee River Watershed	Sediment	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.3

General Watershed Description²

The entire Truckee River watershed covers approximately 2,720 square miles and includes the Lake Tahoe, Truckee River, and Pyramid Lake systems in California and Nevada. The river has its headwaters in California's Sierra Nevada Mountains, where it flows into the southern end of Lake Tahoe. This reach, from the headwaters to South Lake Tahoe, is known as the upper Truckee River. This TMDL focuses on the Truckee River from the outflow of Lake Tahoe at Tahoe City to the California/Nevada state line, commonly referred to as the middle Truckee River. This reach flows through the eastern parts of Placer, Nevada, and Sierra counties. Elevations in the area range from about 5,050 feet at the California/Nevada State line to 10,778 feet at the summit of Mount Rose, Nevada. The river's elevation drops from 6,225 feet at the outlet at Tahoe City to 5,050 feet at the California/Nevada state line, a distance of 39 miles. Tributary streams to the Truckee River are characterized by steep gradients in narrow, steep-walled canyons, except where the region was glaciated; in these areas, stream channels are broad and flat.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2018-2019	4.7
2020-2021	11.1

Translation of CU to Waste Load Allocation (WLA)

To be determined

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 156 for Reach 3, 157 for Reach 2, and 160 for Reach 1

Region-Specific Requirements (Permit Attachment D Sections D3.4)

None

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Regional Water Board Specific Requirements (Permit Section D3.4)	None

¹ Source: Permit Attachment D.

² Source: State of California Lahontan Regional Water Quality Control Board *Total Maximum Daily Load for Sediment Middle Truckee River Watershed Placer, Nevada, and Sierra Counties* (May 2008).

³ Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Truckee River Watershed Sediment TMDL

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation and Turbidity TMDLs (Permit Attachment D Section D5.3)	Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
3	6	260,336	704	0.27%	Sediment	No	h. TMDL-Specific Demonstrations

WLAs

Pollutant	Caltrans WLA
Sediment	No specific WLA is assigned to Caltrans.

TMDL Implementation Schedule

- Start Date: September 16, 2009
- Final Compliance Date: May 2028

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Truckee River Watershed Sediment TMDL

Plan to Achieve WLAs^{2,5,6}

Pollutant	Strategies to Achieve WLAs
Sediment	<ul style="list-style-type: none"> • Although there is no specific WLA, Caltrans is expected to be in compliance with sediment in the Truckee River Watershed. The Caltrans NPDES Permit states that Caltrans is achieving compliance with this TMDL because compliance with the Caltrans NPDES Permit is deemed to be evidence of compliance with its responsibility to help achieve desired watershed conditions. The Caltrans NPDES Permit also states that TMDL attainment is evaluated by the conditions in the watershed and not the sediment mass reduction since there is natural variability of sediment delivery and uncertainties associated with measuring sediment loads in the watershed. As part of its NPDES Permit, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Truckee River Watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Additionally, Caltrans implements structural BMPs, such as Austin sand filters, biofiltration swales, detention basins, infiltration basins, infiltration trenches, and traction sand traps, which are effective in removing sediment. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. The road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Four projects (within either the PID phase, PAED phase, and/or PS&E phase) are planned in the Truckee River Watershed that include treatment BMPs.

Existing Installed Structural BMPs⁷

Treatment BMP Type	Number of BMPs
Biofiltration Swale	6
Detention Basin	119
DPP Infiltration Area (DPPIA)	1
Infiltration Basin	2
Infiltration Trench	3
Stabilization Area	5
Traction Sand Trap	791
Total	927

Existing Non-Structural BMPs⁸

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 3 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum

⁵ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁶ Source: Caltrans *TMDL Implementation Plan* (January 2015).

⁷ Source: All BMP data was exported from the Caltrans Portal as of March 11, 2023.

⁸ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Truckee River Watershed Sediment TMDL

extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring

No monitoring activities are performed within this watershed.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance activities performed during the fiscal year.

Coachella Valley Bacterial Indicators TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Colorado River	Coachella Valley Stormwater Channel	Bacterial Indicators	D3.2, D3.3, D5, D5.1, D5.2, and D5.5

General Watershed Description²

Coachella Valley Stormwater Channel (CVSC) is an unlined, engineered extension of the Whitewater River that serves as a repository and drainage way for irrigation return water, treated wastewater, and urban and stormwater runoff. The channel is located in the Coachella Valley in Riverside County, California, and extends approximately 17 miles from the City of Indio to the Salton Sea. Coachella Valley is bounded to the north by the San Bernardino and Little San Bernardino Mountains, and to the south by the San Jacinto Mountains, Santa Rosa Mountains, and the Salton Sea. The valley has been heavily agricultural since the early 1900s.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2017-2018	17.1
2019-2020	9.27

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined, and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 198 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not Applicable

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreements or monitoring projects are currently located within the Coachella Valley Watershed for this TMDL.

¹ Source: Permit Attachment D.

² Source: *Bacteria Indicators Total Maximum Daily Load Coachella Valley Stormwater Channel Staff Report*, 2006.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Coachella Valley Bacterial Indicators TMDL

Reporting Requirement Permit Section	Summary of Activities
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Bacteria TMDLs (Permit Attachment D Section D5.5)	Caltrans will implement the Departments Homeless Encampment Policy and participate in the regional monitoring program.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
8 and 11	7	1,206,000	1,368	0.1%	Bacterial Indicators	No	d. Discharge Sampling

WLAs⁵

Pollutant	Watershed WLA
E. Coli	Less than or equal to the 126 Most Probable Number per 100 milliliters (based on a minimum of not less than five samples during a 30-day period) or 400 Most Probable Number per 100 milliliters for a single sample

TMDL Implementation Schedule

- Start Date: April 27, 2012
- Final Compliance Date: July 15, 2022

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Sources: *Bacteria Indicators Total Maximum Daily Load Coachella Valley Stormwater Channel Staff Report*, 2006; and Permit Attachment A.

Coachella Valley Bacterial Indicators TMDL

Plan to Achieve WLAs⁶

Pollutant	Strategies to Achieve WLAs
Bacterial Indicators	<ul style="list-style-type: none"> • Water quality monitoring is ongoing. Caltrans will evaluate the results after the required number of events have been sampled. Several years of monitoring during the previous permit term did not yield any samples due to sparse rainfall and drought conditions. • Caltrans has implemented several infiltration BMPs and plans to program more BMPs in future. Caltrans will explore cooperative partnership opportunities if they come up. In addition, Caltrans Maintenance activities (sweeping, trash cleanups, encampment clean ups) will continue. • As an additional pollutant control measure, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Nine SHOPP projects (in either PID, PAED, or PS&E phases) are planned in the Coachella Valley Storm Water Channel watershed that will include treatment BMPs. • Caltrans minimizes wet-weather discharges from its ROW into receiving waterbodies impaired for bacteria by implementing treatment BMPs and source control/preemptive activities such as street sweeping, cleanup of illegal dumping, prohibition of non-stormwater discharges, and public education on littering as described above. • Caltrans actively works to resolve homeless encampments within the ROW. • Caltrans is monitoring for bacterial indicators in the Coachella Valley Watershed as required by the Permit. This monitoring has been ongoing since the last permit term, with limited results due to lack of precipitation and drought.

Existing Installed Structural BMPs⁷

Treatment BMP Type	Number of BMPs
DPP Infiltration Area (DPPIA)	10
Infiltration Basin	16
Total	26

Existing Non-Structural BMPs⁸

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans Districts 8 and 11 prepare and implement a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day⁷ each year. Caltrans staff volunteers collect litter and raise public

⁶ Sources: Caltrans *TMDL Implementation Plan*, January 2015; Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

⁸ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Coachella Valley Bacterial Indicators TMDL

awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring⁹

No cooperative agreement for monitoring in the Coachella Valley Watershed currently exists. However, Caltrans is required to monitor for bacterial indicators in the watershed per the Colorado River Basin Regional Water Quality Control Board’s direction. This regional board requirement is included in the Permit.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

⁹ Source: Caltrans *Monitoring Results Report: Fiscal Year 2021-22*, CTSW-RT-22-395.01.02, October 2022.

Big Bear Lake Nutrients TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutants	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Santa Ana	Big Bear Lake	Nutrients	D5, D5.1, D5.2, and D5.3

General Watershed Description²

Big Bear Lake (Lake) is located in the San Bernardino Mountains, in the southeastern quadrant of San Bernardino County. It was created in 1884 by the construction of the Bear Valley Dam, flooding a natural complex of marshes and small eutrophic ponds and lakes on the floor of the Bear Valley (Leidy, 2006). A second, larger dam was constructed in 1912 approximately 300 feet downstream of the original dam. Local stream runoff and precipitation on the Lake are the sole water supply sources to the Lake; the major inflows are Rathbun Creek, Summit Creek and Grout Creek. The Lake has a surface area of approximately 3,000 acres, a storage capacity of 73,332-acre feet and an average depth of 24 feet (Fugro Pelagos, Inc., 2006). Its drainage basin is approximately 23,000 acres. The lake reaches its deepest point of 72 feet at the dam. The western arm of the Lake is generally deeper than 42 feet, whereas the eastern arm is no deeper than 30 feet in most places, with broad shallow expanses along the margins.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2017-2018	45
2018-2019	29
2020-2021	9

Translation of CUs to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 23 for Reach 1

Region-Specific Requirements (Permit Attachment D Sections D3.4)^{3,4}

No region-specific requirements apply to the Big Bear Lake watershed.

Specific Reporting Requirements^{1,4}

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update its TMDL Compliance Plan annually.

¹ Source: Permit Attachment D.

² Source: Brown and Caldwell, *Final Big Bear Lake TMDL Action Plan*, Prepared for Big Bear Lake Nutrient TMDL Task Force, August 26, 2010, accessed via https://www.sawpa.org/wp-content/uploads/2012/05/S01255.FINAL_Big-Bear-LakeTMDL-Action-Plan-8-26-2010.pdf, 2023. Leidy, R., *Prehistoric and Historic Conditions in Bear Valley*, Report Prepared for Timothy Moore, Risk Sciences, Brentwood, TN, February 2006. Fugro Pelagos Inc., *Big Bear Lake Multibeam Bathymetric Survey*, Document No: FP-6295-001-RPT-01-01, 2006.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

⁴ Source: Permit Attachment D.

Big Bear Lake Nutrients TMDL

Reporting Requirement Permit Section	Summary of Activities
Regional Water Board Specific Requirements (Permit Section D3.4)	No region-specific requirements apply to the Big Bear Lake watershed.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Since the Big Bear Lake In-Lake Nutrient Monitoring Program and Watershed-Wide Nutrient Water Quality Monitoring Program is no longer operational, Caltrans will be performing its own monitoring in 2024 at three or four locations within the Caltrans ROW. The monitoring results will be reported in the Annual Monitoring Results Report.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation and Turbidity Total Maximum Daily Loads (Permit Attachment D Section D5.3)	Caltrans will implement BMPs to that will achieve the following: <ul style="list-style-type: none"> • To prevent or minimize erosion and sediment discharge, including preventing channel incision and bank erosion; protecting and vegetating hillsides; intercepting, filtering, or infiltrating runoff; avoiding concentrated flows in natural channels and drains; and avoiding modification of natural runoff flow patterns. • For spoils management and disposal to prevent runoff from contacting spoils and subsequently discharging such runoff to stormwater conveyance systems. Caltrans shall control discharges from all construction sites (regardless of the size) that drain to TMDL receiving waters.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
8	8	23,398	139	0.59%	Nutrients	Yes	d. Discharge Sampling e. Mass-Based Waste Load

WLAs^{4,6}

Pollutant	Caltrans WLA
Nutrients	Caltrans' discharge is grouped with urban sources. For the urban group of multiple stormwater discharges regulated by NPDES permits, the annual average for the total phosphorus WLA is 475 pounds per year. The WLA specific to Caltrans is 23 pounds per year for dry hydrological conditions, which is 4.8 percent of the group urban WLA.

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Permit Attachment A.

Big Bear Lake Nutrients TMDL

TMDL Implementation Schedule

- Start Date: September 25, 2007
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve WLAs^{2,4,8,9}

Pollutant	Strategies to Achieve WLAs
Total Phosphorus	<ul style="list-style-type: none"> • Caltrans is making progress towards achieving compliance with the phosphorus waste load allocation in the Big Bear Lake watershed. As noted in Attachment D of the Permit, Caltrans controls the discharge of phosphorus through the control of sediment. Caltrans implements and maintains structural BMPs to mitigate sediment in the Big Bear Lake watershed. Additionally, Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Big Bear Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized by Maintenance staff for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized by Maintenance staff for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. One SHOPP project (PID, PAED, and/or PS&E) is planned in the Big Bear Lake watershed that includes treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
DPP Infiltration Area (DPPIA)	1
Other	1
Stabilization Area	1
Total	3

Existing Non-Structural BMPs¹¹

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 8 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan* (January 2015).

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Big Bear Lake Nutrients TMDL

divisions to control non-stormwater pollutants.

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring³

Caltrans contributed to a cooperative watershed monitoring program through the Big Bear Lake In-Lake Nutrient Monitoring Program and Watershed-Wide Nutrient Water Quality Monitoring Program. No further monitoring is required.

Reporting (Time Schedule Order)

Caltrans will achieve compliance with this TMDL by December 31, 2034 through implementation activities, and will document the TMDL compliance activities performed in the Final TMDL Compliance Report submitted by June 30, 2035.

