



Statewide Stormwater Management Plan

California Department of Transportation
Division of Environmental Analysis
Stormwater Program – MS 27
1120 N Street
Sacramento, CA 95814

<http://www.dot.ca.gov/hq/env/stormwater/>

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Hardeep Takhar

05/22/2024

Hardeep Takhar, Chief Environmental Engineer
Division of Environmental Analysis
California Department of Transportation

Date

Note: This Statewide Stormwater Management Plan's (SWMP) section headings have parenthetical statements inserted that identify the California State Water Resources Control Board *National Pollutant Discharge Elimination System Statewide Stormwater Permit and Waste Discharge Requirements for State of California Department of Transportation* (Order No. 2022-0033-DWQ) (Caltrans NPDES Permit) sections that discuss the requirements pertaining to the particular SWMP section. These parenthetical statements are shown in the Table of Contents below as a reference for the SWMP reader. Numeric only Caltrans NPDES Permit section numbers refer to the Caltrans NPDES Permit text, and combination alphabetic and numeric section numbers refer to Caltrans NPDES Permit attachments. SWMP section headings that do not include parenthetical statements are necessary commentary for the intended reader of this SWMP (Caltrans staff) to implement the Caltrans NPDES Permit.

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1 Overview (C1, C2, and C3)

1.1 Overview of the Stormwater Management Plan (C3.1)

The mission of the California Department of Transportation (Caltrans) is to provide a safe and reliable transportation network that serves all people and respects the environment. Caltrans plans, designs, constructs, operates, and maintains roadways and facilities. Caltrans also conducts other activities related to the state's transportation system.

This statewide Stormwater Management Plan (SWMP) has been prepared by Caltrans to describe the program, procedures and practices used to reduce or eliminate the discharge of pollutants to storm drain systems and receiving waters. The SWMP addresses discharges of stormwater and non-stormwater to waters of the United States (as defined by the U.S. Environmental Protection Agency [USEPA]) and waters of the state of California (as defined by the Porter-Cologne Act). Submittal of this SWMP complies with Caltrans' requirements under the *National Pollutant Discharge Elimination System Statewide Stormwater Permit and Waste Discharge Requirements for State of California Department of Transportation* (Order No. 2022-0033-DWQ), issued by the California State Water Resources Control Board (SWRCB or State Water Board) on June 22, 2022 (SWRCB, 2022b) (Caltrans NPDES Permit) and effective January 1, 2023.

1.1.1 Purpose (C3)

The SWMP addresses the requirements of the Caltrans NPDES Permit and the *National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit)* (Order WQ 2022-0057-DWQ) (SWRCB, 2022a) (Statewide Construction General Permit or Statewide CGP).

This SWMP describes Caltrans' program and addresses stormwater pollution control related to Caltrans activities, including planning, design, construction, maintenance, and operation of roadways and facilities. For municipal-type discharges, the SWMP provisions are to control pollutants to the maximum extent practicable (MEP) as required by the federal Clean Water Act (CWA). MEP is the minimum required performance standard for implementation of municipal stormwater management programs to reduce pollutants in stormwater. CWA § 402(p)(3)(B)(iii) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."

For construction activities, this SWMP requires implementation of best management practices (BMPs) to reduce or eliminate toxic pollutants and non-conventional pollutants using Best Available Technology Economically Achievable (BAT) and implementation of BMPs to reduce or eliminate conventional pollutants using Best Conventional Pollutant

Control Technology (BCT) as required by CWA Sections 301 and 402, and as required by the Statewide CGP. BAT/BCT generally refers to a suite of BMPs, which through experience have been found to be effective in controlling construction site runoff water quality.

The SWMP addresses responsibilities within Caltrans for implementing stormwater management procedures and practices including training, public education, monitoring, program evaluation, and reporting activities. The SWMP addresses Caltrans' stormwater management activities on a statewide basis. It may include other procedures on regional, local, or site-specific concerns.

The SWMP addresses discharges resulting from stormwater (i.e., those discharges originating from precipitation events, including snowmelt). In addition, the SWMP also addresses certain discharges that meet the definition of "non-stormwater discharges," including illegal connections, illicit discharges, authorized non-stormwater discharges, and initial emergency response activities.

1.1.2 Regulatory Background (C3.2)

Federal environmental regulations based on the CWA require the control of pollutants from Municipal Separate Storm Sewer Systems (MS4s), construction sites, and industrial activities. Discharges from such sources were brought under the NPDES permitting process by the 1987 CWA amendments and the subsequent 1990 promulgation of stormwater regulations by USEPA. In California, USEPA has delegated administration of the federal NPDES program to the SWRCB and the nine Regional Water Quality Control Boards (RWQCBs). In addition, the SWRCB and nine RWQCBs have authority to regulate waste discharges to land that may affect water quality.

Under the federal stormwater regulations, portions of Caltrans' properties, facilities, and activities come under the jurisdiction of NPDES stormwater regulations for two primary reasons:

- Caltrans' highways and highway-related properties, facilities and activities are served by extensive storm drain systems, which are often connected to, and are considered comparable to, urban MS4s covered explicitly in the federal stormwater regulations.
- Construction of Caltrans' highways and related facilities often results in soil disturbance of one acre or more, for which specific requirements are prescribed by the federal stormwater regulations and the Statewide CGP.

The Code of Federal Regulations, at 40 CFR § 122.26(a)(iii) and (iv) (USEPA, 1998), requires that NPDES stormwater permits be issued for discharges from large, medium, and designated small MS4s. The regulations define the term "Municipal Separate Storm Sewer Systems" to mean "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned or operated by a state, city, town, borough, county."

Caltrans, as the owner and operator of an MS4, is subject to an NPDES MS4 permit in those areas of California specified under federal regulation. Caltrans implements a statewide program for its stormwater compliance activities. The Code of Federal Regulations Section 40 CFR § 122.26 (USEPA, 1998) requires discharges of stormwater associated with construction activity, including clearing, grading and excavation activities, to obtain coverage under the Statewide CGP.

On September 8, 2022, the SWRCB adopted the Statewide CGP (SWRCB, 2022a). This SWMP includes Caltrans' program for complying with the substantive provisions of the Statewide CGP on projects; however, most requirements are met by implementing Stormwater Pollution Prevention Plans prepared for each project.

As statewide stormwater general permits for industrial activities and construction activities are adopted or renewed by the SWRCB, Caltrans will update this SWMP to address statewide general requirements for stormwater and waste discharges to avoid duplicate regulation or parallel programs and consolidate appropriate water quality compliance into one plan.

When performing construction projects that cross Tribal boundaries onto Tribal land, Caltrans will seek coverage under USEPA's CGP. In the Lake Tahoe Hydrologic Unit, Caltrans will comply with the *General Waste Discharge Requirements and National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity in the Lake Tahoe Hydrologic Unit, Counties of Alpine, El Dorado, and Placer* (Order No. R6T-2016-0010) (Lake Tahoe CGP) (Lahontan RWQCB, 2016), which has been administratively extended since it expired December 31, 2021. Upon approval of a new Lake Tahoe CGP, Caltrans will comply with those requirements in the Lake Tahoe Hydrologic Unit area of the Lahontan Region.

Caltrans will be responsible for complying with construction stormwater discharge requirements on its projects statewide, whether activities are performed directly by Caltrans staff or by contractors on behalf of Caltrans.

1.1.3 Relationship of Caltrans NPDES Permit, SWMP, and Related Caltrans Documents

Figure 1-1 indicates how the SWMP is based on the Caltrans NPDES Permit issued by the SWRCB. The SWMP must be approved by the SWRCB, and as specified in the Caltrans NPDES Permit. Implementation of the SWMP should achieve compliance with the Caltrans NPDES Permit; additional requirements in the Caltrans NPDES Permit shall be implemented to reduce or eliminate pollutants in stormwater discharges. Caltrans guidance is referenced in this document, as appropriate, and references are listed in SWMP Section 19. These policies, manuals, and related guidance identify the means and methods of compliance and thus are not enforceable (see Section 13360 of the Water Code). However, these policies, guidelines, and manuals facilitate implementation of the SWMP and will be either created or updated to be consistent with the Caltrans NPDES Permit requirements.

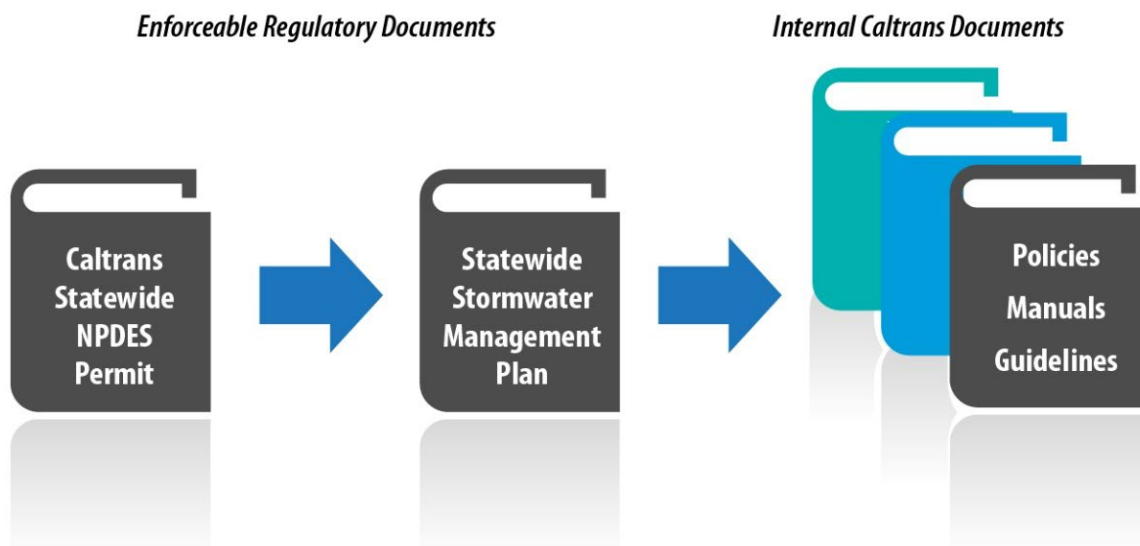


Figure 1-1: Relationship of Caltrans NPDES Permit, SWMP, and Related Caltrans Documents

Copies of the documents currently being used, excluding project-specific documents, are available on the Caltrans website at <https://dot.ca.gov/programs/environmental-analysis>.

1.1.4 Regulatory Permit Requirements that Overlap with this SWMP (C3)

This SWMP addresses the requirements of the Caltrans NPDES Permit, other statewide NPDES Permits, and one regional permit as listed in Table 1-1.

Table 1-1: NPDES Permits Addressed by the SWMP

Permit	Description of Discharge Regulated
<i>National Pollutant Discharge Elimination System Statewide Stormwater Permit and Waste Discharge Requirements for State of California Department of Transportation (Order No. 2022-0033-DWQ) (Caltrans NPDES Permit)</i>	The Caltrans NPDES Permit regulates the following discharges: <ul style="list-style-type: none"> • Stormwater discharges from all Caltrans-owned MS4s including construction sites with land disturbance less than an acre; • Stormwater discharges from Caltrans' vehicle maintenance, equipment cleaning operations facilities and any other non-industrial facilities with activities that have the potential of generating significant quantities of pollutants; and • Certain categories of non-stormwater discharges as shown in Caltrans NPDES Permit Section 3.9.
<i>National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order WQ 2022-0057-DWQ) (SWRCB, 2022a) (Statewide CGP)</i>	The Statewide CGP and this SWMP address Caltrans discharges from construction sites, with land disturbance of greater than or equal to one acre.

Permit	Description of Discharge Regulated
<i>General Waste Discharge Requirements and National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity in the Lake Tahoe Hydrologic Unit, Counties of Alpine, El Dorado, and Placer</i> (Order No. R6T-2016-0010) (Lahontan RWQCB, 2016)	Caltrans construction projects within the Lake Tahoe Hydrologic Unit are subject to the Lake Tahoe CGP; consequently, the specific needs of this area are addressed as described in SWMP Section 6.2.
<i>Statewide General Permit for Stormwater Discharges Associated with Industrial Activities</i> (IGP) (Order No. 2014-0057-DWQ as amended by Order 2015-0122-DWQ and Order 2018-XXXX-DWQ) (SWRCB, 2020)	Industrial activities are not covered under the Caltrans NPDES Permit. SWMP Section 7 addresses compliance with the statewide Industrial General Permit (IGP).

Site-specific Waste Discharge Requirements may apply to Caltrans projects depending on the watershed and region that may be related to the NPDES Permit requirements noted in Table 1-1.

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2 Management and Organization (C2 and C3.2)

This section provides an overview of the management and organizational structure of Caltrans, roles and responsibilities of stormwater personnel, and a description of the role of the single focal point of Caltrans' Stormwater Program. The section also describes the coordination with local authorities, delegations of authority, policies, budget, legal authority, and access control protocols.

2.1 Caltrans Organizational Structure

Caltrans is composed of Headquarters (also referred to as HQ) divisions and executive management, located in Sacramento, and twelve Districts (Districts) located throughout the state. Headquarters responsibility includes executive, and statewide policy and guidance functions; the twelve Districts plan, design, construct, operate, and maintain the State highway transportation system within each of the District boundaries.

Caltrans uses a matrix organization to provide statewide coordination and resource sharing. This matrix organization comprises both traditional line management and functional program management. Traditional line management consists of the twelve District directors and the functional Deputy District Directors (or Regional Managers) within each District (i.e., Transportation and Environmental Planning, Right of Way, Project Management, Design, Construction, and Maintenance).¹ Functional program management consists of the Director, the Deputy Directors, the Headquarters Division Chiefs (Environmental Analysis, Design, Construction, Right of Way, Maintenance, Traffic Operations, etc.), and their respective functional counterparts in the Districts (e.g., the functional Deputy District Directors [or Regional Managers]). Figure 2-1 illustrates the relationship between Headquarters and District counterparts.

2.1.1 Delegations of Authority

Persons having signatory authority for the various documents and reports submitted under the requirements of the Caltrans NPDES Permit and SWMP are limited to specific positions. The Chief Environmental Engineer (CEE) has authority to certify reports or documents required under the SWMP and Caltrans NPDES Permit.

Positions having authority to certify reports, notifications, or other information required of a District under the Caltrans NPDES Permit are reserved for each District Director and named positions in each District Annual Workplan (DAWP). The intent of the DAWP is to allow notifications (especially those related to specific projects) to be delegated to the most-direct position of authority (e.g., resident engineer) related to the project. When an NPDES Permit (e.g., the Statewide CGP or Lake Tahoe CGP) requires the designation of a Legally Responsible Person (LRP), the DAWPs will establish the LRP. Generally, Caltrans is the LRP for construction projects performed by third parties within Caltrans

¹ Some Districts may not have all functional divisions represented (see DAWPs for explanation).

Right of Way (ROW). However, Caltrans may provide written authorization via an encroachment permit to another public agency to serve as an LRP.

When additional information directly associated with the Caltrans NPDES Permit is requested in writing by the SWRCB or RWQCB management, it is also submitted under these authorities with a certification statement. Responses to information requests not directly associated with the Caltrans NPDES Permit are submitted by the CEE or designee (i.e., direct report); information requests required specifically of a District are submitted by the District NPDES Coordinator or other position identified in the DAWP.

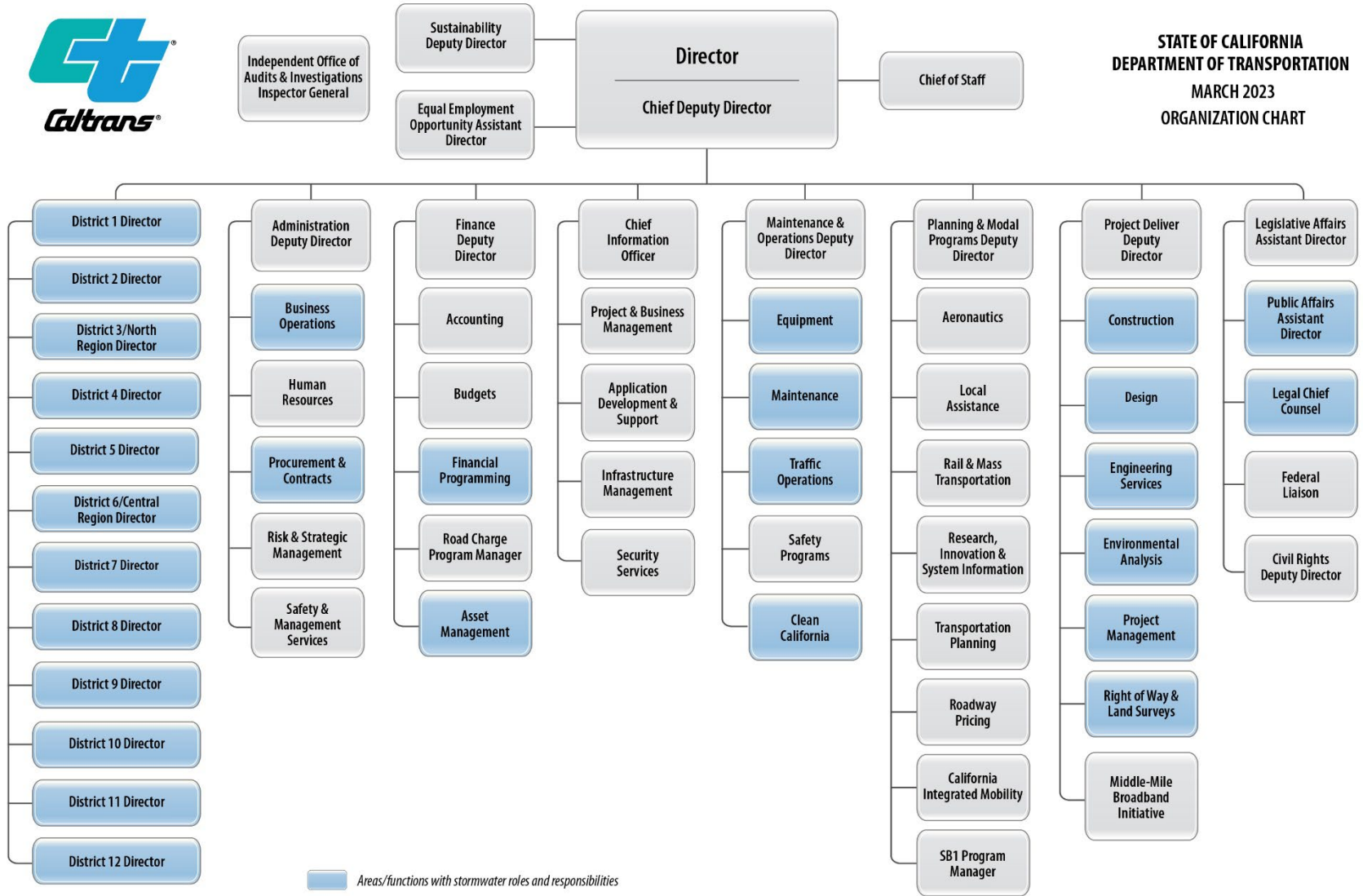


Figure 2-1: Caltrans Organizational Chart

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2.2 Stormwater Management Structure and Responsibilities

The Stormwater Management Program affects most divisions and all Districts; however, the level of impact and responsibility varies. Since stormwater protection is related to environmental tasks, the Headquarters Division of Environmental Analysis (DEA) undertakes stewardship and program management responsibilities for the Stormwater Program statewide (Figure 2-2). However, all Districts and many Headquarters divisions have dedicated staff implementing the program described in this SWMP.

2.2.1 Headquarters

Caltrans' Headquarters develops policy and guidance and oversees, monitors, and reports on departmental activities while District personnel have day-to-day responsibility for implementation of the program. The Headquarters staff from the DEA manages the Stormwater Program and coordinates program implementation with the Districts and other headquarters functional divisions.

There are six Headquarters divisions with staff dedicated to address stormwater issues. These divisions are the Divisions of Environmental Analysis, Design, Construction, Maintenance, Right of Way, and Traffic Operations.

Each division is responsible for the following stormwater tasks related to the Division's core activities:

- Develop tools (e.g., specifications, inspection forms, estimating methods) for incorporating stormwater measures and requirements into activities.
- Develop manuals and other guidance documents for stormwater practices, processes and tools and educating staff and contractors on stormwater responsibilities, requirements, and activities.
- Develop and conduct training classes in support of guidance and manuals developed for stormwater quality.
- Assist Districts and other Headquarters divisions on stormwater issues.
- Administer and sponsor the functional-specific Stormwater Advisory Team (SWAT), and/or provide representation at other division-sponsored SWATs.
- Sponsor the Water Quality Assurance Management Team (WQMAT).

Much of this work is accomplished through architectural and engineering contracts with private engineering firms, research institutes and academia.

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Core Stormwater Divisions/Offices in Headquarters

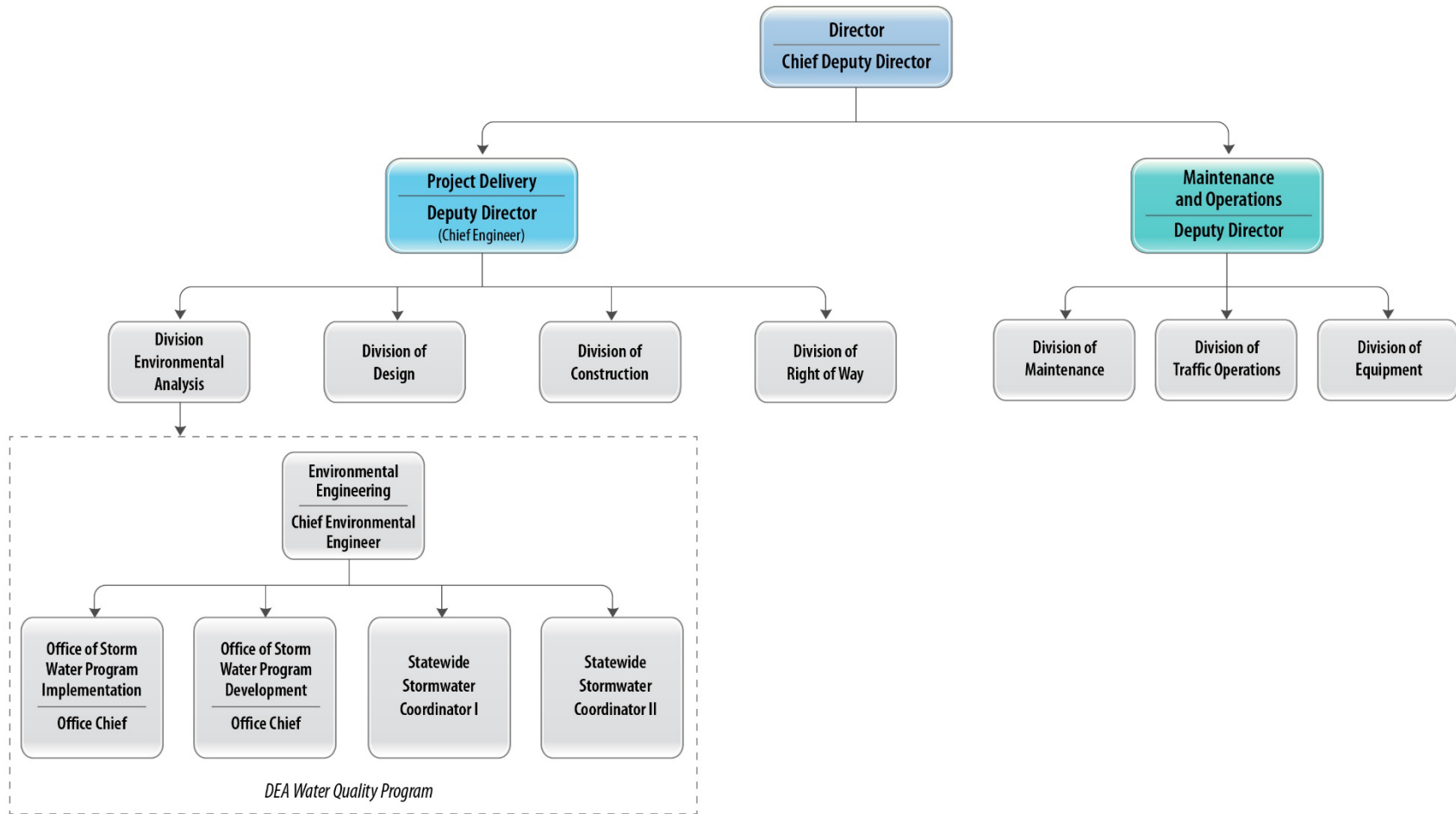


Figure 2-2: Core Stormwater Divisions/Offices in Headquarters

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2.2.2 Focal Point – Chief Environmental Engineer

Due to the significant size of Caltrans' Stormwater Program, and to promote statewide consistency, the need for a single focal point was identified and established under a Budget Change Proposal in April 2002. The single focal point is referred to as Caltrans' CEE and is located within the DEA. The CEE is Caltrans' focal point for advising executive management, local transportation agencies, and other government entities of procedural requirements for complying with the Caltrans NPDES Permit and the SWMP. The CEE promotes coordination between the HQ divisions and twelve Districts to ensure statewide consistency in the implementation of stormwater management policy and procedures. The CEE is responsible for negotiating and resolving issues with external agencies, responding to political inquiries, and assisting Caltrans counsel in responding to litigation related to the Caltrans NPDES Permit and the SWMP.

The CEE is also a liaison to other agencies, including Department of Finance, SWRCB, RWQCBs, California Coastal Commission, Department of Toxic Substances Control, USEPA, California EPA, and transportation planning agencies.

The CEE reports to the Chief of the Headquarters DEA. The CEE supervises staff in the DEA Water Quality Program.

2.2.3 Stormwater Management Program Oversight and Compliance

Caltrans' adopted organizational structure, via line and functional management, ensures that the Caltrans NPDES Permit and the SWMP compliance activities are implemented consistently statewide. Line management positions are responsible for day-to-day overall operations, whereas functional program managers oversee specific program areas. Stormwater program requirements and activities are vested with the functional program elements. The stormwater program is unique in that it must be adaptive to changes in technology, regulations, and requirements, and it operationally relies on feedback from the SWATs, as well as communication from DEA, to ensure program compliance. Stormwater program compliance oversight plays a critical role in implementation due to the dynamic nature of the regulations and the fact that compliance activities are required for all HQ Divisions. The authority to operate with this flexibility is drawn from the highest line and functional management positions (executive management) in the organization. Recognizing this, the Caltrans WQMAT has been established to provide direct communication between the DEA, Headquarters functional managers, and District functional managers. The WQMAT provides leadership and focus from Caltrans' executive management (line and functional management positions) to the statewide single focal point (CEE) for water quality compliance. This will assure that the goals and directives issued by the CEE will be implemented. The specific responsibilities of the WQMAT are as follows:

- Ensure water quality initiatives, policies, and standards reflect Caltrans' environmental stewardship goals, including:
 - Preservation of the state's waters and enhancement of Caltrans' stormwater discharges for the benefit of California's water quality resources;
 - Improving the effectiveness and sustainability of BMPs; and
 - Provide clear direction and priorities on the allocation of all water quality resources for support and capital expenditures for program management, project delivery, maintenance and operations;
- Assure the consistent statewide implementation of stormwater program management, policies, standards, and specifications by:
 - Seamless cross-functional integration of all Caltrans and water quality management activities into day-to-day practices; and
 - Educating department managers, supervisors and staff of the importance of water quality management practices in preservation and enhancement of California's waters;
- Provide a mechanism for establishing training, education, and communication regarding water quality policy, standards, and technical information (see SWMP Section 11);
- Provide for a feedback mechanism (District functional managers to the Headquarters equivalent, and District NPDES coordinators through the SWATs to the DEA) to adaptively manage the program and correct program deficiencies;
- Ensure accountability of Resident Engineers (RE) and Maintenance Area Supervisors through delegated authority for compliance with the Caltrans NPDES Permit, Statewide CGP or Lake Tahoe CGP, and the Caltrans Statewide SWMP; and
- Respond and provide action based on resolution of issues discussed by the WQMAT and the CEE, and respond to recommendations elevated for resolution through the Stormwater Quality Assurance (Inspection) Program, (see SWMP Section 2.8 and SWMP Section 16).

Figure 2-3 illustrates how the organization will collaborate to accomplish the goals and ensure statewide consistency and compliance with the Caltrans NPDES Permit and the SWMP. Current or ongoing collaborations among committees and teams are noted in the shaded areas. The list of advisory/steering committees is provided as an example and it could include other categories or subgroups.

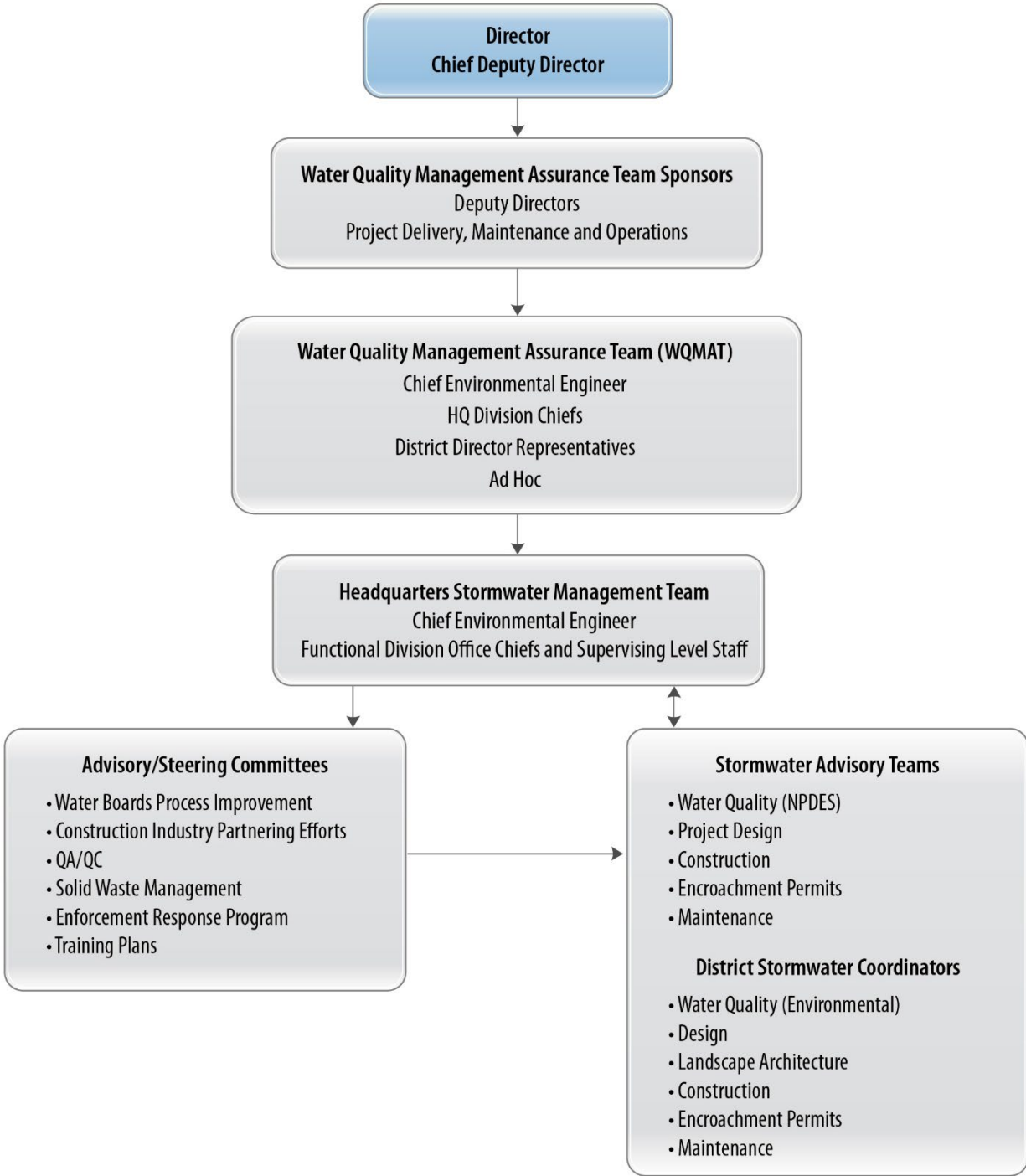


Figure 2-3: Water Quality Management Assurance Team

Under most scenarios, field personnel report directly to District functional management who then reports to the District line management. Therefore, the WQMAT includes District Director representation from throughout the state (north, central, and south) to enforce stormwater program implementation at the District management level.