Lake Elsinore and Canyon Lake Nutrients TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutants	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Santa Ana	Lake Elsinore and Canyon Lake	Nutrients	D5, D5.1, D5.2, D5.3, and D5.10

General Watershed Description²

Lake Elsinore and Canyon Lake are in the southwestern portion of the 780 square-mile San Jacinto watershed approximately 60 miles southeast of Los Angeles. Most of the San Jacinto River watershed falls within Riverside County; however, a small western section is in Orange County. Flow to the San Jacinto River begins in the San Jacinto Mountains, then travels northwest along the San Jacinto fault zone. The river then flows through Canyon Lake and exits the Perris Block into the lower Elsinore Basin created by the Elsinore fault zone. Canyon Lake is located near the watershed outlet and was formed by the damming of the San Jacinto River. Runoff from as far as Moreno Valley, San Jacinto, Hemet, and Perris contribute to surface flows that reach Canyon Lake during rainfall events. Over 90 percent of the San Jacinto watershed drains to Canyon Lake. During normal dry periods, the San Jacinto River is essentially dry, contributing little or no flow to Canyon Lake. Lake Elsinore is located approximately three miles downstream of Canyon Lake, at the bottom of the San Jacinto watershed. The local tributary area to Lake Elsinore is 47 square miles. Surface flow from the watershed reaches Lake Elsinore through release, overflow, or seepage from the Canyon Lake dam. Lake Elsinore acts much like a sink, with almost nonexistent outflow. In rare situations, including torrential rains and extended rain periods, the lake overflows into Temescal Creek, and ultimately to the Santa Ana River.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2014-2015	659.5 ⁴
2017-2018	9.8
2019-2020	139.2
2021-2022	0.5

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 170 for Reach 3, 171 for Reach 1, and 172 for Reach 2

Region-Specific Requirements (Permit Attachment D Sections D3.4 and D5.13)¹

Caltrans will comply with this TMDL by implementing one of the compliance options described below.

¹ Source: Permit Attachment D.

² Source: Santa Ana Watershed Project Authority, Lake Elsinore and Canyon Lake TMDL Task Force website (<https://sawpa.org/task-force/lake-elsinore-and-canyon-lake-tmdl-task-force/>), Geographic Setting, cited February 1, 2023.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

⁴ Of the CUs reported, 615 CUs were not accepted by the Regional Board.

Lake Elsinore and Canyon Lake Nutrients TMDL

- Continue participating in the Lake Elsinore and Canyon Lake Nutrients TMDL Task Force commitment for cooperative implementation actions, monitoring, and special studies.
- If Caltrans does not participate in Lake Elsinore Canyon Lake TMDL Task Force, Caltrans will develop and implement a program consistent with the Lake Elsinore and Canyon Lake TMDL Task force through completion of the tasks listed in Attachment D.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update its TMDL Compliance Plan annually.
Regional Water Board Specific Requirements (Permit Section D3.4) and Requirements for Santa Ana Water Board Lake Elsinore and Canyon Lake Nutrient Total Maximum Daily Load (Permit Attachment D Section D5.13)	Caltrans will comply with this TMDL by continued participation in the Lake Elsinore and Canyon Lake Nutrients TMDL Task Force.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans participates in and contributes to a cooperative watershed monitoring program through the Lake Elsinore and Canyon Lake Nutrients TMDL Task Force.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
8	8	483,883	1,540	0.32%	Nutrients	Yes	h. TMDL-Specific Demonstrations

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

Lake Elsinore and Canyon Lake Nutrients TMDL

WLAs⁶

Pollutant	Caltrans WLA
Nutrients	<ul style="list-style-type: none"> • No Caltrans-specific WLAs or proportional contributions of nutrients are identified in the TMDL. • WLAs are collectively assigned to all NPDES stormwater permittees and referred to as “urban” land uses. Allocations are specified as 10-year running averages. • Based on Caltrans ROW area in the Lake Elsinore watershed of 1,540 acres (about three percent of the urban land use), Caltrans has the following WLAs as a percentage of urban land use (kilograms per year as a 10-year average): <ul style="list-style-type: none"> ○ Final Total Phosphorus WLA <ul style="list-style-type: none"> ▪ Canyon Lake = 9.2 kilograms per year ▪ Lake Elsinore = 3.72 kilograms per year ○ Final Total Nitrogen WLA <ul style="list-style-type: none"> ▪ Canyon Lake = 119.2 kilograms per year ▪ Lake Elsinore = 10.5 kilograms per year

TMDL Implementation Schedule

- Start Date: September 30, 2005
- Final Compliance Date per TSO⁷: December 31, 2034

Plan to Achieve WLAs^{2,8,9,10}

Pollutant	Strategies to Achieve WLAs
Total Phosphorus and Total Nitrogen	<ul style="list-style-type: none"> • There are no WLAs that are assigned specifically to Caltrans; however, Caltrans is making progress towards compliance with the total phosphorus and total nitrogen WLAs through participation in the Lake Elsinore/Canyon Lake Nutrient TMDL Task Force. As part of the TMDL Task Force, a cooperative agreement with the stakeholders in the Lake Elsinore watershed, water quality monitoring is performed, nutrient source assessment models have been updated, and additional studies are performed to better understand the impairments affecting Lake Elsinore and Canyon Lake. Additionally, aeration, alum applications, dredging, carp removal, and removal of nuisance vegetation are being performed to reduce the nutrient concentrations in the lakes. • In addition to cooperation with the Task Force, Caltrans also controls the discharge of sediment to address nutrient impairments and continue to reduce nutrient loads from entering the lake. Caltrans implements and maintains structural BMPs to mitigate nutrients in the Lake Elsinore and Canyon Lake watershed. Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the Lake Elsinore and Canyon Lake watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. For road segments that are located in sensitive watersheds, or where there is an existing or potential threat to water quality, slope stabilization activities will be prioritized for implementing appropriate controls to the maximum extent practicable based on available resources. Based on the review of the slopes, remedial measures are developed and can include minor grading, seeding, and installation of major slope stabilization systems. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment.

⁶ Source: Permit Attachment A.

⁷ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Source: Caltrans *TMDL Implementation Plan*, January 2015.

¹⁰ Source: State Water Resources Control Board’s *Annual Performance Reports Fiscal Year 2019-2020*, watershed report card last updated in October 2020.

Lake Elsinore and Canyon Lake Nutrients TMDL

Pollutant	Strategies to Achieve WLAs
	<ul style="list-style-type: none"> • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Seven SHOPP projects (PID, PAED, and/or PS&E) are planned in the Lake Elsinore and Canyon Lake watershed that include treatment BMPs. • According to the State Water Resources Control Board's <i>Annual Performance Report</i>, the Water Quality Report Cards for Lake Elsinore and Canyon Lake show conditions for phosphorus and nitrogen are improving since 2020. According to the report, in 2020, total phosphorus and total nitrogen loads based on 10-year rolling averages are meeting TMDL WLAs.

Existing Installed Structural BMPs¹¹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	24
Biofiltration Swale	61
Detention Basin	6
DPP Infiltration Area (DPPIA)	42
Infiltration Basin	17
Other	1
Stabilization Area	7
Total	158

Existing Non-Structural BMPs¹²

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 8 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

¹¹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹² Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Lake Elsinore and Canyon Lake Nutrients TMDL

Monitoring¹³

Caltrans' participation in the cooperative water quality monitoring program through the Lake Elsinore and Canyon Lake Nutrients TMDL Task Force will be described in the Monitoring Plan. Caltrans will contribute to the task force's monitoring efforts through a cooperative agreement.

Annual Reporting (Time Schedule Order)

Caltrans will achieve compliance with this TMDL by December 31, 2034 through implementation activities, and will document the TMDL compliance activities performed in the Final TMDL Compliance Report submitted by June 30, 2035.

¹³ Source: Permit Attachment F.

Lake Elsinore and Canyon Lake Nutrients TMDL

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Newport Bay Copper, Lead, and Zinc TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
Santa Ana	Newport Bay	Copper [Cu], Lead [Pb], and Zinc [Zn]	D3.2, D3.3, D5, D5.1, D5.2, and D5.4

General Watershed Description²

Newport Bay is a combination of two distinct water bodies – Lower and Upper Newport Bay, divided by the Pacific Coast Highway Bridge. The Lower Bay, where the majority of commerce and recreational boating exists, is highly developed. The Upper Bay contains both a diverse mix of development in its lower reach and an undeveloped ecological reserve to the north.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

Fiscal Year	Total CUs Achieved ⁴
2015-2016	41.9
2016-2017	12.2
2017-2018	6.5
2018-2019	1.1
2019-2020	0.5
2020-2021	6.5
2021-2022	45.2

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 64 for Reach 1, 65 for Reach 3, 68 for Reach 4, 69 for Reach 2, and 72 for Reach 5

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific reports are required for the Santa Ana Region.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region 9, *Total Maximum Daily Loads for Toxic Pollutants San Diego Creek and Newport Bay, California*, June 14, 2002.

³ The CUs presented include those that were assigned to both the San Diego Creek and Upper Newport Bay Cadmium TMDL and the San Diego Creek and Newport Bay including Rhine Channel (Metals (Cu, Pb, and Zn)) TMDL since this is how they were initially allocated. The Permit organizes TMDL waterbodies and their constituent combinations differently; therefore, there may be duplication between the CUs presented for these watersheds (i.e., some CUs earned in the San Diego Creek portion of the watershed are shown in the Newport Bay portion of the watershed and vice versa).

⁴ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Newport Bay Copper, Lead, and Zinc TMDL

Reporting Requirement Permit Section	Summary of Activities
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Regional Water Board-Specific Reporting (Permit Attachment D Section D3.4)	No region-specific reports are required for the Santa Ana Region.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Santa Ana Water Board TMDLs (Permit Attachment D Section D5.13)	<ul style="list-style-type: none"> No Santa Ana Regional Board requirements apply to the Newport Bay Cu, Pb, and Zn TMDL. In the TMDL Compliance Plan and Annual TMDL Compliance Status Reports, Caltrans will report the status of Newport Bay Cu, Pb, and Zn TMDL best practices implementation (see Permit Attachment D Section D3.4).

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
12	8	97,127	3,509	4%	Cu, Pb, and Zn	No	e. Mass-Based Waste Load and d. Discharge Sampling

WLAs⁶

Pollutant	Watershed WLA
Dissolved Cu	<ul style="list-style-type: none"> Final Mass-Based Dissolved Copper WLAs in Newport Bay including Rhine Channel (pounds per year) Applicable to Caltrans: <ul style="list-style-type: none"> Dissolved Copper: 423 pounds per year Final Concentration-Based Dissolved Copper WLAs in Newport Bay including Rhine Channel (micrograms per liter) Applicable to Caltrans: <ul style="list-style-type: none"> Dissolved Saltwater Acute Dissolved Copper: 4.8 micrograms per liter Dissolved Saltwater Chronic Dissolved Copper: 3.1 micrograms per liter

TMDL Implementation Schedule

- Start Date: June 14, 2002
- Final Compliance Date: June 14, 2002⁷

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Source: Permit Attachment A.

⁷ An implementation schedule was not included in the TMDL. Therefore, the final deadline was June 14, 2002.

Newport Bay Copper, Lead, and Zinc TMDL

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Dissolved Cu	<ul style="list-style-type: none"> Caltrans is in compliance with Dissolved Copper WLAs for dry-weather in the Newport Bay watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. Caltrans is making progress towards achieving compliance with Dissolved Copper WLAs for wet-weather in the Newport Bay watershed. Caltrans continues to implement appropriate control measures to reduce the discharge of Dissolved Copper, such as physical structures that prevent contaminated runoff from reaching receiving waters. Monitoring results show no exceedances for metals. As an additional mitigation measure, Caltrans reduces the sediment transport of metals by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Newport Bay watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Two SHOPP projects (PID, PAED, and/or PS&E) are planned in the San Diego Creek and Upper Newport Bay watersheds that will include treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Strip	14
Biofiltration Swale	22
DPP Infiltration Area (DPPIA)	15
Detention Basin	23
Infiltration Trench	1
Open Grade Friction Course	8
Other BMP	2
Total	85

Existing Non-Structural BMPs¹¹

- Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 12 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan*, January 2015.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Newport Bay Copper, Lead, and Zinc TMDL

Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹²

No TMDL monitoring requirements apply to this watershed.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

¹² Source: Permit Attachment F.

Rhine Channel Area of Lower Newport Bay Chromium and Mercury TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Santa Ana	Rhine Channel Area of Lower Newport Bay	Chromium and Mercury	D3.2, D3.3, D5, D5.1, D5.2, D5.3 and D5.4

General Watershed Description²

Newport Bay is a combination of two distinct water bodies – Lower and Upper Newport Bay, divided by the Pacific Coast Highway Bridge. The Lower Bay, where the majority of commerce and recreational boating exists, is highly developed. Rhine Channel, a dead-end reach in western side of Lower Bay, is an isolated area with poor tidal flushing and minimal storm drain input.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

None

Translation of CU to Waste Load Allocation (WLA)

No translation is necessary due to no CUs earned previously.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 244 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific requirements apply to the Rhine Channel Area of Lower Newport Bay watershed.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed.

¹ Source: Permit Attachment D.

² Source: United States Environmental Protection Agency Region 9, *Total Maximum Daily Loads for Toxic Pollutants San Diego and Newport Bay, California*, June 14, 2002.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Rhine Channel Area of Lower Newport Bay Chromium and Mercury TMDL

Reporting Requirement Permit Section	Summary of Activities
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation and Turbidity Total Maximum Daily Loads (Permit Attachment D Section D5.3)	Caltrans has no discharge in this watershed. Caltrans will prevent or minimize erosion and sediment discharge. In addition, Caltrans controls the discharge of runoff from their construction sites.
Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads (Permit Attachment D Section 5.4)	<ul style="list-style-type: none"> Caltrans has no discharge in this watershed. Caltrans will control total metals in stormwater discharges through implementing BMPs that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns. In addition, Caltrans will prevent contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
12	8	87	0	0%	Chromium and Mercury	No	g. No Discharge

WLAs⁵

Pollutant	Caltrans WLA
Chromium	0.89 kg/year
Mercury	0.0027 kg/year

TMDL Implementation Schedule

- Start Date: June 14, 2002
- Final Compliance Date⁶: June 14, 2002

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁵ Source: Permit Attachment A.

⁶ An implementation schedule was not included; therefore, the final compliance deadline was June 14, 2002.

Rhine Channel Area of Lower Newport Bay Chromium and Mercury TMDL

Plan to Achieve TMDL Compliance^{2,7,8}

Pollutant	Strategies to Achieve TMDL Compliance
Chromium	A major source of chromium is due to existing sediment loading in the Rhine Channel from prior industrial activities. Caltrans has no ROW facilities that discharge to the Rhine Channel therefore Caltrans is in compliance with chromium WLAs in the Rhine Channel Area of Lower Newport Bay watershed.
Mercury	A major source of Mercury is due to existing sediment loading in the Rhine Channel from prior industrial activities. Caltrans has no ROW facilities that discharge to the Rhine Channel therefore Caltrans is in compliance with mercury WLAs in the Rhine Channel Area of Lower Newport Bay watershed.
Additional Measures to Achieve WLAs for All Pollutants	Caltrans has no ROW facilities that discharge to the Rhine Channel. Dredging efforts were performed by others in the Rhine Channel to help remove contaminated sediment.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
None	-

Existing Non-Structural BMPs¹⁰

- **Cleanup of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 12 prepares and implements a Hazardous Spill Contingency Plan on an annual basis.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring

No monitoring activities are performed within this watershed.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Source: Caltrans *TMDL Implementation Plan*, January 2015.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Rhine Channel Area of Lower Newport Bay Chromium and Mercury TMDL

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

San Diego Creek Metals (Cadmium, Copper, Lead, and Zinc) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Santa Ana	San Diego Creek	Metals (Cadmium [Cd], Copper [Cu], Lead [Pb], and Zinc [Zn])	D3.2, D3.3, D5, D5.1, D5.2, and D5.4

General Watershed Description²

San Diego Creek is divided into two reaches. Reach 1 is located downstream of Jeffrey Road and Reach 2 lies upstream of Jeffrey Road to the headwaters. The San Diego Creek watershed (ca. 105 square miles) is divided into two main tributaries:

- Peters Canyon Wash, which drains Peters Canyon, Rattlesnake Canyon, and Hicks Canyon Washes that have their headwaters in the foothills of the Santa Ana Mountains, and
- San Diego Creek itself, which receives flows from Peters Canyon Wash in Reach 1 and includes Bee Canyon, Round Canyon, Marshburn Channel, Agua Chinon Wash, Borrego Canyon Wash and Serrano Creek.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

Fiscal Year	Total CUs Achieved ⁴
2015-2016	41.9
2016-2017	12.2
2017-2018	6.5
2018-2019	1.1
2019-2020	0.5
2020-2021	6.5
2021-2022	45.2

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined, and will be inserted once it is finalized.

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region 9, *Total Maximum Daily Loads for Toxic Pollutants San Diego Creek and Newport Bay, California*, June 14, 2002.

³ The CUs presented include those that were assigned to both the San Diego Creek and Upper Newport Bay Cadmium TMDL and the San Diego Creek and Newport Bay including Rhine Channel (Metals (Cu, Pb, and Zn)) TMDL since this is how they were initially allocated. The Permit organizes TMDL waterbodies and their constituent combinations differently; therefore, there may be duplication between the CUs presented for these watersheds (i.e., some CUs earned in the Newport Bay portion of the watershed are shown in the San Diego Creek portion of the watershed and vice versa).

⁴ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

San Diego Creek Metals (Cadmium, Copper, Lead, and Zinc) TMDL

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 64 for Reach 1⁵, 65 for Reach 3⁶, 66 for Reach 2⁷, 67 for Reach 3⁸, 68 for Reach 4, 69 for Reach 2⁹, 71 for Reach 4¹⁰, and 72 for Reach 5¹¹

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific reports are required for the Santa Ana Region.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Regional Water Board-Specific Reporting (Permit Attachment D Section D3.4)	No region-specific reports are required for the Santa Ana Region.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Santa Ana Water Board TMDLs (Permit Attachment D Section D5.13)	<ul style="list-style-type: none"> • No Santa Ana Regional Board requirements apply to the San Diego Creek Metals TMDL. • In the TMDL Compliance Plan and Annual TMDL Compliance Status Reports, Caltrans will report the status of San Diego Creek Metals (Cd, Cu, Pb, and Zn) TMDL best practices implementation (see Permit Attachment D Section D3.4).

⁵ Northern portion of Reach 1 is located in the San Diego Creek watershed.

⁶ Reach 3 is associated with the previously named San Diego Creek and Newport Bay, including Rhine Channel (Metals (Cu, Pb, and Zn)) TMDL.

⁷ Reach 2 is associated with the previously named San Diego Creek and Upper Newport Bay (Cadmium) TMDL.

⁸ Reach 3 is associated with the previously named San Diego Creek and Upper Newport Bay (Cadmium) TMDL.

⁹ Northern portion of Reach 2 is located in the San Diego Creek Watershed. Reach 2 is associated with the previously named San Diego Creek and Newport Bay, including Rhine Channel (Metals (Cu, Pb, and Zn)) TMDL.

¹⁰ Reach 4 is associated with the previously named San Diego Creek and Upper Newport Bay (Cadmium) TMDL.

¹¹ Reach 5 is associated with the previously named San Diego Creek and Newport Bay, including Rhine Channel (Metals (Cu, Pb, and Zn)) TMDL.

San Diego Creek Metals (Cadmium, Copper, Lead, and Zinc) TMDL

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ¹²	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
12	8	76,263	2,978	4%	Metals (Cd, Cu, Pb, and Zn)	No	e. Mass-Based Waste Load and d. Discharge Sampling

WLAs¹³

Pollutant	Watershed WLA
Dissolved Cu	<p>Concentration-Based WLA Based for San Diego Creek Watershed by Flow Tiers (micrograms per liter) Applicable to Caltrans:</p> <ul style="list-style-type: none"> Flow Tier 1 Acute (Base flow is less than 20 cubic feet for second; hardness = 400 milligrams per liter) for Dissolved Copper = 50 micrograms per liter Flow Tier 1 Chronic (Base flow is less than 20 cubic feet per second; hardness = 400 milligrams per liter) for Dissolved Copper = 29.3 micrograms per liter Flow Tier 2 Acute (Small flows are 21-181 cubic feet per second; hardness = 322 milligrams per liter) for Dissolved Copper = 40 micrograms per liter Flow Tier 2 Chronic (Small flows are 21-181 cubic feet per second; hardness = 322 milligrams per liter) for Dissolved Copper = 24.3 micrograms per liter Flow Tier 3 Acute (Medium flows are 182-815 cubic feet per second; hardness = 236 milligrams per liter) for Dissolved Copper = 30.2 micrograms per liter Flow Tier 3 Chronic (Medium flows are 182-815 cubic feet per second; hardness = 236 milligrams per liter) for Dissolved Copper = 18.7 micrograms per liter Flow Tier 4 Acute (Flows greater than 815 cubic feet per second; hardness = 197 milligrams per liter) for Dissolved Copper = 25.5 micrograms per liter
Dissolved Cd, Dissolved Pb, and Dissolved Zn	None – On April 20, 2020, the Santa Ana Regional Water Quality Control Board stated that Dissolved Cd, Dissolved Pb, and Dissolved Zn were delisted for San Diego Creek.

TMDL Implementation Schedule

- Start Date: June 14, 2002
- Final Compliance Date¹⁴: June 14, 2002

¹² ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

¹³ Source: Permit Attachment A.

¹⁴ An implementation schedule was not included in the TMDL. Therefore, the final deadline was June 14, 2002.

San Diego Creek Metals (Cadmium, Copper, Lead, and Zinc) TMDL

Plan to Achieve WLAs^{15,16}

Pollutant	Strategies to Achieve WLAs
Dissolved Cd	Caltrans is in compliance with Dissolved Cadmium WLAs for the San Diego Creek watershed, since the Santa Ana Regional Water Quality Control Board stated that Dissolved Cd were delisted for San Diego Creek on April 20, 2020.
Dissolved Cu, Dissolved Pb, and Dissolved Zn	<ul style="list-style-type: none"> • Caltrans is in compliance with Dissolved Cu WLAs for dry-weather in the San Diego Creek watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. • Caltrans is making progress towards achieving compliance with Dissolved Cu WLAs for wet-weather in the San Diego Creek watershed. Caltrans continues to implement appropriate control measures to reduce the discharge of dissolved fraction metals, such as physical structures that prevent contaminated runoff from reaching receiving waters. Monitoring results show no exceedances for metals. • As an additional mitigation measure, Caltrans reduces the sediment transport of metals by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the San Diego Creek watersheds by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Eight SHOPP projects (PID, PAED, and/or PS&E) are planned in the San Diego Creek watershed that will include treatment BMPs. • Caltrans is in compliance with Dissolved Pb and Dissolved Zn WLAs for the San Diego Creek watershed, since the Santa Ana Regional Water Quality Control Board stated that Dissolved Pb and Dissolved Zn were delisted for San Diego Creek on April 20, 2020.

Existing Installed Structural BMPs¹⁷

Treatment BMP Type	Number of BMPs
Biofiltration Strip	14
Biofiltration Swale	22
Detention Basin	23
DPP Infiltration Area (DPPIA)	15
Infiltration Trench	1
Open Graded Friction Course	8
Other BMP	2
Total	85

¹⁵ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

¹⁶ Source: Caltrans *TMDL Implementation Plan*, January 2015.

¹⁷ Source: All BMP data was exported from the Caltrans Portal as of May 1, 2023.

San Diego Creek Metals (Cadmium, Copper, Lead, and Zinc) TMDL

Existing Non-Structural BMPs¹⁸

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 12 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring

No TMDL monitoring requirements apply to this watershed.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

¹⁸ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

San Diego Creek Metals (Cadmium, Copper, Lead, and Zinc) TMDL

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San Diego Creek Revised Organochlorine Compounds (Dichlorodiphenyltrichloroethane [DDT], Chlordane, Polychlorinated Biphenyls [PCBs], and Toxaphene) TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Santa Ana	San Diego Creek	DDT, Chlordane, PCBs, and Toxaphene	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.4

General Watershed Description²

The San Diego Creek watershed is part of the larger Newport Bay watershed and occupies about 105 square miles. Major tributaries of San Diego Creek include: Peters Canyon Wash, Rattlesnake Canyon, Hicks Canyon, Bee Canyon, Round Canyon, Agua Chinon Canyon, Borrego Canyon, and Serrano Canyon to the north and east; and Bonita Creek and Sand Canyon Wash (includes Bommer Canyon and Shady Canyon) to the south and west. The highly urbanized areas north and west (Santa Ana, Orange, Costa Mesa, and Tustin) are drained to San Diego Creek via a number of urban channels including: El Modena-Irvine channel, the Tustin channel, the Santa Fe channel, the Red Hill channel, the Como channel, and the Barranca channel.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2015-2016	41.9
2017-2018	5.71
2018-2019	1.1
2019-2020	0.5
2020-2021	6.5
2021-2022	45.3

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined, and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 166 for Reach 1 and 168 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific reports are required for the Santa Ana Region.

¹ Source: Permit Attachment D.

² Source: "San Diego Creek Watershed - Reports and Studies". Watershed and Coastal Resources Division of Orange County. www.ocwatersheds.com. Archived from the original on 2002-10-25.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

San Diego Creek Revised Organochlorine Compounds (Dichlorodiphenyltrichloroethane [DDT], Chlordane, Polychlorinated Biphenyls [PCBs], and Toxaphene) TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Regional Water Board-Specific Reporting (Permit Attachment D Section D3.4)	No region-specific reports are required for the Santa Ana Region.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Santa Ana Water Board TMDLs (Permit Attachment D Section D5.13)	<ul style="list-style-type: none"> No Santa Ana Regional Board requirements apply to the San Diego Creek Revised Organochlorine Compounds TMDL. In the TMDL Compliance Plan and Annual TMDL Compliance Status Reports, Caltrans will report the status of San Diego Creek Revised Organochlorine Compounds TMDL best practices implementation (see Permit Attachment D Section D3.4).

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
12	8	76,263	2,978	4%	Organochlorine Compounds (DDT, Chlordane, PCBs, and Toxaphene)	Yes	e. Mass-Based Waste Load

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

San Diego Creek Revised Organochlorine Compounds (Dichlorodiphenyltrichloroethane [DDT], Chlordane, Polychlorinated Biphenyls [PCBs], and Toxaphene) TMDL

WLAs⁵

Pollutant	Watershed WLA
Organochlorine Compounds (DDT, Chlordane, PCBs, and Toxaphene)	<p>Caltrans is listed as a primary source of pollutant loads contributing to the impairment of San Diego Creek watershed. The mass-based WLAs are expressed as daily and annual values. Based upon the percentage of the total urban land use comprised by urban roads, Caltrans' facilities and roadways make up 11 percent of the land area and are assigned a proportion of the overall WLAs accordingly.</p> <p>Caltrans-Specific WLAs Expressed as a Daily Value (grams per day):</p> <ul style="list-style-type: none"> • Total DDT: 0.11 grams per day • Toxaphene: 0.002 grams per day <p>Caltrans-Specific WLAs Expressed as an Annual Value (grams per year):</p> <ul style="list-style-type: none"> • Total DDT: 39.2 grams per year • Toxaphene: 0.6 grams per year

TMDL Implementation Schedule

- Start Date: November 12, 2013
- Final Compliance Date per TSO⁶: December 31, 2034

Plan to Achieve WLAs^{7,8}

Pollutant	Strategies to Achieve WLAs
Total DDT	<ul style="list-style-type: none"> • Caltrans is making progress towards achieving compliance with total DDT WLAs in the San Diego Creek watershed since DDTs are no longer in production and their usage has been regulated. Additionally, Caltrans does not use DDTs within its ROW. • Although Caltrans does not use pesticides within its ROW, Caltrans complies with Attachment C Section C3.5.3.2 of the Permit which specifies practices for the safe handling and use of pesticides, including compliance with federal, State and local regulations, and label directions. Caltrans is also required to perform site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in stormwater runoff in the San Diego Creek watershed. • A major source of DDT impairments in the San Diego Creek watershed is due to historical loading from the pollutants adhering to sediment. As an additional mitigation measure, Caltrans reduces the sediment transport of pesticides by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the San Diego Creek watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Toxaphene	<ul style="list-style-type: none"> • Caltrans is expected to be in compliance with toxaphene WLAs in the San Diego Creek watershed since toxaphene is no longer in production and their usage has been regulated. Additionally, Caltrans does not use toxaphene within its ROW. Monitoring results show toxaphene is not detected in any of the samples. • Caltrans implements control measures to prevent or minimize erosion and sediment discharge in the San Diego Creek watershed by protecting hillsides, intercepting, and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.