The DEA Water Quality Program and Headquarters functional units will ensure consistency and accountability by District staff on implementation and full compliance of the SWMP and Caltrans NPDES Permit requirements through oversight, inspections, and enforcement programs.

The Headquarters WQMAT receives feedback from the functional SWATs regarding specific issues and programmatic changes that may be needed, including critical findings identified from the Stormwater Quality Assurance Program.

The typical lines of authority for the stormwater quality assurance program are depicted in Figure 2-4. Specifically, the figure shows the line of authority from the Caltrans Director to the construction project resident engineer (RE) and similarly, the line of authority from the Caltrans Director to the Maintenance Area Supervisor.

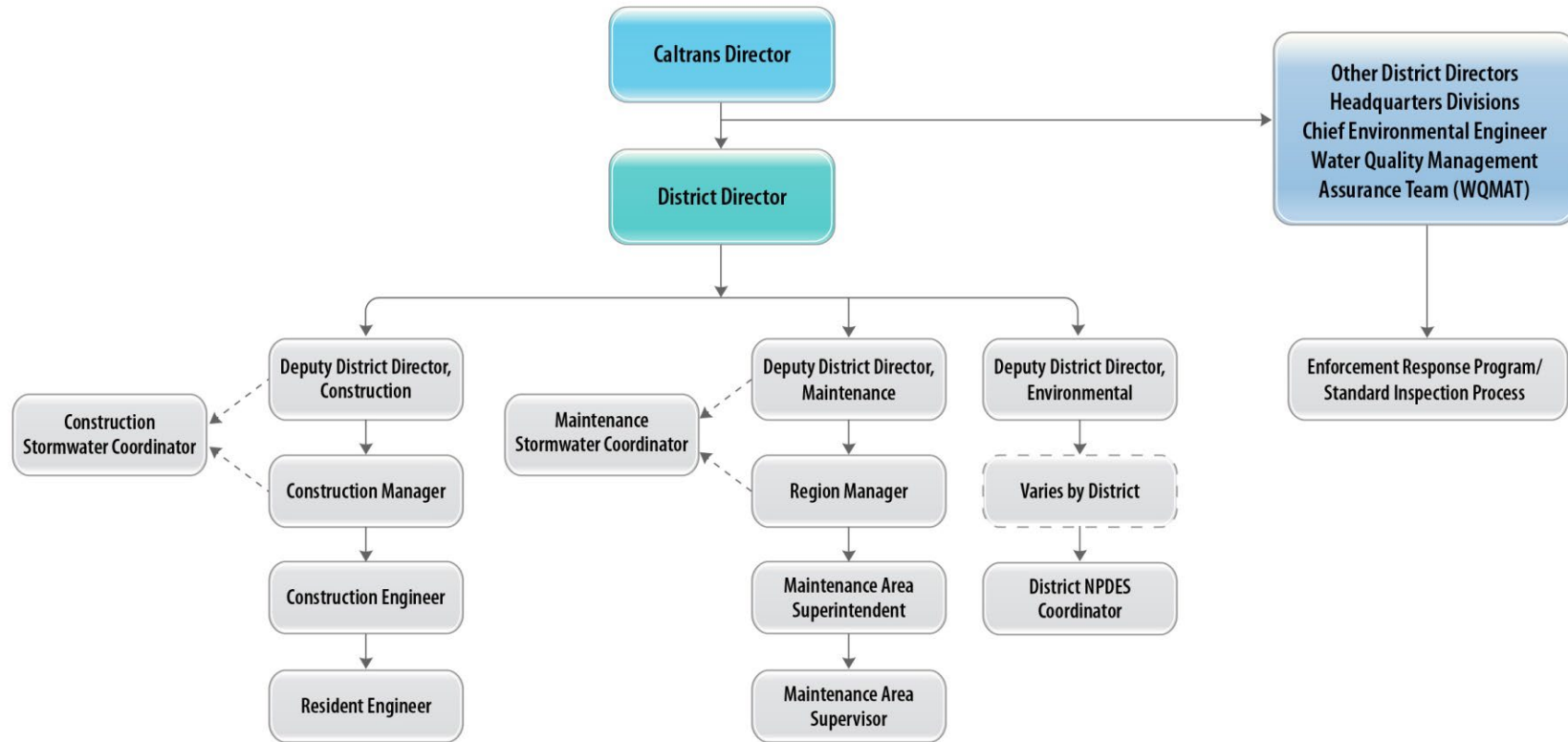


Figure 2-4: Stormwater Quality Assurance Program Typical Lines of Authority

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2.2.4 Stormwater Advisory Teams

Caltrans has established five internal statewide SWATs (Figure 2-5). The Chair of each SWAT is a functional office chief from Headquarters. The purpose of the SWATs is to advise the CEE of technical issues of concern within the program, including those that may arise because of the quality control and quality assurance. Any SWAT recommendation that results in changes to SWMP policies and procedure must be approved by the CEE. The CEE will be responsible for initiating and completing any changes to the SWMP. The specific functions of the five SWATs are described as follows:

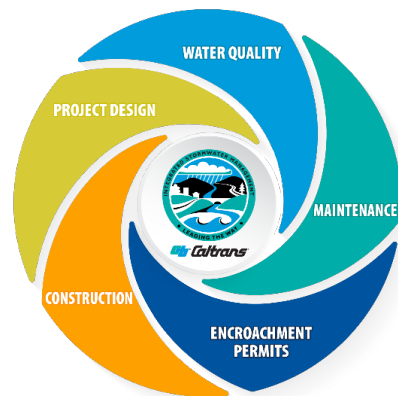


Figure 2-5: Caltrans SWATs

- The Water Quality SWAT is composed of the District NPDES Coordinators and representatives from each of the core Headquarters Divisions. The Water Quality SWAT chair is the office chief for the Office of Stormwater Program Implementation in HQ DEA. The Water Quality SWAT's responsibilities include:
 - Reviewing proposed and existing Treatment BMPs, and prioritizes research or studies of Treatment BMPs.
 - Discussing stormwater coordination activities underway or planned with other municipalities, reviewing and recommending public education efforts, sharing technical information, providing advice on compliance issues, and resolving issues of dispute on stormwater.
 - Recommending any changes in the SWMP and other guidance documents on stormwater.
 - Discussing stormwater budget allocations for the Districts and HQ Divisions.
 - Reviewing data and findings from compliance monitoring and evaluation activities, and recommends changes in practices to improve compliance efforts.
- The Project Design SWAT is composed of District representatives from Design and related functional units and representatives from each of the affected Headquarters Divisions, including the DEA. The Project Design SWAT chair is the office chief from the Office of Stormwater Management Design in the Division of Design. The Project Design SWAT's responsibilities include:
 - Reviewing proposed and existing BMPs used in the planning and design of projects. BMPs include Construction Site BMPs, design pollution prevention (DPP) BMPs, and Treatment BMPs.
 - Developing training classes for stormwater design activities.
- The Construction SWAT is composed of District Construction Stormwater coordinators and representatives from Headquarters Divisions, including DEA. The Chair of the Construction SWAT is the office chief of the Office of

Construction Compliance and Training in the Division of Construction. The Construction SWAT's responsibilities include:

- Reviewing proposed and existing Construction Site BMPs.
- Developing training classes for stormwater construction activities.
- The Encroachment Permit SWAT is composed of District Encroachment Permit Stormwater Coordinators and Headquarters representatives. The Chair of the Encroachment Permit SWAT is the office chief of the Office of Encroachment and Outdoor Advertising Permits in the Division of Traffic Operations. The Encroachment Permit SWAT's responsibilities include:
 - Reviewing procedures that may affect encroachment permit projects including Non-programmed Capital construction projects.
- The Maintenance SWAT is composed of District Maintenance Stormwater Coordinators and representatives from each of the affected Headquarters Divisions, including DEA and the Division of Equipment. The Chair of the Maintenance SWAT is the office chief of the Office of Maintenance Stormwater and Environmental Compliance in the Division of Maintenance. The Maintenance SWAT's responsibilities include:
 - Providing any necessary review and/or evaluation of proposed and existing maintenance BMPs.
 - Reviewing and assisting in the development of training classes and guidance documents for implementing stormwater activities described in this SWMP for maintaining highways, bridges, facilities, and other appurtenances related to transportation.

Other Divisions (e.g., Right of Way, Equipment, Engineering Services) with stormwater responsibilities participate in various SWAT meetings on an as-needed basis.

Any program recommendations and critical issues discussed during SWAT meetings that require resolution and action are discussed with the Headquarters WQMAT.

2.2.5 Water Quality Program

The Water Quality Program assists the Headquarters functional programs, the Districts and Caltrans' transportation partners in complying with the Caltrans NPDES Permit, SWMP and applicable state and federal stormwater laws and regulations.

The roles of the Water Quality Program in the Caltrans stormwater program are as follows:

- **Permit Compliance:** Ensure consistent interpretation, implementation, and compliance with the Caltrans NPDES Permit and SWMP; provide guidance and direction necessary to develop strategies for complying with regulations and addressing other mandates on stormwater and waste discharges set forth by federal, state, and local regulatory agencies.
- **Regulatory Coordination:** The Water Quality Program coordinates overall stormwater management program compliance with the SWRCB. In addition, the Water Quality Program assists the Districts in coordinating stormwater

compliance with the RWQCBs through the District NPDES Stormwater Coordinator.

- **Development and Updating of Statewide SWMP:** The Water Quality Program coordinates the ongoing development of the SWMP and implementation in conformance with the requirements of the Caltrans NPDES Permit. This includes the coordination planning for statewide compliance and identifying area-specific stormwater management needs with the Districts. The Water Quality Program also updates the SWMP annually as required in the Caltrans NPDES Permit; the updating includes public input.
- **Evaluation and Approval of Treatment BMPs:** The Water Quality Program coordinates the evaluation and approval of the Treatment BMPs identified for inclusion in the SWMP to manage the quality of discharges from stormwater drainage systems associated with Caltrans' facilities. The process for evaluation and approval of BMPs is discussed in more detail in SWMP Section 4.2. The Water Quality Program also oversees the evaluation and approval of new stormwater quality management techniques, products and designs. The Water Quality Program coordinates the Water Quality SWAT.
- **Water Quality Research Program:** The Water Quality Program coordinates research activities used to assess potential BMPs and investigate water quality issues.
- **Coordination with Districts and Functional Programs:** In consultation with the functional programs, the Water Quality Program provides general guidance regarding compliance with the Caltrans NPDES Permit. This guidance includes providing information on the Caltrans NPDES Permit requirements, SWMP implementation, stormwater BMPs, compliance schedules, reporting formats, legal authorities, budgeting assistance and other information needed to effectively implement the Caltrans NPDES Permit and SWMP requirements. In addition, the Water Quality Program provides feedback to the Districts and the functional programs regarding the status of Caltrans' overall compliance with the Caltrans NPDES Permit.
- **Monitoring:** The Water Quality Program conducts monitoring related to stormwater quality management, Caltrans NPDES Permit compliance, and to advance the state of knowledge regarding water quality issues and to provide direction for making program improvements.
- **Program Evaluation:** The Water Quality Program coordinates the assessment of the effectiveness of implementing the SWMP, through managing program evaluation tasks, including the management and implementation of activities for measuring the level of compliance.
- **Reporting:** The Water Quality Program coordinates the preparation of the Annual Stormwater Management Plan Report (Annual Report) and tracking of Caltrans NPDES Permit and total maximum daily load (TMDL) compliance.
- **Training:** The Water Quality Program provides training on stormwater water quality for current and new employees as well as updates.
- **Public Education and Outreach:** Administer and manage public education and information efforts for improving stormwater quality.

- Stormwater Resources:** Ensure establishment, accuracy, and adequacy of stormwater resources for each fiscal year; assist with prioritizing and evaluating stormwater resources, activities, and operations.

2.2.6 Maintenance and Operations Stormwater Management Program

The Maintenance and Operations Stormwater Management program includes the Maintenance Division and Equipment Division at both the Headquarters and District levels. Figure 2-6 presents the functional relationships and key positions within the Maintenance and Operations Stormwater Management program.

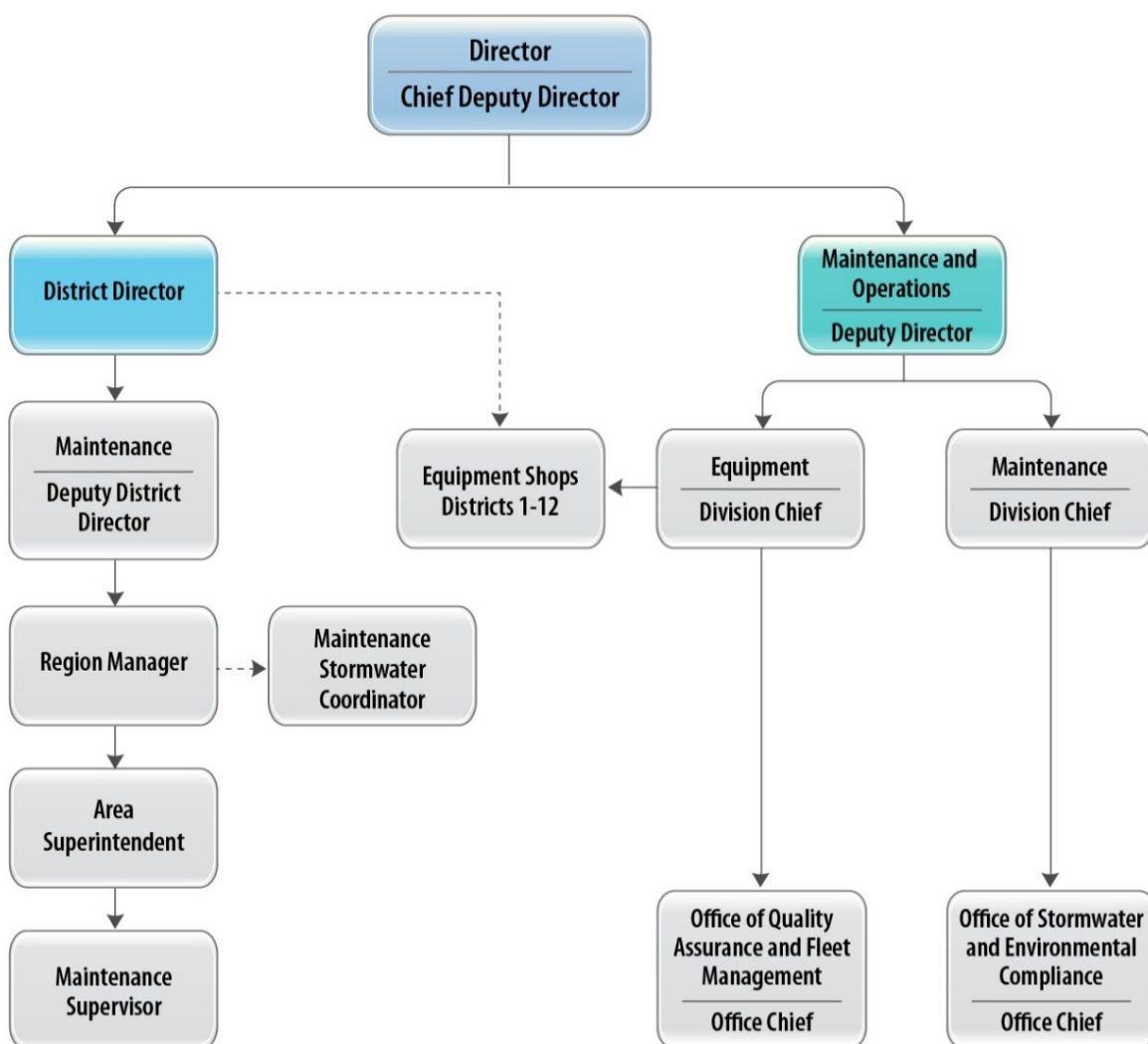


Figure 2-6: Maintenance and Operations Stormwater Management Program Functional Relationships

2.2.6.1 Maintenance Division

The role of the Office of Stormwater and Environmental Compliance in the Division of Maintenance includes:

- **Coordination:** In coordination with the DEA Water Quality Program, the Headquarters Maintenance Division provides guidance to the Maintenance Programs in the Districts on water quality management practices associated with Maintenance facilities and activities.
- **Program Evaluation:** The Headquarters Maintenance Division evaluates District implementation of BMPs in managing the stormwater discharges associated with Caltrans' maintenance facilities, highway facilities and activities.
- **Treatment BMP Maintenance and Management:** The Headquarters Maintenance Division allocates resources to District Maintenance to inspect and maintain BMPs.
- **Reporting:** The Headquarters Maintenance Division assists the DEA Water Quality Program in the preparation of the Annual Report to the SWRCB, as it relates to Maintenance facilities and activities.

Key Caltrans Maintenance Division positions and responsibilities include:

- The **Maintenance Division Chief** is responsible for statewide implementation policies and procedures and the personnel and equipment of the Maintenance Division. This includes ensuring compliance with all elements of the SWMP required for implementation by the Maintenance Division.
- **Maintenance Deputy District Directors** are responsible for the implementation of policies, procedures, personnel, and equipment of the District Maintenance Stormwater Management Program within their respective Districts. This includes implementation of elements of the SWMP relevant to maintenance activities such as ensuring that the District Maintenance Stormwater Management Program SWMP training is implemented (per SWMP Section 11).
- **Maintenance Managers** direct maintenance activities within regions or programs of the District. Each region is subdivided into maintenance areas. Maintenance Managers provide general supervision to Maintenance Area Superintendents within their region or program.
- **Maintenance Area Superintendents** direct maintenance activities, provide direction to Maintenance Area Supervisors, and are responsible for ensuring maintenance BMPs are implemented in their jurisdictions.
- **Maintenance Area Supervisors** are responsible for supervising the maintenance crew. Maintenance Area Supervisors provide on-the-job training for crews on water quality protection requirements. Specific crew assignments are covered in BMP tailgate reviews prior to the start of scheduled work activities. Supervisors have on-site responsibility for BMP implementation.
- **District Maintenance Stormwater Coordinators** are focal points of contact for issues related to District stormwater maintenance. They approve the Stormwater Data Report for proposed Treatment BMPs, review stormwater programs for elements related to the Division of Maintenance, monitor and evaluate BMP

implementation and effectiveness for Maintenance activities, participate in meetings that potentially impact Maintenance, coordinate stormwater training for their District Maintenance staff, and collect, compile, analyze, and prepare materials for the District's maintenance portion of the Annual Report. District Maintenance Stormwater Coordinators are responsible for ensuring Facility Pollution Prevention Plans are developed and maintained at each maintenance facility.

2.2.6.2 Equipment Division

The role of the HQ Division of Equipment includes:

- **Coordination:** In coordination with the DEA Water Quality Program, the Headquarters Equipment Division provides guidance to the Equipment Shops in the Districts on water quality management practices associated with fleet equipment activities.
- **Program Evaluation:** The Headquarters Equipment Division evaluates District implementation of BMPs in managing the stormwater discharges associated with the operation of Caltrans' equipment facilities.
- **Reporting:** The Headquarters Equipment Division assists the DEA Water Quality Program in the preparation of the Annual Report to the SWRCB, as it relates to the Division of Equipment's facilities and operations.

Key Caltrans Equipment positions and responsibilities include:

- The **Equipment Division Chief** is responsible for statewide implementation policies and procedures and the personnel and equipment of the Equipment Division. This includes implementation of elements of the SWMP relevant to Equipment Division activities such as ensuring that the SWMP related training program is implemented (per SWMP Section 11).
- **District Equipment Shop Superintendents** are responsible for the implementation of policies, procedures, personnel, and equipment of the District Equipment Shop. This includes ensuring implementation of the SWMP by the District Equipment Shop.
- The **Statewide Facilities Project Manager** is responsible for ensuring Facility Pollution Prevention Plans are developed and maintained at Equipment Shops and evaluating BMP implementation and effectiveness for Equipment activities, participating in meetings that potentially impact Equipment, and like the District Maintenance Stormwater Coordinator, is responsible for coordinating stormwater training for Equipment staff, and collecting, compiling, analyzing, and preparing materials for the District's maintenance portion of the Annual Report.

2.2.7 Project Delivery Program

The Project Delivery program includes the Design Divisions, Construction Divisions, the associated functional units in the Right of Way Divisions, and the associated functional units in the Engineering Services Divisions at the Headquarters and District levels.

Responsibility matrices showing functional relationships and key positions in the Project Delivery Stormwater Management Program are presented in Figure 2-7.

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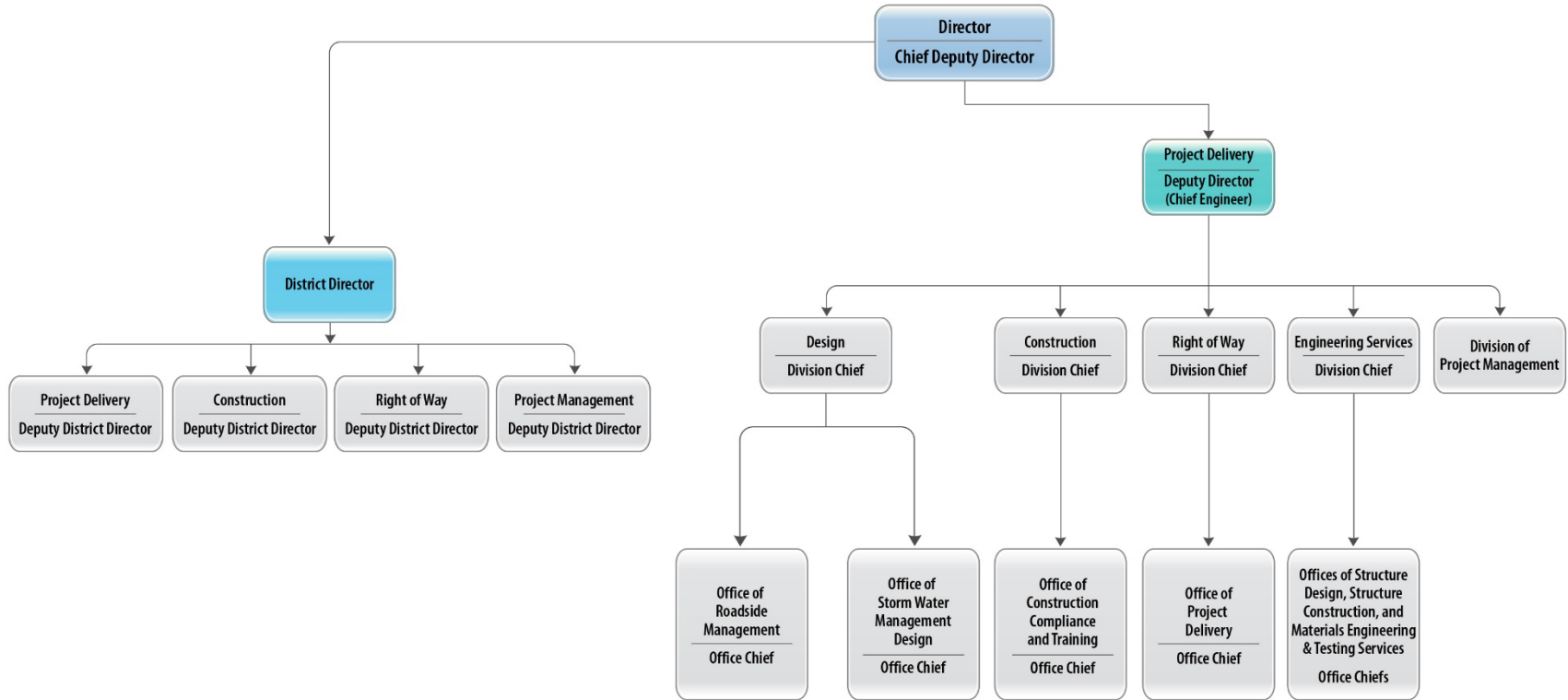


Figure 2-7: Project Delivery Stormwater Management Program Functional Relationships

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2.2.7.1 Design Division

The role of Headquarters Office of Hydraulic and Stormwater Design includes:

- **Coordination:** In coordination with the DEA Water Quality Program, the Design Program provides guidance to the District Design Divisions on the implementation of water quality management practices associated with project delivery activities.
- **Program Evaluation:** The HQ Design Division evaluates District incorporation of stormwater quality management features into project delivery activities. Provides continuous improvement by conducting a design compliance monitoring program.
- **Reporting:** The HQ Design Division assists the DEA Water Quality Program in the preparation of the Annual Report to the SWRCB, as it relates to project delivery activities.

Key Caltrans Design Division positions and responsibilities include:

- **Design Division Chief:** The Design Division chief is responsible for the overall design program, guidance, policies, and procedures on a statewide basis. Responsibilities include the design of stormwater BMPs and other aspects of the stormwater program that effect the Division of Design in the project development process.
- **Design Deputy District Director (or Regional Manager):** The Design Deputy District Directors (or Regional Managers) are responsible for the implementation of the policies, procedures, and personnel of the Design Program within their respective Districts. This includes ensuring compliance with all elements of the SWMP required to be implemented by the District Design Division.
- **Project Engineer (PE):** The PE is a Licensed Engineer registered with the State of California. Most Caltrans projects are developed by a PE. Infrequently, depending upon the project scope, a project may be developed by a Licensed Landscape Architect registered with the State of California. The PE or Landscape Architect is responsible for the preparation of Project Study Reports and Project Reports during the initial phases of project delivery and the final contract documents during the Plans, Specifications, and Estimates (PS&E) phase of a project. During the development of these documents, the PE or Landscape Architect will work collaboratively with other professionals (Hydraulics, Landscape Architect, Geotechnical, Environmental, District Stormwater, etc.) to assure that the appropriate designs and evaluations have been completed. In addition, they determine whether a Stormwater Pollution Prevention Plan (SWPPP) or a Water Pollution Control Plan (WPCP) is required during construction and incorporate appropriate permanent and temporary BMPs into the contract.

When required by the Caltrans NPDES Permit, the PE or Landscape Architect incorporates Treatment BMPs (when they are considered feasible) into the project plans and specifications. Some projects will also specify temporary BMPs (including contaminated soils management) in the PS&E.

The PE or Landscape Architect is responsible for providing information to the RE for the purposes of evaluating/approving the SWPPP/WPCP prepared by the contractor. With the assistance of the Design Stormwater Coordinator, the PE or Landscape Architect determines the project Risk Level, and develops information to be given to construction staff for the purposes of obtaining the coverage under the Statewide Construction General Permit (CGP).

- **Design Stormwater Coordinator:** The District/Regional Design Stormwater Coordinator is responsible for providing support to the District NPDES Coordinator and District Design staff throughout all phases of the project planning and design process. The DAWP may provide additional description of the roles and responsibilities of the Stormwater Coordinator.

2.2.7.2 Construction Division

The role of the HQ Office of Construction Compliance and Training includes:

- **Coordination:** In coordination with the DEA Water Quality Program, the Construction Division provides guidance to the District Construction Divisions on the implementation of water quality management practices associated with Construction activities.
- **Program Evaluation:** The HQ Construction Division evaluates District incorporation of stormwater quality management features into Construction activities.
- **Reporting:** The HQ Construction Division assists the DEA Water Quality Program in the preparation of the Annual Report to the SWRCB, as it relates to Construction activities.

The key Caltrans Construction positions responsible for implementing stormwater are as follows:²

- The **HQ Construction Division Chief** is responsible for statewide implementation of policies and procedures related to the construction of Caltrans projects. This includes ensuring compliance with all elements of the SWMP that require implementation by Construction personnel.
- **Construction Deputy District Director (or Regional Manager):** The Construction Deputy District Directors (or Regional Managers) are responsible for implementation of policies and procedures, and management of Construction personnel and equipment within their region or District. This includes implementation of elements of the SWMP relevant to construction activities, such as ensuring the training is implemented (per SWMP Section 11).
- **RE:** The RE is Caltrans' representative charged with administering construction contracts, oversight of construction contracts under a cooperative agreement that are covered by an Administrative Encroachment Permit (see Table 2-4), and is responsible for ensuring that stormwater BMPs are implemented, inspected, and maintained on construction sites as specified in the authorized SWPPP or WPCP.

² DAWPs may describe exceptions to these responsibilities.

The RE uses all available assistance and expertise in preventing water pollution. The RE reviews the Contractor-prepared SWPPP/WPCP and, when necessary, notifies the Contractor of any required changes and authorizes the SWPPP/WPCP. The RE is responsible for ensuring the SWPPP along with the Caltrans NPDES Permit Registration Documents (PRDs) are uploaded to the SWRCB's Stormwater Multiple Application Report and Tracking System (SMARTS) website. The RE makes decisions regarding the acceptance of materials furnished and work performed and exercises contractual authority as needed. The RE also ensures the contractor personnel responsible for implementation of stormwater management measures are properly trained and certified, and that they receive training during the course of construction. The RE will also cooperate with construction compliance evaluations (SWMP Section 16.3). The RE is responsible for contacting the District Maintenance Stormwater Coordinator to conduct the Construction to Maintenance Treatment BMP Walkthrough.

- The **Construction Engineer** is the RE's first-line supervisor. On larger construction projects, the Construction Engineer may also be designated as the RE (i.e., Senior RE). The Construction Engineer or Senior RE is responsible for daily supervision of Caltrans field staff.
- **Stormwater Inspector:** The RE may assign staff to function as the stormwater inspector. The stormwater inspector assists the RE in carrying out any or all of the inspection tasks and other work of overseeing the Contractor's activities related to water pollution prevention.
- **District Construction Stormwater Coordinator:** Districts have a designated Construction Stormwater Coordinator who implements administrative functions to assist REs. The coordinator is a resource that helps interpret guidance manuals, policies, specifications, permits, and other information that impacts water pollution prevention related decisions. The coordinator assists in the review of water pollution control documents. The District Construction Stormwater Coordinator identifies the training needs of District Construction staff, administers technical expertise resources, and coordinates with other Caltrans stormwater personnel (e.g., District NPDES Coordinator) within the District or Headquarters. The DAWP may provide additional description of the roles and responsibilities of the Stormwater Coordinator.

2.2.7.3 Right of Way Division

The role of the HQ Office of Project Delivery within the Division of Right of Way includes:

- **Coordination:** In coordination with the DEA Water Quality Program, the Office of Project Delivery provides guidance to the District Right of Way Divisions on the implementation of water quality management practices associated with planning and design activities.
- **Program Evaluation:** The Office of Project Delivery evaluates District incorporation of stormwater quality management features into Right of Way activities associated with project delivery activities.

- **Reporting:** The Office of Project Delivery assists the DEA Water Quality Program in the preparation of the Annual Report to the SWRCB, as it relates to project delivery activities.

The HQ Right of Way Division Chief is responsible for statewide implementation of policies and procedures related to Caltrans ROW operations. This includes ensuring compliance with all elements of the SWMP that require implementation by Right of Way personnel.

2.2.8 Encroachment Permits and Non-Departmental Activities (C3.6)

2.2.8.1 Traffic Operations

The role of the HQ Division of Traffic Operations, Office of Encroachment and Outdoor Advertising Permits includes:

- **Coordination:** In coordination with the DEA Water Quality Program, the Office of Encroachment and Outdoor Advertising Permits provides support and guidance to the District Encroachment Permit offices on the implementation of water quality management associated with encroachment activities.
- **Reporting:** The Office of Encroachment and Outdoor Advertising Permits assists the DEA Water Quality Program in the preparation of the Annual Report to the SWRCB, as it relates to non-departmental activities.