⁵ Source: Permit Attachment A.

⁶ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

⁷ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁸ Sources: Caltrans *TMDL Implementation Plan*, January 2015.

San Diego Creek Revised Organochlorine Compounds (Dichlorodiphenyltrichloroethane [DDT], Chlordane, Polychlorinated Biphenyls [PCBs], and Toxaphene) TMDL

Pollutant	Strategies to Achieve WLAs
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> • Caltrans has also established a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans will pursue cooperative agreement opportunities and partner with local agencies to achieve similar objectives. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Eight SHOPP projects (PID, PAED, and/or PS&E) are planned in the San Diego Creek watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	13
Biofiltration Swale	15
Detention Basin	23
DPP Infiltration Area (DPPIA)	12
Infiltration Trench	1
Open Graded Friction Course	7
Other BMP	2
Total	73

Existing Non-Structural BMPs¹⁰

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 12 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹⁰ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

San Diego Creek Revised Organochlorine Compounds (Dichlorodiphenyltrichloroethane [DDT], Chlordane, Polychlorinated Biphenyls [PCBs], and Toxaphene) TMDL

Monitoring

No TMDL monitoring requirements apply to this watershed.

Annual Reporting (Time Schedule Order)

Caltrans will achieve compliance with this TMDL by December 31, 2034 through implementation activities, and will document the TMDL compliance activities performed in the Final TMDL Compliance Report submitted by June 30, 2035.

San Diego Creek Revised Organochlorine Compounds (Dichlorodiphenyltrichloroethane [DDT], Chlordane, Polychlorinated Biphenyls [PCBs], and Toxaphene) TMDL

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Upper Newport Bay Cadmium TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Santa Ana	Upper Newport Bay	Cadmium	D3.2, D3.3, D5, D5.1, D5.2, and D5.4

General Watershed Description²

The Newport Bay/San Diego Creek watershed is located in Central Orange County in the southwest corner of the Santa Ana River Basin, about 35 miles southeast of Los Angeles and 70 miles north of San Diego. The watershed encompasses 154 square miles and includes portions of the Cities of Newport Beach, Irvine, Laguna Hills, Lake Forest, Tustin, Orange, Santa Ana, and Costa Mesa. Mountains on three sides encircle the watershed; runoff from these mountains drains across the Tustin Plain and enters Upper Newport Bay via San Diego Creek. Newport Bay is a combination of two distinct water bodies - Lower and Upper Newport Bay, divided by the Pacific Coast Highway (PCH) Bridge. The Lower Bay, where the majority of commerce and recreational boating exists, is highly developed. The Upper Bay contains both a diverse mix of development in its lower reach and an undeveloped ecological reserve to the north. San Diego Creek flows into Upper Newport Bay and is divided into two reaches. Reach 1 is located downstream of Jeffrey Road and Reach 2 lies upstream of Jeffrey Road to the headwaters. The San Diego Creek watershed (105 square miles) is divided into two main tributaries: Peters Canyon Wash and San Diego Creek. Important freshwater drainages to Upper Newport Bay, together covering 49 square miles, include the San Diego Creek, Santa Ana-Delhi Channel, Big Canyon Wash, Costa Mesa Channel and other local drainages. San Diego Creek is the largest contributor (95%) of freshwater flow into Upper Newport Bay, followed by Santa Ana-Delhi Channel (~5%) (U.S. Army Corps of Engineers, 2000).

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed³

Fiscal Year	Total CUs Achieved ⁴
2015-2016	41.9
2016-2017	12.2
2017-2018	6.5
2018-2019	1.1
2019-2020	0.5
2020-2021	6.5
2021-2022	45.2

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined, and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 64 for Reach 1, 66 for Reach 2, 67 for Reach 3 and 71 for Reach 4

¹ Source: Permit Attachment D.

² Source: U.S. Environmental Protection Agency Region 9, *Total Maximum Daily Loads for Toxic Pollutants San Diego Creek and Newport Bay, California*, June 14, 2002. U.S. Army Corps of Engineers, *Upper Newport Bay Ecosystem Restoration Feasibility Study: Environment Impact Statement/Report Final Report*, September 2000.

³ The CUs presented include those that were assigned to the San Diego Creek and Upper Newport Bay Cadmium TMDL since this is how they were initially allocated. The Permit organizes TMDL waterbodies and their constituent combinations differently; therefore, there may be duplication between the CUs presented for these watersheds (i.e., some CUs earned in the San Diego Creek portion of the watershed are shown in the Upper Newport Bay Fact Sheet and vice versa).

⁴ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Upper Newport Bay Cadmium TMDL

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific reports are required for the Santa Ana Region.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Regional Water Board-Specific Reporting (Permit Attachment D Section D3.4)	No region-specific reports are required for the Santa Ana Region.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Santa Ana Water Board TMDLs (Permit Attachment D Section D5.4)	<ul style="list-style-type: none"> No Santa Ana Regional Board requirements apply to the Upper Newport Bay Cadmium TMDL. In the TMDL Compliance Plan and Annual TMDL Compliance Status Reports, Caltrans will report the status of Upper Newport Bay Cadmium TMDL best practices implementation (see Permit Attachment D Section D3.4).

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁵	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
12	8	92,717	3,424	4%	Cadmium	No	d. Discharge Sampling and e. Mass-Based Waste Load

WLAs⁶

Pollutant	Watershed WLA
Cadmium	None – On April 20, 2020, the Santa Ana Regional Water Quality Control Board stated that cadmium was delisted for Newport Bay.

TMDL Implementation Schedule

- Start Date: June 14, 2002
- Final Compliance Date: June 14, 2002⁷

⁵ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

⁶ Source: Permit Attachment A.

⁷ An implementation schedule was not included in the TMDL. Therefore, the final deadline was June 14, 2002.

Upper Newport Bay Cadmium TMDL

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Cadmium	<ul style="list-style-type: none"> • Caltrans is in compliance with cadmium WLAs for dry-weather in the Newport Bay watershed, since Caltrans has no discharge during dry-weather conditions. • Caltrans is in compliance with cadmium WLAs for wet-weather in the Newport Bay watershed. Caltrans also implements appropriate control measures to reduce the discharge of dissolved fraction metals, such as physical structures that minimize contaminated runoff from reaching receiving waters. Monitoring results show no exceedances for metals. • As an additional mitigation measure, Caltrans reduces the sediment transport of metals by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Newport Bay watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to minimize the discharge of sediment. • Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Eight SHOPP projects (PID, PAED, and/or PS&E) are planned in the San Diego Creek and Upper Newport Bay watersheds that will include treatment BMPs.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Strip	14
Biofiltration Swale	18
Detention Basin	23
DPP Infiltration Area (DPPIA)	15
Infiltration Trench	1
Open Grade Friction Course	8
Other BMP	2
Total	81

Existing Non-Structural BMPs¹¹

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 12 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater

⁸ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁹ Sources: Caltrans *TMDL Implementation Plan*, January 2015, and Caltrans *TMDL Compliance Plan* Appendix H.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

Upper Newport Bay Cadmium TMDL

pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.

- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring

No TMDL monitoring requirements apply to this watershed.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

**Upper and Lower Newport Bay Revised Organochlorine Compounds
(Dichlorodiphenyltrichloroethane [DDT], Polychlorinated Biphenyls [PCBs], and Chlordane)
TMDL**

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
Santa Ana	Upper and Lower Newport Bay	Organochlorine Compounds (DDT, PCBs, and Chlordane)	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.4

General Watershed Description²

The Newport Bay watershed covers an area of 154 square miles (98,500 acres) in central Orange County, California. Cities located partly or fully within the watershed include Orange, Tustin, Santa Ana, Irvine, Lake Forest, Laguna Hills, Costa Mesa, and Newport Beach; some unincorporated lands within the county are located within the watershed boundaries. The San Diego Creek watershed is part of the larger Newport Bay watershed and occupies about 105 square miles. The remainder of the Newport Bay watershed (about 49 square miles) includes the Santa Ana Delhi Channel, Bonita Creek, Big Canyon Wash, and other small drainages. The central portion of the watershed is largely occupied by the relatively flat Tustin Plain, bounded to the northeast by the Santiago Hills and by the San Joaquin Hills to the southwest. Runoff from the mountains drains across the Tustin Plain and enters Newport Bay primarily via Peters Canyon Wash and San Diego Creek. Lower Newport Bay is considered to be that portion of the Bay south of the Pacific Coast Highway Bridge (Highway 1). The Lower Bay harbor is important for recreational use and supports nearly 10,000 pleasure boats, as well as many residential and commercial facilities. Upper Newport Bay (north of the Pacific Coast Highway Bridge) includes a 752-acre estuary, where saltwater from the Pacific Ocean mixes with fresh water derived primarily from San Diego Creek.

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ³
2019-2020	0.5
2021-2022	10.9

Translation of CU to Waste Load Allocation (WLA)

The proposed translation from previously earned compliance units under the previous order to WLAs is being determined, and will be inserted once it is finalized.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 64 for Reach 1, 167 for Reach 3 and 173 for Reach 2

Region-Specific Requirements (Permit Attachment D Section D3.4)

No region-specific reports are required for the Santa Ana Region.

¹ Source: Permit Attachment D.

² Source: Santa Ana Regional Water Quality Control Board, *Total Maximum Daily Loads for Organochlorine Compounds*, San Diego Creek: Total DDT and Toxaphene, Upper and Lower Newport Bay: Total DDT, Chlordane, Total PCBs, Orange County, California, Prepared by Kathy L. Rose, Ph.D., Environmental Scientist, November 17, 2006, accessed via https://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/docs/oc_staffreport_final_12_01_06.pdf on February 2, 2023.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Upper and Lower Newport Bay Revised Organochlorine Compounds (Dichlorodiphenyltrichloroethane [DDT], Polychlorinated Biphenyls [PCBs], and Chlordane) TMDL

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	No cooperative agreement projects are occurring within this watershed.
Regional Water Board-Specific Reporting (Permit Attachment D Section D3.4)	No region-specific reports are required for the Santa Ana Region.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Santa Ana Water Board TMDLs (Permit Attachment D Section D5.13)	<ul style="list-style-type: none"> No Santa Ana Regional Board requirements apply to the Upper and Lower Newport Bay Revised Organochlorine Compounds TMDL. In the TMDL Compliance Plan and Annual TMDL Compliance Status Reports, Caltrans will report the status of Upper and Lower Newport Bay Revised Organochlorine Compounds TMDL best practices implementation (see Permit Attachment D Section D3.4).

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁴	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
12	8	97,127	3,509	4%	Organochlorine Compounds (DDT, PCBs, and Chlordane)	Yes	e. Mass-Based Waste Load

⁴ ROW area includes impervious and pervious areas. The area was calculated using the Caltrans highway centerline data set (February 2015).

**Upper and Lower Newport Bay Revised Organochlorine Compounds
(Dichlorodiphenyltrichloroethane [DDT], Polychlorinated Biphenyls [PCBs], and Chlordane)
TMDL**

WLAs

Pollutant	Watershed WLA
Organochlorine Compounds (DDT, PCBs, and Chlordane)	<p>Caltrans is listed as a primary source of pollutant loads contributing to the impairment of Upper and Lower Newport Bay watershed. The mass-based WLAs are expressed as daily and annual values. Based upon the percentage of the total urban land use comprised by urban roads, Caltrans' facilities and roadways make up 11 percent of the land area and are assigned a proportion of the overall WLAs accordingly.</p> <p>Caltrans-Specific WLAs Expressed as a Daily Value (grams per day)</p> <ul style="list-style-type: none"> • Upper Newport Bay Watershed: <ul style="list-style-type: none"> ○ Total DDT: 0.04 grams per day ○ Chlordane: 0.03 grams per day ○ Total PCBs: 0.02 grams per day • Lower Newport Bay Watershed: <ul style="list-style-type: none"> ○ Total DDT: 0.02 grams per day ○ Chlordane: 0.01 grams per day ○ Total PCBs: 0.07 grams per day <p>Caltrans-Specific WLAs Expressed as an Annual Value (grams per year)</p> <ul style="list-style-type: none"> • Upper Newport Bay Watershed: <ul style="list-style-type: none"> ○ Total DDT: 15.8 grams per year ○ Chlordane: 9.2 grams per year ○ Total PCBs: 9.1 grams per year • Lower Newport Bay Watershed: <ul style="list-style-type: none"> ○ Total DDT: 5.8 grams per year ○ Chlordane: 3.4 grams per year ○ Total PCBs: 23.9 grams per year

TMDL Implementation Schedule

- Start Date: November 12, 2013
- Final Compliance Date per TSO⁵: December 31, 2034

⁵ Since this TMDL is listed in the Time Schedule Order, final compliance is required by December 31, 2034. Source: Permit Attachment A and Permit Time Schedule Order.