Key positions within the Encroachment Permits Program responsible for overseeing the Permittee's stormwater Construction Site BMPs on non-departmental projects are as follows:

- The **HQ Division of Traffic Operations, Chief** is responsible for statewide policies and procedures for encroachment permit projects. This includes ensuring compliance with all elements of the SWMP that require implementation by Encroachment Permits personnel.
- **Deputy District Directors** ensure that District personnel comply with statewide policies and procedures. The Deputy District Directors are responsible for implementation of policies and procedures, and management of staff within their region or District.
- **District Permit Engineer (DPE) (or Senior Encroachment Permit Engineer):** The DPE authorizes encroachment permit activities and manages personnel. The DPE may revoke a permit if the Permittee or contractor does not comply with the permit conditions. This includes implementation of SWMP elements relevant to construction activities, such as ensuring the training is implemented (per SWMP Section 11).
- **Encroachment Permit Writer:** The Encroachment Permit Writer coordinates with the applicant and permit inspector through the entire permitting process: submittal, review, inspection, acceptance, closure, and archiving. The Encroachment Permit Writer also coordinates with other Caltrans functional units to ensure the proposed activity conforms to policies and standards. The permit writer, in coordination with the Encroachment Permit Stormwater Coordinator

(see below), reviews the project to ensure stormwater compliance, including verification of CGP, U.S. Environmental Protection Agency (USEPA) CGP, and Industrial General Permit (IGP) coverage (Waste Discharger Identification Number), verification of active certification status of Qualified SWPPP Developer/Qualified SWPPP Practitioner (QSP), and issuance and re-issuance of encroachment activities.

- **Encroachment Permit Inspector (or Construction Oversight Engineer):** The Encroachment Permits Inspector is responsible for providing quality assurance and ensuring that the Permittee implements, verification of party performing independent quality assurance (IQA), and maintains stormwater BMPs according to the accepted stormwater documents. The Encroachment Permits Inspector documents the annual report elements and, in addition, reports incidents of non-compliance to their DPE (or supervisor), Encroachment Permit Stormwater Coordinator, and NPDES.
- **Encroachment Permit Stormwater Coordinator:** The Encroachment Permit Stormwater Coordinator reviews stormwater documents, conducts routine stormwater compliance field inspections, coordinates Permittee and contractor meetings, and provides training evaluation and development support to HQ Construction. The Encroachment Permit Stormwater Coordinator has District-wide stormwater review responsibility for encroachment permit activities. The Encroachment Permit Stormwater Coordinator reports incidents of non-compliance to the DPE (or supervisor), District NPDES Coordinator, and Encroachment Permits Inspector. The Encroachment Permit Stormwater Coordinator provides guidance to permit writers, inspectors, and the Permittees. The Encroachment Permit Stormwater Coordinator is responsible for submitting the Annual Report elements to the District NPDES Coordinator. The DAWP may provide additional description of the roles and responsibilities of the Encroachment Permit Stormwater Coordinator.
- **Permittee:** The Permittee is the Legally Responsible Person (LRP) and is responsible for reducing discharges from their contractor's activities within the ROW as required by the Caltrans NPDES Permit and Statewide CGP. The Permittee ensures that their contractor personnel responsible for implementation of stormwater management measures are properly trained and certified, and that they receive training during the course of construction. The permittee is responsible for or authorizes their consultant/contractor to enter monitoring and reporting findings into SMARTS, and implement the Enforcement Response Program. The permittee's or their contractor's QSD and QSP are responsible for ensuring that stormwater BMPs are implemented, inspected, and maintained as specified in the accepted SWPPP or WPCP.

2.2.8.2 Right of Way

The role of the Division of Right of Way Office of Real Property Services and Office of Railroads and Utilities includes:

- **Coordination:** In coordination with the DEA Water Quality Program, the Offices provide guidance to District Right of Way on the implementation of stormwater quality management practices as it relates to third-party activities.
- **Reporting:** The Offices assist the DEA Water Quality Program in the preparation of the Annual Report as it relates to third-party ROW activities.

Key District positions responsible for implementing stormwater pollution prevention within the Division of Right of Way are as follows:

- **State Right of Way Utility Coordinator:** The Right of Way Utility Coordinator works with the District RE and/or PE during utility relocation activities.
- **Right of Way Agent:** The Right of Way Agent is responsible for ensuring that third parties are implementing stormwater BMPs.

Figure 2-8 presents the functional relationships and key positions within the Traffic Operations and Right of Way Divisions for Non-Department activities.

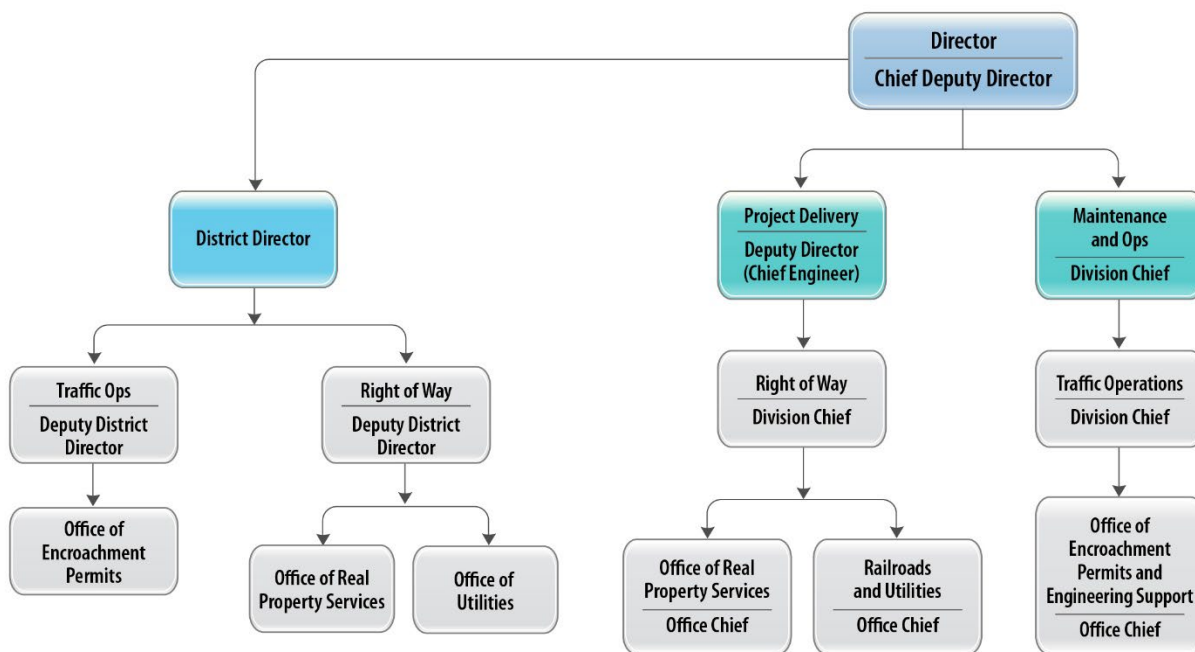


Figure 2-8: Non-Department Stormwater Management Program Functional Relationships

2.2.9 Districts

The District Office of Encroachment Permits is the primary contact for third parties that require an encroachment permit.

The Districts have the primary responsibility for day-to-day implementation of the SWMP. Responsibility for implementation lies with the District Director and each functional Deputy District Director (or Regional Manager). The Districts are responsible for implementation of the stormwater program consistent with statewide model practices

in collaboration with HQ DEA and other applicable Headquarters Functions consistent with the process as described in SWMP Section 2.2. Each District has flexibility to address regional requirements.

Each District has a designated District NPDES Coordinator who is the lead on stormwater quality issues within a District. The role of each District NPDES Coordinator is to facilitate implementation of the SWMP and the DAWP and serve as liaison to the Stormwater Program. District NPDES Coordinator activities include conducting meetings related to stormwater management issues with District staff and with other MS4 permittees to discuss problems and concerns. Liaison activities also include regular communications with representatives of the RWQCB. The District NPDES Coordinators also provide coordination between Caltrans' Headquarters functional programs and the Districts.

2.3 Coordination with Local Agencies and Municipal Coordination Plan (C3.2.1)

Coordination with municipalities on stormwater management responsibilities and ensuring implementation of Caltrans' existing municipal coordination policies is the responsibility of the District Stormwater NPDES Coordinator in collaboration with Headquarters DEA Stormwater Coordinators I and II. As required by the Caltrans NPDES Permit, a list of the Stormwater NPDES Coordinators and their contact information is posted to the Caltrans DEA Division website (<https://dot.ca.gov/programs/environmental-analysis/stormwater-management-program/stormwater-contacts>). In addition, where applicable, District-specific municipal coordination plans will be uploaded to SMARTS within one month of the SWMP approval. The appropriate RWQCBs and SWRCB staff will be notified.

The objective of Caltrans Municipal Coordination Plan is to enhance or establish communication, coordination, cooperation, and collaboration with other MS4 stormwater management agencies and their programs including establishing agreements with municipalities, flood control departments, or Districts as necessary or appropriate.

The Municipal Coordination Plan may provide opportunities to partner with other entities/municipalities to implement structural and non-structural BMPs. These BMPs may treat combined runoff from Caltrans and non-Caltrans property, or other BMPs that are constructed outside of the Caltrans ROW. Collaborative measures may be evaluated from both an engineering and economic perspective, and recommendations are provided.

Municipal coordination could offer potential benefits to Caltrans and its partners in the form of cost-savings (e.g., where the overall cost of a constructed BMP can be shared) or valuable trade-offs (where Caltrans can agree to contribute capital funds and a partner will be responsible for operations and maintenance). A collaborative process can also produce other benefits. The willingness of partners to pool funds and develop joint BMPs is likely to result in using available funds more efficiently, as resources within the entire region can be applied to the sites most likely to achieve good results.

Regional collaboration allows stakeholders to participate meaningfully with fair proportionality of benefits from resources contributed. The collaborative relationship creates an opportunity for coordinating other activities, such as monitoring, research, training, education, and seeking grant funds. Any actions taken will comply with the lawful requirements of municipalities and other local agencies' jurisdictions.

Caltrans will report on the status and progress of interagency coordination activities in the Annual Report and TMDL Compliance Plan.

2.4 Legal Authority

Caltrans maintains adequate legal authority to ensure compliance with the provisions of the Caltrans NPDES Permit and SWMP within the Caltrans ROW. The California Streets and Highway Code empowers Caltrans with the authority to conduct operations necessary for the design, construction, and maintenance of state highways. This authority enables Caltrans to: 1) control contribution of pollutants from its properties, facilities, ROW and conveyance systems, 2) prohibit Illegal Connections/Illicit Discharges (IC/IDs), 3) control dumping or disposal of materials other than stormwater, 4) require compliance with the Caltrans NPDES Permit and SWMP and 5) carry out inspections, surveys and monitoring procedures necessary to determine compliance with permit conditions.

2.4.1 Authority to Control Contribution of Pollutants from State Transportation System

According to Section 90 of the Streets and Highways Code, Caltrans "shall have full possession and control of all state highways and all property and rights in property acquired for state highway purposes". The California Streets and Highway Code, Section 23, defines "highway" to include "bridges, culverts, curbs, drains, and all works incidental to highway construction, improvement and maintenance." Under this definition, Caltrans' authority extends to highway water conveyance systems. Caltrans therefore has authority to control discharges to and from its properties, facilities, ROW, and water conveyance systems.

If the contribution of pollutants from outside Caltrans ROW is unavoidable (beyond the jurisdiction and authority of Caltrans), Caltrans will refer these discharges to the RWQCB for appropriate action. However, there are also practical limitations on the ability of Caltrans to control vehicle emissions, accidents, and other discharges by third-party users of the State Highway System.

2.4.2 Applicable Authority

The Streets and Highways codes applicable to Caltrans ability to control discharges to and from the Caltrans ROW include the following:

- Section 670(a) (2) of the Streets and Highways Code requires that encroachments on the State Highway System are issued permits.
- Section 670 (b) finds any person who places an encroachment without a permit or changes or fails to renew their permit is guilty of a misdemeanor.
- Section 660 defines an encroachment to be “any...pipe, pipe line,...object of any kind or character not particularly mentioned in this section...which is in, under, or over any portion of the highway...”
- Section 720 requires that should an encroachment exist, Caltrans may require its removal. Section 721(c) of the Streets and Highways Code allows Caltrans to immediately remove from any state highway any encroachment that consists of refuse.

The state has empowered the California Highway Patrol with the authority to enforce laws applicable to the use of state highways. (California Vehicle Code § 2400) Caltrans relies on the California Highway Patrol for enforcement of applicable laws pertaining to the State Highway System. In addition, sheriffs and local police departments possess the appropriate legal authority to pursue and take enforcement action against persons causing, or threatening to cause illicit discharges. Caltrans refers illicit dischargers to the California Highway Patrol or the RWQCB for appropriate action. Caltrans may also refer illicit dischargers to the State Attorney General’s office, the local District Attorney’s office, or to the local City Attorney’s office for criminal prosecution, as appropriate.

2.4.3 Survey and Monitor Procedures from Compliance

Section 92 of the Streets and Highways Code states that Caltrans “may do any act necessary, convenient or proper for the construction, improvement, maintenance or use of all highways under its jurisdiction, possession or control.” As a result, Caltrans has created a Stormwater Program that directly oversees the implementation of stormwater policies and practices in the design, environmental, construction, and maintenance phases of transportation facilities projects. A description of staff roles and responsibilities is included in SWMP Section 2.2. Caltrans has authority to carry out inspection, surveillance, and monitoring procedures necessary to determine compliance or non-compliance with permit conditions or policies, and/or procedures set forth within the SWMP.

2.4.4 Annual Certification of Legal Authority (C3.2.2)

Caltrans evaluates its authority each year to identify any areas where existing authority limited Caltrans’ ability to address particular issues. If improvements are identified, Caltrans determines the process for addressing those issues and implements the process to establish the necessary authority. Caltrans submits its Certification of the Adequacy of Legal Authority in the Annual Report each year. This certification is a statement certified by Caltrans’ chief legal counsel that it has adequate legal authority to implement and enforce each of the key regulatory requirements contained in Code of Federal Regulations Section 40 CFR § 122.26(d)(2)(i)(A)-(F).

2.5 Fiscal Planning Strategy and Available Resources

Funding for transportation projects is a coordinated effort by the California State Legislature, California State Transportation Agency, California Transportation Commission, and Caltrans. The Legislature promotes its transportation initiatives and spending priorities by establishing policies and financial resources through State statutes such as the Revenue and Taxation Code, the Streets and Highways Code, and the Government Code. The Governor and Legislature appropriate funds for the transportation network through the annual budget.

This section describes fiscal planning strategy and funding resources available for the Caltrans Stormwater Program.

2.5.1 Transportation Funding Resources

Caltrans relies on three funding sources to fulfill the Caltrans NPDES Permit requirements. These three funding sources are the annual Governor's Enacted Budget (2660-007-0042), the State Highway System Management Plan (SHSMP)/State Highway Operation and Protection Program (SHOPP), and the State Transportation Improvement Program (STIP) as described below in Figure 2-9.

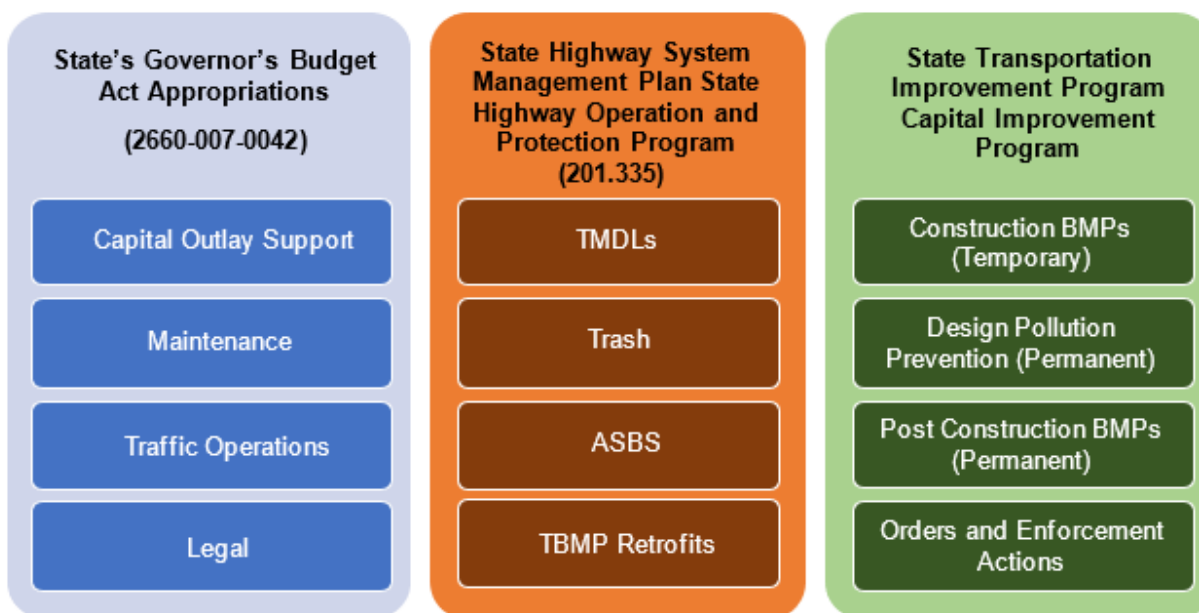


Figure 2-9: Transportation Funding Sources

2.5.1.1 Governor's Enacted Budget (2660-007-0042)

As a response to compliance with regulatory requirements and past lawsuits, the Governor's Office approved a budget line item for Caltrans to address deficiencies. Caltrans performed a zero-base budget exercise in developing the needs in response to the 2012 Caltrans NPDES Permit and associated 2016 SWMP requirements. The funds appropriated in this item may be expended only to attain compliance with:

- (a) the stormwater discharge provisions of the NPDES permits as promulgated by the State Water Resources Control Board or RWQCBs,
- (b) the Statewide SWMP,
- (c) court order, or
- (d) any other non-project water quality or air quality or the quality of receiving waters.

These funds are utilized for personnel services (staff positions), operating expenses, and contracting (e.g., consultant and services) and cannot be used for capital projects. Saving from this budget will be evaluated toward the end of each fiscal year and can be utilized to support municipal coordination cooperative projects implementation agreements with local agencies who administer regional water quality improvement projects.

2.5.1.2 State Highway System Management Plan

Caltrans is responsible for planning, developing, maintaining, and operating the legislatively designated State Highway System and a variety of supporting infrastructure. The SHSMP satisfies the requirements of the Streets and Highway Code Section 164.6 for a 10-Year SHOPP Plan to list projects that are projected to need funding and a Five-Year Maintenance Plan for planned maintenance activities. The SHOPP four-year list of projects are those that will be prioritized for funding to collectively improve the condition, operation, and sustainability of the State Highway System and associated transportation infrastructure in California. The SHOPP funds safety and condition improvements, damage repairs, and highway operational and modal improvements on the State Highway System.

The SHOPP can be utilized to install new Treatment BMPs to treat runoff from Significant Trash Generation Areas (STGAs), TMDL watersheds, or Areas of Special Biological Significance (ASBS). It may also be used for Treatment BMP retrofit purposes. Caltrans maintains a list of asset inventory for each of the STGA, TMDL, ASBS, and Treatment BMP retrofit category. These projects are considered operational improvements to the existing State Highway System.

Per Caltrans NPDES Permit Section C3.10.6.2, Caltrans inspects all installed BMPs at least once every two years. The conditions of the BMPs are categorized into good, fair, or poor. BMPs in good condition only require regular maintenance. BMPs in fair condition require some additional maintenance effort, e.g., removal of sediments or revegetation. BMPs in poor condition will require a retrofit by Highway Maintenance or SHOPP program. Depending on the feasibility, retrofit can be either a replacement in kind or another alternate which provides same or greater treatment capacity. Inspection, tracking, and evaluation of BMPs is known as need assessment in the SHSMP.

The SHSMP presents an unconstrained need, meaning it includes potential SHOPP needs regardless of funding source and availability and a fiscally constrained investment plan. The Needs Assessment is the first in a series of steps in a

performance management analysis framework. In this context, “needs” can be defined as the gap in performance between the current condition (i.e., distribution of good, fair, and poor condition) and a future Desired State of Repair condition. The SHSMP defines needs over a 10-year period, e.g., spanning July 2023 through June 2033. These needs are addressed through a combination of SHOPP capital investment projects, Highway Maintenance projects, and work carried out by Caltrans field maintenance crews.

The total needs are addressed through maintenance and rehabilitation work determined through a gap analysis. Preventive maintenance needs are also considered in the gap analysis. These are associated with activities that focus on keeping good condition assets in good condition for as long as possible.

Cost estimates to close the gap is based on statewide average unit rates to maintain or construct the BMPs. The costs to repair or retrofit BMPs are included in the SHSMP. Caltrans typically posts SHSMP for public review in January-February of each odd number year.

2.5.1.3 State Transportation Improvement Program

The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the Transportation Investment Fund and other funding sources. STIP programming generally occurs every two years. The programming cycle begins with the release of a proposed fund estimate in July of odd-numbered years, followed by California Transportation Commission adoption of the fund estimate in August (odd years). The fund estimate serves to identify the amount of new funds available for the programming of transportation projects. These funds include new Treatment BMPs installed as part of a larger project to comply with Caltrans NPDES Permit requirement for post-construction treatment requirements, temporary BMPs to comply with the CGP requirements, Design Pollution Prevention (DPP) BMPs and projects resulting from orders or enforcement actions.

2.5.2 Maintenance Activity

Funds for stormwater specific maintenance activities are covered by the Governor’s Enacted Budget (2660-007-0042) while routine maintenance activities that improves water quality are supported by other state funding. Please refer to SWMP Sections 2.5.1.1 and 2.5.3.5 for details.

2.5.3 Fiscal Planning Strategy (C3.2.3)

Stormwater BMPs can be planned, designed, construction, inspected, maintained, and rehabilitated following Caltrans Investment Plan. Caltrans’ fiscal planning strategy to comply with items 1a through 1c of Caltrans NPDES Permit Attachment C Section C3.2.3 is described below.

2.5.3.1 Installation, Implementation, Inspection, Maintenance, Rehabilitation, and Replacement of All Stormwater Related Assets and BMPs

Stormwater related assets and BMPs can be constructed by Caltrans or third parties through Encroachment Permit approval. Stormwater related assets and BMPs can be installed to fulfill post-construction treatment requirement and/ or address specific pollutant of concern, e.g., TMDLs and trash, as specified in Caltrans NPDES Permit Attachments C, D, and E.

For projects not located in TMDL, ASBS, or STGA, new Treatment BMPs will be installed to comply with Caltrans NPDES Permit requirement for post-construction treatment. The costs for post-construction treatment are included in the primary highway improvement project costs. The post-construction Treatment BMP(s) will be built as part of the highway improvement project, including SHOPP, STIP, and Encroachment Permit. No separate project will be created for construction of the post-construction treatment and temporary BMP(s). Each District NPDES unit will review design document to ensure that the project meets the post-construction treatment requirements specified in Attachment C3.10 of Caltrans NPDES Permit.

Each District identifies the stormwater need to comply with the Caltrans NPDES Permit and incorporates the need into SHSMP or STIP. The SHSMP is updated every two years in odd number of years. The latest SHSMP is available at <https://dot.ca.gov/programs/asset-management/state-highway-system-plan>. The needs are prioritized by each District in collaboration with HQ Stormwater Program and are included in the Caltrans Investment Plan. Each District prepares the Project Initiation Document (PID) for the needs included in the Investment Plan. Based on allocated budget, District Division of Transportation Planning estimates the project costs, including temporary and permanent BMP costs, in the PID. PIDs are required to be developed and approved by Caltrans before any major or high complexity project can be programmed and constructed on the State Highway System.

Projects requiring a PID must be identified in a Regional Transportation Planning Agency or Caltrans plan, such as a Regional Transportation Plan or State Highway System Management Plan (used to be 10-Year SHOPP Plan). The PID Program works with Caltrans District Planning divisions to schedule the completion of PIDs, allowing projects a reasonable opportunity to be programmed through a funding cycle. This increased level of coordination is essential to ensure that resources provided to create PIDs results in projects that are prepared for funding. Approved PIDs are incorporated into SHOPP in even number of years.

2.5.3.2 Development, Implementation, and Iterative Improvement of an Effective Stormwater Monitoring Program

Caltrans complies with the monitoring requirements, and future revisions thereto, in the Caltrans NPDES Permit. Monitoring is defined as sampling, analysis, field tests, and observations used to evaluate pollutant concentrations in receiving water, stormwater runoff, and BMP effectiveness for compliance with Caltrans NPDES Permit

requirements. Monitoring may be performed by Caltrans or through Caltrans' participation in local and regional cooperative monitoring and through regional monitoring programs. For information about funding monitoring, please refer to SWMP Section 2.5.3.3 below and Table 2-1.

2.5.3.3 Retention of Qualified Personnel to Implement and Manage the Stormwater Program

Caltrans Division of Human Resources provides essential support services to employees and members of the public in the following areas: Classification and Hiring Services; Examination Services; Career Executive Assignment, Managerial Selection Process and Exempt Services; Talent Acquisition; Transaction Services (Payroll and Benefits); Workforce Planning and Employee Engagement; Organizational Management; and Staff Central; Learning Development Office. Caltrans attempts every effort to retain qualified staff as per Human Resources and departmental policies and Memorandum of Understanding executed between Caltrans and its employees.

Table 2-1: Caltrans NPDES Permit Requirements and Budget Coverage

Caltrans NPDES Permit Attachment C Section C3.2.3 Requirements	Governor's Enacted Budget 2660-007-0042	SHSMP	STIP
1a. Assets and BMPs	X	X	X
1b. Effective stormwater monitoring program	X	-	-
1c. Retention of qualified personnel	X	-	-

Table Notes: X Applicable; - Not Applicable

2.5.3.4 Fiscal Limitations Strategies

Pertaining to the Governor's Enacted Budget (2660-007-0042), although these personnel services and operating expenses are earmarked annually for the stormwater program, these funds are at the discretion of the annual Governor's enacted budget. Caltrans anticipates these funds to be available annually.

Caltrans will continue the evaluation of program needs to comply with the Caltrans NPDES Permit and the SWMP. Based on the gap identified between the currently available resources and the new Caltrans NPDES Permit requirements, a Budget Change Proposal (BCP) will be prepared and submitted for Governor's approval.

2.5.3.4.1 SHSMP

As described previously, funding for SHSMP is fiscally constrained. The SHSMP investment plan evaluates through a trade-off analysis balancing multiple competing priorities, including but are not limited to stormwater, transportation safety, operation, and other programs, and acknowledging that no one combination of investment will fully address all the identified needs of the State Highway System.

Caltrans Stormwater Program manager and advisor work closely with HQ Asset Management to quantify 10-year needs through the identification of appropriate locations, quantities, treatments, and associated costs. This, in turn, is used to inform

investment decision making in the SHSMP. Additionally, HQ Stormwater Program manager and/or advisor work closely with Districts and local agencies to develop regional partnership projects which achieve compliance more economically. HQ Stormwater Program manager and/or advisor also work closely with District staff to incorporate stormwater improvement components into transportation projects through multi-asset approach where feasible.

2.5.3.4.2 STIP

The STIP consists of two broad programs, the regional program funded from 75 percent of new STIP funding and the interregional program funded from 25 percent of new STIP funding. The 75 percent regional program is further subdivided by formula into county shares. County shares are available solely for projects nominated by regions in their Regional Transportation Improvement Programs. In partnership with each other, Regional Transportation Planning Agencies are responsible for nominating projects in their respective Regional Transportation Improvement Programs and Caltrans is responsible for nominating projects to the Interregional Transportation Improvement Program. The California Transportation Commission has final approval of the Regional Transportation Improvement Programs and the Interregional Transportation Improvement Program.

2.5.3.5 Other State Funding

In addition to the dedicated resources mentioned above, Caltrans utilizes other state funds in activities and projects that have a water quality nexus, therefore beneficial to its stormwater compliance. Although these other state funds are earmarked for routine activities or typically available for a limited time frame, they can also assist in eliminating pollutant discharges. For example, street sweeping, Adopt-A-Highway, unsheltered area cleanup, Clean California, drain cleaning, etc., are activities which may help compliance with trash provisions of the Caltrans NPDES Permit. Similarly, storm damage repairs, open grade asphalt concrete overlays, and fish passage projects reduce pollutant load generation in certain watersheds. If these funds become available, Caltrans will evaluate the need and prioritize as appropriate.

2.6 Budget Analysis

A Fourth-Year Budget Analysis will be submitted along with the Annual Fiscal Analysis Report for the fourth year Annual Fiscal Analysis Report (November 30, 2026) the Report of Waste Discharge (May 31, 2027). The budget analysis will provide projections for future spending in the next Caltrans NPDES Permit cycle and will be considered for the next five-year permit cycle.

2.7 Conflicts Between SWMP and Caltrans Policies and Practices (C3.2.4)

Conflicts between the Caltrans SWMP and its policies and practices may be identified during SWMP implementation and will start a process to identify solutions, prepare

SWMP updates and implementation schedules. Potential conflicts may include, but are not limited to, SHOPP funding practices, fiscal resource allocations, enforcement, and maintenance emergency activities.

2.8 Stormwater Quality Assurance Program

The Caltrans Stormwater Quality Assurance program consists of three elements: (1) Planning and Design Quality Assurance, (2) the Standard Inspection process, and (3) the Enforcement Response Program. The Caltrans Stormwater QA program ensures that:

- Planning and Design quality assurance is conducted for various phases of project delivery to ensure Caltrans NPDES Permit requirements are met (see SWMP Section 5).
- All construction projects (whether administered by Caltrans staff or by other agencies within the Caltrans ROW) meet the applicable NPDES Permit requirements (i.e., Statewide CGP, Lake Tahoe CGP, or USEPA CGP, and the Caltrans NPDES Permit).
- All maintenance activities are performed and maintenance facilities are operated in compliance with the Caltrans NPDES Permit provisions.

2.8.1 Standard Inspection Process

Caltrans provides an inspection program that includes:

- training for inspection personnel;
- documentation of field activities;
- a reporting system that can be used to track effectiveness of control measures;
- enforcement procedures (or referral for enforcement) for non-compliance;
- procedures for taking corrective action;
- responsibilities and responsible personnel of all affected functional offices and branches;
- standard operating procedures for documenting inspection findings;
- a system of escalating enforcement response to non-compliance (including procedures for addressing third party (i.e., contractor) non-compliance); and
- a system to ensure the timely resolution of all violations of the Caltrans NPDES Permit or the SWMP.

Caltrans delegates adequate authority to appropriate personnel within all affected functional offices and branches to require corrective actions (including stop work orders).

The Standard Inspection process entails three levels of reviews: quality control (QC), quality assurance (QA), and IQA [third party]. The QC process is implemented by the contractor for construction projects; the QC process for maintenance activities and facilities is performed at the field level by the supervisor or by designated personnel responsible for ensuring compliance on a daily basis. The QA process is provided by Caltrans personnel that are not directly responsible for performing the work. The

Headquarters Division of Environmental Analysis (DEA) Water Quality Program, under the direction of the CEE, is responsible for implementing the IQA process. IQA reviews are performed to fulfill the Caltrans NPDES Permit’s requirement to perform a self-audit of field activities.

The Standard Inspection process for construction projects is depicted in Figure 2-10.

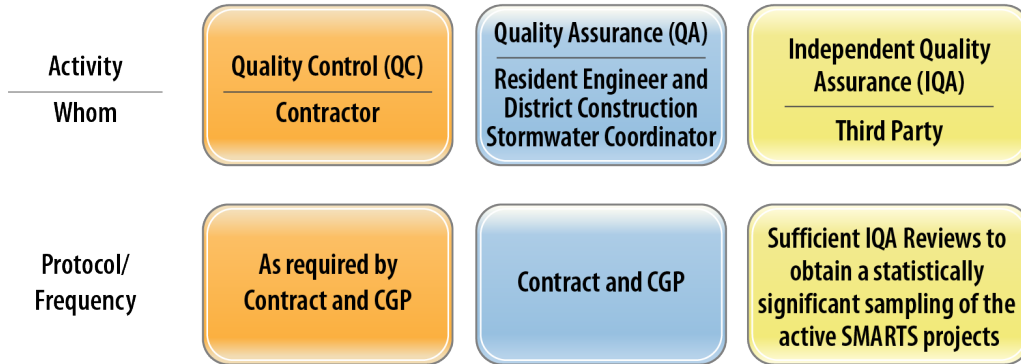


Figure 2-10: Construction Standard Inspection Process

The Standard Inspection process for Encroachment Permit construction activities is depicted in Figure 2-11.