Upper and Lower Newport Bay Revised Organochlorine Compounds (Dichlorodiphenyltrichloroethane [DDT], Polychlorinated Biphenyls [PCBs], and Chlordane) TMDL

Plan to Achieve WLAs^{6,7}

Pollutant	Strategies to Achieve WLAs
Total DDT	<ul style="list-style-type: none"> • Caltrans is making progress towards achieving compliance with total DDT WLAs in the Upper and Lower Newport Bay watershed since DDTs are no longer in production and their usage has been regulated. Additionally, Caltrans does not use DDTs or chlordane within its ROW. • Although Caltrans does not use pesticides within its ROW, Caltrans complies with Attachment C Section C3.5.3.2 of the Permit which specifies practices for the safe handling and use of pesticides, including compliance with federal, State and local regulations, and label directions. Caltrans is also required to perform site assessments, applicator training, and implementation of integrated pest and vegetation management practices when using pesticides in order to prevent pesticide discharge in stormwater runoff in the Upper and Lower Newport Bay watershed. • A major source of DDT impairments in the Upper and Lower Newport Bay watershed is due to historical loading from the pollutants adhering to sediment. As an additional mitigation measure, Caltrans reduces the sediment transport of pesticides by controlling the discharge of sediment. Caltrans implements control measures to prevent or minimize sediment in the Upper and Lower Newport Bay watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.
Chlordane and PCBs	<ul style="list-style-type: none"> • The Santa Ana Regional Water Quality Control Board did not establish TMDLs for chlordane and PCBs but did develop informational TMDLs for chlordane and PCBs. • Since PCBs are no longer in production and their usage has been regulated, PCB concentrations are expected to reduce over time in the watershed. Additionally, Caltrans does not use PCBs and chlordane within its ROW.
Additional Measures to Achieve WLAs for All Pollutants	<ul style="list-style-type: none"> • Caltrans has also established a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • Caltrans will pursue cooperative agreement opportunities and partner with local agencies to achieve similar objectives. • For additional pollutant control, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. Seventeen SHOPP projects (PID, PAED, and/or PS&E) are planned in the Upper and Lower Newport Bay watershed that will include treatment BMPs.

Existing Installed Structural BMPs⁸

Treatment BMP Type	Number of BMPs
Biofiltration Strip	1
Biofiltration Swale	7
DPP Infiltration Area (DPPIA)	3
Open Grade Friction Course	1
Total	12

⁶ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2013-2014, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

⁷ Sources: Caltrans *TMDL Implementation Plan*, January 2015.

⁸ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Upper and Lower Newport Bay Revised Organochlorine Compounds (Dichlorodiphenyltrichloroethane [DDT], Polychlorinated Biphenyls [PCBs], and Chlordane) TMDL

Existing Non-Structural BMPs⁹

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 12 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples’ behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District’s Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California “Keep America Beautiful” campaign through their “Let’s Change This to That” campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring

No TMDL monitoring requirements apply to this watershed.

Annual Reporting (Time Schedule Order)

Caltrans will achieve compliance with this TMDL by December 31, 2034 through implementation activities, and will document the TMDL compliance activities performed in the Final TMDL Compliance Report submitted by June 30, 2035.

⁹ Sources: Caltrans *Statewide Storm Water Management Plan*, 2016; and Caltrans *TMDL Implementation Plan*, 2015.

**Upper and Lower Newport Bay Revised Organochlorine Compounds
(Dichlorodiphenyltrichloroethane [DDT], Polychlorinated Biphenyls [PCBs], and Chlordane)
TMDL**

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Chollas Creek Dissolved Copper, Lead, and Zinc TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Diego	Chollas Creek	Copper, Lead, Zinc	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.14.2

General Watershed Description²

Chollas Creek is an urban creek with highly variable flows. Much of the Creek has been channelized and concrete lined, but some sections of earthen creek bed remain. It flows approximately 15 miles downstream, through the City of San Diego, and empties on the eastern shoreline of the central portion of San Diego Bay. Urban runoff enters the Creek throughout its course and is the main cause of the pollutants described by this TMDL. Creek is ephemeral and dry most of the year with episodic dry weather flows from surrounding urban neighborhoods.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress ³

Watershed Design Storm

Storm Type	Values
Volumetric Runoff (85 th Percentile 24-hr Storm) ⁴	0.49 – 0.67 inches
Water Quality Flow ⁵	0.2 inches/hour

Previously Earned Compliance Units (CUs) in Watershed

BMP #	BMP Type ⁶	Wet Weather Area Treated (ac)	# TMDLs Treated Towards Compliance Unit Credits
1	Modular Infiltration Trench	2.90	8.7
2	Modular Infiltration Trench	4.25	12.75
3	Bio-infiltration Swale ⁷	1.54	4.62
4	Bio-infiltration Swale ¹²	1.93	5.79
5	Modular Infiltration Trench	5.57	16.71
6	Modular Infiltration Trench	8.82	26.46
7	Bio-infiltration Swale	3.47	10.41
8	Austin Sand Filter	3.62	10.86
9	Modular Infiltration Trench	2.73	8.19
10	Modular Infiltration Trench	10.75	32.25
11	Instream Modular Infiltration Trench	42.22	126.66
12	Bio-infiltration Swales	5.32	15.96
13	Instream Modular Infiltration Trench	26.08	78.24

¹ Source: Permit Attachment D.

² Source: State of California San Diego Regional Water Quality Control Board, *Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed San Diego County*, April 14, 2002.

³ Regionally wet weather compliance has been achieved in the watershed.

⁴ Sources: Caltrans *Stormwater Quality Handbooks Project Planning and Design Guide*, July 2017 (Updated April 2019); California State University, Sacramento, Office of Water Programs Basin Sizer Version 1.47, Copyright 2013.

⁵ Source: Caltrans *Stormwater Quality Handbooks Project Planning and Design Guide*, July 2017 (Updated April 2019).

⁶ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022. District 11 EA 11-28240 and EA 11-28250.

⁷ Bio-infiltration Swale located outside Chollas Creek Watershed (in Switzer Creek Watershed).

Chollas Creek Dissolved Copper, Lead, and Zinc TMDL

BMP #	BMP Type ⁶	Wet Weather Area Treated (ac)	# TMDLs Treated Towards Compliance Unit Credits
14	Bio-infiltration Swale	2.02	6.06
-	Total	121.22	363.66

Translation of CU to Waste Load Allocation (WLA)

To be determined

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 80 for Reach 2 and 82 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

In the TMDL Compliance Plan and Annual TMDL Compliance Status Reports, Caltrans will report the status of Chollas Creek TMDL best practices implementation including: (i) current and proposed best management practices (BMPs) and treatment acres implemented through cooperative agreements; (ii) existing acreage treated with existing Caltrans BMPs; (iii) proposed Caltrans BMPs and acreage to be treated for the upcoming year; and (iv) proposed total acreage that will be treated with Caltrans BMPs by the compliance deadline.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans participates in and contributes to a cooperative watershed monitoring program with Chollas Creek Responsible Agencies through the Chollas Creek TMDL Receiving Water Monitoring Program. Receiving water will be sampled monthly during the wet season for two rain events and will use the results of this monitoring to demonstrate watershed compliance/non-compliance with the WLAs.
Regional Water Board-Specific Reporting (Permit Attachment D Section D3.4)	In the TMDL Compliance Plan and Annual TMDL Compliance Status Reports, Caltrans will report the status of Chollas Creek TMDL best practices implementation including: (i) current and proposed BMPs and treatment acres implemented through cooperative agreements; (ii) existing acreage treated with existing Caltrans BMPs; (iii) proposed Caltrans BMPs and acreage to be treated for the upcoming year; and (iv) proposed total acreage that will be treated with Caltrans BMPs by the compliance deadline.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed BMP and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan.

Chollas Creek Dissolved Copper, Lead, and Zinc TMDL

Reporting Requirement Permit Section	Summary of Activities
Requirements for San Diego Water Board TMDLs (Permit Attachment D Section D5.14.2)	<ul style="list-style-type: none"> • Caltrans will implement and maintain BMPs, to monitor, and to report for Chollas Creek copper, lead, and zinc TMDLs. • Monitoring will be implemented and reported. • Caltrans will plan, implement, and report on one of the following options: <ol style="list-style-type: none"> a. <i>Cooperative Agreements</i>: Implement BMPs through the Chollas Creek TMDL Receiving Water Monitoring Program or other cooperative agreements. b. <i>Department-Specific</i>: Include a plan and schedule in the TMDL Compliance Plan that identifies (1) the existing acreage treated within its right-of-way (ROW) with existing BMPs and (2) the proposed total acreage within Caltrans ROW that BMPs will meet the WLAs by the interim and final compliance dates • In the TMDL Compliance Plan and Annual TMDL Compliance Status Reports, Caltrans will report the status of Chollas Creek TMDL best practices implementation (see Permit Attachment D Section D3.4).

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁸	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
11	9	18,175	940	5.2%	Dissolved Copper (Cu), Lead (Pb), and Zinc (Zn)	No	h. TMDL- Specific Demonstrations

WLAs

Pollutant	Watershed WLA (kg/year)	Load Capacity Ranges (µg/L)
Cu, Pb, and Zn	<p>WLAs Expressed as 90 Percent of the Numeric Targets for Acute Conditions (ug/L) in Receiving Water: Copper: $0.9 * 6.998 * (0.96) * \{e^{[0.9422 * \ln(\text{hardness}) - 1.700]}\}$ Lead: $0.9 * 1 * \{1.46203 - [0.145712 * \ln(\text{hardness})]\} * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\}$ Zinc: $0.9 * 1.711 * (0.978) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\}$</p> <p>WLAs Expressed as 90 Percent of the Numeric Targets for Chronic Conditions (ug/L) in Receiving Water: Copper: $0.9 * 6.998 * (0.96) * \{e^{[0.845 * \ln(\text{hardness}) - 1.702]}\}$ Lead: $0.9 * 1 * \{1.46203 - [0.145712 * \ln(\text{hardness})]\} * \{e^{[1.273 * \ln(\text{hardness}) - 4.705]}\}$ Zinc: $0.9 * 1.711 * (0.986) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\}$</p> <p>Note: Water Effects Ratio (WER) values have been replaced as appropriate. The site-specific WER applies during wet weather, which is defined as a storm event with greater than 0.1 inch of rainfall. Wet weather copper WER is 6.998 and wet weather zinc WER is 1.711. Dry weather WERs are equal to 1.0. No site-specific WER for lead is applicable since neutral pH conditions (making lead very insoluble) and low concentrations of lead have been detected in Chollas Creek. In absence of a site-specific value, the WER for lead remains the default value of 1.0 as described in Regional Board Resolution R9-2017-0015.</p>	<p><u>Acute Condition Range:</u> Copper = 16 to 291 Lead = 14 to 234 Zinc = 41 to 548</p> <p><u>Chronic Conditions Range:</u> Copper = 13 to 173 Lead = <1 to 9 Zinc = 41 to 553</p>

⁸ ROW area includes impervious and pervious areas for Chollas HSA map dated May 2022, provided by District 11.

Chollas Creek Dissolved Copper, Lead, and Zinc TMDL

TMDL Implementation Schedule

- Start Date: December 18, 2008
- Final Compliance Date: December 18, 2028

Plan to Achieve WLAs^{9,10}

Pollutant	Strategies to Achieve WLAs
Dissolved Copper, Lead, and Zinc	<ul style="list-style-type: none"> • Caltrans is in compliance with dissolved metals (Cu, Pb, Zn) WLAs for dry-weather in the Chollas Creek watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. Caltrans has eight in-line infiltration trenches installed in this watershed to capture dry weather flows from its ROW and large portions of the surrounding municipal watershed. • Caltrans is in compliance with dissolved lead and zinc for wet-weather in the Chollas Creek watershed. Monitoring results show that dissolved zinc and lead have been below water quality objectives. According to the State Water Resources Control Board’s Annual Performance Report, the Water Quality Report Card for Chollas Creek indicates that lead concentrations do not generally exceed water quality objectives for acute and chronic toxicity. • Caltrans is not in compliance with dissolved copper for wet-weather in the Chollas Creek watershed, but is making progress towards compliance. Caltrans implements appropriate control measures to reduce the discharge of dissolved fraction metals, such as physical structures to prevent contaminated runoff from reaching receiving waters. Monitoring results show that dissolved copper has generally been above both acute and chronic water quality objectives. SB346 (known as the California Motor Vehicle Brake Friction material Law) was signed on September 27, 2010, which bans brake pads from containing more than trace amounts of heavy metals beginning in 2014 and effectively eliminates the amount in 2025. Brake pads are the only known source of potentially soluble copper in the ROW. • Metals have a high affinity for adhering to fine sediment and controlling the discharge of fine sediment can effectively mitigate metals in water. Caltrans implements control measures to minimize erosion and sediment discharge in the Chollas Creek watershed by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns. In urban areas Caltrans maximizes vegetation planting in the ROW to slow water velocity and reduce rain fall impact. • Caltrans has established a program to inspect roadside slopes for erosion on a five-year cycle. Areas with recurring problems are inspected on an as-needed basis. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • For additional pollutant control, Caltrans also uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and support infrastructure through its continuous rehabilitation plan. Four SHOPP projects (PID, PAED, and/or PS&E) are planned in the Chollas Creek watershed that will include treatment BMPs.

⁹ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

¹⁰ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board’s *Annual Performance Reports* Fiscal Year 2014-2015, and Fiscal Year 2015-2016.

Chollas Creek Dissolved Copper, Lead, and Zinc TMDL

Existing Installed Structural BMPs¹¹

BMP #	BMP Type	Total Tributary Area = Dry Weather Area (ac) ¹²	Contributing ROW Area (ac)	Design Capacity Area (ac) ¹³
1	Modular Infiltration Trench	2.90	2.52	8.75
2	Modular Infiltration Trench	19.93	10.09	4.25
3	Bio-infiltration Swale ¹⁴	1.54	-	3.36
4	Bio-infiltration Swale ¹²	1.93	-	14.02
5	Modular Infiltration Trench	7.94	5.66	5.57
6	Modular Infiltration Trench	51.94	21.01	8.82
7	Bio-infiltration Swale	3.47	3.47	15.66
8	Austin Sand Filter	198.12	16.24	3.62
9	Modular Infiltration Trench	2.73	2.73	4.69
10	Modular Infiltration Trench	54.81	15.38	10.75
11	Instream Modular Infiltration Trench	1,458.19	182.04	42.22
12	Bio-infiltration Swales	5.32	4.03	12.89
13	Instream Modular Infiltration Trench	770.28	56.07	26.08
14	Bio-infiltration Swale	2.02	2.02	17.33
-	Total	2,581.12	321.26	178.01

Existing Non-Structural BMPs¹⁵

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 11 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.
- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

¹¹ Source: District 11 EA 11-28240 and EA 11-28250. Data was provided by the District NPDES Coordinator.