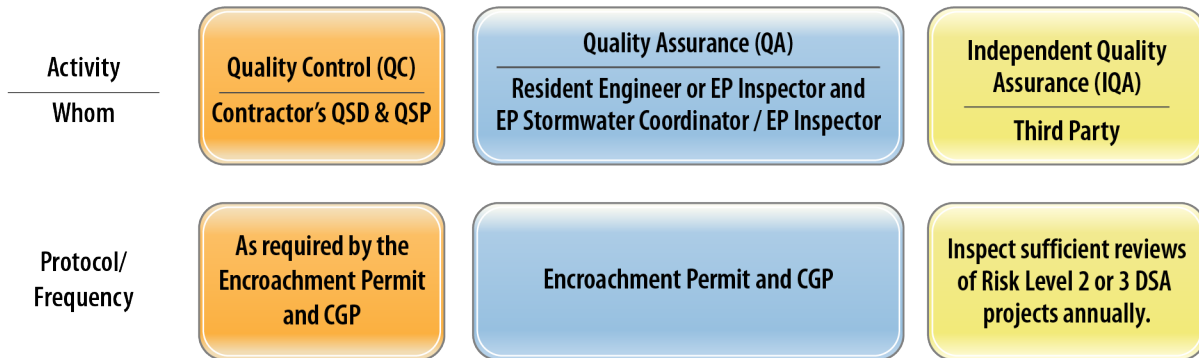


Figure 2-11: Encroachment Permit Construction Standard Inspection Process

The Standard Inspection process for maintenance activities and maintenance facilities is depicted in Figure 2-12.

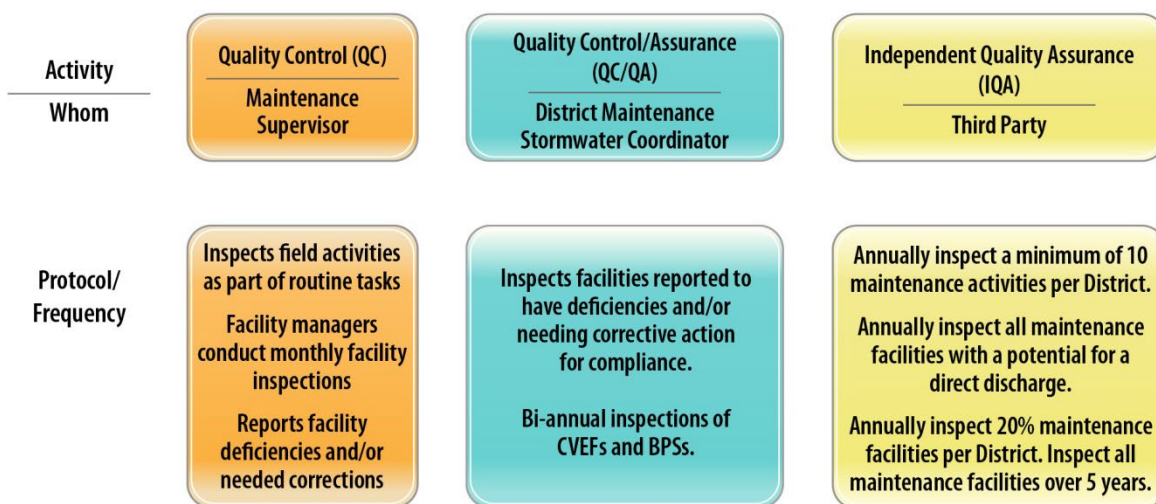


Figure 2-12: Maintenance Standard Inspection Process

Findings from the Standard Inspection process feed back into the Stormwater Advisory Teams (SWATs) for both construction and maintenance. The SWATs are charged, in part, with recommending procedural changes in response to findings from the Standard Inspection process when a systematic deficiency is identified.

2.8.2 Enforcement Response Program Overview

The Enforcement Response Program is Caltrans’ approach to ensuring adequate implementation of the Caltrans NPDES Permit, the Statewide CGP, and other applicable NPDES permits through progressive enforcement procedures for construction projects, maintenance activities, and maintenance facilities. The Enforcement Response Program establishes a range of escalating enforcement activities to address practices that are contrary to applicable NPDES permits.

Caltrans will identify and resolve compliance issues at the lowest possible level within the organizational hierarchy to ensure that the response is timely and appropriate. The Enforcement Response Program is a methodical escalating approach to compliance issues to ensure that corrective actions are effective.

The Enforcement Response Program process is initiated when site findings or issues are not or cannot be adequately addressed by first line field personnel or a critical finding is identified. A “critical” finding is a direct discharge to surface waters.

When corrective actions implemented at the field level are deemed inadequate or they fail to be implemented, the Enforcement Response Program is initiated. Progressive levels of the Enforcement Response Program will be initiated until it is deemed that the corrective action(s) implemented are adequate or a prioritized plan to implement a long-term resolution is in place.

The Enforcement Response Program is designed around four levels corresponding to line management positions within Caltrans. This tiered approach is designed so that an appropriate management level is responsible to ensure a satisfactory conclusion for all identified issues and provides a progressive method of escalation for issues that are not resolved at a lower level.

The Enforcement Response Program does not fully define the personnel or contractual enforcement procedures but only provides an overview. The applicable statutes, regulations, contract documents, and associated guidance will be consulted before fully engaging in enforcement procedures.

2.8.3 Construction Enforcement Response Program

Contractual enforcement authority for administering stormwater related actions on a Caltrans construction site is vested with the RE. The RE may seek the assistance of Assistant REs, the Structures Representative, District Construction Stormwater Coordinator (DCSWC), and the District NPDES Coordinator to resolve stormwater issues. The Construction Manager, Deputy District Director of Construction, and the District Director are responsible for internally managing the Construction Enforcement Response Program as discussed. The levels of authority between the RE and the Caltrans Director are shown in Figure 2-4.

The Enforcement Response Program process is initiated when initial corrective actions implemented at the project (field) level are deemed inadequate. Progressive levels of the Enforcement Response Program will be initiated until it is deemed that the corrective action(s) implemented are adequate. Decisions made and follow-up reviews performed will be documented.

Level 1 enforcement decisions are typically the responsibility of the Construction Manager, and are administered by the RE. The ERP Level 1 manager is responsible for determining the appropriate corrective actions to be implemented. If nonconformance continues, the Enforcement Response Program manager will escalate the issues to the next Enforcement Response Program Level until conformance is achieved.

Contractual enforcement against the Contractor for nonconformance with stormwater requirements can be taken through verbal and/or written warnings, each supported by the contract documents.

Level 2 enforcement decisions are typically the responsibility of the Deputy District Director, Construction. The RE is responsible for administering the corrective action(s) and having a subsequent inspection performed and inspection results documented.

Inspections that cite a “critical” finding will be immediately elevated to ERP Level 2 and become the responsibility of the Deputy District Director. The Deputy District Director will work with the Construction Manager to quickly resolve the issues, have a subsequent inspection performed, and perform final documentation when corrective actions are deemed sufficient.

The Level 2 action(s) taken by the RE, as directed by the Deputy District Director, can be taken through written sanctions, each supported by the contract documents. Level 2 actions may include the temporary suspension of work until the work that is contributing to or causing contract nonconformance is corrected, withholding of progress payments for fines and penalties levied against Caltrans for the Contractor's non-compliance, or an administrative deduction.

Level 3 enforcement decisions are typically the responsibility of the District Director. The Level 3 action(s) taken by the RE, as directed by the District Director, may include recommendation to the HQ Division Chief of Construction for termination of control or termination of contract.

Level 4 enforcement actions are typically the responsibility of the Caltrans Director. The Caltrans Director will rely on the advice of the District Director, the CEE, HQ Legal and the Water Quality Management Assurance Team (WQMAT) to assist in determining the appropriate corrective action(s). Additionally, a compliance issue may be elevated to this level if legal action is brought against Caltrans by the State, USEPA or a third party, or if Caltrans brings legal action against any party resulting from an NPDES violation at a construction site. The Director, in consultation with the Chief Counsel, will protect the environment and Caltrans' interests and ensure a satisfactory resolution to the action.

At each level of the Enforcement Response Program, the responsible manager will determine appropriate corrective actions. Corrective actions may be project-specific. Corrective actions may also require programmatic corrections on a statewide basis. Programmatic corrections are handled as discussed in the SWMP Section 2.2.3 and SWMP Section 16. Project-specific corrective actions are implemented at the District level. HQ Construction, in coordination with DEA Water Quality Program, is responsible for identifying programmatic corrective actions.

2.8.4 Summary of Construction Enforcement Response Program

The Construction Enforcement Response Program operates as an overlay to the construction Standard Inspection process.

Figure 2-13 shows how the Enforcement Response Program overlays with the Standard Inspection process.

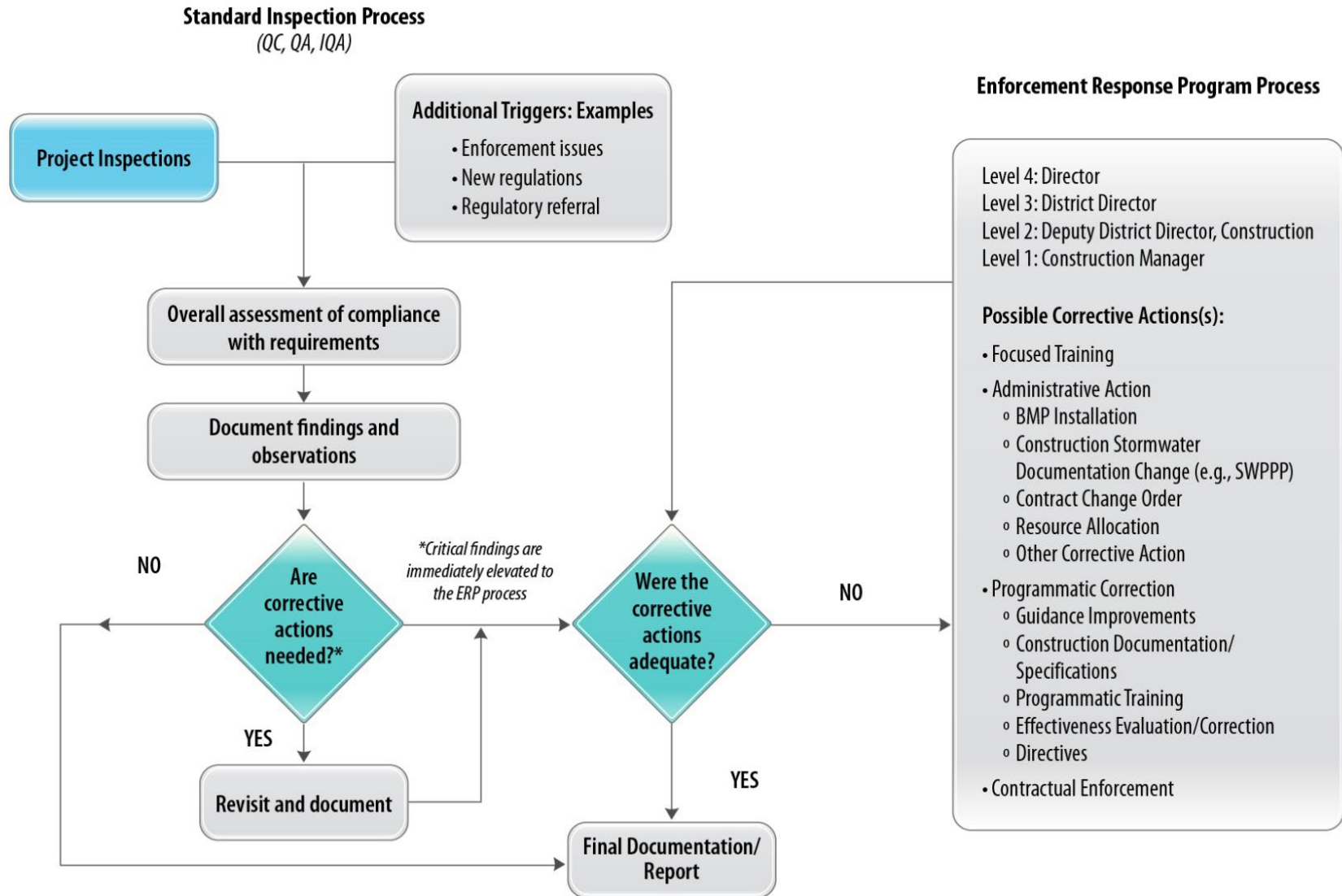


Figure 2-13: Typical Construction Enforcement Response Process

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Enforcement response progresses through the levels if satisfactory resolution is not reached at a previous level. Inspections that have “critical” findings result in an immediate elevation to ERP Level 2. Table 2-2 summarizes the responsibilities for the Construction Enforcement Response Program.

Table 2-2: Responsibility Matrix for Construction Stormwater Quality Response Process

Position	SIP QC	SIP QA	SIP IQA	ERP L1	ERP L2	ERP L3	ERP L4
Caltrans Director	-	-	-	-	-	N	R
District Director	-	-	-	-	N	R	N
Deputy District Director, Construction	-	-	N	N	R	N	N
Construction Manager (Supervising TE)	-	N	N	R	N	N	N
Construction Engineer (Senior TE)	-	N	N	N	N	N	N
Resident Engineer	N	R	I	I	I	I	I
Caltrans Contractor (WPC manager)	R/I	I*	I*	I*	I*	I*	I*
District Construction Stormwater Coordinator	N/T	R	N	A	A	A	A
DEA Water Quality Program	-	-	N/T	N/T	N/T	N/T	N/T
Chief Environmental Engineer (CEE)	-	-	N	N	N	A/N	A/N
NPDES Coordinator	-	-	-	A	A	A	A
IQA Reviewer	-	-	R	A	A	A	A

A – Party to assist responsible party, as needed

ERP L1 – Enforcement Response Program Level 1

ERP L2 – Enforcement Response Program Level 2

ERP L3 – Enforcement Response Program Level 3

ERP L4 – Enforcement Response Program Level 4

I – Responsible party to implement corrective action

I* – Responsible to deploy corrective action as directed by the RE

N – Notification provided to this party

R – Responsible party to manage process and determine corrective action

SIP IQA – Standard Inspection Process Independent Quality Assurance

SIP QA – Standard Inspection Process Quality Assurance

SIP QC – Standard Inspection Process Quality Control

T – Tracking compliance

TE – Transportation Engineer

WPC – Water Pollution Control

2.8.5 Maintenance and Operations Site Enforcement Response

Enforcement authority for stormwater related actions at maintenance activities and maintenance facilities lies with line management in the Districts. Within their respective District, Deputy District Directors, Maintenance, and District Equipment Shop Superintendents are responsible for the implementation of the policies and procedures of the Maintenance and Operations Stormwater Management Program by their reporting personnel. The levels of authority between the field staff and the Caltrans Director are shown in Figure 2-4.

The Enforcement Response Program process is initiated when initial corrective actions implemented by field staff are deemed not adequate. Progressive levels of the Enforcement Response Program will be initiated when it is deemed that the corrective action(s) implemented are not adequate. At each Enforcement Response Program Level, the designated Enforcement Response Program Level manager is responsible for determining the appropriate corrective action(s) to be implemented. The Enforcement Response Program Level manager will oftentimes rely on the advice of the District Maintenance Stormwater Coordinator, District, NPDES Coordinator, or an IQA reviewer. It is the responsibility of the Enforcement Response Program Level manager to elevate an issue to the next Enforcement Response Program Level if it cannot be adequately resolved at his/her level. Decisions made and follow-up reviews performed will be documented at each Enforcement Response Program Level.

Level 1 enforcement is typically managed by the Region Manager (Maintenance) or the Equipment Shop Superintendent (Equipment Operations). The Maintenance Area Superintendent is typically responsible for ensuring the corrective action(s) are implemented and having a subsequent review performed and the results documented.

Level 2 enforcement is typically managed by the Deputy District Director for Maintenance. The Region Manager (Maintenance) is typically responsible for ensuring the corrective action(s) are implemented and having a subsequent review performed and the results documented. Inspections that cite a “critical” finding will be immediately elevated to ERP Level 2 and become the responsibility of the ERP Level 2 manager. The ERP Level 2 manager will work to quickly resolve “critical” findings, have a subsequent review performed, and have the review results documented.

Level 3 enforcement is typically managed by the District Director. The Region Manager (Maintenance) is typically responsible for ensuring the corrective action(s) are implemented and having a subsequent review performed and the results documented.

Level 4 enforcement is typically managed by the Caltrans Director. The Caltrans Director will rely on the advice of the District Director, the CEE, and the WQMAT to assist in determining the appropriate corrective action(s).

A compliance issue will be elevated directly to ERP Level 4 if legal action is brought by the State, USEPA, or a third party, or if Caltrans brings legal action against any party because of an NPDES violation at a maintenance activity or maintenance facility site. The Caltrans Director, in consultation with the Chief Counsel, will protect Caltrans’ interests and ensure a satisfactory resolution to the issue.

At each level of the Enforcement Response Program, the responsible Enforcement Response Program manager will determine appropriate corrective actions. Corrective actions may be facility-specific or activity-specific actions. Corrective actions may also require programmatic corrections on a statewide basis, facility-type basis, or specific to an activity performed at numerous locations. Programmatic corrections are handled as discussed in the SWMP Section 2.2.3 and SWMP Section 16. Facility-specific or activity-specific corrective actions are implemented at the District level with the

assistance of HQ Maintenance as needed. HQ Maintenance, in coordination with DEA Water Quality Program, is responsible identifying programmatic corrective actions for the Division of Maintenance. The Division of Equipment in coordination with DEA Water Quality Program is responsible for identifying programmatic corrective actions for the Division of Equipment.

2.8.6 Summary of Maintenance and Operations Enforcement Response Program

The Maintenance and Operations Enforcement Response Program operates as an overlay to the maintenance activity and maintenance facility Standard Inspection process. Figure 2-14 shows how the Enforcement Response Program overlays the Standard Inspection process.

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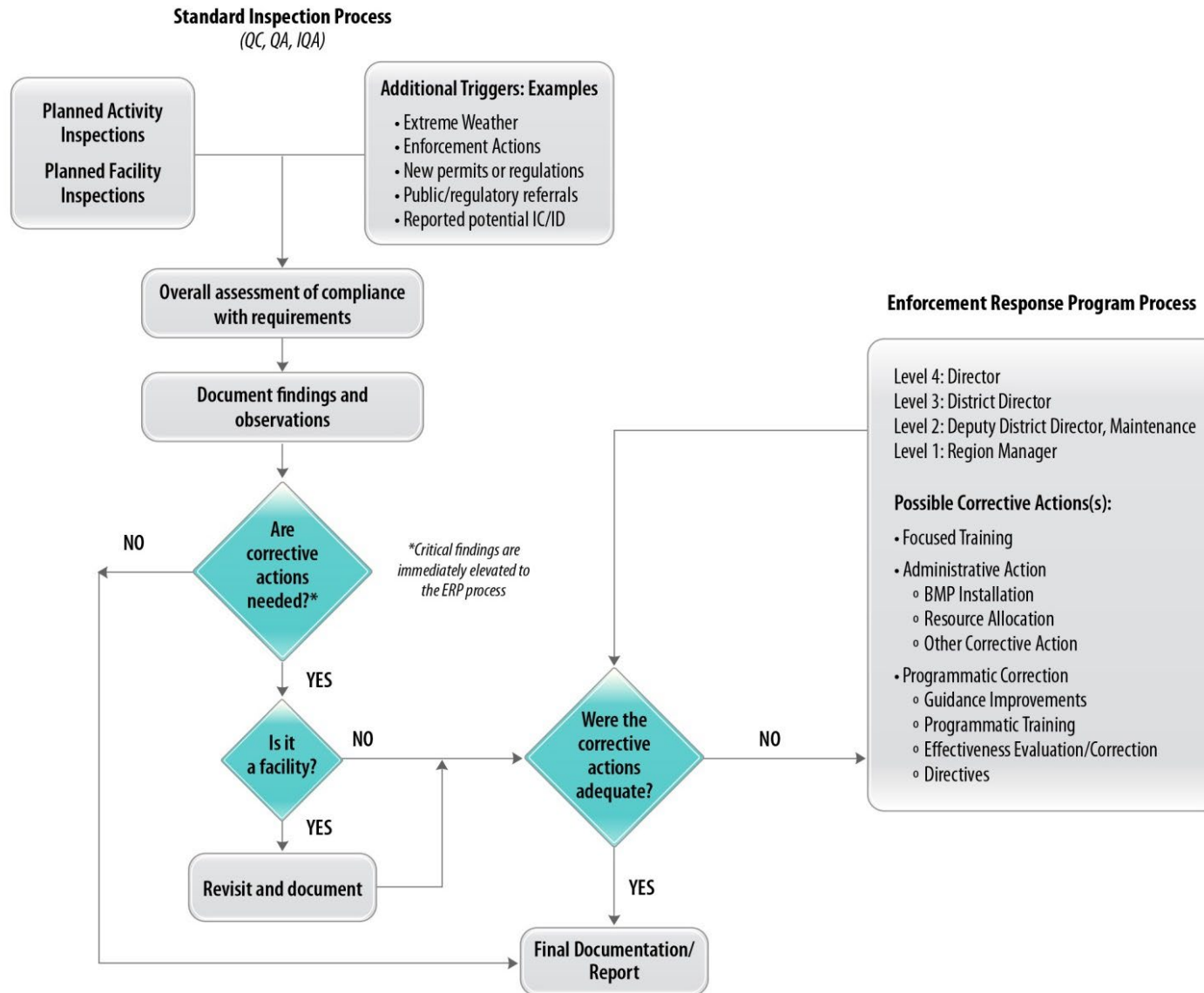


Figure 2-14: Typical Maintenance and Operations Enforcement Response Process

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Enforcement response can progress through the levels if satisfactory resolution is not reached at a previous level. Inspections that have “critical” findings result in an immediate elevation to ERP Level 2.

Table 2-3 summarizes the responsibilities for the Maintenance and Operations Enforcement Response Program.

Table 2-3: Typical Responsibility Matrix for Maintenance and Facility Operations Stormwater Quality Response Process

Position	SIP QC	SIP QA	SIP IQA	ERP L1	ERP L2	ERP L3	ERP L4
Caltrans Director	-	-	-	-	-	N	R
District Director	-	-	-	-	N	R	N
Deputy District Director	-	-	N	N	R	N	N
Region Manager	-	N	N	R	N	N	N
Maintenance Area Superintendent	N	N	N	N	N	N	N
Maintenance Area Supervisor/Facility Manager	R	I	I	I	I	I	I
District Maintenance Stormwater Coordinator	N/T	R	N	A	A	A	A
DEA Water Quality Program	-	-	N/T	N/T	N/T	N/T	N/T
Chief Environmental Engineer	-	-	N	N	N	A/N	A/N
Headquarters Maintenance Division	-	N	N	N	N	N	N
NPDES Coordinator	-	-		A	A	A	A
IQA Reviewer	-	-	R	A	A	A	A

- A – Party to assist responsible party, as needed
- ERP L1 – Enforcement Response Program Level 1
- ERP L2 – Enforcement Response Program Level 2
- ERP L3 – Enforcement Response Program Level 3
- ERP L4 – Enforcement Response Program Level 4
- I – Responsible party to implement corrective action
- N – Notification provided to this party
- R – Responsible party to manage process and determine corrective action
- SIP IQA – Standard Inspection Process Independent Quality Assurance (IQA)
- SIP QA – Standard Inspection Process Quality Assurance
- SIP QC – Standard Inspection Process Quality Control
- T – Tracking compliance

2.8.7 Encroachment Permit Enforcement Response Program

The Encroachment Permit Construction Enforcement Response Program operates as an overlay to the construction Standard Inspection process for encroachment permit activities. Figure 2-15 shows how the Enforcement Response Program overlays with Standard Inspection process for encroachment permit activities.

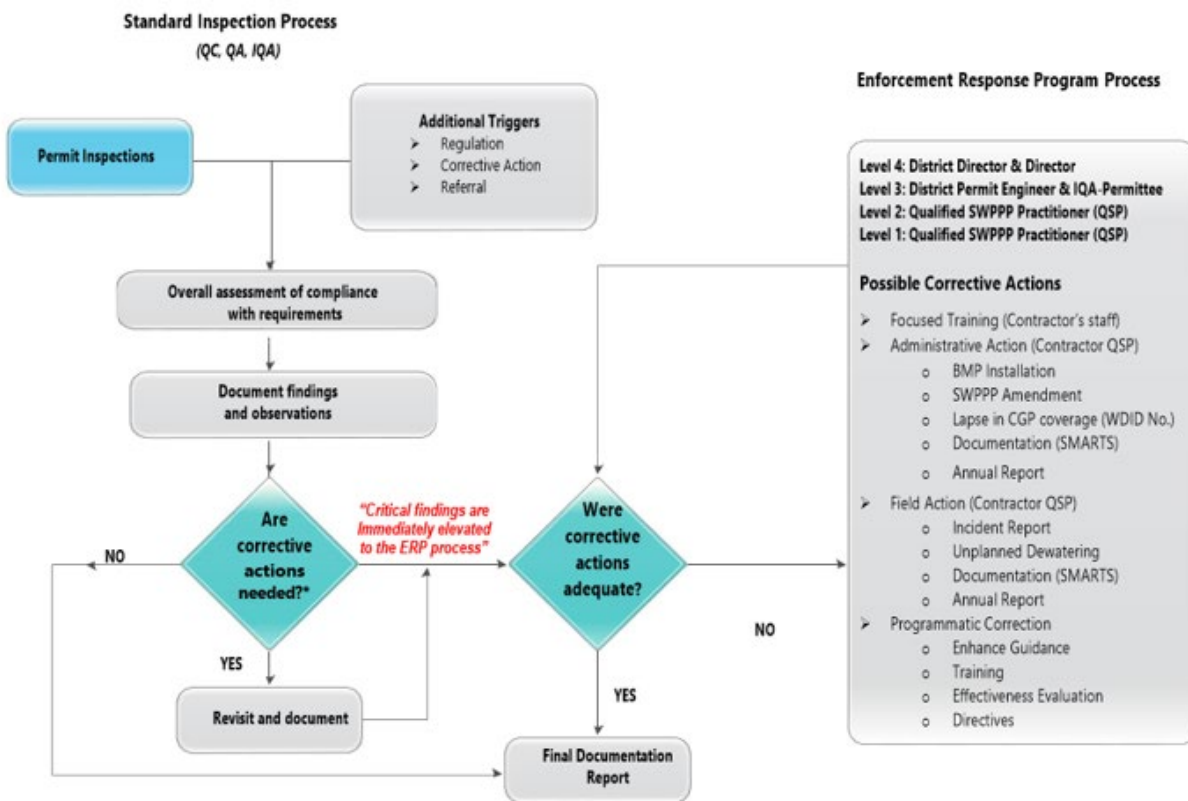


Figure 2-15: Typical Encroachment Permit Enforcement Response Process for Construction Activities

Enforcement authority over the revocation of a Caltrans Encroachment Permit lies with line management in the Districts. Within each District, the District Director, Deputy District Director, and District Permit Engineer (DPE) are responsible for the implementation of the policies and procedures of the Encroachment Permits Program. The contractor’s implementation of stormwater requirements lies with the Permittee (or Legally Responsible Person [LRP] when the project has active coverage under an NPDES permit or Waste Discharge Requirements when the Permittee is a private entity or Linear Utility).

Table 2-4 lists the levels of authority during implementation of the standard permit inspection and Enforcement Response Program process.

During standard permit inspections, the Contractor’s QSD and Qualified Stormwater Pollution Prevention Plan (SWPPP) Practitioner (QSP) are responsible to implement and document corrective action and report corrections to the LRP and the Encroachment Permits Inspector (or Construction Oversight Engineer).

Caltrans initiates the Enforcement Response Program process when initial corrective actions implemented by Contractor’s field staff during the standard inspection process are deemed not adequate by the Caltrans Encroachment Permits Stormwater Coordinator and/or the Encroachment Permits Inspector. Progressive levels of the Enforcement Response Program will be initiated and continued until it is deemed that

the corrective action(s) implemented by the Contractor's QSP are adequate. Decisions made and follow-up reviews performed will be documented by the Contractor's QSP or an independent QSP reviewer not associated with the Contractor as requested at each Enforcement Response Program level.

During Level 1 enforcement, the Encroachment Permits inspector notifies, verbally and in written form, both the Permittee and the Permittee's Contractor-QSP of the non-compliance. The Encroachment Permits Inspector (or Construction Oversight Engineer) may call upon the Permittee or the Permittee's Contractor-QSP to perform a subsequent review and document the results of the corrective actions.

During Level 2 enforcement, the Encroachment Permits inspector notifies (verbally and in written form) both the Permittee's Contractor's QSD and the Contractor's QSP of the non-compliance. The Permittee's Contractor with the assistance of the Permittee's Contractor's QSD and QSP are responsible for implementing Level 2 enforcement, which may include temporary suspension of work except stormwater pollution prevention. Upon notification of a second violation, the Encroachment Permits Inspector (or Construction Oversight Engineer) will notify the Permittee and the Permittee's Contractor's QSD and QSP that a third violation may result in a permit suspension or revocation.

During Level 3 enforcement, the RE or Encroachment Permits inspector notifies (verbally and in written form) both the Permittee and the Permittee's Contractor's QSD and QSP of the temporary suspension. The Permittee shall replace the QSD and QSP and appoint or hire new QSD/QSP to take on the decisions and correction of the non-compliance. The Permittee shall document the delegation of authority to the new QSD/QSP in the SWPPP kept in the field and uploaded to SMARTS. The new QSD/QSP will notify the District NPDES Coordinator and the RE and the Encroachment Permits Inspector (or Construction Oversight Engineer) of the plan to correct the non-compliance. The DPE, in consultation with the District Director, the new QSD/QSP and the District NPDES, determines the conditions under which work can continue. Other possible actions include suspension of other current permits, imposing bonding requirements, and removal of encroachments.

Level 4 enforcement actions are typically managed by the Caltrans Director with the assistance of the District Director, the CEE, HQ Legal, and the WQMAT to determine the appropriate corrective action(s). A non-compliance issue may be elevated to this level if legal action is brought against Caltrans by the State Water Resources Control Board (SWRCB), a Regional Water Quality Control Board (RWQCB), USEPA, or a third party, or if Caltrans brings legal action against any party resulting from an NPDES violation at a construction site. The Director, in consultation with the Chief Counsel, will protect the environment and Caltrans' interests and ensure a satisfactory resolution to the action. Under consultation with the Chief Counsel, Caltrans Headquarters Office of Permits may suspend all permits in that Permittee's name statewide.

Instances of permit non-compliance are reported to the RWQCB within the timeframes stated in SWMP Section 18.6 upon discovery of such instances.