¹² Tributary Area is the total (includes comingled flow) contributing drainage area for dry weather flow that the BMP would treat under ideal conditions.

¹³ Design Capacity Area calculations based on Caltrans plan sets, and design guidelines. No consideration for time-varied runoff, or pipe conveyance limitations.

¹⁴ Bio-infiltration Swale located outside Chollas Creek Watershed (in Switzer Creek Watershed)

¹⁵ Sources: Caltrans *Statewide Storm Water Management Plan* (2016); and Caltrans *TMDL Implementation Plan* (2015).

Chollas Creek Dissolved Copper, Lead, and Zinc TMDL

Monitoring

Caltrans can select and implement one of the two monitoring options listed:

1. Caltrans can participate in or contribute to a cooperative watershed monitoring program with other responsible municipalities. Caltrans participates financially in TMDL monitoring activities for dissolved metals Chollas Creek receiving waters (Chollas Creek TMDL Receiving Water Monitoring Program¹⁶) through a cooperative agreement with the Chollas Creek Responsible Agencies¹⁷. Receiving water will be sampled monthly during the wet season and will demonstrate watershed compliance/non-compliance with the WLAs; or
2. Caltrans may develop and conduct compliance monitoring to demonstrate the effectiveness of BMPs at outfalls to achieve WLAs. Representative outfalls will be monitored for applicable metals for one rain event per year over three separate years during the wet season per the permit term or per every five years, whichever is less. Monitoring will be representative of the effects of Caltrans' discharges on water quality.

Caltrans participates in and contributes to a cooperative watershed monitoring program with Chollas Creek Responsible Agencies through the Chollas Creek TMDL Receiving Water Monitoring Program. Receiving water will be sampled monthly during the wet season for two rain events and will use the results of this monitoring to demonstrate watershed compliance/non-compliance with the WLAs.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

¹⁶ *Chollas Creek Diazinon and Dissolved Metals Total Maximum Daily Load 2019–2020 Final Water Quality Compliance Monitoring Report* (Chollas Creek Responsible Agencies, 2020).

¹⁷ The Chollas Creek Responsible Agencies comprise the following six entities: the Cities of San Diego, La Mesa, and Lemon Grove; the San Diego Unified Port District; the United States Navy; and Caltrans.

Chollas Creek Diazinon TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Diego	Chollas Creek	Diazinon	D3.2

General Watershed Description²

The watershed of Chollas Creek encompasses 16,273 acres. (Note: This acreage excludes Switzer Creek). The area of the north fork of the watershed (9,276 acres) is somewhat larger than that of the south fork (6,997 acres). Land use is predominantly residential, with some commercial and industrial use. A significant portion of the watershed consists of roadways. The remaining land in the watershed is open space. A small portion of the watershed consists of “tidelands” immediately adjacent to San Diego Bay. Tidelands under the jurisdiction of the San Diego Unified Port District is also less than 1% of the watershed; the remainder is under the jurisdiction of the United States Navy. Chollas Creek is an urban creek with highly variable flows. The highest flow rates are associated with storm events. During dry weather, there are often extended periods of no surface flows in the creek, although pools of standing water may be present. Much of the creek has been channelized and concrete lined, but some sections of earthen creek bed remain. The mouth of the creek is located on the eastern shoreline of the central portion of San Diego Bay.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Watershed Design Storm

Storm Type	Values
Volumetric Runoff (85 th Percentile 24-hr Storm) ³	0.49 – 0.67 inches
Water Quality Flow ⁴	0.2 inches/hour

Previously Earned Compliance Units (CUs) in Watershed

BMP #	BMP Type ⁵	Wet Weather Area Treated (ac)	# TMDLS Treated Towards Compliance Unit Credits
1	Modular Infiltration Trench	2.90	8.7
2	Modular Infiltration Trench	4.25	12.75
3	Bio-infiltration Swale ⁶	1.54	4.62
4	Bio-infiltration Swale ¹²	1.93	5.79
5	Modular Infiltration Trench	5.57	16.71
6	Modular Infiltration Trench	8.82	26.46
7	Bio-infiltration Swale	3.47	10.41
8	Austin Sand Filter	3.62	10.86
9	Modular Infiltration Trench	2.73	8.19
10	Modular Infiltration Trench	10.75	32.25
11	Instream Modular Infiltration Trench	42.22	126.66

¹ Source: Permit Attachment D.

² Source: State of California San Diego Regional Water Quality Control Board, *Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed San Diego County*, August 14, 2002.

³ Sources: Caltrans *Stormwater Quality Handbooks Project Planning and Design Guide*, July 2017 (Updated April 2019); California State University, Sacramento, Office of Water Programs Basin Sizer Version 1.47, Copyright 2013.

⁴ Source: Caltrans *Stormwater Quality Handbooks Project Planning and Design Guide*, July 2017 (Updated April 2019).

⁵ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, and Fiscal Year 2021-2022. District 11 EA 11-28240 and EA 11-28250

⁶ Bio-infiltration Swale located outside Chollas Creek Watershed (in Switzer Creek Watershed)

Chollas Creek Diazinon TMDL

BMP #	BMP Type ⁵	Wet Weather Area Treated (ac)	# TMDLS Treated Towards Compliance Unit Credits
12	Bio-infiltration Swales	5.32	15.96
13	Instream Modular Infiltration Trench	26.08	78.24
14	Bio-infiltration Swale	2.02	6.06
-	Total	121.22	363.66

Translation of CU to Waste Load Allocation (WLA)

To be determined

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 80 for Reach 2 and 82 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)⁴

In the TMDL Compliance Plan and Annual TMDL Compliance Status Reports, Caltrans will report the status of Chollas Creek TMDL best practices implementation including: (i) current and proposed best management practices (BMPs) and treatment acres implemented through cooperative agreements; (ii) existing acreage treated with existing Caltrans-specific BMPs; (iii) proposed Caltrans-specific BMPs and acreage to be treated for the upcoming year; and (iv) proposed total acreage that will be treated with Caltrans-specific BMPs by the compliance deadline. Caltrans will demonstrate that the implementation schedule will meet the WLA interim and final deadlines.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁷	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
11	9	18,175	940	5.2%	Diazinon	No	g. No Discharge

WLAs⁸

Pollutant	Watershed WLA (µg/L)
Diazinon	Diazinon Acute 1-hour average 0.07 µg/L Diazinon Chronic 4-day average 0.05 µg/L

TMDL Implementation Schedule⁹

- Start Date: November 3, 2003
- Final Compliance Date: None – In the supporting technical documentation, the Regional Board stated that Caltrans is responsible for the major freeways and roadways making up approximately four percent of the land in the watershed; that Caltrans reports diazinon is not used; and that Caltrans has an integrated pest management plan. Since Caltrans does not use diazinon it is in compliance with the prohibition of discharge.

⁷ ROW area includes impervious and pervious areas for Chollas HSA map dated May 2022, provided by District 11.

⁸ Sources: TMDL for Diazinon in Chollas Creek Watershed Staff Report (2002); and Permit.

⁹ Sources: Permit and expired 2012 Caltrans Conformed NPDES Permit (Order 2012-0011-DWQ).

Chollas Creek Diazinon TMDL

Plan to Achieve WLAs^{10,11}

Pollutant	Strategies to Achieve WLAs
Diazinon	<ul style="list-style-type: none"> Caltrans is in compliance with the diazinon WLA in the Chollas Creek watershed. Diazinon is a pesticide used in agriculture, and Caltrans policy is to not use diazinon within its ROW. Additionally, Caltrans' Integrated Pest Management Plan has an ecosystem-based strategy that focuses on long-term control of pests or their damage through a combination of techniques, such as biological controls, habitat manipulation, modification of cultural practices, and use of pest resistant plant varieties. Monitoring results show that diazinon concentrations have shown statistically significant decreasing trends. According to the State Water Resources Control Board's Annual Performance Report, the Water Quality Report Card for Chollas Creek shows significant reductions in diazinon loading from San Diego's municipal storm water conveyance system.

Existing Installed Structural BMPs¹²

BMP #	BMP Type	Total Tributary Area = Dry Weather Area (ac) ¹³	Contributing ROW Area (ac)	Design Capacity Area (ac) ¹⁴
1	Modular Infiltration Trench	2.90	2.52	8.75
2	Modular Infiltration Trench	19.93	10.09	4.25
3	Bio-infiltration Swale ¹⁵	1.54	-	3.36
4	Bio-infiltration Swale ¹⁴	1.93	-	14.02
5	Modular Infiltration Trench	7.94	5.66	5.57
6	Modular Infiltration Trench	51.94	21.01	8.82
7	Bio-infiltration Swale	3.47	3.47	15.66
8	Austin Sand Filter	198.12	16.24	3.62
9	Modular Infiltration Trench	2.73	2.73	4.69
10	Modular Infiltration Trench	54.81	15.38	10.75
11	Instream Modular Infiltration Trench	1,458.19	182.04	42.22
12	Bio-infiltration Swales	5.32	4.03	12.89
13	Instream Modular Infiltration Trench	770.28	56.07	26.08
14	Bio-infiltration Swale	2.02	2.02	17.33
-	Total	2,581.12	321.26	178.01

Existing Non-Structural BMPs¹⁶

As of December 31, 2004, the United States Environmental Protection Agency (USEPA) banned the retail sale of diazinon products because of the chemical's adverse health effects on the human nervous system (USEPA, 2012).

¹⁰ Sources: Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

¹¹ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports* Fiscal Year 2014-2015, and Fiscal Year 2015-2016.

¹² Source: District 11 EA 11-28240 and EA 11-28250. Data was provided by the District NPDES Coordinator.

¹³ Tributary Area is the total (includes comingled flow) contributing drainage area for dry weather flow that the BMP would treat under ideal conditions.

¹⁴ Design Capacity Area calculations based on Caltrans plan sets, and design guidelines. No consideration for time-varied runoff, or pipe conveyance limitations.

¹⁵ Bio-infiltration Swale located outside Chollas Creek Watershed (in Switzer Creek Watershed)

¹⁶ Sources: Caltrans *District 11 Chollas Creek Historical Data Analysis and Compliance Evaluation Technical Memorandum* (2011).

Chollas Creek Diazinon TMDL

Monitoring

The receiving waters of Chollas Creek are monitored during two to three storm events annually as part of the Chollas Creek Diazinon and Dissolved Metals TMDL Compliance Monitoring Program¹⁷ (Chollas Creek Responsible Agencies¹⁸, 2020). Since 2007, detectable levels of diazinon have rarely been reported in the Chollas Creek receiving waters or Caltrans runoff, with no detectable levels found in the past five years. Caltrans is consistently achieving compliance with the final Diazinon TMDL WQOs. Monitoring results indicate no detectable levels of diazinon since the BMP effectiveness monitoring program was implemented in 2014.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

¹⁷ *Chollas Creek Diazinon and Dissolved Metals Total Maximum Daily Load 2019–2020 Final Water Quality Compliance Monitoring Report* (Chollas Creek Responsible Agencies, 2020).

¹⁸ The Chollas Creek Responsible Agencies comprise the following six entities: the Cities of San Diego, La Mesa, and Lemon Grove; the San Diego Unified Port District; the United States Navy; and Caltrans.

Los Peñasquitos Lagoon Sediment TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit Attachment D)
San Diego	Los Peñasquitos Lagoon	Sediment	D3.1, D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.14.3

General Watershed Description²

The Los Peñasquitos watershed is located in central San Diego County. Both the watershed and Lagoon are included in the Peñasquitos Hydrologic Unit (HU 906). The Los Peñasquitos watershed is 93 square miles (approximately 60,000 acres) and includes portions of the City of San Diego, City of Poway, City of Del Mar, and San Diego County. Three major streams drain the watershed and flow into the Lagoon. Los Peñasquitos Creek is the largest catchment draining 59 square miles (approximately 37,760 acres) in the central portion of the watershed. Carroll Canyon Creek is the second largest catchment draining 18 square miles (approximately 11,520 acres) in the southern portion of the watershed. Carmel Creek is the smallest of the three catchments draining the remaining 16 square miles (approximately 10,240 acres) in the northern, coastal area. Los Peñasquitos Creek and Carroll Canyon Creek converge prior to entering the Lagoon. Miramar Reservoir drains one square mile (approximately 640 acres) of the Carroll Canyon Creek watershed. Watershed elevation rises from sea level to 2,600 feet in the headwaters.

Watershed Compliance Status

Compliance Achieved ³

Compliance In Progress

Note: The Waste Load Allocation (WLA) has been achieved by Caltrans and full WLA compliance will be achieved when the City-sponsored lagoon restoration is complete.

Watershed Design Storm

Storm Type	Values
Volumetric Runoff (85 th Percentile 24-hr Storm) ⁴	0.44 – 0.6 inches
Water Quality Flow ⁵	0.2 inches/hour

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ⁶
2018-2019	171.2
2020-2021	2.5
2021-2022	6.4

Translation of CU to WLA

To be determined

¹ Source: Permit Attachment D.

² Source: State of California San Diego Regional Water Quality Control Board, *Sediment Total Maximum Daily Load for Los Peñasquitos Lagoon*, February 15, 2012.

³ Letter dated March 18, 2022 received from Regional Board in response to Caltrans District 11 Request for compliance determination with Los Peñasquitos Lagoon Sediment TMDL.

⁴ Sources: Caltrans *Stormwater Quality Handbooks Project Planning and Design Guide*, July 2017 (Updated April 2019); California State University, Sacramento, Office of Water Programs Basin Sizer Version 1.47, Copyright 2013.

⁵ Source: Caltrans *Stormwater Quality Handbooks Project Planning and Design Guide*, July 2017 (Updated April 2019).

⁶ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Los Peñasquitos Lagoon Sediment TMDL

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 276 for Reach 1, 279 for Reach 2, 280 for Reach 4, and 281 for Reach 3

Region-Specific Requirements (Permit Attachment D Sections D3.4 and D5.14.3)

Los Peñasquitos Lagoon Sediment Monitoring will be implemented and reported. Caltrans will meet its sediment load reduction and tidal and non-tidal salt marsh restoration by participation in cooperative watershed agreements or by Caltrans-specific implementation. In addition to the tidal and non-tidal salt marsh restoration efforts, Caltrans has met the required sediment load reduction⁷, which is 48 tons per wet season by the final TMDL compliance date of July 14, 2034.

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Prioritize Inventory of Reaches by Pollutant Category (Permit Attachment D Section D3.1)	Caltrans updated its Prioritized Inventory of Reaches.
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Regional Water Board-Specific Reports (Permit Attachment D Section D3.4)	Regional Water Board Specific Reports are not applicable this TMDL.
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1, and Attachment F Section F2.11.2)	<ul style="list-style-type: none"> • Caltrans will participate in a cooperative agreement project with the other responsible parties to demonstrate compliance with the load reduction. • Caltrans will continue to participate with the Phase I municipal responsible parties through cooperative agreements or other methods to ensure successful restoration of 346 acres of tidal and non-tidal salt marsh by the final compliance deadline.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for San Diego Regional Water Board TMDLs (Permit Attachment D Section D5.14.3, and Attachment F Section F2.11.2)	Los Peñasquitos Lagoon Sediment Monitoring will be implemented and reported by participating in the monitoring performed through a cooperative agreement. Caltrans has met its sediment load reduction by participating in cooperative watershed agreements or by Caltrans-specific implementation. Additionally, the City's tidal and non-tidal salt marsh restoration activities will occur through the cooperative agreement. Furthermore, as a result of the tidal and non-tidal salt marsh restoration efforts, Caltrans' required sediment load reduction is 48 tons per wet season by the final TMDL compliance date of July 14, 2034.

⁷ Source: Regional Board Letter to District 11, dated March 18, 2022, regarding "Response to Caltrans District 11 Request for Compliance Determination with the Los Peñasquitos Lagoon Sediment Total Maximum Daily Load".

Los Peñasquitos Lagoon Sediment TMDL

Interim and Final Milestones Schedule

TMDL Compliance Date	Milestones as Percent Reduction in Sediment Loading	Caltrans' Sediment Load Reduction (tons per wet season)	Compliance Met
July 14, 2019 – July 13, 2023	20 percent reduction	9.6	Yes
July 14, 2023	40 percent reduction	19.2	Yes
July 14, 2027	60 percent reduction	28.8	Yes
July 14, 2029	80 percent reduction	38.4	Yes
July 14, 2034	100 percent reduction	48	Yes

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁸	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
11	9	59,212	1,555	2.6%	Sediment	No	h. TMDL-Specific Demonstrations

Waste Load Allocations (WLAs)

Pollutant	Watershed WLA (tons/wet season)
Sediment	Watershed Load Reduction Goal for Total Suspended Solids = 48 tons/wet season

TMDL Implementation Schedule

- Start Date: October 30, 2014
- Final Compliance Date: July 14, 2034

Plan to Achieve WLAs⁹

Pollutant	Strategies to Achieve WLAs
Sediment	Based on the structural and non-structural BMPs implemented in the watershed, Caltrans estimates that they are achieving a sediment load reduction of 90 tons per year and the Regional Board agrees that Caltrans is in compliance with the first interim milestone and is on track to achieve compliance ¹⁰ . Caltrans has also funded an Endowment Management Agreement in 2017 to make \$4 million available for Los Peñasquitos Lagoon mouth maintenance and funding for the Los Peñasquitos Lagoon Restoration Project. Although Caltrans is in compliance with the first interim milestone and on track to achieve compliance with the rest of the Sediment TMDL interim milestones in partnership with the City of San Diego who is developing the lagoon restoration contract, Caltrans will continue to participate with the Phase I municipal responsible parties through cooperative agreements or other methods to ensure successful restoration of 346 acres of tidal and non-tidal salt marsh by the final compliance deadline.

⁸ ROW area includes impervious and pervious areas for Los Peñasquitos HSA map dated December 2022, provided by District 11.

⁹ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports* Fiscal Year 2014-2015, and Fiscal Year 2015-2016; Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

¹⁰ Source: Letter March 18, 2022 received from Regional Board in response to Caltrans District 11 Request for compliance determination with Los Peñasquitos Lagoon Sediment TMDL.

Los Peñasquitos Lagoon Sediment TMDL

Existing Installed Structural BMPs¹¹

Treatment BMP Type	Number of BMPs
Biofiltration Strip	1
DPP Infiltration Area (DPPIA)	6
Infiltration Basin	1
Detention Basin	3
Sediment Basin	1
Biofiltration Swale	115
Stabilization Area	2
Total	129

Existing Non-Structural BMPs¹²

Treatment BMP Type	Number of BMPs
Dredging	1
Slope Repair and Stabilization	2
Overplanting	1
Street Sweeping	0
Farmland Restoration	1
Total	5

Monitoring

In addition to the over 527,000 cubic yards removed by dredging, Caltrans estimates that they are achieving a minimum sediment load reduction of 90 tons per year through structural and non-structural BMPs implemented in the watershed and the Regional Board agrees that Caltrans is in compliance and is on track to achieve compliance. Therefore, no additional monitoring activities are anticipated to be required.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

¹¹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹² Source: Caltrans *Los Peñasquitos Watershed TMDL Compliance Evaluation Technical Memorandum* dated December 2021.

Project I – Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) Indicator Bacteria TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Diego	Project I – Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) Indicator Bacteria TMDL	Indicator Bacteria	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.14.1

General Watershed Description²

The Project I TMDL boundary includes beaches and creeks primarily in southern Orange and San Diego Counties. The beaches and creeks are located within or hydraulically downstream of five watersheds in Orange County (with a small portion in Riverside County) (Caltrans Districts 12 and 8 respectively) and eight watersheds in San Diego County (Caltrans District 11). The combined watersheds cover roughly 1,740 square miles (4,500 square kilometers). The climate in the Region is generally mild with annual temperatures averaging around 65°F near the coastal areas. Average annual rainfall ranges from nine to 11 inches along the coast to more than 30 inches in the eastern mountains. The land use of the Region is highly variable. The coastline areas are highly concentrated with urban and residential land uses, and the inland areas primarily consist of open space. Most of the area is open space or recreational land use (64.2 percent), followed by low-density residential (14.1 percent) and agriculture/livestock (12.4 percent) land uses. Other major land uses are commercial/institutional (3.0 percent), high-density residential (2.2 percent), industrial/transportation (1.6 percent), military (1.0 percent), transitional (0.8 percent), and water (0.7 percent).

Watershed Compliance Status

Compliance Achieved
 Compliance In Progress

Previously Earned Compliance Units (CUs) in Watershed in Districts 8, 11, and 12

BMP #	BMP Type ³	Wet Weather Area Treated (ac)	# TMDLS Treated Towards Compliance Unit Credits
1	Modular Infiltration Trench	2.90	8.7
2	Modular Infiltration Trench	4.25	12.75
3	Bio-infiltration Swale ⁴	1.54	4.62
4	Bio-infiltration Swale ¹²	1.93	5.79
5	Modular Infiltration Trench	5.57	16.71
6	Modular Infiltration Trench	8.82	26.46
7	Bio-infiltration Swale	3.47	10.41
8	Austin Sand Filter	3.62	10.86
9	Modular Infiltration Trench	2.73	8.19
10	Modular Infiltration Trench	10.75	32.25
11	Instream Modular Infiltration Trench	42.22	126.66
12	Bio-infiltration Swales	5.32	15.96
13	Instream Modular Infiltration Trench	26.08	78.24
14	Bio-infiltration Swale	2.02	6.06
-	Total	121.22	363.66

¹ Source: Permit Attachment D.

² Source: State of California San Diego Regional Water Quality Control Board, *Revised Total Maximum Daily Loads for Indicator Bacteria Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek) Final Technical Report*, February 10, 2010.

³ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, and Fiscal Year 2021-2022. District 11 EA 11-28240 and EA 11-28250

⁴ Bio-infiltration Swale located outside Chollas Creek Watershed (in Switzer Creek Watershed)

Project I – Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) Indicator Bacteria TMDL

Fiscal Year	Total CUs Achieved ⁵
2015-2016	155.1
2017-2018	30.2
2018-2019	67.1
2019-2020	90.8
2020-2021	4.52
2021-2022	8.6

Translation of CU to Waste Load Allocation (WLA)

Caltrans is in compliance with indicator bacteria WLAs for dry-weather flows and expected to be in compliance with indicator bacteria for wet-weather flows in the Project I watershed because they are in compliance with their stormwater permit. Caltrans minimizes wet-weather discharges from its right-of-way (ROW) into receiving waterbodies impaired for bacteria by source control/preemptive activities such as street sweeping, cleanup of illegal dumping, prohibition of non-stormwater discharges, and public education on littering. As an additional control measure, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan. The *District Work Plans Fiscal Year 2023-2024* for Districts 11 and 12 show 16 projects (PID, PAED, and/or PS&E) are planned in the Project I - Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) Watershed that will include treatment best management practices (BMPs) that may treat bacteria.

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 183 for Reach 7, 184 for Reach 9, 185 for Reach 13, 186 for Reach 10, 196 for Reach 3, 197 for Reach 2, 200 for Reach 1, 201 for Reach 4, 202 for Reach 8, 203 for Reach 12, 204 for Reach 6, 205 for Reach 11, 207 for Reach 5, and 239 for Reach 14

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not Applicable

Specific Reporting Requirements¹

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Regional Water Board-Specific Reports (Permit Attachment D Section D3.4)	None
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	A cooperative agreement for monitoring the watershed exists and it is considered Tier 1 monitoring that was performed during the 2021-2022 fiscal year.

⁵ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.. District 11 EA 11-28240 and EA 11-28250

**Project I – Revised Twenty Beaches and Creeks in the San Diego Region
(including Tecolote Creek) Indicator Bacteria TMDL**

Reporting Requirement Permit Section	Summary of Activities
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for San Diego Regional Water Board TMDLs (Permit Attachment D Section D5.14.1 and Attachment F)	Caltrans will participate in the regional monitoring program.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans ROW Area in TMDL (acres) ⁶	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
8, 11 and 12	9	1,114,011	12,236	1%	Indicator Bacteria	No	b. Receiving Water Quality Monitoring (through participation in cooperative regional monitoring)

⁶ ROW area includes impervious and pervious areas. The District 11 area was delineated by District 11 staff, and the District 12 area was calculated using the Caltrans ROW Geographic Information System data set (2022).

**Project I – Revised Twenty Beaches and Creeks in the San Diego Region
(including Tecolote Creek) Indicator Bacteria TMDL**

WLAs⁷

Pollutant	Watershed WLA	Allowable Number of Exceedance Days for Wet-Weather (Critical Condition)
Indicator Bacteria	<p><u>Wet Weather Fecal Coliform Bacteria (Billion Most Probable Number [MPN]/year)</u></p> <ul style="list-style-type: none"> • San Joaquin Hills Hydrologic Sub Area (HSA) and Laguna Hills HSA: 179 • Aliso HSA: 260 • Dana Point HSA: 13 • Lower San Juan HSA: 1,713 • San Clemente Hydrologic Area (HA): 335 • San Luis Rey Hydrologic Unit (HU): 1,537 • San Marcos HA: 8 • San Dieguito HU: 1,310 • Miramar Reservoir HA: 0 • Scripps HA: 0 • Tecolote HA: 553 • Mission San Diego HSA and Santee HSA: 1,009 • Chollas HSA: 892 <p><u>Dry Weather Fecal Coliform Bacteria (Billion MPN/year):</u> 0 (No surface runoff discharge to receiving waters from Caltrans ROW.)</p>	<ul style="list-style-type: none"> • San Joaquin Hills HSA and Laguna Hills HSA: 15 • Aliso HSA: 15 • Dana Point HSA: 15 • Lower San Juan HSA: 17 • San Clemente HA: 16 • San Luis Rey HU: 20 • San Marcos HA: 11 • San Dieguito HU: 22 • Miramar Reservoir HA: 21 • Scripps HA: 13 • Tecolote HA: 13 • Mission San Diego HSA and Santee HSA: 19 • Chollas HSA: 14

⁷ Sources: Revised TMDL for Indicator Bacteria Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) Staff Report (2010); and Caltrans NPDES Permit 2022.