Table 2-4: Responsibility Matrix for the Enforcement of Stormwater Quality Response Process on Encroachment Permits Projects

Position	SIP QC	SIP QA	SIP IQA	ERP L1	ERP L2	ERP L3	ERP L4
Caltrans Director	-	-	-	-	-	-	R
District Director	-	-	-	-	-	RP	A
Permittee (LRP)	N/T	R/S	R/S	R	R	R	A
Permittee's Contractor	R/I	I	I	I	I	I	I
Permittee's Contractor-QSP	A/TN	I*/T	I*/T	I*/T	I*/T	I*/T	I*/T
Permittee's Contractor-QSD	A/TN	R/T	I*/T	I*/T	I*/T	I*/T	I*/T
District Permit Engineer (DPE)	N	N	N	-	N	N	A*
Resident Engineer ³	N	R	I	I	I	I	I
Encroachment Permits Inspector (or Construction Oversight Engineer or Encroachment Permit Stormwater Coordinator)	N	N/T	R/T	N/T	N/T	N/T	N/T
District NPDES Coordinator	-	N	N	-	N/T	N/T	
Maintenance Area Supervisor	-	N	N	N	N	N	N
DEA Water Quality Program	-	N	N	-	N	N	A/N
IQA Reviewer	-	-	R	A	A	A	A

A – Party to assist responsible party

A* – Assist District Director with encroachment permit revocation

ERP L1 – Enforcement Response Program Level 1

ERP L2 – Enforcement Response Program Level 2

ERP L3 – Enforcement Response Program Level 3

ERP L4 – Enforcement Response Program Level 4

I – Responsible party to implement corrective action

I* – Responsible party to implement corrective action as directed

N – Notification provided to this party

R – Responsible Party to determine corrective action

RP – Responsible for encroachment permit revocation decision

SIP IQA – Standard Inspection Process Independent Quality Assurance

SIP QA – Standard Inspection Process Quality Assurance

SIP QC – Standard Inspection Process Quality Control

T – Tracking compliance

TN – Tracking and reporting non-compliance in SMARTS under responsible party

³ Caltrans and local MS4 cooperative agreements may require the Local Resident Engineer to be the LRP delegate for Caltrans in SMARTS as long as the local MS4 has Statewide Construction General Permit (CGP) coverage for the totality of the construction activity including the portion covered by the Caltrans Encroachment Permit.

3 Monitoring and Runoff Characterization Program

This section describes the Caltrans Stormwater Monitoring and Runoff Characterization Program. An overview of previous monitoring activities is discussed, followed by plans for future runoff characterization, region specific total maximum daily load (TMDL) monitoring, and BMP effectiveness monitoring for compliance credit. Monitoring is defined as sampling, analysis, field tests, and observations used to evaluate pollutant concentrations in receiving water, stormwater runoff, and BMP effectiveness for compliance with Caltrans NPDES Permit requirements. The monitoring may be performed by Caltrans or through participation in local and regional cooperative monitoring and other regional monitoring programs.

3.1 Overview of Previous Monitoring Activities

Caltrans conducted a comprehensive, multi-component stormwater monitoring program as part of the past permit cycles that was designed to achieve the following objectives:

- Achieve compliance with the Caltrans NPDES Permit and legal requirements;
- Produce monitoring data that are scientifically credible and representative of runoff from Caltrans' roadways and facilities; and
- Provide information to:
 - Identify constituents of concern;
 - Identify sources of those constituents;
 - Determine if constituents of concern are amenable to reductions through source control or treatment;
 - Evaluate effectiveness of BMPs (see SWMP Section 4) and other stormwater program elements; and
 - Optimize future monitoring efforts.

The monitoring program comprised of three principal elements or areas of activity: Discharge Characterization, Runoff Monitoring, and BMP Evaluation. Monitoring was conducted at more than 469 sites statewide. These sites yielded more than 190,000 water quality data points. Monitoring protocols and data management and analysis tools that ensure the scientific validity of the collected data were developed and implemented. Roadway and facilities monitoring by Caltrans as part of the monitoring program included: freeways, highways, maintenance stations, park-and-ride lots, rest areas, toll plazas, and vehicle inspection/weigh stations. In addition, monitoring was conducted at construction sites, erosion control sites, Treatment BMP sites, and small-scale pilot studies. Data were statistically analyzed to characterize highway runoff and make recommendations for future monitoring.

Results of these analyses are reported in the Discharge Characterization Study Report (Caltrans, 2003). It is one of the most comprehensive stormwater runoff characterization studies available for transportation facilities. This study was augmented in 2008 to include additional monitoring data through the 2006-2007 monitoring season.

3.2 Monitoring Plan

The Caltrans Monitoring Plan will comply with the elements required by Caltrans NPDES Permit Attachment F Sections F2 through F2.15. The Monitoring Plan will be submitted within 12 months of the Caltrans NPDES Permit effective date. Annual updates to the Caltrans Monitoring Plan will be submitted by November 30 of each year. Caltrans will submit updates to the Monitoring Plan and annual updates for review and consideration of approval by the SWRCB Executive Director.

The Monitoring Plan will include all proposed monitoring and a monitoring schedule for the upcoming fiscal year and the following fiscal year, including monitoring of applicable water body reaches in TMDL watersheds where Caltrans is named as a responsible party via participation in local/regional cooperative monitoring programs. Where there are no region-specific monitoring requirements, monitoring shall be in accordance with the Caltrans TMDL Compliance Plan. The Caltrans Monitoring Plan and annual updates will be implemented upon approval by the SWRCB Executive Director.

The Caltrans Monitoring Plan will include the following types of monitoring sites. Sites shall be selected based on the need for data to meet compliance with regulatory requirements:

- Receiving Water Monitoring
 - Cooperative Monitoring Programs with Local Agencies
 - Cooperative Water Quality Monitoring Programs
 - Regional Monitoring Programs for TMDLs
 - Coordinated Integrated Monitoring Programs
- Region-Specific TMDL Monitoring Requirements
 - Monitoring Options for North Coast RWQCB Sediment TMDLs
 - Monitoring Options for San Francisco Bay RWQCB Mercury and Polychlorinated Biphenyls TMDLs
 - Mercury Monitoring Options for the San Francisco Bay RWQCB
 - Polychlorinated Biphenyls Monitoring Options for the San Francisco Bay RWQCB
 - Monitoring Options for Los Angeles RWQCB TMDLs
 - Central Valley RWQCB TMDL Monitoring Requirements
 - Lahontan RWQCB TMDL Monitoring Requirements
 - Colorado River Basin RWQCB TMDL Monitoring Requirements
 - San Diego RWQCB TMDL Monitoring Requirements
 - Project I – Twenty Beaches and Creeks Bacteria Monitoring
 - Chollas Creek Dissolved Copper, Lead, and Zinc
 - Los Peñasquitos Lagoon Sediment Monitoring
- Runoff Characterization Monitoring for Selection of BMPs
- BMP Effectiveness Monitoring for Demonstration of Compliance with TMDLs
- Conditionally Exempt Non-Stormwater Discharge Monitoring
- Sampling Analysis Requirements and Protocols

- Quality Assurance Program Plan
- Representative Samples, Field Tests, and Monitoring Results
- Analytical Methods for Laboratory Analysis
- Minimum Level and Method Detection Limits
- Sufficiently Sensitive Analytical Methods
- Environmental Laboratory Accreditation Program Certification
- Sample Location Information
- Monitoring Schedule and Type of Monitoring
- Electronic Monitoring Data Reporting
- Analytical Methods and Monitoring Parameters

3.2.1 Reporting

3.2.1.1 Annual Monitoring Results Report

By November 30 of each year, Caltrans will submit an Annual Monitoring Results Report that covers the period from July 1 of the prior year through June 30 of the current year, defined as the fiscal year. The Annual Monitoring Results Report will include the following information:

1. All monitoring results, including from region-specific monitoring required in Caltrans NPDES Permit Attachment F Section F2.11 through F2.11.5.
2. Description with accompanying tabulated summary of exceedances (dependent on the applicable water quality standard as described in Caltrans NPDES Permit Section 5), including all information necessary to locate and identify the sample results in the Excel file (described below) and in the certified laboratory results.
3. Descriptive text of all monitoring results, including results from ASBS.
4. A list of all site locations with site identification numbers that were monitored during the reporting year, including the past fiscal year's monitoring activities, BMP effectiveness monitoring, receiving water monitoring, and any other monitoring performed for the period by Caltrans.

Using the SMARTS parameter entry field under requirements, Caltrans will upload to SMARTS common data format files (Microsoft Excel format) containing certified laboratory analytical results, the laboratory and Caltrans sample identification numbers, sample locations and coordinates, reporting limits, method detection limits, minimum levels, laboratory qualifiers, and storm event identification numbers. The file will comply with the requirements of Caltrans NPDES Permit Attachment F Section F2.9. The California Environmental Data Exchange Network data entry template is the accepted format (accessible by clicking on the California Environmental Data Exchange Network submit data link for the template). The Microsoft Excel file will be uploaded to SMARTS that is formatted to meet the following requirements:

1. Highlighted analytical and field test results that exceed applicable water quality standards, including toxicity objectives.
2. Certified laboratory reports as an appendix.
3. A summary of sites requiring corrective actions to achieve compliance with the Caltrans NPDES Permit, and a review of any iterative procedures (where applicable) at sites needing corrective actions.
4. Summary conclusion from any Regional Monitoring Program or cooperative monitoring program regarding whether the TMDL watersheds comply with the waste load allocations.

3.2.1.2 Reporting Due Dates

Within 60 days of the Caltrans NPDES Permit's Adoption Date, Caltrans will either report its participation in the Lake Tahoe Regional Stormwater Monitoring Program or submit a Stormwater Monitoring Plan according to the requirements of Caltrans NPDES Permit Attachment F Section F2.12.5.

By November 30 of each year, Caltrans will submit a summary of annual updates to its Monitoring Plan. Caltrans' annual updates will comply with Caltrans NPDES Permit Attachment F.

In addition, Caltrans will submit by November 30 of each year an Annual Monitoring Results Report for the period from July 1 of the prior year through June 30 of the current year. The Monitoring Results Report will include the information required in Caltrans NPDES Permit Attachment F.

If Caltrans determines that a discharge is exceeding a receiving water limitation, then Caltrans will provide a notification according to the Caltrans NPDES Permit Attachment G requirements.

3.3 Receiving Water Monitoring

Caltrans may participate in regional monitoring programs or local, regional, and other cooperative monitoring programs depending on the specific TMDL. In lieu of participation in the regional monitoring programs or local, regional, or any other cooperative monitoring program, Caltrans may submit proposed monitoring or individual monitoring.

3.3.1 Cooperative Monitoring Programs with Local Agencies

Caltrans participates in several cooperative monitoring programs and reports that in every annual report. If Caltrans decides to work cooperatively with local agencies to maximize monitoring resources, Caltrans typically establishes a cooperative agreement with local municipalities or other entities. The following are examples of existing cooperative monitoring programs suggested in the Caltrans NPDES Permit:

- The Phase I Methylmercury Delta Regional Monitoring Program, within the Central Valley RWQCB jurisdiction.
- The Klamath Basin Monitoring Program within the North Coast RWQCB jurisdiction.
- The Central Coast Ambient Monitoring Program within the Central Coast RWQCB jurisdiction.
- The Central Valley Region Salts Monitoring Program within the Central Valley Regional RWQCB jurisdiction.
- Big Bear Lake – In-Lake Nutrient Monitoring Program and Watershed-Wide Nutrient Water Quality Monitoring Program.
- Lake Elsinore and Canyon Lake TMDL Task Force.

3.3.2 Regional Monitoring Programs for TMDLs

Caltrans is encouraged to participate in approved regional monitoring programs that correlate with the monitored watershed and Caltrans' waste load allocation in that watershed, as approved by the SWRCB Executive Director in coordination with the applicable RWQCB Executive Officer.

3.3.3 Coordinated Integrated Monitoring Programs

Coordinated integrated monitoring programs are agreements whereby multiple entities form unified monitoring programs for a watershed where there is a water quality benefit and advantage for integrated monitoring over self-monitoring.

3.4 Region-Specific TMDL Monitoring

Several region-specific monitoring options and requirements apply to certain regions of California. The following describe those monitoring requirements in those specific regions.

3.4.1 Monitoring Options for North Coast RWQCB Sediment TMDLs

Caltrans NPDES Permit Options: Caltrans' monitoring activities for each sediment TMDL in the North Coast RWQCB will be achieved by complying with one of the following TMDL options:

- Caltrans will either a) allocate a one-time funding contribution equivalent to 10 percent of each TMDL sediment reduction project cost to maintain existing watershed-based status and trends monitoring programs or b) Caltrans will contribute funding proportionate to its share of waste load allocation among stakeholders for each TMDL sediment reduction project. Examples of watershed-based monitoring programs include the Klamath Basin Monitoring Program; or
- Caltrans shall 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 RWQCB 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 shall 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. Caltrans may consult with North Coast RWQCB staff on development of a watershed-based monitoring program.

The Caltrans NPDES Permit provisions are unclear and need to be clarified with North Coast RWQCB and SWRCB.

3.4.2 Monitoring Options for San Francisco Bay RWQCB Mercury and Polychlorinated Biphenyls TMDLs

3.4.2.1 Mercury Monitoring Options for the San Francisco Bay RWQCB

Caltrans NPDES Permit Options: Caltrans will select a mercury monitoring option with one of the following options:

- **Regional Monitoring** – Participate in mercury monitoring via the Regional Monitoring Program for Water Quality in San Francisco Bay. Caltrans' financial contribution will be calculated in the same manner as that of other urban stormwater permittees; or
- **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. Bedded fine sediment will be sampled a minimum of four wet weather events per year over the term of the Caltrans NPDES Permit. Sample locations shall be at or near a point of discharge from the ROW and into the system that discharges stormwater into San Francisco Bay.
- **Combination** – Caltrans may implement a combination of monitoring requirements in the Regional Monitoring or Self-Monitoring above, provided that the combination provides equivalent monitoring.

Caltrans is participating in mercury monitoring via the Regional Monitoring Program for Water Quality in San Francisco Bay.

3.4.2.2 Polychlorinated Biphenyls Monitoring Options for the San Francisco Bay RWQCB

Caltrans NPDES Permit Options: Caltrans will select and implement one of the following polychlorinated biphenyl monitoring options:

- **Regional Monitoring Program** – Participate in the Regional Monitoring Program for Water Quality in San Francisco Bay. Participation will be equivalent to other urban stormwater permittees participation; or
- **Self-Monitoring** – Develop, submit, and implement a Caltrans-specific monitoring plan to quantify polychlorinated biphenyls stormwater runoff loads and the load reductions achieved through treatment, source control and other actions. Bedded fine sediment shall be sampled a minimum of four wet weather events per year

over the term of the Caltrans NPDES Permit. Sample locations shall be at/near a point of discharge from the ROW and into the conveyance system that discharges stormwater into San Francisco Bay. Monitoring shall be representative of pollutant concentrations or loadings in discharges from the Caltrans ROW or shall be representative of the effects of discharges from the Caltrans ROW on water qualities in the TMDL waterbodies.

- Combination – Caltrans may implement a combination of monitoring requirements in Regional Monitoring Program or Self-Monitoring above, provided that the combination provides equivalent monitoring.

Caltrans is participating in the Regional Monitoring Program for Water Quality in San Francisco Bay.

3.4.3 Monitoring Options for Los Angeles RWQCB TMDLs

Caltrans NPDES Permit Options: Caltrans will comply with the Los Angeles RWQCB monitoring requirements by selecting and implementing one of the following:

- Coordinated Integrated Monitoring – Caltrans may continue to participate in Coordinated Integrated Monitoring Programs for individual TMDL watersheds or participate in other watershed cooperative monitoring programs in lieu of self-monitoring; or
- Self-Monitoring – Caltrans will implement self-monitoring through development of a monitoring plan and schedule to monitor its ROWs. The monitoring plan will be equivalent in methods, precision, accuracy, and quality to the (1) relevant Coordinated Integrated Monitoring Programs or other watershed cooperative monitoring programs and (2) the monitoring requirements in Caltrans NPDES Permit Attachment F. The monitoring plan will include a work plan and schedule to implement the monitoring. The watershed and TMDL shall be identified in the monitoring plan; or
- Combination – Caltrans may implement a combination of requirements in Caltrans NPDES Permit Attachment F Section F2.12.3, Coordinated Integrated Monitoring or Self-Monitoring above, provided that the combination is equivalent to the monitoring via watershed cooperative monitoring and ROW monitoring.

Caltrans will explore cooperative opportunities if available or conduct self-monitoring if cooperative monitoring is not feasible.

3.4.4 Central Valley RWQCB TMDL Monitoring Requirements

Caltrans NPDES Permit Options: For the Sacramento-San Joaquin Delta Methylmercury TMDL, Caltrans is approved to participate in the Central Valley Water Board approved Delta Regional Monitoring Program. If, in the event the Delta Regional Monitoring Program is no longer approved by the Central Valley Water Board Executive Officer, the monitoring below will be required upon notice.

- Methylmercury Monitoring Plan – Caltrans shall submit a Methylmercury Monitoring Plan for Central Valley RWQCB Executive Officer approval that

assesses attainment with the TMDL allocations in stormwater discharges. The sampling locations, frequencies, and reporting may be the same as the requirements in the Caltrans NPDES Permit. Caltrans shall implement the monitoring plan within six months of the Central Valley RWQCB Executive Officer approval. At a minimum, the Methylmercury Monitoring Plan shall include the following information:

- Management questions to be answered by the Methylmercury Monitoring Plan;
- Methylmercury loads and concentrations, turbidity, and other constituents to be monitored in stormwater discharges, analytical methods, and reporting limits;
- Sampling sites' locations representative of Caltrans' service area, including latitude and longitude coordinates, water body name, and water body segment, if applicable;
- Frequency of monitoring;
- Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any); and
- Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.
- Caltrans must submit a Quality Assurance Project Plan with the Methylmercury Monitoring Plan to the Central Valley RWQCB Executive Officer for review and approval. The Quality Assurance Project Plan must be consistent with the Surface Water Ambient Monitoring Project. All samples will be collected and analyzed according to the Quality Assurance Project Plan. Monitoring Reports will be submitted with the Annual Report and include the following information, consistent with the approved Monitoring Plan:
 - The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
 - Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
 - Identification of and rationale for any deviations from the Quality Assurance Project Plan;
 - Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits;
 - Comparison to reference sites (if applicable), guidelines or targets;
 - Discussion of whether data collected addresses the objectives or questions of study design; and
 - Quantifiable discussion of program/study pollutant reduction effectiveness.

For the Clear Lake Nutrients TMDL, Caltrans will implement turbidity monitoring for construction projects. For the Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch Mercury TMDL, Caltrans shall implement turbidity monitoring for construction projects.

3.4.5 Lahontan RWQCB TMDL Monitoring Requirements

Caltrans NPDES Permit Options: Within 60 days of the effective date of the Caltrans NPDES Permit, Caltrans shall either (a) report its demonstration of participation in the Lake Tahoe Regional Stormwater Monitoring Program at a participation contribution equivalent to other municipal jurisdictions in the Lake Tahoe region or (b) prepare and submit a Stormwater Monitoring Plan for review and consideration of approval to the SWRCB Executive Director in consultation with the Lahontan RWQCB Executive Officer. If option (b) is selected, Caltrans' monitoring plan shall have the same monitoring parameters, locations, frequencies, and reporting as the Lake Tahoe Regional Stormwater Monitoring Program.

Caltrans is participating in the Lake Tahoe Regional Stormwater Monitoring Program.

3.4.6 Colorado River Basin RWQCB TMDL Monitoring Requirements

Caltrans NPDES Permit Options: For the Coachella Valley Stormwater Channel Bacterial Indicators TMDL, Caltrans shall monitor for *Escherichia coli* during a minimum of two qualifying precipitation events per calendar year that result in a discharge and for a minimum of eight sampled events over four years, excluding years less than two qualifying precipitation events. Caltrans shall sample at the monitoring locations identified in Caltrans' "Monitoring and Reporting Project Plan and Quality Assurance Project Plan for Two-Year Bacteria Indicator Monitoring in Conformance with Phase I Implementation for the Coachella Valley Stormwater Channel Total Maximum Daily Load Riverside County, California" as approved by the Colorado River Basin RWQCB on December 12, 2013. If the water quality objectives are not achieved by the end of Phase I monitoring, then Colorado River Basin RWQCB staff will implement additional actions to control pathogenic sources (i.e., the TMDL Phase II actions).

Caltrans is conducting monitoring in this watershed per the RWQCB requirements.

3.4.7 San Diego RWQCB TMDL Monitoring Requirements

Caltrans' Monitoring Plan shall describe the plans for monitoring the following watersheds in the San Diego RWQCB:

3.4.7.1 Project I – Twenty Beaches and Creeks Bacteria Monitoring

Caltrans NPDES Permit Options: For indicator bacteria in the Project I – Twenty Beaches and Creeks TMDL, the Water Quality Plan for the San Diego Basin (San Diego RWQCB Basin Plan Tables 7-41 through 7-43 for Wet Weather and Tables 7-45 through 7-47 for Dry Weather) states that Caltrans is currently in compliance with the wet and dry weather waste load allocations if mass loads from Caltrans ROWs have not increased with time; this also means that existing mass loads from Caltrans ROWs cannot increase over time. To monitor for compliance with the Project I – Twenty Beaches and Creeks Bacteria TMDL, Caltrans will either participate in cooperative watershed monitoring or will develop and implement a Caltrans-specific monitoring plan

as described in the two options listed below, according to the San Diego RWQCB Basin Plan, page 7-96. The options are as follows:

- *Cooperative Watershed Monitoring* – Caltrans may participate in a cooperative watershed monitoring program with the other responsible municipalities, as approved by the SWRCB Executive Director in consultation with the San Diego RWQCB Executive Officer. Caltrans' participation shall be a proportional responsibility that is calculated in accordance with Caltrans' land use coverage in the watershed; or
- *Department-Specific Monitoring Program* – Caltrans may conduct compliance monitoring to demonstrate the effectiveness of BMPs in controlling bacteria loads for this TMDL. Receiving water and outfall monitoring must be conducted. Receiving water monitoring will be conducted in three representative watersheds annually for the Caltrans NPDES Permit term. For each of the 20 beaches and creeks watersheds, outfalls will be monitored weekly during the dry season and a minimum of three rain events during one wet season. This monitoring will occur twice per Caltrans NPDES Permit term. Sampling must occur in two different sampling years. Sample locations, number of samples, sampling time, methods, and frequencies will be representative of pollutant concentrations or loadings in discharges from the Caltrans ROW or will be representative of the effects of discharges from the Caltrans ROW on water qualities in the TMDL waterbodies. If there is no flow during dry weather, Caltrans must document and record visual observations.

Caltrans will continue its ongoing effort of cooperative watershed monitoring in the Twenty Beaches and Creeks Watershed.

3.4.7.2 Chollas Creek Dissolved Copper, Lead, and Zinc

Caltrans NPDES Permit Options: The TMDLs require monitoring and reports to assess the effectiveness of implemented BMPs to meet the waste load allocations. Caltrans shall perform monitoring by choosing and implementing one of following two options:

- *Cooperative Watershed Receiving Water Monitoring Program* – Caltrans may participate in or contribute to a cooperative watershed monitoring program with the other responsible municipalities (i.e., cities of La Mesa, Lemon Grove, and San Diego; the Port of San Diego; and the County of San Diego), as approved by the SWRCB Executive Director in consultation with the San Diego RWQCB Executive Officer. Receiving water will be sampled monthly during the wet season. Receiving water monitoring will demonstrate watershed compliance/non-compliance with the waste load allocations; or
- *Self-Monitoring* – Caltrans may develop and conduct compliance monitoring to demonstrate the effectiveness of BMPs at outfalls to achieve waste load allocations. Representative outfalls will be monitored for applicable metals for one rain event per year over three separate years during the wet season per the Caltrans NPDES Permit term or per every five years, whichever is less. Monitoring shall be representative of the effects of Caltrans' discharges on water quality.

Caltrans will continue ongoing self-monitoring of selected BMPs.

3.4.7.3 Los Peñasquitos Lagoon Sediment Monitoring

Caltrans NPDES Permit Options: For Los Peñasquitos Lagoon sediment monitoring, Caltrans will perform sediment monitoring by selecting and implementing one of the following:

- Cooperative Watershed Monitoring – Caltrans may participate in or contribute to a cooperative watershed monitoring program with the other responsible parties, as reviewed for consideration of approval by the SWRCB Executive Director in consultation with the San Diego RWQCB Executive Officer; or
- Self-Monitoring – Caltrans may develop and conduct compliance monitoring to demonstrate the effectiveness of BMPs and to demonstrate compliance with the load reduction. Sampling locations, number of samples, sampling time, methods, and frequencies will be included in the monitoring plan.
 - Caltrans shall demonstrate effectiveness of BMPs through monitoring a minimum of either (i) 20 percent of the total inventoried BMPs in the Los Peñasquitos Watershed or (ii) a total of three BMPs in the Los Peñasquitos Watershed, whichever is greater. The minimum number of Treatment BMPs selected for monitoring must be representative of the BMPs being relied upon by Caltrans for meeting Caltrans' Required Sediment Load Reduction. Monitoring for the BMPs selected by Caltrans must be conducted annually for three rain events during the wet season (October 1 through April 30); and
 - Caltrans will monitor representative outfalls draining from the Los Peñasquitos, Carroll Canyon, and Carmel Creek locations prior to entering the Los Peñasquitos Lagoon. Monitoring will address, at a minimum, representative values of flow rates and total suspended solids concentrations from Caltrans' outfalls. Caltrans will monitor outfalls during three storms during two wet seasons over the Caltrans NPDES Permit term. The wet season is defined as October 1 through April 30.

Caltrans will participate in cooperative monitoring efforts.

3.5 Runoff Characterization Monitoring for Selection of BMPs

Caltrans will describe its plans and procedures for runoff characterization monitoring. When performing runoff characterization monitoring, Caltrans will obtain representative samples for analysis and field tests. Caltrans may use the results to assist in the selection of BMPs. Caltrans will identify the locations, number, frequency, and parameters of all BMP monitoring in its Monitoring Plan. Caltrans will annually report updates to its BMP selection monitoring.

3.6 BMP Effectiveness Monitoring for Demonstration of Compliance with TMDLs

When Caltrans uses BMP effectiveness monitoring results to represent the quality of its stormwater discharges, Caltrans shall sample at an influent point into the BMP and a discharge point out of the BMP structure. Representative samples will be obtained for data analysis and field tests.

BMP effectiveness monitoring is a measurement of the treatment effectiveness of a structural BMP installed at a specific location. Caltrans will, at a minimum, include the following in its Monitoring Plan:

- Recommended representative sampling locations for effectiveness monitoring,
- Number of samples,
- Frequency of monitoring, and
- Monitoring parameters.

Caltrans will provide a list of the discharge point locations that are representative of BMPs, a monitoring schedule, and an updated list of BMP effectiveness monitoring as part of the TMDL monitoring Plan.

3.7 Conditionally Exempt Non-Stormwater Discharge Monitoring (C3.7)

The Caltrans NPDES Permit allows certain types of non-stormwater discharges that are not considered to be sources of pollutants. However, if the SWRCB Executive Director determines that any category of allowed non-stormwater discharge is a source of pollutants, the SWRCB Executive Director may require Caltrans to conduct additional monitoring and submit a report on such discharges. The SWRCB Executive Director may also order Caltrans to cease a non-stormwater discharge.

4 BMP Development and Implementation

Caltrans has a systematic approach starting from selection through design, installation, inspection to maintenance of Treatment BMPs. This approach is intended to ensure that sound scientific and technological criteria are used to implement BMPs for implementation on transportation projects and activities. Caltrans-approved BMPs are cost-effective, efficient, and appropriate for the roadway and roadway facilities infrastructure.

This section describes:

- How new or modified BMPs are identified;
- BMP selection and approval process;
- Criteria used for selecting BMPs; and
- BMP Integration into the stormwater program.

Caltrans has been testing BMPs for effectiveness in removing pollutants from roadways and facilities since 1996. Findings have been published in the *Treatment BMP Technology Report* (Caltrans, 2018). This report summarizes the Caltrans BMP identification and selection process and has fact sheets presenting several BMP technology categories. The BMP fact sheets are based on a desktop evaluation using a standard set of criteria that include design, operations, maintenance, construction, treatment efficiency, advantages, and constraints. Caltrans uses the fact sheets as a preliminary screening tool for the selection of pilot BMPs when Caltrans-approved BMPs cannot meet project-specific treatment requirements. Pilot testing may be required to evaluate effectiveness in the Caltrans environment prior to use of a new BMP technology if there is an agreement that the available literatures or previous study is not sufficient for Caltrans minimum standard for approval list. BMPs selected for pilot testing are not automatically approved for statewide use.

Caltrans NPDES Permit Attachment C Section C5.3 requires Caltrans to include a “Best Management Practice Technology, Monitoring, and Development Status Report.” This report supplements the Annual Report and documents the pilot study results of any new BMP evaluations and investigations conducted by Caltrans.

The BMP development process has resulted in the approval of a range of Treatment BMPs now available for implementation. Lists of adopted BMPs used for design, construction, maintenance, and facility operations are provided in SWMP Sections 5, 6, and 8, respectively.

4.1 Identification and Prioritization of BMP Development Needs

The BMP development is focused on addressing targeted pollutants identified by runoff characterization. Caltrans identifies and prioritizes BMP development needs based on current or future concerns regarding the following:

- Target pollutants present in Caltrans’ stormwater runoff;
- Adopted TMDLs;

- Additional information needed regarding the feasibility of specific BMPs as identified from ongoing applied studies; and
- BMP performance trends that identify weaknesses.

Sources of ideas for potential new BMPs or modifications to existing approved BMPs include literature searches, past and ongoing monitoring, internally generated concepts from technical brainstorming sessions, feedback from the implementation of approved BMPs and, review of data collected by other transportation or municipal agencies. New or modified BMPs may also be proposed by the Districts during the project development process.

4.1.1 Identification of Pilot BMPs During Project Development Process

Project Engineers (PEs) may also propose pilot or modified BMPs during the planning and design of a project in consultation and coordination with HQ DEA and HQ Division of Design. A monitoring plan needs to be approved prior to installing pilot or modified BMPs which could be installed during a project but would have to be monitored separately.

Variations to existing BMPs are considered by the HQ Water Quality Management Assurance Team (WQMAT) to share the knowledge gained throughout Caltrans functional units and to improve future BMP designs or operations.

Some variations to Treatment BMPs may warrant a pilot project to evaluate the effectiveness including operation and maintenance. Treatment BMPs proposed for pilot testing must follow the evaluation processes as explained in SWMP Section 4.2.

4.2 Treatment BMP Selection Process

A needs assessment will be conducted when new or modified Treatment BMPs are proposed by District Project Development staff, HQ staff, or submitted by a vendor via the Caltrans New Products Approval Process. Appropriate functional Stormwater Advisory Teams (SWATs) or their representatives provide input to the needs assessment. The needs assessment process may involve a literature review, evaluation of existing performance data and the operational considerations like maintenance, safety etc.

If the needs assessment determines that additional studies are warranted, then a laboratory study and/or a small scale pilot study may be considered. A full-scale field pilot study is generally required if the results of the initial pilot study indicate feasibility of using the BMP in Caltrans' operational environment. Full-scale pilot studies may be performed as part of a capital project or a standalone pilot project.

The study or pilot for trash Treatment BMP will only be performed in the laboratory due to the fact that the combination for trash discharge and the variation for hydraulic capacity is difficult or almost impossible to obtain at any given time. In addition, the field observation is very limited.

The results of pilot studies are circulated to all functional SWATs (design, maintenance, construction, water quality) for their recommendations. Each SWAT may recommend adoption, rejection, or further study of the BMP. If the SWATs unanimously recommend adoption of the BMP, the proposal is submitted to the CEE for approval. When the SWAT recommendations are not unanimous, the WQMAT will review the proposal. DEA is responsible for testing and ultimately approving Treatment BMPs for use in Caltrans roadway projects and facilities.

Treatment BMP pilot studies should generally demonstrate satisfactory pollutant removal effectiveness in order for a Treatment BMP to be adopted. Approved Treatment BMPs will be reconsidered if their anticipated reliability is below industry standards, or if construction cost and/or maintenance effort are more than expected. If a pilot BMP installed in the field is not effective, a cross-functional team formed by the Divisions of Maintenance, Design, NPDES, and Construction, will evaluate the problems and determine if the BMP needs to be retrofitted, taken into inventory as-is, or decommissioned and physically removed.

4.2.1 Treatment BMP Selection Criteria

In general, Treatment BMPs are selected based on the following criteria:

- a. Feasibility: Safety, ROW, design/siting, construction, environmental compliance
- b. Operations and maintenance
- c. Treatment performance
- d. Life-cycle costs

The level of detail for the selection process may differ significantly depending upon the complexity of the BMP. The selection criteria are explained below.

4.2.1.1 Feasibility

Feasibility is intended to determine if a potential Treatment BMP would function under conditions encountered in the Caltrans highway environment and comply with drainage and safety requirements. Specific selection criteria are listed in detail below:

1. Products that require handling by Caltrans employees must comply with applicable health and safety regulations, and the Office of Health and Safety Management Services must approve their use.
2. The BMP will function under one or more climatic, geological, and topographical conditions encountered in the Caltrans highway environment. Except for initial installation and vegetation establishment periods, irrigation, or supplemental water should not be required.
3. The BMP will be able to be sited so it complies with the safety requirements of the Caltrans Highway Design Manual (HDM) (Caltrans, 2022).
4. The site, design, and operation of a BMP will not produce any adverse environmental impacts and comply with applicable environmental regulations.

4.2.1.2 Operation and Maintenance

Treatment BMPs need to be designed, located, and constructed so they can be effectively operated and maintained during its intended design life. Operation and Maintenance selection criteria are as follows:

1. The BMP should be self-sustaining, although regular inspection is required to ensure its proper functionality.
2. Maintenance requirements for a BMP are well understood and defined with respect to scope and frequency. Maintenance crews are able to inspect and maintain BMPs using available equipment and resources.
3. Maintenance personnel or Contractors must be able to safely perform inspections and maintenance tasks.
4. Long-term maintenance requirements and costs for the BMP are identified.
5. The Treatment BMP is designed and operated in a manner that does not create a public nuisance or health hazard. Specifically, it is a concern with regard to potential disease vectors, such as mosquitoes. Treatment BMP design and prescribed O&M are adequate to ensure BMP operation and meet water quality goals, while at the same time reducing potential vector concerns to an acceptable level.

4.2.1.3 Treatment Performance

BMPs are selected based on treatment performance for constituents identified as pollutants of concern when present at levels typical of Caltrans stormwater runoff. Appendix A of the Treatment Technology Report provides specific performance criteria that are used for BMP selection.

4.2.1.4 Life-Cycle Cost

For a new Treatment BMP to be selected for implementation, pollution control benefits must have a reasonable relationship to the life-cycle costs to implement the BMP within Caltrans' transportation infrastructure. Estimated life-cycle costs are compared to the established life-cycle costs of other approved BMPs that target the same constituents in runoff.

4.2.1.5 Environmentally Friendly BMPs (C3.10.4)

Caltrans will include procedures regarding the design and implementation of effective temporary and construction-phase BMPs consistent with the following requirements:

- Ensure that all BMPs do not constitute or minimize hazard to wildlife in general;
- Use wildlife-friendly 100 percent biodegradable erosion and sediment control products. Per Caltrans NPDES Permit, photodegradable synthetic products are not considered biodegradable;
- Erosion and sediment control products are removeable when they are no longer needed for temporary site stabilization; and

- BMP guidance will include recommendations that BMPs determined to entrap or harm wildlife at any site or facility should be immediately removed and replaced with wildlife-friendly biodegradable products.

4.3 Non-Structural Treatment BMP Selection

New or modified Maintenance facility operations BMPs, Maintenance activity BMPs, Construction Site BMPs, and source control (i.e., street sweeping, etc.) BMPs will be assigned to the respective SWAT for review. Recommendation for adoption will be in consultation with WQMAT prior to approval.

4.4 Selection of Proprietary BMPs

Although the Federal Highway Administration has provided more flexibility to state departments of transportation for the use of proprietary products, there are limitations on Caltrans' use of proprietary products or materials. The Federal Highway Administration has interpreted Title 23 Section of United States Code 112(a) to require competition not only for the award of the contract,⁴ but to also require competition for the various materials and processes involved in the work (Public Contract Code 3400: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=3400.&lawCode=PCC). The specification of a particular product may restrict competition as the pool of available products is reduced to the product selected. In some cases, however, the need for a particular product outweighs the need to procure products competitively. The Code of Federal Regulations Section 23 CFR § 635.411 provides the regulatory authority for Federal Highway Administration's participation in the cost of a patented or proprietary product.

Caltrans has a process to evaluate proprietary treatment technologies. Information about the Caltrans Product Evaluation Program for evaluating new products is available on the Caltrans website (<http://www.dot.ca.gov/hq/esc/Translab/NewProducts/index.htm>). Caltrans Stormwater Program will evaluate proprietary treatment technologies that are submitted via the new products evaluation process and provide updates in the Best Management Practice Technology, Monitoring, and Development Status Report. The viable non-proprietary alternatives will be added to the Caltrans approved BMP list.

4.5 Integration of BMPs into Caltrans Guidance and Policy (5.1.5)

Headquarters Divisions integrate approved BMPs into Caltrans' activities by following a systematic process that includes:

1. Development of Standard Plans and Specifications for the inclusion of BMPs into projects so they can be appropriately designed, built, and maintained;

⁴ "In all cases where the construction is to be performed by the State transportation department or under its supervision, a request for submission of bids shall be made by advertisement unless some other method is approved by the Secretary. The Secretary shall require such plans and specifications and such methods of bidding as shall be effective in securing competition."

2. Development of guidance containing specific procedures and details for Design, Construction, and Maintenance staff; and
3. Development and implementation of training.

See SWMP Sections 5, 6, 8, and 9 for descriptions of how the BMPs are implemented within design, construction, maintenance, ROW, and for third-party activities.

4.5.1 Vector Control (C3.10.10)

For any BMP being considered for inclusion as an approved Caltrans BMP, vector control concerns will be considered.

Caltrans and the California Department of Public Health have worked cooperatively to incorporate appropriate BMP criteria guidance in the Caltrans' processes. California Department of Public Health has determined through studies that the following criteria are protective of mosquito-borne vectors if these criteria are met for BMPs with standing water:

- Throughout California, water may be retained in urban structural BMPs for up to 96 hours. This requirement does not apply to Certified Full Capture Systems installed for compliance with the Statewide Trash Provisions and Caltrans NPDES Permit Attachment C if the installation complies with local Mosquito Vector Control District guidance.
- In the Lake Tahoe Basin and in other high-elevation regions of the Sierra Nevada above 5,000 feet with similar alpine climates, water may be retained in structural BMPs as long as necessary between October 1 and April 15.

All BMPs will be maintained at the frequency specified in Caltrans' Maintenance Staff Guide or by the manufacturer (whichever results in more frequent maintenance), to prevent the propagation of vectors. In addition, BMPs will be designed and installed to comply with the applicable provisions of the California Health and Safety Code relating to vector control, and to allow for inspections and treatment by mosquito and vector control agency staff. An inventory of BMPs that retain water for more than 96 hours will be submitted electronically to the California Department of Public Health within two years of the Caltrans NPDES Permit effective date and subsequently every two years thereafter. Caltrans will cooperate and coordinate with California Department of Public Health and mosquito and vector control agencies on issues related to vector production in Caltrans' BMPs where applicable.

4.5.2 Biodegradable Materials

When construction site erosion control BMPs are selected for incorporation into projects, Caltrans will use biodegradable materials where feasible.

See SWMP Section 5.3.1, Incorporation of Construction Site BMPs into Projects.

4.6 Treatment BMP Tracking, Operation and Maintenance

The Stormwater Portal and the Integrated Maintenance Management System will be used to track Treatment BMPs on a watershed basis. The following Treatment BMP information will be included in the Stormwater Portal:

- Name and location of BMP (including latitude, longitude, county, route and post mile);
- Watershed, RWQCB, and Caltrans District where located;
- Design criteria (including size and capacity);
- Treatment BMP type and description;
- Date of construction;
- Party responsible for maintenance;
- Date the Treatment BMP was accepted by the Division of Maintenance.

The following information will be tracked in the Integrated Maintenance Management System:

- Inspection dates, significant findings, and functioning status of the Treatment BMP; and
- Date corrective actions were taken to return the Treatment BMP to fully functional status as intended (as applicable).

Data will be included and updated in the Stormwater Portal as certain project milestones are met, including Plans, Specifications, and Estimates (PS&E), construction, and acceptance of the asset by the Division of Maintenance. A summary of the BMP inventory will be included in the Annual Report. In addition, BMP inspection report will be uploaded to SMARTS within 60 days of the inspection.

Long-term operation and maintenance activities are conducted according to Caltrans maintenance guidance. Maintenance of Treatment BMPs will be scheduled and conducted during regular maintenance operations.

If monitoring studies or inspection records indicate that a post-construction BMP is not effective, Caltrans will develop a strategy to improve the effectiveness or replace the BMP.

Caltrans will inspect stormwater Treatment BMPs as follows:

- All newly installed stormwater Treatment BMPs at 90% project completion to evaluate if they have been constructed as designed;
- All installed stormwater Treatment BMPs once every two years to ensure they have been maintained as stated in the maintenance manual.

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5 Project Planning and Design

5.1 Overview

This section describes how Caltrans incorporates stormwater management measures into the project planning and design processes. In addition, this section describes the procedures and methodologies used in the selection of Design and Construction Site BMPs for incorporation into Caltrans projects.

This section describes:

- The overall project planning and design process;
- BMP identification and selection procedures; and
- Program level implementation criteria.

5.2 Project Planning and Design Process (C3.10.3)

5.2.1 Project Development Process

The project development process spans a period of time that begins with identifying a project need and ends with the acceptance of construction completion. The project development milestones are as follows:

5.2.1.1 Project Planning

- PID phase focuses on identifying and clarifying the specific transportation system problem and developing project alternatives for a solution. Evaluation of potential stormwater issues (e.g., 303[d] listed water bodies, TMDLs, work within water bodies) and planning for permanent BMPs (as needed) begin in the PID phase.
- Project Approval/Environmental Document phase summarizes the studies of the scope, cost, and overall environmental impact of the alternatives, and refines the design concept and design scope of the project alternatives listed in the PID. The outcome of the Project Approval/Environmental Document process is a preferred project alternative and includes recommended stormwater BMPs documented in the Stormwater Data Report for the Project Approval/Environmental Document phase.

5.2.1.2 Project Design

- PS&E phase includes decisions regarding final BMP design and documentation in the contract documents and the Stormwater Data Report.

5.2.1.3 Construction

- Construction – During this phase, the contractor develops and implements a Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP) based on the project specifics and the contractor's methods for constructing the project. The WPCP/SWPPP include appropriate Construction Site BMPs (see SWMP Section 5.3). Caltrans' post-construction treatment

control requirements (Treatment BMPs) are also incorporated into the SWPPP and CGP Notice of Intent.

5.3 Construction Site BMPs

5.3.1 Incorporation of Construction Site BMPs into Projects

Caltrans directs the implementation of Construction Site BMPs on every project by including details and specifications into the project's contract documents. Construction Site BMPs are implemented in conformance with the project WPCP or SWPPP.

All erosion control products will utilize biodegradable, wildlife friendly materials wherever feasible. If non-biodegradable products are used for temporary site stabilization, they will be removed when they are no longer needed, but in all cases prior to Construction Contract Acceptance (project close-out). If during construction it is found that erosion control netting or products cause entrapment or harm to wildlife, they will be replaced with wildlife friendly products.

To prepare the project to address potential stormwater impacts during construction, the PE incorporates Construction Site BMPs into the project planning and design process by using the following:

1. At every phase in the planning and design process, the PE estimates costs for Construction Site BMPs based upon appropriate estimating methodologies.
2. The PE incorporates those Construction Site BMPs that are essential to protect water quality into the project plans and specifications. These Construction Site BMPs include but are not limited to such items as concrete washouts, drainage inlet protection, or temporary fencing for the preservation of existing vegetation (see SWMP Appendix B, BMP Descriptions by Function).
3. The PE determines the estimated quantities and costs for each BMP.
4. The PE calculates the expected stormwater run-on to the project site and provides that information to the resident engineer (RE) prior to construction so appropriate control measures can be implemented to convey concentrated flows around or through the site.
5. For projects covered by the CGP (Statewide or Lake Tahoe), the PE provides the Permit Registration Documents (PRDs) to the Construction Division and is then entered into SMARTS. The project Risk Level is calculated by the PE and confirmed by the Construction Division.
6. Construction Site BMPs are implemented in accordance with the SWPPP that the Contractor prepares (see SWMP Section 6). Alternatively, the

Construction Site BMPs shown in the WPCP (where applicable) that is prepared by a Contractor or other personnel.

5.4 New Development and Redevelopment Requirements (C3.10 and C3.10.8)

BMPs are selected and designed to protect water quality to the maximum extent practicable (MEP), minimize life-cycle maintenance costs and resources, provide adequate site access, and to maximize worker and public safety. Design Pollution Prevention (DPP), Treatment, and specific Construction Site BMPs are incorporated into the plans and specifications. Construction, operation, and maintenance costs are considered when selecting permanent Design BMPs so adequate cost is projected and enough funding is allocated. These elements are discussed in SWMP Sections 6 and 8 respectively.

Project-specific BMP selection is an iterative process that begins with initial project planning activities. As the project progresses into detailed design, the PE revisits the BMP selection process. The BMP selection and project design proceed together with a detailed analysis of the highway and drainage facilities. New development and redevelopment projects that create any amount of disturbed soil area are required to include the appropriate DPP BMPs.

New development and redevelopment projects that create 10,000 square feet (highway facility) or 5,000 square feet (non-highway facility) or more of new impervious surface are required to incorporate post construction treatment controls. If a project has no discharge, post construction treatment is not required. Highway facility projects that meet all of the following thresholds are not required to incorporate post construction treatment controls:

- Create less than one acre of new impervious surface;
- Have completely proceeded through Caltrans' PID phase prior to the Caltrans NPDES Permit effective date; and
- Commenced with project construction within five years of the Caltrans NPDES Permit effective date or seven years of completing the PID stage, whichever is sooner.

Caltrans is required by the Caltrans NPDES Permit to submit a list of projects which meet the above criteria to the SWRCB prior to June 30, 2023.

Caltrans may submit a request for an extension to the time criteria in the third bullet above, to the SWRCB Executive Director for review and consideration of approval in coordination with the RWQCB Executive Officer.

These requirements apply to Caltrans capital construction, non-programmed capital construction (see SWMP Section 9.2.1), and encroachment permit construction (see SWMP Section 9.2.2).

5.4.1 Principles for Project Design (C3.10.5)

Caltrans incorporates the following principles for all projects with disturbed soil area, as appropriate:

- Conserve natural areas to the extent feasible, including existing trees, stream buffer areas, vegetation, and soils.
- Minimize the impervious footprint of the project.
- Minimize disturbances to natural drainages.
- Design pervious areas to effectively receive runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.
- Incorporate landscape and soil based BMPs.
- Use climate appropriate landscaping that minimizes irrigation and runoff, promotes surface infiltration, and minimizes the use of pesticides and fertilizers.
- Design landscapes to comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance.⁵ This includes any new (or rehabilitated) planting area provided with permanent irrigation (greater than 2,500 square feet) except for mitigation planting and erosion control projects with temporary irrigation systems.
- Where the California Department of Water Resources Model Water Efficient Landscape Ordinance conflicts with a local water conservation ordinance, Caltrans will comply with the local ordinance.

5.4.2 Incorporation of DPP BMPs into Projects (C3.10.5)

The PE collaborates with other project support professionals involved to select the appropriate DPP BMPs. Table 5-1 lists the DPP BMPs that have been approved by Caltrans for project-specific use statewide. These BMPs will be incorporated, as appropriate, into all projects that create a disturbed soil area. All DPP BMPs will be designed to follow the Professional Engineers Act for engineering work and the Landscape Architecture Practice Act for landscape work. For summary descriptions of the approved Design Prevention BMPs, see SWMP Appendix B, BMP Descriptions by Function.

⁵ Any landscape design that consists of new or rehabilitated landscape irrigation within the project limits (greater than 2,500 square feet per AB 1881) will comply with the California Department of Water Resources Model Water Ordinance by estimating water needs by using the following guidance resources: WULCOLS III (Water Use Classifications of Landscape Species); MAWA (Maximum Allowable Water Allowance) and ETWU (Estimated Total Water Use).

Table 5-1: Design Pollution Prevention BMPs

Consideration of Downstream Effects Related to Potentially Increased Flow
<ul style="list-style-type: none"> • Peak Flow Attenuation Devices • Reduction of Paved Surface (i.e., increase pervious area) • Soil Modification • Energy Dissipation Devices
Preservation of Existing Vegetation
Concentrated Flow Conveyance Systems
<ul style="list-style-type: none"> • Ditches, Berms, Dikes and Swales • Overside Drains, Downdrains, and Paved Spillways • Channel Linings • Flared Culvert End Sections • Outlet Protection/Velocity Dissipation Devices
Slope/Surface Protection Systems
<ul style="list-style-type: none"> • Vegetated Surfaces • Benching/Terracing, Slope Rounding, Reduce Gradients • Hard Surfaces

DPP BMPs may also be used to satisfy post-construction treatment control requirements if they are sized to control the volume of runoff from the 85th percentile 24-hour storm event (or a portion of the volume) and may be used as a flow through treatment devices where appropriately sized for peak flows and velocities.⁶ Highway drainage, flood analysis, and safety must be considered when DPP BMPs are used.

5.4.3 Incorporation of Treatment BMPs into Projects (C3.10.2)

During the project planning and design process, the PE collaborates with other project support professionals to select and incorporate Treatment BMPs to protect water quality by reducing pollutants in the discharge to the MEP for all projects subject to the Caltrans NPDES Permit, and which meet the criteria in Table 5-2.

Table 5-2: Threshold for Implementation of Treatment BMPs into Caltrans Projects⁷

Project Category	Threshold – Net Additional Impervious Area⁸
Non-Highway Facilities (Rest Areas and Vista Points, Park and Ride Lots, Maintenance and support facilities)	5,000 square feet
Highways ^{9,10}	10,000 square feet

⁶ The Lahontan RWQCB has included specific BMP sizing requirements in the Caltrans NPDES Permit, which shall be required in those areas.

⁷ Projects that do not discharge to a surface water body are not required to implement treatment.

⁸ Routine maintenance activities are not required to incorporate Treatment BMPs (see SWMP Section 5.4.3.6 below).

⁹ Exclusions apply to this category, and the definition of “Redevelopment” in SWMP Appendix D describes those exclusions.

¹⁰ Emergency projects are exempt from Treatment BMPs based on the immediate need to provide service and protection for the public.

The approved Treatment BMPs listed in Table 5-3 are considered fiscally reasonable and technically feasible when project site conditions support their use. Caltrans has tested and determined that these BMPs are constructible, maintainable, and effective at removing pollutants in the discharge to the MEP in the highway environment, provided the appropriate siting and design criteria are satisfied. Vector control design is included in accordance with California Department of Health Services and the Caltrans NPDES Permit's requirements and has been included in the Caltrans design guidance for each BMP type, as appropriate. All Treatment BMPs will be designed to follow the Professional Engineers Act for engineering work and the Landscape Architecture Practice Act for landscape work. For a description of the approved BMPs, see SWMP Appendix B (BMP Descriptions by Function).

Table 5-3: Approved Treatment BMPs

Treatment BMP – Low Impact Development [LID]/Soil Based BMPs
Biofiltration: Strips/Swales
Bioretention
DPP Infiltration Areas
Infiltration Devices
Detention Devices (earthen)
Media filters (earthen)
Open Graded Friction Course
Wet Basin
Treatment BMP – Capture and Treat
Multi-Chamber Treatment Trains
Media filters (vault type)
Alternate Media Filter
Dry Weather Flow Diversion
Detention Devices (lined)
Gross Solids Removal Devices
Capture Housing
Traction Sand Traps
Trash Net

Note: BMP lists and categories are dynamic. New and modified BMPs will be identified in the Annual Report.

The Treatment BMPs listed in Table 5-3 will be implemented in a prioritized order subject to site constraints and sized to accommodate the stormwater runoff volumes and rates specified in the Caltrans NPDES Permit. Treatment BMPs will be implemented with the following priority, subject to site-specific technical feasibility:

1. Infiltrating, harvesting, and/or re-using stormwater runoff prior to consideration of treatment and discharge (e.g., biofiltration).
2. Excess runoff volume from an 85th percentile, 24-hour storm event that cannot be infiltrated, harvested, reused, or evapotranspired may be treated by LID-based flow-through treatment devices.

3. If LID-based flow-through treatment devices are not feasible, excess volume may be treated through conventional volume-based or flow-based stormwater treatment devices.

The requirement of “Infiltrate, harvest and/or reuse, and evapotranspiration of stormwater runoff” will be accomplished through the implementation of applicable LID/Soil Based BMPs.

Special consideration is required in areas subject to a TMDL or in a Significant Trash Generation Area (see SWMP Section 13). As such, the prioritized selection criteria listed above may not apply for the following:

- Caltrans projects subject to TMDL requirements
- Caltrans stand-alone projects to construct Treatment BMPs to meet region specific pollution control requirements such as the required minimum waste load reduction (see SWMP Section 13).

Project Engineers should implement approved Treatment BMPs; however, if project conditions prohibit the use of approved BMPs, then District staff may propose incorporating a non-approved BMP as a pilot project (see SWMP Section 4.2).

Caltrans non-highway facility improvement projects will vary in size and function, so modified or non-approved BMPs may be appropriate on a case-by-case basis to meet the post construction treatment requirements. Until additional approved Treatment BMPs are developed that are appropriate for non-highway facilities, project engineers should first consider using the approved BMPs or variations of those BMPs. After these have been considered, the project engineer can propose non-approved BMPs, as a pilot project, using the process described in SWMP Section 4.

5.4.3.1 Sizing Treatment BMPs (C3.10.7)

The volume of water required to be treated by the Caltrans NPDES Permit is referred to as the Water Quality Volume (WQV) calculated based on the 85th percentile 24-hour storm event and the redevelopment impervious area.

For locations where the entire water quality volume cannot be infiltrated, this “excess volume” should be treated by LID based flow-through treatment devices. Where LID based flow-through treatment is not feasible, other volume and/or flow based BMPs will be considered.

To appropriately size the flow through device after the initial WQV is infiltrated, Caltrans developed a flow-based design criteria, to treat the excess volume. Caltrans, the State Water Resources Control Board (SWRCB), and the nine RWQCBs worked cooperatively to establish rainfall intensities to be used to compute Water Quality Flow (WQFs). The agreed upon rainfall intensities for each region are provided in Table 5-4 and will be used to design the flow-based BMPs that are designated to treat the WQF.

Table 5-4: Rainfall Intensities Used for BMP Design Using WQF

Region	Counties/Area	Intensity ¹¹
Region 1 (North Coast)	Siskiyou and Modoc	0.22 inches per hour (in/hr)
Region 1	Trinity, Mendocino, Glenn and Lake	0.27 in/hr
Region 1	Del Norte, Humboldt, Marin and Sonoma	0.36 in/hr
Region 2 (San Francisco)	Entire Region	0.20 in/hr
Region 3 (Central Coast)	Santa Cruz, San Mateo	0.22 in/hr
Region 3	Santa Clara	0.20 in/hr
Region 3	San Benito, Monterey and San Luis Obispo	0.18 in/hr
Region 3	Santa Barbara County and Ventura	0.26 in/hr
Region 4 (Los Angeles)	Entire region	0.20 in/hr
Region 5 (Central Valley)	Lassen and Modoc	0.16 in/hr
Region 5	North of Sacramento and Amador (inclusive); All Areas Below 1,000 feet elevation	0.16 in/hr
Region 5	South of Sacramento and Amador; Below 2,000 feet elevation	0.16 in/hr
Region 5	West side of the Coast Ranges	0.16 in/hr
Region 5	North Sierra Nevadas; 1,000 ft – 4,000 feet elevation	0.20 in/hr
Region 5	South Sierra Nevadas; 2,000 ft – 4,000 feet elevation	0.20 in/hr
Region 5	Sierra Nevadas; All Areas above 4,000 feet elevation	0.24 in/hr
Region 6 (Lahontan)	Inyo and south; Pervious surface areas within the Mammoth Creek watershed	0.16 in/hr
Region 6	Truckee River, East and West Forks Carson River, Mammoth Creek, and Lake Tahoe (Location Specific)	See SWMP Section 13
Region 6	All other areas	0.20 in/hr
Region 7 (Colorado River)	Entire region	0.16 in/hr
Region 8 (Santa Ana River)	Entire region	0.20 in/hr
Region 9 (San Diego)	Entire region	0.20 in/hr

5.4.3.2 Waiver

Projects that have been determined to have a minimal effect on water quality by the RWQCB Executive Officer may have the treatment requirements waived. Caltrans will submit a technical report to the RWQCB explaining why the project has minimal effect on water quality and request the consideration of the waiver by the appropriate Executive Officer.

5.4.3.3 Scope of Design Criteria Applicability for New Development and Redevelopment Projects

Table 5-5 and Table 5-6 describe the assessment of treatment requirements of new development and redevelopment projects of Highway Facilities (that create 10,000 square feet or more of new impervious surface area) and Non-Highway Facilities (with 5,000 square feet or more of new impervious surface area). Table 5-5 applies to highway and non-highway projects that increase their total post-project impervious area

¹¹ See the National Oceanic and Atmospheric Administration website for precipitation frequency data at <https://hdsc.nws.noaa.gov/pfds/>.

by less than or equal to 50 percent, whereas Table 5-6 applies to highway and non-highway projects that increase their total post-project impervious area by 50 percent or more.

Table 5-5: Minimum Post Construction Treatment Requirements for Projects that Increase ≤ 50 Percent of Total Post-Project Impervious Area within Highway and Non-Highway Project Limits

Highway Projects ¹²	Non-Highway Projects ¹²
<i>Hydraulically Separable Flows:</i> Treat only the new impervious surface area and not the entire project	<i>Hydraulically Separable Flows:</i> Treat only the new impervious surface area increase and not the entire project
<i>Hydraulically Inseparable Flows:</i> Treat either the redeveloped area and as much of the hydraulically inseparable flow as feasible (based on site conditions and constraints) and divert any excess flow around the treatment device to prevent overloading. OR Identify treatment opportunities equivalent to the untreated portion of the redeveloped area.	<i>Hydraulically Inseparable Flows:</i> Treat the redeveloped area and as much of the hydraulically inseparable flow as feasible (based on site conditions and constraints) and divert any excess flow around the treatment device to prevent overloading. OR Identify treatment opportunities equivalent to the redeveloped area at an alternative compliance site.
Complete post-construction BMP installations on or before the overall project completion date.	Complete post-construction BMP installations on or before the overall project completion date.

Table 5-6: Minimum Post Construction Treatment Requirements for Projects that Increase > 50 Percent of Total Post-Project Impervious Area within Highway and Non-Highway Project Limits

Highway Projects ¹²	Non-Highway Projects ¹²
Treat the entire impervious area within the project limits OR Identify treatment opportunities equivalent to the untreated portion of the entire impervious area at an alternative compliance site.	Treat the entire impervious area within the project limits
Complete post-construction BMP installations on or before the overall project completion date.	Complete post-construction BMP installations on or before the overall project completion date.

New Impervious Surface (NIS) is the addition of the net new impervious (NNI) and the replaced impervious surface (RIS) with the excluded impervious area subtracted.

Alternative Compliance Site is a BMP location outside the project limits.

Redeveloped Area is the new impervious area plus, where applicable, existing impervious area where impervious materials were removed and the underlying soil or previous subgrade were exposed.

Hydraulically Inseparable Flows will be addressed by treating as much of the impervious drainage area contributing stormwater runoff to the BMP as feasible.

The Caltrans NPDES Permit Attachment C includes an exception for highway facility projects that create less than one acre of new impervious surface, and have an approved PID dated prior to January 1, 2023, and for which project construction has commenced within five years of January 1, 2023, or seven years of completing the PID phase, whichever is sooner. Caltrans will submit a list of the highway facility projects that meet these exception criteria within six months of January 1, 2023. Caltrans may submit a request for an extension on the project construction time criteria to the

¹² Underlined text notes the differences between highway and non-highway requirements.

SWRCB Executive Director for review and consideration of approval in coordination with the RWQCB Executive Officer.

5.4.3.4 Bypass or Diversion around Treatment BMPs

If it is not possible to hydraulically separate the redeveloped area flows from the existing impervious area, then the treatment system will be designed to treat as much of the hydraulically inseparable flow as feasible and will bypass or divert any excess around the treatment device. The bypass or diversion of flows is generally accomplished with flow splitters and overflow weirs or risers for the end of pipe treatment devices.

It is not typically feasible to separate flows in “LID type flow through devices,” as it would conflict with the general design principles of these types of BMPs. Biofiltration strips and swales are designed to infiltrate the WQV and/or treat the WQF and should also be designed to carry larger flood flows without causing erosion.

5.4.3.5 Alternative Compliance Projects Located Within or Outside the Right of Way (C3.10.1)

If Caltrans determines that all or any portion of on-site treatment for a project is infeasible on-site, Caltrans will prepare a proposal for alternative compliance for approval by the SWRCB Executive Director in coordination with the applicable RWQCB Executive Officer. Caltrans NPDES Coordinator must communicate to the RWQCB and SWRCB how the timeliness or expected time frame of its decision will facilitate compliance based on the current Caltrans project delivery process. The proposal will include documentation supporting the determination of infeasibility. Alternative compliance will be based on one of the following options:

- An equivalent rate such as acres of ROW to acres of an alternative compliance project.
- Proportional responsibility calculated from pollutant loadings at the ROW compared to the loadings at an alternative compliance project.
- Caltrans’ land use coverage in the watershed.
- Other methods as approved by the SWRCB Executive Director in consultation with the applicable RWQCB Executive Officer.

Examples of other potential alternative compliance projects include the following:

- Maximizing stormwater treatment design and construction beyond the minimum mandatory post-construction BMP controls.
- Cooperating with municipalities for post-construction BMP controls or cost-sharing projects.

Alternative compliance projects that Caltrans implements outside the project limits will include provisions for the long-term maintenance of such alternative compliance projects.

5.4.3.6 Routine Maintenance

As defined by the U.S. Environmental Protection Agency (USEPA) and the Caltrans NPDES Permit, routine maintenance are those activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. The Caltrans NPDES Permit further defines routine maintenance as the replacement of the structural section, but not when the activity exposes the underlying soil or pervious subgrade.

As defined in the Caltrans HDM and Project Development Procedures Manual, the road surface and base are not part of the subgrade (see Figure 5-1). As such, those portions of a redevelopment project that remove the road surface and base down to the pervious subgrade and/or underlying soil would not be considered routine maintenance.

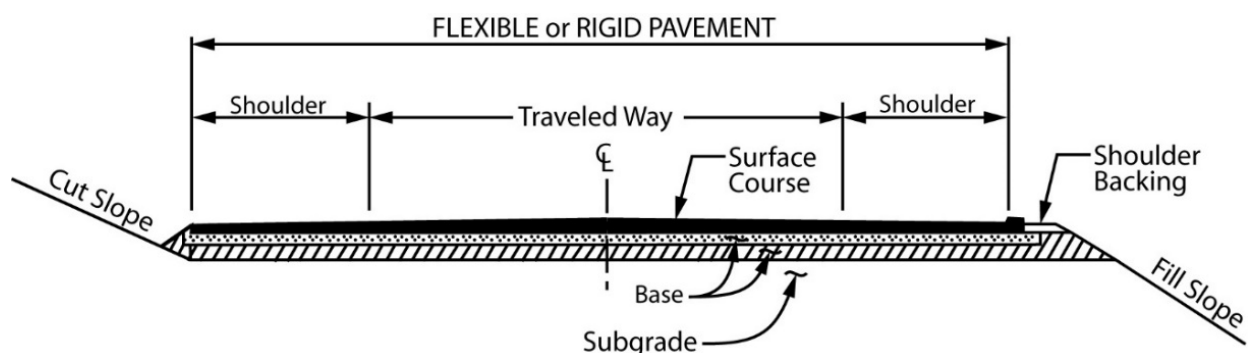


Figure 5-1: Basic Roadway Pavement Layers

Projects such as cold planing, overlays, slab replacements, and other routine maintenance activities do not require Treatment BMPs. Additionally, overlay projects that only require the placement of a thin layer of material on top of the existing shoulder backing would be considered routine maintenance and not subject to treatment requirements, nor should it be considered disturbed soil area. However, if the shoulder backing material is removed down to the erodible soil during the replacement, then this area would be considered disturbed soil area. Projects that remove or disturb the underlying soil but are 100 percent within the existing pavement area do not require Treatment BMPs.