**Project I – Revised Twenty Beaches and Creeks in the San Diego Region
(including Tecolote Creek) Indicator Bacteria TMDL**

Pollutant	Watershed WLA	Allowable Number of Exceedance Days for Wet-Weather (Critical Condition)
Indicator Bacteria	<p><u>Receiving Water Limitations for Beaches:</u> Wet Weather Numeric Objective (MPN/100 milliliters [mL]): Fecal Coliform 400 Total Coliform 10,000 Enterococcus 104</p> <p>Wet Weather Allowable Exceedance Frequency: Fecal Coliform 22% Total Coliform 22% Enterococcus 22%</p> <p>Dry Weather Numeric Objective (MPN/100 mL): Fecal Coliform 200 Total Coliform 1,000 Enterococcus 35</p> <p>Dry Weather Allowable Exceedance Frequency: Fecal Coliform 0% Total Coliform 0% Enterococcus 0%</p> <p><u>Receiving Water Limitations for Creeks:</u> Wet Weather Numeric Objective (MPN/100 mL): Fecal Coliform 400 Enterococcus 61</p> <p>Wet Weather Allowable Exceedance Frequency: Fecal Coliform 22% Enterococcus 22%</p> <p>Dry Weather Numeric Objective (MPN/100 mL): Fecal Coliform 200 Enterococcus 33</p> <p>Dry Weather Allowable Exceedance Frequency: Fecal Coliform 0% Enterococcus 0%</p>	-

TMDL Implementation Schedule

- Start Date: June 22, 2011
- Dry Weather Receiving Water Limitations Final Compliance Date: April 4, 2021
- Wet Weather Receiving Water Limitations Final Compliance Date: April 4, 2031

Project I – Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) Indicator Bacteria TMDL

Plan to Achieve WLAs^{8,9}

Pollutant	Strategies to Achieve WLAs
Indicator Bacteria	<ul style="list-style-type: none"> • Caltrans waste load reduction goal is zero. • Caltrans is in compliance with indicator bacteria WLAs for dry-weather flows in the Project I - Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) watershed, since Caltrans does not contribute any dry-weather discharge from its ROW. • Caltrans is in compliance with indicator bacteria WLAs for wet-weather flows in the Project I - Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) watershed. According to the Caltrans Annual Report Fiscal Year 2015-2016, Caltrans WLAs are set equal to Caltrans existing load. Therefore, no reduction is required. • Caltrans minimizes wet-weather discharges from its ROW into receiving waterbodies impaired for bacteria by implementing treatment BMPs and source control/preemptive activities such as street sweeping, cleanup of illegal dumping, prohibition of non-stormwater discharges, and public education on littering as described above. • As an additional control measure, Caltrans uses the State Highway Operation and Protection Program (SHOPP) to maintain and preserve the state highway system and supporting infrastructure through its continuous rehabilitation plan.

Existing Installed Structural BMPs¹⁰

Treatment BMP Type	Number of BMPs
Biofiltration Strips	19
Biofiltration Swales	282
Detention Basin	31
DPP Infiltration Area (DPPIA)	16
Infiltration Trench	8
Infiltration Basin	3
Other	8
Total	367

Existing Non-Structural BMPs¹¹

- **Clean Up of Illegal Dumping** – Illegal dumping is prohibited by state and local laws and is enforced by the California Highway Patrol (CHP) and local law enforcement agencies. Caltrans relies on CHP and Caltrans staff to investigate and resolve reports of suspected illegal connections and illicit discharges. Caltrans has trained in-house and contract hazardous response staff to manage and clean up spills. Caltrans District 7 prepares and implements a Hazardous Spill Contingency Plan on an annual basis. In addition, Caltrans removes homeless encampments as soon as practicable after identification.
- **Prohibition of Non-Stormwater Discharges** – Caltrans prohibits non-stormwater discharges to the MS4 and reduces pollution caused by wastes associated with non-stormwater discharges to the maximum extent practicable. Caltrans implements BMPs through their construction, design and maintenance divisions to control non-stormwater pollutants.

⁸ Sources: Revised TMDL for Indicator Bacteria Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) Staff Report (2010); and Caltrans NPDES Permit 2022.

⁹ Sources: Caltrans TMDL Implementation Plan (January 2015); State Water Resources Control Board's Annual Performance Reports Fiscal Year 2014-2015, and Fiscal Year 2015-2016; Caltrans District Work Plans Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024.

¹⁰ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

¹¹ Sources: Caltrans Statewide Storm Water Management Plan (2016); and Caltrans TMDL Implementation Plan (2015).

Project I – Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) Indicator Bacteria TMDL

- **Public Education** – Caltrans partners with various organizations at both the state and local levels, focusing on educating and motivating the public to modify peoples' behavior regarding stormwater pollution. Headquarters Division of Environmental Analysis coordinates Headquarters Public Information Officer and District NPDES Coordinators. Headquarters Public Information Officer coordinates with the District's Public Information Officer to educate the public about stormwater pollution. Caltrans helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep America Beautiful" campaign through their "Let's Change This to That" campaign, which addresses key actions the public can take to properly dispose of trash and pollutants.
- **Roadway Sweeping** – Caltrans conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces, which removes tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Monitoring¹²

The Department participates in a cooperative watershed monitoring program with the other responsible municipalities.

Annual Reporting (Permit Attachment D Section D3.2)

The Annual TMDL Compliance Status Report will document the TMDL compliance and maintenance activities performed during the fiscal year.

¹² Source: Caltrans *Monitoring Results Report: Fiscal Year 2021-22*, CTSW-RT-22-395.01.02, October 2022.

**Project I – Revised Twenty Beaches and Creeks in the San Diego Region
(including Tecolote Creek) Indicator Bacteria TMDL**

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Rainbow Creek Total Nitrogen and Total Phosphorus TMDL

Regional Board ¹	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirements in 2022 Caltrans NPDES Permit (Permit) Attachment D
San Diego	Rainbow Creek	Total Nitrogen and Phosphorus	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.3

General Watershed Description²

Rainbow Creek is a small tributary to the Santa Margarita River located in northern San Diego County, near the community of Fallbrook. The Rainbow Creek watershed is designated in the Basin Plan as hydrologic unit subareas (HSAs) 902.22 and 902.23 and encompasses over 6,000 acres. The watershed is primarily rural, with sixty percent of the watershed undeveloped. Development within the watershed includes rural residential units (8.7 percent), agricultural uses (7.3 percent), orchards (11.8 percent), commercial nurseries (5.3 percent), and a mix of other uses (eight percent) (MRCO 1999). Rainbow Creek headwaters begin east of Rainbow Valley, traverses the relatively flat Rainbow Valley Basin, located about 1.5 miles west of the headwaters and then enters another sparsely populated area with hilly terrain. Rainbow Creek eventually flows into the Santa Margarita River, approximately eight miles from the headwaters. The upper reaches include the creek and tributaries above Oak Crest sampling station, the middle reaches are the creek and tributaries between Willow Glen-4 and Oak Crest stations, and the lower reaches are the creek and tributaries between Stage Coach and Willow Glen-4 stations.

Watershed Compliance Status

Compliance Achieved

Compliance In Progress

Watershed Design Storm

Storm Type	Values
Volumetric Runoff (85 th Percentile 24-hr Storm) ³	0.66 – 0.71 inches
Water Quality Flow ⁴	0.2 inches/hour

Previously Earned Compliance Units (CUs) in Watershed

Fiscal Year	Total CUs Achieved ⁵
2018-2019	1.2

Translation of CU to Waste Load Allocation (WLA)

To be determined

Prioritized Inventory of Reaches Ranking

Reach Number Priority Ranking: 169 for Reach 1

Region-Specific Requirements (Permit Attachment D Section D3.4)

Not Applicable

¹ Source: Permit Attachment D.

² Source: State of California San Diego Regional Water Quality Control Board, *Draft Staff Report for Nutrient Total Maximum Daily Loads for Rainbow Creek*, March 22, 2002.

³ Sources: Caltrans *Stormwater Quality Handbooks Project Planning and Design Guide*, July 2017 (Updated April 2019); California State University, Sacramento, Office of Water Programs Basin Sizer Version 1.47, Copyright 2013.

⁴ Source: Caltrans *Stormwater Quality Handbooks Project Planning and Design Guide*, July 2017 (Updated April 2019).

⁵ Sources: Caltrans *TMDL Status Review Reports*, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, and Fiscal Year 2021-2022.

Rainbow Creek Total Nitrogen and Total Phosphorus TMDL

Specific Reporting Requirements⁶

Reporting Requirement Permit Section	Summary of Activities
Annual TMDL Compliance Status Reports (Permit Attachment D Section D3.2)	Caltrans will submit an annual TMDL Compliance Status Report by November 30 of each year.
TMDL Compliance (Permit Attachment D Section D3.3)	Caltrans will develop, implement, and update a TMDL Compliance Plan annually.
Regional Water Board-Specific Reports (Permit Attachment D Section D3.4)	None
Cooperative Agreement Projects Summary (Permit Attachment D Sections D5 and D5.1)	Caltrans currently does not have cooperative implementation projects to address TMDL requirements with outside agencies within this watershed. However, Caltrans closely coordinates with the County of San Diego and their monitoring efforts.
Performance, Effectiveness, and Adaptive Management Assessment (Permit Attachment D Section D5.2)	Caltrans affirms the appropriate maintenance is conducted on each type of installed best management practice (BMP) and control measures as per the Maintenance Indicator Document, this ensures the BMPs and control measures achieve the performance and effectiveness required to address pollutants of concern. The Maintenance Indicator Document is available at this website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/maintenance-staff-guide-may-2018-a11y.pdf . Deficient BMPs are addressed following Caltrans Transportation Asset Management Plan, which is available at this website: https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2022-tamp-a11y.pdf .
Requirements for Sediment, Nutrients, Mercury, Siltation, and Turbidity Total Maximum Daily Loads (Permit Attachment D Section D5.3)	Caltrans will continue to implement BMPs to prevent or minimize erosion and sediment discharge.

Caltrans District	RWQCB Number	TMDL Watershed Area (acres)	Caltrans Right-of-Way (ROW) Area in TMDL (acres) ⁷	Percent of Caltrans ROW in TMDL Watershed	TMDL Pollutant	TSO	Compliance Strategy
8 and 11	9	6,059	279.42	4.6%	Total Nitrogen and Total Phosphorus	Yes	h.TMDL-Specific Demonstrations

WLAs

Pollutant	Watershed WLA (kg/year)
Total Nitrogen	49 kg/year
Total Phosphorus	5 kg/year

TMDL Implementation Schedule

- Start Date: March 22, 2006
- Final Compliance Date: December 31, 2034

⁶ See Permit Attachment D for full requirements of each section.

⁷ ROW area includes impervious and pervious areas. The area was provided by District 11 staff for both districts.

Rainbow Creek Total Nitrogen and Total Phosphorus TMDL

Plan to Achieve WLAs⁸

Pollutant	Strategies to Achieve WLAs
Total Nitrogen and Total Phosphorus	<ul style="list-style-type: none"> • Caltrans has achieved a 63 percent mass load reduction of total nitrogen in stormwater runoff and a 36 percent mass load reduction of total phosphorus in stormwater runoff over an eight year monitoring and reporting period. The Regional Board has determined that Caltrans has achieved compliance with the 2009, 2011, and 2013 interim wasteload allocations for total nitrogen and total phosphorus. Also, Caltrans' stormwater runoff mass load reduction was within 20 percent of the final 2021 wasteload allocations for total nitrogen and total phosphorus. On average, Caltrans has reduced its stormwater runoff mass loading of total phosphorus and total nitrogen from six to 18 percent annually based on the 2012 mass loading through implementation of non-structural BMPs. With continued implementation of current Caltrans non-structural BMPs, Caltrans plans to achieve the final wasteload allocations in the near future. • Caltrans implements BMPs within the Interstate 15 drainage area that include ROW street sweeping, storm drain inlet maintenance and cleaning, erosion and sediment controls, collaborative activities to support source identification from other dischargers in the watershed, discontinuing fertilizing, and discontinuing irrigation. Caltrans also monitors during wet weather months (October through April). In addition, Caltrans has sponsored nitrogen and phosphorus pollutant source investigations within its ROW and a geotechnical study assessing the infiltration capacity of the Interstate 15 ROW for installation of structural BMPs. The investigations concluded that other than aerial deposition of auto exhaust, no other known sources of nitrogen or phosphorus exist within Caltrans' control within the Interstate 15 ROW drainage area. Auto exhaust is also an unlikely source since exhaust is a source of nitrogen but not phosphorus. Furthermore, Caltrans concluded that ROW geology was natural rock with very low infiltration rates and was not suitable for the installation of structural BMPs. • Caltrans also implements source control measures for compliance with the Construction General Permit on active construction sites to prevent the discharge of sediment. • According to the State Water Resources Control Board's Annual Performance Report, the Water Quality Report Card for Rainbow Creek indicates that conditions are improving, as concentrations of both total nitrogen and total phosphorus show a decreasing trend.

Existing Installed Structural BMPs⁹

Treatment BMP Type	Number of BMPs
DPP Infiltration Area (DPPIA)	1
Total	1

Existing Non-Structural BMPs

To control nutrients, Caltrans has implemented BMPs within the Interstate 15 drainage area, including ROW storm drain inlet maintenance and cleaning, erosion and sediment controls at construction projects located in the watershed, and collaborative activities to support source identification from other dischargers in the Rainbow Creek watershed. Caltrans has never fertilized nor irrigated in this watershed.

⁸ Sources: Caltrans *TMDL Implementation Plan* (January 2015); State Water Resources Control Board's *Annual Performance Reports* Fiscal Year 2014-2015, and Fiscal Year 2015-2016; Caltrans *District Work Plans* Fiscal Year 2012-2013, Fiscal Year 2014-2015, Fiscal Year 2015-2016, Fiscal Year 2016-2017, Fiscal Year 2017-2018, Fiscal Year 2018-2019, Fiscal Year 2019-2020, Fiscal Year 2020-2021, Fiscal Year 2021-2022, Fiscal Year 2022-2023, and Fiscal Year 2023-2024; and Caltrans *Monitoring Results Report: Fiscal Year 2014-2015*; Permit Attachment A

⁹ Source: All BMP data was exported from the Caltrans Portal as of May 11, 2023.

Rainbow Creek Total Nitrogen and Total Phosphorus TMDL

Monitoring

Caltrans conducted monitoring during the October through April wet weather months from October 2012 through April 2016 and from October 2020 to April 2021. With continued implementation of technically feasible BMPs, Caltrans has achieved a 63 percent mass load reduction of total nitrogen in stormwater runoff and a 36 percent mass load reduction of total phosphorus in stormwater runoff over this eight-year monitoring and reporting period. Based on the 2012 through 2021 monitoring data, the Regional Board has determined that Caltrans has achieved compliance with the 2009, 2011, and 2013 interim waste load allocations for total nitrogen and total phosphorus.

No additional monitoring is required for Rainbow Creek Watershed per Permit Attachment F.

Annual Reporting (Permit Attachment D Section D3.2)

The Final TMDL Compliance Report will document the TMDL compliance activities performed to achieve compliance and will be submitted by June 30, 2035.