5.4.3.7 Discharge to Sanitary Sewer System

Although rarely used, dry weather flow diversion is a viable stormwater treatment BMP when all of the following conditions are met:

- Dry weather flow is the result of Caltrans activities;
- Dry weather flow is persistent (i.e., present over a significant length of time at a relatively consistent flow rate, or having significant quantities that are periodically developed on-site), and contains pollutants;
- An opportunity for connecting to a sanitary sewer is reasonably close and would not involve extraordinary plumbing, features or construction practices to implement (e.g., jacking under a freeway); and

- The Publicly Owned Treatment Works is willing to accept the flow during the dry season or dry weather.

When discharge to a sanitary sewer system is desirable, the Caltrans Project Development Team works with the District Project Manager on submitting an application to the Publicly Owned Treatment Works. No discharge to a sanitary sewer system is allowed unless a permit has been issued by the Publicly Owned Treatment Works. Sampling, monitoring, and reporting of the discharge will be made as per the Publicly Owned Treatment Works permit requirement(s).

5.5 Stream Channel Stability Requirements (C3.10.9, C3.10.9.1, C3.10.9.2, C3.10.9.3, C3.10.9.4, and C3.10.9.5)

Caltrans will ensure that all new development and redevelopment projects do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. Refer to Table 5-7 for stream channel stability criteria and requirements. Caltrans will use the 13-step risk-based approach contained in the Federal Highway Administration Publication “Assessing Stream Channel Stability at Bridges in Physiographic Regions” (Federal Highway Administration, 2006) to assess lateral and vertical stability.

Caltrans will also analyze the stability of highway structures at stream crossings because failures can occur due to natural and anthropogenic causes. While these causes may or may not have a correlation with the proposed Caltrans activity, a failure could result in a release of sediment and create other water quality impacts. Caltrans will use a risk-based approach because Caltrans facilities (roadways) cross almost every stream in California, but comprise a very small percentage of the drainage area. With limited resources or control of upstream activities, Caltrans will focus on stabilizing its crossing as the most effective means in addressing changes in stream flows. Additionally, Caltrans will address its own discharges through the incorporation of DPP and Treatment BMPs that are required as part of the post construction treatment requirements of the Caltrans NPDES Permit (see SWMP Section 5.4.3).

Table 5-7: Stream Channel Stability Criteria for Design

New Impervious Surface Area	Stream Channel Stability Criteria for Design	Requirements
0-5,000 square feet	None	None
5,000 square feet < 10,000 square feet	Site DPP BMPs as appropriate	Incorporate as appropriate

New Impervious Surface Area	Stream Channel Stability Criteria for Design	Requirements
10,000 square feet or greater and outside threshold drainage area	Site DPP BMPs and Post-Construction Long-Term Operation and Maintenance Plans	Prepare and implement long-term operation and maintenance plans to ensure long-term structural BMPs are maintained per the Caltrans Maintenance Staff Guide or by the manufacturer’s directions (as required) and replaced when necessary. Inspect all BMPs at a minimum of once every two years. Dispose of retained sediments per applicable local, state, and federal acts, laws, regulations, ordinances, and statutes. Inspect all newly installed BMPs and controls within 45 days of installation to ensure the construction and installation is in accordance with approved plans.
10,000 square feet or greater new impervious surface and is within a threshold drainage area	Conduct a “rapid assessment of stream stability at each stream crossing (e.g., pipe, culvert, swale or bridge)”	If rapid assessment results are good or excellent, then stream channel stability analysis of the stream is complete. (Note that highway structures should be checked.)
10,000 square feet or greater net new impervious surface and is within a threshold drainage area	Conduct a “rapid assessment of stream stability at each stream crossing (e.g., pipe, culvert, swale or bridge)”	If rapid assessment results are poor, then an appropriate Level 2 (and, if necessary, Level 3) analyses will be conducted.
10,000 square feet or greater net new impervious surface and is within a threshold drainage area	Conduct a “rapid assessment of stream stability at each stream crossing (e.g., pipe, culvert, swale or bridge)”	If the appropriate Level 2 (and, if necessary, Level 3) analyses indicate that there is no risk to existing or proposed highway structures, implement the requirements for Projects Subject to Post-Construction Treatment Requirements in Caltrans NPDES Permit Attachment C and document the methodologies used, the results, and the mitigation measures suggested as part of the appropriate Level 2 and, if necessary, Level 3 analyses.

New Impervious Surface Area	Stream Channel Stability Criteria for Design	Requirements
10,000 square feet or greater net new impervious surface and is within a threshold drainage area	Conduct a “rapid assessment of stream stability at each stream crossing (e.g., pipe, culvert, swale or bridge)”	If the appropriate Level 2 (and, if necessary, Level 3) analyses indicate that there is an instability risk to an existing or proposed highway structures, other options should be implemented, including, but not limited to, (1) in-stream and floodplain enhancement or restoration, (2) fish barrier removal as identified in the report required under Article 3.5 of the California Streets and Highways Code, (3) regional flow control, (4) off-site BMPs, and, (5) if necessary, project re-design.

After completion of the 13-step rapid assessment, Caltrans will consider:

Additional analyses for stream crossings with poor or fair ratings. Caltrans will determine whether the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures by conducting appropriate Level 2 (and, if necessary, Level 3) analysis (HEC 20 [Federal Highway Administration 2012 or suitable equivalent]). Appropriate Level 2 (and, if necessary, Level 3) analyses may also include portions of a Level 1 analysis because the required rapid assessment is quasi-Level 1 assessment and may need more data inputs depending on the site. Additionally, there may be instances where a stable stream may have an unstable structure that needs repair to protect water quality. For these cases, the methodologies in the HDM for drainage design will be followed. If the results of the appropriate Level 2 (and, if necessary, Level 3) analyses indicate that there is no risk to existing or proposed highway structures, Caltrans will implement the requirements for Projects Subject to Post-Construction Treatment Requirements described in Caltrans NPDES Permit Attachment C and document the methodologies used, the results and the mitigation measures suggested as part of the appropriate Level 2 and, if necessary, Level 3 analyses.

If the results of the appropriate Level 2 and Level 3 analysis indicate that the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures, other options may be implemented. These include but are not limited to in-stream and floodplain enhancement/restoration, fish barrier removal as identified in the report required under Article 3.5 of the Streets and Highways Code, regional flow control, off-site BMPs, and, if necessary, project re-design. It should be recognized that in-stream projects on properties not controlled by Caltrans require extensive permitting by other agencies. These additional requirements may make the overall project infeasible due to additional costs for design and construction from the added requirements and conditions.

5.5.1 Appropriate Level 2 Analysis Scenarios (C3.10.9.5)

5.5.1.1 Stable Stream and Failing Structure

This scenario typically includes a stream crossing through a small culvert that has a corroded invert. The stream is considered stable, but the failing structure requires repair to prevent the erosion of fill and sediment discharge. In this case, the appropriate Level 2 analysis will be to design a repair to the culvert using the HDM criteria. A full HEC 20 Level 2 analysis is not required in this case.

5.5.1.2 Stable Structure Unstable Stream

One possible example of a Stable Structure Unstable Stream scenario is a stream crossing through a robust bridge on a braided desert stream with flashy behavior. The stream is naturally unstable using the rapid assessment method, but the new bridge structure is designed to withstand the migration of the stream. The appropriate Level 2 analysis for this scenario would be to describe how the existing bridge has been designed to withstand the lateral and/or vertical movement of the unstable stream.

5.5.2 Appropriate Level of Analysis (C3.10.9.5)

The appropriate level of analysis and methodology should be determined by a licensed engineer with experience with highway structures, hydraulics methodology (HEC 20 [Federal Highway Administration 2012 or suitable equivalent]), and hydrology. The analysis for a small culvert replacement will be much less than the analysis for the replacement of a bridge on an unstable stream that threatens the structure. The rapid assessment (Federal Highway Administration 2006) does not have to be completed by an engineer, but it must be conducted under the responsible charge of a licensed engineer.

5.5.3 When to Conduct a Rapid Assessment (C3.10.9.5)

Caltrans will conduct a rapid assessment when a highway or non-highway project crosses over a water of the U.S. within the project limits and it has 10,000 square feet or more of net new impervious surface to the Threshold Drainage Area. The Caltrans NPDES Permit mentions other appropriate inspections programs, such as the federally mandated bridge inspection program that may be referenced to document the stability of a stream crossing. Caltrans also has a statewide culvert inspection program that look at culvert conditions and the condition of inlets and outlets.

5.5.3.1 Bridges

The federal highways bridge inspection program includes determination of scour at bridges and the stability of the structure; these may be equivalent inspections of the bridge crossing to determine if stream channel stability is an issue with the stability of the structure.

5.5.3.2 Culverts

The Caltrans culvert inspection program may be an appropriate evaluation to determine the stability of a crossing structure (pipes and culverts) and any deficiencies need repair.

5.5.3.3 Threshold Drainage Area

Highway or non-highway projects that add 10,000 square feet or more of new impervious surface with any impervious portion of the project located within a threshold drainage area must conduct a rapid assessment of stream stability at each stream crossing. If the stream crossing is a bridge, a follow up rapid assessment of stream stability can be coordinated with the federally mandated bridge inspection process, if the inspection is available. Figure 5-2 is a schematic of a threshold drainage area.

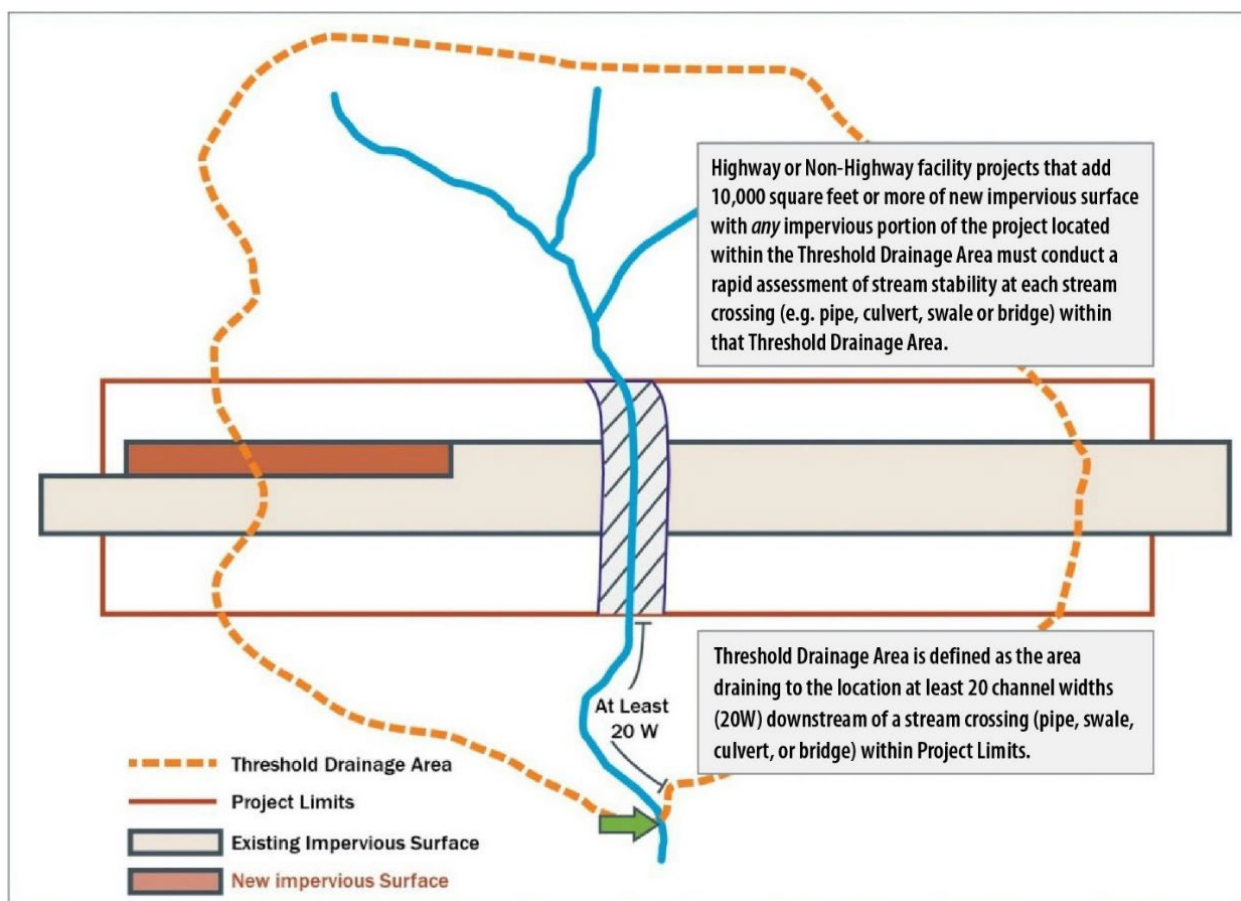


Figure 5-2: Threshold Drainage Area

The net new impervious is cumulative for areas within a project, within the same watershed. For example, if there is a project parallel to a Water of the U.S. and numerous small stream crossings, each small stream crossing should be analyzed with the rapid assessment if the total net new impervious area is more than 10,000 square feet, as well as analyzed for the DPP and Treatment BMP requirements. This would

apply for a safety curve correction project in the same watershed. However, for projects that are scattered throughout a District in multiple watersheds with each location less than 10,000 square feet, then the hydromodification/stream channel stability requirements may not be appropriate. An example is a maintenance pullout project located in multiple counties but combined in one set of plans for contract administration purposes.

If the results of the rapid assessment indicate that the representative reach will not be laterally and vertically stable (i.e., a rating of excellent or good), Caltrans must determine whether the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures by conducting appropriate Level 2 (and, if necessary, Level 3) analyses. Caltrans will follow the Level 2 and 3 analysis guidelines contained in HEC-20 (Federal Highway Administration, 2012) or a suitable equivalent within an accessible portion of the reach. If the results of the appropriate Level 2 (and, if necessary, Level 3) analyses indicate that there is no risk to existing or proposed highway structures, the PE will document the findings.

5.6 Other Considerations

5.6.1 Coordination and Communication with Other Agencies

The project development process includes coordination and communication with affected MS4 permittee(s), local agencies, and regulatory agencies (i.e., RWQCB) as appropriate. These entities have an opportunity to review and comment on project specific related stormwater issues during the environmental review and permitting process, during public hearings, and via special interest regulatory boards or commissions. In addition to project specific coordination, the Caltrans Districts also discuss stormwater related issues on a broader level by participating in watershed groups, municipal water quality teams, and through the completion of public education activities.

5.6.2 Encroachment Permit Projects Treatment Requirements

Projects within the Caltrans ROW that are proposed by other agencies should follow the same requirements as Caltrans (see SWMP Section 9).

5.6.3 Stream Crossing Design Guidelines to Maintain Natural Stream Processes and Fish Passage (C3.11)

Caltrans maintains the “Fish Passage Design for Road Crossings” (Caltrans, 2009) guidance document to be consistent with the latest stream crossing design, construction, and rehabilitation criteria contained in the California Salmonid Stream Habitat Restoration Manual (California Department of Fish and Game, 2010) and National Marine Fisheries Service guidance (NMFS, 2001 and 2023). The document was reviewed for consistency in 2013. In the Year 2 Annual Report, Caltrans will submit a report detailing the review of the guidance and the status of Implementation of the road crossing guidelines.

For applicable projects, if it is infeasible to meet any of the guidelines specified in the “Fish Passage Design for Road Crossings” guidance, Caltrans will prepare written documentation justifying the determination of infeasibility and provide it to the RWQCB for review and consideration of approval.

Per Article 3.5 of the Streets and Highways Code, Caltrans is required to report on the status of its efforts in locating, assessing, and remediating barriers to fish passage to the State Legislature by October 31 of each year. Caltrans will submit a copy of this report to the SWRCB with the Annual Report.

Fish passage projects are based on drainage design (hydraulics and hydrology) and will only be designed by a licensed engineer in responsible charge and in accordance with the design guidelines listed above.

5.6.4 Legal Requirements Outside the Caltrans NPDES Permit

Caltrans’ SWMP addresses stormwater discharges from its highways, properties, activities, and facilities throughout the State, as required by the Caltrans NPDES Permit. However, RWQCBs or other agencies may require separate permits or may have additional region-specific requirements. Caltrans will obtain any consultation, permit, license, or certification as required by federal and state laws and regulations for its projects. The following is a list of permits that may include additional requirements.

1. US Army Corps of Engineers 404: The U.S. Army Corps of Engineers issues permits for work in wetlands and waters of the U.S. Prescriptive BMPs are used to comply with their permits to protect waters of the U.S. and wetlands.
2. RWQCB 401 certification: Under Section 401 of the federal Clean Water Act (CWA), an applicant for an U.S. Army Corps of Engineers Section 404 permit must also obtain a certification from the RWQCBs that the discharge will comply with the state’s water quality standards. In general, it is expected that the certification conditions would not be duplicative of requirements covered in CWA Section 402 included in the Caltrans NPDES Permit and this SWMP, but will instead add any necessary requirements where special project and site conditions require unique BMP applications to protect water quality as determined in the environmental document, or where exempted or conditionally exempted non-stormwater discharges may violate water quality standards.
3. California Department of Fish and Wildlife Section 1602 Stream Alteration Agreement: These agreements are required for any work within a water of the U.S. or state surface waters. Maintenance activities would have to follow any Memorandum of Understanding that Caltrans has with California Department of Fish and Wildlife.

Biological opinions are required from NOAA fisheries and/or California Department of Fish and Wildlife for work impacting federally listed species.

6 Construction (C3.3)

6.1 Overview

This section describes how Caltrans addresses its construction activities to reduce the discharge of pollutants from construction sites administered by Caltrans. Caltrans' goal is to protect water quality throughout the construction process. This section describes plans for meeting the requirements of the Statewide Construction General Permit (CGP), the Lake Tahoe CGP, USEPA's CGP, and the Caltrans NPDES Permit. These procedures and directions ensure pollutant discharges from construction sites administered by Caltrans are:

- Reduced, prevented, or eliminated by either Best Conventional Pollutant Control Technology (BCT) or Best Available Technology Economically Achievable (BAT) when covered by the Statewide CGP, Lake Tahoe CGP, or USEPA's CGP; or
- Reduced to the MEP when covered by the Caltrans NPDES Permit (Attachment C Provision C3.3.1).

This section is organized to:

- Describe NPDES Permit coverage requirements for construction activities administered by Caltrans
- Describe in general, the relevant positions and responsibilities for managing construction activities relating to stormwater and contractor obligations for complying with stormwater requirements
- Describe the common administrative activities relevant to stormwater during project construction
- Broadly describe the inspection protocols used by Caltrans to ensure that BMPs are properly implemented and maintained
- Identify the Construction Site BMPs used by Caltrans
- Describe how Caltrans manages construction projects involving lead-contaminated soils
- Describe how Caltrans complies with RWQCB requirements for managing pavement grindings
- Describe non-compliance reporting requirements

6.2 Permit Coverage for Construction Projects (C3.3.1)

All Caltrans-administered construction projects are covered by one or more of the four NPDES Permits described below.

1. The Statewide CGP (*National Pollutant Discharge Elimination System [NPDES] General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities [General Permit]* Order WQ 2022-0057-DWQ, NPDES No. CAS000002) generally applies to projects that disturb one or more acres of soil or projects that disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres. Statewide

CGP requirements vary between traditional and linear projects, for example, linear projects may not be considered part of a larger common plan of development if separated by a quarter mile or more. Construction activity subject to the Statewide CGP includes clearing, grading, and disturbances to the ground such as trenching, stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

2. *General Waste Discharge Requirements and National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity in the Lake Tahoe Hydrologic Unit, Counties of Alpine, El Dorado, and Placer* (Order No. R6T-2016-0010, NPDES No. CAG616002) (Lake Tahoe CGP):
 - a. Construction sites that disturb less than one acre of total land area, and which are not part of a larger common plan of development or sale.
 - b. Construction activity that results in land disturbance of less than one acre if the construction activity is part of a larger common plan of development or sale that disturbs one or more acres.
 - c. Construction activity that results in land disturbance of one or more acres related to residential, commercial, or industrial development on lands currently used for agriculture or silviculture including, but not limited to, the construction of roads and buildings related to agriculture or silviculture that are considered industrial pursuant to USEPA regulations, such as dairy barns or food processing facilities.
 - d. Construction activity that results in land disturbance of one or more acres associated with linear underground/overhead utility projects (LUP) including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities), underground utility mark-out, potholing, concrete, and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.
 - e. Discharges from construction activities that result in land disturbance of one or more acres associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.
3. The USEPA CGP is applicable when construction projects cross into federal or Tribal land under the following conditions:

- a. Construction project will disturb one or more acres of land or will disturb less than one acre of land but is part of a common plan of development or sale that will ultimately disturb one or more acres of land.
 - b. Have been designated by USEPA as needing permit coverage under the Code of Federal Regulations Sections 40 CFR § 122.26(a)(1)(v) or 40 CFR § 122.26(b)(15)(ii).
 - c. Construction project is located in an area where USEPA is the permitting authority and where coverage under USEPA CGP is available.
4. Construction projects that are not subject to the Statewide CGP, the Lake Tahoe CGP, or USEPA CGP are covered under the Caltrans NPDES Permit requirements to implement Construction Site BMPs to reduce the discharge of pollutants to the MEP.

6.3 Stormwater Management

Each District has a Construction Division that administers construction projects. In addition, as shown in Table 9-1, the division provides oversight of certain construction operations conducted by third parties under an encroachment permit (see SWMP Section 9) or cooperative agreements (typically with local transportation authorities). SWMP Section 2 describes the Stormwater Management key Construction position roles and responsibilities.

As required by the State's Public Contract Code, Caltrans hires contractors to perform highway construction work. Caltrans contract Standard Specifications require the Contractor to manage its work activities in a way that reduces the discharge of pollutants to surface waters, groundwater, and municipal separate storm sewer systems (MS4s). Additionally, the contract Standard Specifications for water pollution control requires the Contractor to monitor and inspect water pollution control practices at the job site and project-related facilities and operations outside Caltrans ROW (i.e., concrete or asphalt batch plants, staging areas, concrete slurry processing or other material recycling operations, equipment and material storage yards, material borrow areas, and access roads).

6.4 Administration Activities

Administrative activities related to stormwater management address both technical issues and specific Caltrans NPDES Permit and CGP (Statewide and Lake Tahoe) requirements. These administrative activities are described below.

6.4.1 Pre-Construction Activities

Activities prior to groundbreaking on construction projects may include:

- Ensuring that proper notifications and Permit Registration Documents (PRDs) have been filed with the SWRCB (in SMARTS) and RWQCB;

- Meeting with the appropriate environmental and stormwater personnel;
- Reviewing the contract requirements for water pollution control; and
- Conducting a pre-construction meeting with the Contractor to discuss required stormwater measures and requirements. Depending on the project's size and complexity, an additional pre-construction conference may be conducted exclusively for discussing stormwater control issues.

6.4.2 Submittal, Review and Authorization of SWPPPs or WPCPs

A Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP) is an implementation plan for addressing temporary impacts of construction activities upon stormwater run-off. The SWPPP or WPCP contains project specific information related to the construction; the basic content of the SWPPP or WPCP is the description of the Construction Site BMPs to be deployed at the project site.

SWPPPs prepared under the Statewide CGP and Lake Tahoe CGP and authorized by the Res must be submitted through SMARTS as part of the required PRDs. SWPPPs prepared for USEPA CGP use the NPDES eReporting Tool, or "NeT" system, to prepare and submit the Notice of Intent (NOI) electronically. For those Operators who want to submit a paper NOI form, USEPA offer the paper NOI form in Appendix H of the 2022 Federal CGP.

The Contractor submits a SWPPP or WPCP completed in accordance with the contract specifications to the RE for review and authorization. If revisions are required, the Contractor submits a revised SWPPP or WPCP. The time frames for SWPPP or WPCP submittal, review, and re-submittal are specified in the contract documents.

6.4.3 SWPPP Amendments or WPCP Amendments During Construction

During construction, changes in conditions of the site may occur that affect the ability of the Contractor to implement the SWPPP or WPCP as initially authorized or the ability of the previously authorized SWPPP or WPCP to meet the objectives for water pollution control. The Contractor submits an amendment to the SWPPP or WPCP to the RE for review and authorization. The RE will review the Contractor's proposed SWPPP or WPCP amendment for completeness and conformance with the revised conditions and give written authorization to the Contractor if the amendment is acceptable.

6.4.4 Construction Project Annual Report

The Contractor prepares a Construction Project Annual Report each year. The RE ensures that the Construction Project Annual Report is electronically submitted by September 1 of each year to the SWRCB for all projects enrolled in SMARTS for more than one continuous three-month period.¹³ The Construction Project Annual Report serves to annually certify project compliance. Management of documentation and thorough record keeping are required to ensure compliance with reporting requirements.

¹³ Lake Tahoe CGP requires reporting by November 30 of each year.

The Construction Project Annual Report must include documentation to support that the monitoring objectives and qualified training have been met. An electronic or paper copy of each Construction Project Annual Report will be kept by Caltrans for a period of three years after project completion.

6.4.5 Project Completion

Before contract acceptance (i.e., releasing the Contractor of any further obligations), the RE must do the following:

- Determine that all unpaved or non-structural surfaces (i.e., open soils) are stabilized in conformance with the contract and meets the CGP (Statewide and Lake Tahoe) final stabilization requirements;
- Require the contractor to remove Construction Site BMPs that are not a part of permanent BMPs; and
- Conduct a walk-through with the appropriate Division of Maintenance personnel per the process described in the Construction Manual.
- Submit the Treatment BMP documentation (for projects with Treatment BMPs) in order to receive an approved Notice of Termination (NOT).

When projects with a SWPPP have been determined to be complete, the RE or authorized designee will submit a NOT through SMARTS. If the project has been active for more than one continuous three-month period, the SWRCB requires submission of a Construction Project Annual Report with the NOT through SMARTS.¹⁴

6.5 Inspection (C3.10.4)

Caltrans' staff and the Contractor's staff perform stormwater inspections on construction sites. These inspections are crucial for ensuring the Construction Site BMPs are properly maintained and functional. The inspections may reveal that additional BMPs are needed or that existing BMPs can be removed; however, site integrity for stormwater pollution prevention must be maintained. In addition, inspections can help in the planning of BMPs for activities not yet implemented and can help in the development of potential amendments to the SWPPP or WPCP. To ensure installation and construction in accordance with approved plans, all newly installed stormwater Treatment BMPs will be inspected within 45 days or before contract acceptance. The following information will be collected on inspection forms during each inspection:

- Date and time
- Location (physical address or geographic information systems location)
- Name of inspector
- Results of inspection
- Photographs that document conditions
- Recommendations

¹⁴ Lake Tahoe CGP defines the reporting period as October 16 of the previous year through October 15 of the current year.

Inspection forms will be uploaded to SMARTS within 60 days of an inspection.

6.5.1 Contractor Inspections (C3.3.4)

Caltrans requires its Contractors to be responsible for inspecting the site. To ensure the proper implementation and functioning of Construction Site BMPs, the Contractor is to regularly inspect and maintain project BMPs.¹⁵ Visual monitoring/inspection will occur as follows:

- Prior to any expected precipitation event
- Prior to a forecasted storm event;
- At least once each 24-hour intervals during any extended storm events;
- After each qualifying rain event;
- Routine weekly site inspection for Construction Site BMP maintenance; and
- Daily visual inspections.

6.5.2 Caltrans Reviews

Caltrans performs quality assurance reviews for construction activities related to stormwater pollution prevention. SWMP Section 2.8 describes the Caltrans Stormwater Quality Assurance Program.

6.6 Construction Site BMPs (C3.3.5)

When defining a strategy to implement temporary erosion and sediment control at a construction site, the strategy must consider drainage flow paths (conveyances and topography), climate, soil conditions, and the type of construction activities anticipated. A construction SWPPP or WPCP is a comprehensive plan that meets the following objectives:

- All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity, are controlled;
- Where not otherwise required to be under a RWQCB permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the BAT/BCT standard (SWPPP projects) or MEP (WPCP projects);
- Calculations and design details as well as BMP controls for site run-on are complete and correct;
- Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed; and

¹⁵ Lake Tahoe CGP Section IX.D specifies inspection and BMP maintenance requirements for construction projects.

- Handling run-on by complete diversion around the construction site, or directing the run-on through the project in a manner that does not add pollutants resulting from contact with the project.
- Successful implementation of Construction Site BMPs for erosion and sediment control, non-stormwater discharges, and waste management is dependent upon the inspection, monitoring, and maintenance practices of the BMPs to ensure functionality and longevity. The Statewide CGP specifies minimum Construction Site BMPs based on the Risk Level of the project. The Construction Site BMPs in SWMP Appendix B (BMP Descriptions by Function) are consistent with the minimum BMP requirements in the Statewide CGP. Projects subject to the Lake Tahoe CGP or USEPA CGP must additionally verify that the minimum BMP requirements of those permits are satisfied.

6.6.1 Specific Commitments

SWMP Appendix B (BMP Descriptions by Function) describes Construction Site BMPs that Caltrans will implement, as appropriate, on construction sites. The selected Construction Site BMPs are chosen to reduce or eliminate pollutants in stormwater discharges.

The individual BMPs designated in SWMP Appendix B as being applicable to a typical construction activity may not necessarily be appropriate for all projects involving the noted activity. There are instances where project and site conditions require deviation from the noted BMPs described in SWMP Appendix B. However, the BMPs shown in SWMP Appendix B are typical of those implemented on a project-specific basis. In addition, Caltrans guidance includes procedures on the design and implementation of effective temporary and construction-stage BMPs consistent with the Caltrans NPDES Permit requirements on environmentally friendly BMPs.

Project and site conditions may allow implementation of other innovative approaches to construction pollution management in addition to those set forth in SWMP Appendix B. Caltrans will continue to encourage innovation on deploying such measures to minimize pollution; however, the innovative measure must be used in specific applications. Information gathered from the use of innovative measures is analyzed and reported in the Annual Report. Through feedback stemming from these efforts, Caltrans expects that the Construction Site BMPs identified herein will continue to evolve and improve in its effectiveness in managing the quality of stormwater discharges.

6.7 Use of Lead-Contaminated Soils (C3.3.2)

For construction projects where Caltrans has received a Department of Toxic Substances Control variance for the reuse of “lead-contaminated soils,” Caltrans will notify the RWQCB in writing at least 30 days prior to contract advertisement to allow the RWQCB to determine if there is a need for the development of a Waste Discharge Requirement. “Lead contaminated soil(s)” are defined in the variance received from the department.

6.8 Pavement Grindings (C3.3.3)

Caltrans will comply with the requirements of the RWQCBs and the Department of Fish and Wildlife, as well as with all state and local regulations, including Titles 22 and 27 of the California Code of Regulations, for the management of pavement grindings generated by Caltrans activities or for Caltrans projects. Caltrans' internal guidance includes the pavement grindings requirements noted in the Caltrans NPDES Permit.

Unless superseded by a RWQCB requirement, Caltrans has a Memorandum of Understanding with the Department of Fish and Wildlife on the use of asphalt pavement grindings. Section 110.11, Conservation of Materials and Energy, of the Highway Design Manual lists the elements of the Memorandum of Understanding.

Per Section 5650 of the State's Fish and Wildlife Code, it is unlawful to deposit pavement grindings into the Waters of the State.¹⁶

6.8.1 Region-Specific Requirements for Pavement Grindings

The North Coast RWQCB established their expectation and requirements for the reuse of asphalt concrete and Portland Cement Concrete pavement grindings in a memorandum to the Caltrans Districts 1, 2, and 4 Directors dated January 5, 2010. Per this memorandum, the North Coast RWQCB will require characterization of the grindings on a case-by-case basis and only permit reuse if the characterization study indicates that the material does not have the potential to degrade water quality. Upon determination that the material does not have the potential to degrade water quality, Caltrans must submit an Engineers Report/Plan for On-site Reuse to the North Coast RWQCB. Caltrans staff must allow at least 60 days' lead-time for adequate review and processing by the North Coast RWQCB. Caltrans staff is to refer to the memorandum from the North Coast RWQCB for specific details regarding their requirements.

The San Francisco Bay RWQCB established their expectation and requirements for the reuse of asphalt concrete and Portland Cement Concrete pavement grindings in a memorandum to the Caltrans District 4 Construction Stormwater Coordinator dated February 8, 2007. Per the San Francisco Bay RWQCB, the reuse of asphalt concrete and Portland Cement Concrete as road base is acceptable without characterization as long as the material is encapsulated under an asphalt concrete/Portland Cement Concrete roadway, which is relatively impervious to infiltration. Additionally, the material must be placed at least five feet above the seasonal high water ground elevation. Reuse of asphalt concrete or Portland Cement Concrete grindings as yard cover at the surface of contractor work yards or in embankments where the material is exposed at

¹⁶ Unless expressly authorized pursuant to, and in compliance with, the terms and conditions of a waste discharge requirement pursuant to Section 13263 of the Water Code, or a waiver issued pursuant to subdivision (a) of Section 13269 of the Water Code issued by the SWRCB or a RWQCB after a public hearing, or that is expressly authorized pursuant to, and in compliance with, the terms and conditions of a federal permit for which the SWRCB or a RWQCB has, after a public hearing, issued a water quality certification pursuant to Section 13160 of the Water Code.

the surface must be reviewed on a case-by-case basis. Additionally, the San Francisco Bay RWQCB may require proof that the placement of asphalt concrete or Portland Cement Concrete grindings will not result in the degradation of water quality (both beneficial uses and numerical limits).

6.9 Non-Compliance Reporting

SWMP Section 16 describes non-compliance reporting requirements.

6.10 Project Completion

On the day that project work is completed in accordance with all the requirements of the Standard Specifications, special provisions, plans, and approved contract change orders, a notification is sent to the District Construction Office recommending acceptance of the contract. The Deputy District Director of Construction or authorized designee issues the “Contract Acceptance” form to the contractor. The same procedure is followed for the acceptance of emergency contracts.

When projects with a SWPPP are complete and meet the final stabilization requirements of the Statewide CGP or Lake Tahoe CGP, the RE or authorized designee will submit a NOT through SMARTS.

Projects with a WPCP are complete when the project is stabilized to the MEP and the “Contract Acceptance” is issued by the Deputy District Director of Construction or authorized designee.

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7 Compliance with the Industrial General Permit (C3.4)

7.1 Overview

The *General Permit for Storm Water Discharges Associated with Industrial Activities* (Order 2014-0057-DWQ, as amended in 2015 and 2018 as of July 1, 2020), otherwise known as the Industrial General Permit (IGP) is an NPDES Permit that regulates discharges associated with nine broad categories of industrial activities as provided in IGP Attachment A. The IGP requires the implementation of stormwater management measures that will achieve the performance standard of BAT and BCT. The IGP also requires the development of a SWPPP and a monitoring plan. The 2018 amendment incorporates the implementation of total maximum daily loads, the new federal Sufficient Sensitive Method rule, and statewide compliance options, which all became effective on July 1, 2020. Through the SWPPP, sources of pollutants are to be identified and the means to manage the sources to reduce, prevent, or eliminate stormwater pollution are described below.

This section is organized to:

- Describe IGP coverage requirements for construction activities administered by Caltrans under the Caltrans NPDES Permit,
- Describe Caltrans procedures for IGP compliance for its activities subject to the IGP, and
- Describe Caltrans requirements for lessees of Caltrans property that conduct activities that are subject to the IGP.

7.2 IGP Compliance for Caltrans Construction Projects (C3.3.4 and C3.5.4)

The Caltrans NPDES Permit does not cover industrial activities at facilities subject to coverage under the IGP. However, in certain construction-related situations, coverage under the IGP will be necessary. For these situations, Caltrans contracts include language requiring the Contractor operating the facility to apply for and operate under the IGP. The contract language and the IGP also require the Contractor to reduce the discharge of pollutants to the extent feasible through implementing BMPs as required under the IGP. Caltrans verifies that proper coverage has been obtained prior to issuing a Notice to Proceed to the contractor. These situations include industrial operations (e.g., batch plants or borrow areas)¹⁷ located within project limits regardless of whether the facility is within or outside of the Caltrans ROW. Compliance with the specifics of the IGP is the responsibility of the Contractor. SWMP Section 11.3 discusses how the contractor pollution awareness training requirements are addressed.

¹⁷ A batch plant is typically a mixing plant for concrete or asphalt established by contractors to facilitate the construction of a project. A borrow area is typically an off-site area and facility for disposal of excess materials, acquisition of necessary borrow materials, to stage equipment, store supplies, and to house contractors offices.

7.3 IGP Compliance for Caltrans Activities

In general, Caltrans' stormwater discharges are regulated by the Caltrans NPDES Permit and it is not necessary to apply for coverage under the IGP. When Caltrans reviews its Facility Pollution Prevention Plans or when new facilities are constructed, an evaluation will be performed to determine if any industrial activities are conducted that are subject to the IGP. If it is determined that industrial activities covered by the IGP are conducted, Caltrans will file for coverage under the IGP for that facility.

7.4 IGP Compliance for Non-Departmental Activities (C3.6)

Some non-departmental activities performed on Caltrans property may be subject to the IGP. Third parties operating under an encroachment permit are required to be in full compliance with the Caltrans NPDES Permit. The Caltrans NPDES Permit states that industrial activities are not covered under it and must be covered under the IGP (Caltrans NPDES Permit Attachment C Section C3.4).

It is the Permittee's responsibility to determine if its activities require coverage under the IGP. If IGP coverage is required, then the Permittee is responsible for full compliance. This includes, but not limited to, inspection, monitoring, and reporting requirements. The Caltrans Office of Encroachment Permits does not provide inspection services for IGP activities.

The Division of Right of Way will evaluate the determination made by the permittee if its activities require IGP coverage. Lessees whose activities are subject to coverage under the IGP are required to register in SMARTS and provide the Waste Discharger Identification Number to Caltrans. It is the permittee's responsibility to meet all applicable requirements of the IGP.

Notice of Non-Applicability: Facilities otherwise subject to the IGP but for which a valid Notice of Non-Applicability has been certified and submitted via SMARTS by the permittee are not covered under the IGP. Permittees who are claiming "No Discharge" through the Notice of Non-Applicability will meet all the eligibility requirements of the IGP.

No Exposure Certification: No Exposure Certification holders are conditionally excluded from some IGP requirements. Permittees shall submit required PRDs through SMARTS to obtain No Exposure Certification coverage. No Exposure Certification coverage is only valid if the condition of "No Exposure" exists and is reasonably expected to continue to exist. Dischargers/Permittees shall electronically certify and submit PRDs for NOI coverage when the condition of "No Exposure" is no longer expected to exist.

8 Maintenance Program Activities and Facilities Operations (C3.5, C3.5.3.1, and C3.10.6)

8.1 Overview

Activities related to ongoing maintenance and repair of the State highway transportation system, including the maintenance of existing Treatment BMPs and activities conducted at maintenance and highway facilities, (e.g., maintenance stations, rest areas, warehouses) that have the potential to discharge pollutants in stormwater runoff are addressed through the application of BMPs. Furthermore, regular inspections of maintenance and highway facilities are performed to confirm that proper measures are implemented. Any Caltrans maintenance-related activities or functions will follow the BMPs as described within this section.

This section describes:

- An overview of the Maintenance and Operations Stormwater Management Program, which is the mechanism for incorporating maintenance BMPs ensuring that they are implemented;
- Inspections of maintenance operations to confirm Maintenance BMPs are properly implemented to reduce the potential for stormwater pollution;
- BMPs required as part of the ongoing repair and maintenance activities for existing transportation facilities within state highway ROW;
- Vegetation Management;
- Slope Stabilization;
- Landslide Management Activities;
- Storm Drainage Systems Maintenance;
- Waste Management;
- Maintenance of Treatment BMPs;
- Management of Division of Maintenance facilities that may impact stormwater quality. Management of all other facilities is described in SWMP Section 8.3;
- BMPs that are part of the ongoing effort to reduce discharges of pollutants transported in stormwater to the extent feasible, and to prevent pollutants from being present in authorized non-stormwater discharges; and
- The inspection program used to assess that maintenance BMPs are implemented and maintained.

8.2 Stormwater Management – Highways (C3.5.3)

The Headquarters Division of Maintenance and District Maintenance Programs are responsible for maintaining Caltrans' highways and appurtenances, including appropriate maintenance of Treatment BMPs to protect water quality.

Caltrans inventories the following information to assist with the planning of maintenance activities related to water quality:

- Slopes Prone to Erosion Inventory
- Storm drain systems
- Treatment BMPs
- Illegal Connection/Illicit Discharge
- Maintenance facility and activity inspections
- Facility Pollution Prevention Plans
- Training

8.2.1 Inspection and Surveillance of Highways

During the course of their roadside activities, Maintenance Supervisors and staff continuously make observations of the highway ROW to identify potential stormwater concerns, such as roadway flooding, damage to slopes, and damaged BMPs. When conditions warrant implementation or repair of BMPs, the Maintenance Supervisor undertakes actions in accordance with the requirements identified in SWMP Section 8.2.3. In addition, Maintenance Supervisors continuously make observations regarding the specific Maintenance BMPs implemented by staff for the type of activity being performed. If appropriate, additional BMPs are implemented to enhance water quality protection.

8.2.2 Trash and Litter Removal

Caltrans Maintenance will report on trash and litter removal activities. Activities include, but are not limited to, road sweeping, public education, and the Adopt-A-Highway program. Caltrans will report and assess current and future activities and will include estimated annual volumes of trash and litter removed. Estimates will be submitted as part of the Annual Report in a summary format by District. Prior years' data will be included to facilitate an analysis of trends. SWMP Section 14 discusses the trash requirements applicable to Caltrans and its implementation strategy.

8.2.3 Maintenance Best Management Practice Requirements

Maintenance performs activities that could adversely impact stormwater and receiving water quality if not performed with the appropriate maintenance BMPs. Maintenance BMPs are implemented in a manner to reduce or eliminate the potential for pollutants to be discharged to the MEP and in accordance with the Caltrans NPDES Permit. Potential pollutants from Caltrans' maintenance activities include petroleum products, sediment, trash and debris, metals, caustic and acidic substances, nutrients, solvents, paint, herbicides, and other materials. Many of these potential pollutants can be prevented from being discharged via stormwater drainage systems by selecting and implementing BMPs appropriate for the activity and task being conducted.

Maintenance activities are grouped into "families" based on crew assignment. These families and associated activities are summarized in Table 8-1. Maintenance activities are scheduled to minimize impacts to water quality. However, conditions do exist that require some activities to be conducted during wet weather such as emergency slide repair or spill cleanup.

The stormwater maintenance guidance provides detailed descriptions of maintenance BMPs and addresses implementation of BMPs during maintenance activities. The maintenance guidance provides a systematic process for selecting appropriate BMPs at the start of a new activity within another family or within the same family. Maintenance BMPs are listed in Table 8-1 and Table 8-2 and summary descriptions of all BMPs are found in SWMP Appendix B. BMP Descriptions by Function. The maintenance guidance provides general and specific BMP options for each specific activity listed in the Maintenance Family. The Headquarters Division of Maintenance and District Maintenance Programs (referred to herein as Maintenance) are responsible for the care and upkeep of state highways.

Table 8-1: Maintenance Families and Related Activities¹⁸

Family Letter	Family Name	Related Activities
A	Flexible Pavement	Maintenance and repair of surface, base, and paved shoulders on all highways with Asphaltic Concrete surfacing.
B	Rigid Pavement	Maintenance and repair of surface, base, and paved shoulders on all highways with Portland Cement Concrete surfacing.
C	Slopes/Drains/Vegetation	Unsurfaced area grading, lateral support repair, replacement, and cleaning of ditches, and culverts. Also included are fence repairs, non-landscaped vegetation management, and repairs and replacement of retaining walls, dikes, and curbs, sidewalks, cattle guards, and other structures.
D	Litter/Debris/Graffiti	All work concerning roadbed and roadside cleanup operations to maintain highway safety and aesthetics.
E	Landscaping	Maintenance and replacement of all vegetative material planted within the highway ROW, including watering, fertilizing, plant replacement, weed control, and miscellaneous work.
F	Stormwater	Maintenance stormwater work, including training, meetings, drains and drainage, roadside stabilization, erosion control, stockpile management, BMP implementation, illicit discharges, maintenance of Treatment BMPs, and contractor management.
G	Service Facilities	Maintenance of service facilities, which includes safety roadside rest areas, vista points, park-and-ride lots, and weigh stations.
H	Bridges	All work performed on structures that provide for passage of highway traffic over, through, or under obstacles and that are assigned bridge numbers by the Office of Structures Maintenance. Work under this family consists of bridge repair, maintenance, painting, and cleaning, including electro-mechanical equipment. Any work covered by an approved Bridge Report.
J	Other Structures	Maintenance, repair, and cleaning of pumping plants, tunnels, tubes, ferries, and docks or slips.

¹⁸ BMP lists and categories are dynamic. New and modified BMPs will be identified in the Annual Report.

Family Letter	Family Name	Related Activities
K	Electrical	All maintenance performed on highway electrical facilities used for control of traffic signal systems, highway, sign lighting systems, and all other related electrical systems.
M	Traffic Guidance	All work necessary to replace and maintain roadway markings on the traveled way. Maintenance and replacement of signs placed on state highways for warning, regulating, and guiding traffic. This family also includes the repair, replacement, and cleaning of guideposts or markers, guardrail and median barriers, and energy dissipaters.
R	Snow/Ice Control	All work in connection with snow removal, drift prevention, and maintenance of snow fences, snow poles, and skid chain fabrication and repair. Maintenance and control of chain control locations and appurtenant signs and gates. Truck haul of snow, opening drains covered by snow and ice, and spring opening of roads closed for the winter. Mechanical and hand sanding and the use of deicing agents are also included.
S	Storm/Major Damage	Patrol activities, as well as repair of both minor and major damage caused by storms or other extraordinary events, such as earthquakes, slides, fires, tidal waves, etc.
T	Support	Repairs, building and ground maintenance, electrical and janitorial activities at District and regional offices. Receiving and issuing of materials and hazardous waste storage, tracking and disposal.

Table 8-2: Maintenance BMPs¹⁹

BMPs	BMPs
Scheduling and Planning Sediment Control - Silt Fence - Sandbag or Gravel Bag Barrier - Straw Bale Barrier - Fiber Rolls - Check Dam - Sediment Trap Storm Drain Inlet Protection Concentrated Flow Conveyance BMPs - Overside/Slope Drains - Ditches, Berms, Dikes, and Swales - Temporary Diversion Ditches Overside/Slope Drains - Ditches, Berms, Dikes, and Swales - Temporary Diversion Ditches Soil Stabilization	Vehicle and Equipment Operations - Vehicle and Equipment Cleaning - Vehicle and Equipment Fueling - Vehicle and Equipment Maintenance Paving Operations Procedures Stockpile Management Water Conservation Practices Potable Water/Irrigation/Non-Emergency Fire Suppression System Flows Storm Drain Stenciling Safer Alternative Products Drainage Facilities - Baseline Stormwater Drainage Facilities Inspection and Cleaning - Enhanced Storm Drain Inlet Inspection and Cleaning Program - Full Trash Capture Devices

¹⁹ BMP lists and categories are dynamic. New and modified BMPs will be identified in the Annual Report.

BMPs	BMPs
<ul style="list-style-type: none"> - Compaction - Wood Mulch - Hydraulic Mulch - Hydroseeding/Hand Seeding - Soil Binders - Straw Mulch - Geotextiles - Riprap Preservation of Existing Vegetation Clear-water Diversions Work in a Water Body Wind Erosion Control Sediment Tracking Control - Stabilized Activity Entrance/Exit - Tire Inspection and Sediment Removal Waste Management - Spill Prevention and Control - Solid Waste Management - Hazardous Waste Management - Contaminated Soil Management - Sanitary/Septic Waste Management - Liquid Waste Management - Concrete Waste Management Material Delivery and Storage Material Use 	<ul style="list-style-type: none"> - Illicit Discharge Detection, Reporting, and Removal - Illegal Spill Discharge Control Treatment System Maintenance - Vegetated Treatment Systems (Biofiltration Swales and Strips) - Infiltration Basins - Detention Devices/Traction Sand Trap Devices - Multi-Chambered Treatment Trains - Wet Basins - Media Filters Vegetated Slope Inspection Snow Removal and De-Icing Agents Stormwater Dewatering Operations (Temporary Pumping Operations) Sweeping and Vacuuming Maintenance Facility Housekeeping Practices

A Maintenance Supervisor is required to conduct regular BMP tailgate meetings a minimum of every ten working days or prior to each new work activity assignment. The Maintenance Supervisors review with staff the applicable BMPs for the work assignment.

8.2.4 Vegetation Management Best Management Practice Requirements (C3.5.3.2)

Caltrans maintains vegetation on roadsides in a manner compatible with the surrounding environment, highway safety, and aesthetics. The vegetation must be controlled to reduce the risk of roadside fires, maintain sight distance, provide safety, and discourage and/or eliminate noxious and invasive weeds. Activities conducted under the Vegetation Control Program include chemical weed control, mechanical weed control, manual weed control, controlled fires (thermal), mulching (cultural), structural treatments, and biological control. Removal of vegetation is generally restricted to a narrow band adjacent to shoulder edges, which is necessary to provide sight distance, protect highway appurtenances such as guardrails and signs, and reduce the threat of fires from disabled vehicles (undercarriage contact) and discarded cigars and cigarettes. Vegetation management practices are designed to provide a safe roadway free from obstructions for the travelling public and keep clear views of safety devices along the roadside.

Caltrans uses integrated vegetation management principles, including manual, mechanical, chemical, cultural, structural, thermal, and biological to:

- Enhance the establishment of appropriate native and adapted vegetation;
- Maximize vegetative cover where feasible and appropriate;
- Apply vegetation control products in a manner to reduce or eliminate pollutant runoff;
- Minimize nutrient runoff by applying nutrients according to established application guidelines;
- Maintain the proper functioning of vegetative Treatment BMPs;
- Conserve or recycle water for irrigation;
- Minimize or eliminate potential erosion and/or sediment loading;
- Minimize the application of chemicals by reducing the need for application of fertilizers and herbicides by using native species and using integrated vegetation management methods for controlling of exotic species; and
- Apply pesticides in accordance with federal/state regulations and product label directions.

Prior to any chemical applications, site-specific conditions are assessed to prevent discharges to the MS4. These include precipitation potential, proximity to water bodies, mobility of the chemical, application methods, fate and transport, and the effects of using combinations of chemicals. Caltrans implements the following BMPs prior to and during any pesticides applications:

1. Adherence to the Caltrans Maintenance Manual Chapter C2 Vegetation Control, requirements from the Department of Pesticide Regulation, and information in the pesticide manufacturer's label.
2. Application of pesticides to hard surfaces such as roadways or sidewalks is avoided whenever possible. Where pesticides must be applied to hard surfaces, care and the appropriate application technology is used to help restrict pesticide application to the target area. No chemical or pesticide shall be sprayed onto any biofiltration T-BMP (including but not limited to biofiltration strip and biofiltration swales). Biofiltration T-BMPs should be maintained through mechanical means only.
3. Pesticides are not applied directly to the storm drain system.

As required by California Code of Regulations (Title 3. Food and Agriculture), Caltrans submits monthly pesticide use reports to the Department of Pesticide Regulations. This department and County Agricultural Commissioners have agreed to accept the updated monthly pesticide use reports provided to the Department of Pesticide Regulations in lieu of the Caltrans NPDES Permit's requirements; however, if a County Agricultural Commissioner requests reporting of violations within 10 business days, Caltrans will comply with said request. These reports are compiled by the Department of Pesticide Regulations and are available online through the California Pesticide Information Portal at <http://calpip.cdpr.ca.gov>. County Agricultural Commissioners as well as the public can access these reports.

The pesticide data that is reported annually includes information about the quantities used for vegetation management during the reporting period by District, type of pesticides, and month of application. In addition, the following information will be included in the Annual Report as per Caltrans NPDES Permit requirements:

- A summary of Caltrans' chemical use including the quantity of chemicals used during the reporting period by name, type, District, and by month.
- An assessment of long-term trends in pesticide usage including a table presenting yearly District pesticides totals by chemical type.
- A comparison of statewide pesticide uses with Caltrans' active ingredient reduction goals.
- An analysis of the effectiveness of implementation of vegetation control BMPs. The analysis will include discussion of improvements to BMP implementation being used or proposed. If no improvements are proposed, an explanation will be included.
- Justification for any increases in the usage of pesticides, and fertilizers.
- A report on the number and percentage of employees who apply pesticides, who have been trained in the Caltrans Annual Pesticide Worker Safety Training, and certified as a pesticide applicator.
- Training materials, if requested by the SWRCB.
- All employees and contractors responsible for pesticide application take part in a comprehensive training program to understand integrated management principles, including proper application of chemicals. The training program for Caltrans staff is described in SWMP Section 11.

8.2.5 Slopes Prone to Erosion and Sediment Discharge

Caltrans has established a program to periodically inspect roadside slopes. Road segments identified as prone to erosion and sediment discharge are prioritized for stabilization. Inspections may be performed by maintenance managers, superintendents, supervisors, landscape specialists, maintenance stormwater coordinators, lead workers, and other maintenance personnel. These inspections are conducted along roadsides once during an established five-year schedule. Roadsides found to be of significant concern are inspected on a more frequent basis depending on site conditions. In addition, all newly completed slopes resulting from construction projects are inspected on a more frequent basis up to one year after project completion.

Caltrans records inspection findings and identifies recommended repairs. Slides and slip-outs encountered during routine surveillance and inspections are evaluated for repair. Recommendations are developed for site-specific remedial measures to maintain slope and soil stability. Remedial measures can range from minor grading or seeding to installation of major slope stabilization systems. A summary of the inspections conducted by each District is submitted with the Annual Report.

The Districts will prioritize stabilization efforts for those slopes most prone to erosion. Prioritization of stabilization efforts is not intended to supersede efforts required for ensuring safety or the preservation of the State Highway System.

The Division of Maintenance, in collaboration with the Headquarters Division of Environmental Analysis (DEA), will maintain its Integrated Maintenance Management System that will contain an inventory of geo-referenced data identifying road segments that are prone to erosion and sediment discharge to control the discharge of pollutants to the MEP. An inventory of vulnerable road segments will be maintained in the District Annual Workplans (DAWPs). Stabilization activities will be reported in the Annual Report (see SWMP Section 18.3). The database will also contain information regarding slope stabilization inspection and repair activities of these slopes prone to sediment discharge. District staff will review the database on an annual basis to ascertain the total number of road segments receiving slope stabilization in a District.

Based upon review of the slopes by District staff, remedial measures are developed. Solutions range from minor grading or seeding to installation of major slope stabilization systems. Minor slope failures (those within the Division of Maintenance budget and operational capability) are incorporated into the District Maintenance schedule for repairs. Contracted services are utilized for major slope stabilization projects.

8.2.6 Landslide Management Activities

The Landslide Management Plan (approved August 26, 2014, currently under revision) includes BMPs applicable to construction and maintenance work associated with landslide-related activities including burn sites. The plan addresses all forms of mass wasting such as slumps, mudflows, and rock falls. This plan was submitted in October 2013 with the Annual Report and included the following:

- Prevention
 - Inspections
 - Landslide Preventative Measures
 - Fire Prevention
- Response
 - Landslide and Burn Area Principal Response Activities
 - Inspection Assessments
 - Notification
 - Mitigation
- BMPs
 - Landslide Management and Burn Site Activities BMPs
 - Inspections
 - Drain/Culvert and Drainage Ditch/Channel Maintenance
 - Roadside Stabilization and Erosion Control
 - Vegetation Maintenance
 - Slide/Slipout Cleanup and Repair
 - Bridge and Structural Pavement Failure Repairs
 - Guard Rail, Sign and Fence Repair and Replacement
 - Maintenance of Waste Disposal Areas
 - Burn Site Management Activities BMPs

8.2.7 Storm Drainage System Maintenance

Potential trash and debris pollutant loadings are eliminated and/or reduced through storm drain inlet cleaning activities. Drainage facilities undergo annual inspection each fall and after major storms to keep them clean and in good repair. The Culvert Inspection Program updates the inventory of drainage systems and their conditions. Waste and debris are removed at half the drainage inlet or catch basin capacity. Drainage repairs or replacement are performed through routine maintenance work, or as a State Highway System Management Plan target.

8.2.8 Baseline Stormwater Drainage Facilities Inspection and Cleaning Program

District personnel inspect stormwater drainage systems and assess the need for cleaning or clearing. Caltrans inspects all urban drainage inlets and catch basins a minimum of once per year and remove all waste and debris when it has accumulated to a depth of 50 percent of the inlet or catch basin capacity.²⁰ This does not preclude a supervisor's judgment to clean with less accumulated material present for highway safety and preservation. The following information will be collected on inspection forms during each inspection:

- Date and time
- Location (physical address, geographic information system location, or post mile range)
- Name of inspector
- Results of inspection
- Photographs that document conditions
- Recommendations

The DEA, in collaboration with other Divisions that use and contribute supplemental data, will develop and maintain a Storm Drain System Inventory. This database will contain geo-referenced data that identifies the location of all storm drain inlets, outfalls, and tributary areas to inlets within urban areas and the following additional areas:

- Critical drainage inlets (as identified by the SWRCB and Caltrans) that discharge directly to an Area of Special Biological Significance (ASBS).
- Critical drainage inlets adjacent to an ASBS (as identified by the SWRCB and Caltrans) that discharge to Waters of the State or Waters of the United States.
- Drainage inlets within areas prone to erosion that are within 200 feet of a sediment-impaired 303(d) water body.

Caltrans will prioritize the cleaning of storm drains based on the following criteria:

- Priority 1: Drainage inlets on highway segments in areas prone to erosion that are within sediment impaired watersheds or ASBS;

²⁰ The term "urban" shall mean located within an "urbanized area" as determined by the latest Decennial Census by the Bureau of the Census (Urbanized Area).

- Priority 2: Drainage inlets on highway segments in sediment impaired watersheds or ASBS;
- Priority 3: Drainage inlets on highway segments in areas prone to erosion

District maps and databases have been developed identifying areas prone to erosion and Environmentally Sensitive Areas.

Drainage inlets that do not meet one or more of the above criteria will be assigned lower priorities for cleaning than those drain inlets that do meet one or more of the above criteria. Type of drainage facility (e.g., self-cleaning drop inlets, catch basins, trash screen) will also be considered when prioritizing a drain for cleaning. These criteria are not intended to supersede efforts required for ensuring safety or the preservation of the State's transportation system.

8.2.9 Storm Drain System Maintenance Waste Management (C3.5.3.4)

Generated wastes from storm drainage system maintenance are disposed of in accordance with applicable federal and state waste management and disposal regulations. Details of Caltrans' waste handling procedures for storm drainage system maintenance will be documented in Caltrans' Waste Management Plan. This plan was submitted to the SWRCB within one year of the effective date of the Caltrans NPDES Permit. The plan includes:

- An inventory of waste storage, transfer, and disposal sites;
- Estimated annual volumes of material; (Maintenance reports on number of instances not on cubic feet of material removed for drain cleaning)
- The source of waste and the physical/chemical characterization of the waste; and
- Existing or planned waste management practices for each waste and facility type.

Waste characterization is not required on a site-by-site basis, but may be evaluated programmatically based on the highway environment, land uses, climate, and eco-region.

Waste and debris, including sweeper and vacuum truck waste, will be managed and reported in accordance with all applicable laws and regulations, including California Code of Regulations Title 27, Division 2, Subdivision 1.

8.2.10 Maintenance of Treatment BMPs

The Construction Stormwater Program will coordinate with the Maintenance and Operations Stormwater Management Program to facilitate transfer of Treatment BMPs to the Division of Maintenance.

Long-term operation and maintenance activities are maintained according to Caltrans maintenance guidance. Maintenance records for Treatment BMPs will be tracked by the Division of Maintenance. Currently, Caltrans does not install proprietary devices as Treatment BMPs. If Caltrans does install a proprietary device as a Treatment BMP, the

manufacturer's recommendation for maintenance will be followed. Caltrans will inspect installed Treatment BMPs at a minimum of once every two years and monitor, and track Treatment BMPs. See SWMP Section 4.6 for additional information regarding BMP Tracking requirements including tracking of maintenance records.

8.2.11 Pavement Grindings

Caltrans will comply with the requirements of the RWQCBs, the Department of Fish and Wildlife, and all state and local regulations, including Titles 22 and 27 of the California Code of Regulations, for the management of pavement grindings generated by Caltrans activities or for Caltrans projects. See SWMP Section 6.8 for details.

8.3 Stormwater Management – Facilities Operations

Most facilities are managed by the Headquarters Division of Maintenance and District Maintenance Programs. Such facilities include, but are not limited to, maintenance stations/yards, equipment shops, and material storage facilities. In addition, other Department Divisions may operate fixed facilities addressed in this section. For example, the Equipment Division maintains Caltrans fleet vehicles and the Procurement Division operates warehouses that may include totally enclosed material storage areas. Types and definitions of Caltrans facilities are provided in the glossary.

For facilities under the Maintenance Division, the positions listed in SWMP Section 2.2.6 are responsible for implementing the Stormwater Management Program within the Districts.

8.3.1 Facility Pollution Prevention Plan (C3.5.1)

The Facility Pollution Prevention Plan describes the activities conducted at a facility and the BMPs to be implemented to reduce or eliminate the discharge of pollutants in stormwater runoff from the facility. Facility Pollution Prevention Plan development/maintenance and maintenance facility inspection and reporting are used to comply with the Caltrans NPDES Permit, SWMP, Caltrans Maintenance Program guidance documents, and the Maintenance and Operations Stormwater Management Program. A copy of the Caltrans NPDES Permit is to be included with each Facility Pollution Prevention Plan.

Caltrans will maintain its inventory of all maintenance facilities. Caltrans will describe the activities at each facility along with the BMPs to be implemented. The maintenance facilities inventory will include the following information:

- Description of the maintenance facility.
- Geo-referenced location of the maintenance facility.
- Pollutants associated with the activities performed at the facility.
- Types of BMPs implemented to reduce or eliminate the discharge of pollutants from the facility that are consistent with the activities performed at the facility.
- The date the maintenance facility's Facility Pollution Prevention Plan was certified and signed.

Additionally, non-maintenance facilities are evaluated to determine which require site specific Facility Pollution Prevention Plans. Caltrans has established a two-pronged effort to address its facilities. First, there are specific facilities that warrant special attention due to their activities and potential to discharge pollutants to the stormwater drainage system or directly to surface water and include all maintenance facilities. For these facilities, Caltrans has prepared Facility Pollution Prevention Plans that will be updated due to any of the following reasons:

- There is a change in design, construction, operation, or site features that may affect the discharge of pollutants to surface water, groundwater, or a MS4;
- If found in violation of any condition of the Caltrans NPDES Permit, or;
- As required by the SWRCB, RWQCB or USEPA.

The second effort is for facilities not required to develop Facility Pollution Prevention Plans. These facilities are required to control discharge of pollutants through implementation of appropriate source BMPs, but documented inspections and monitoring are not required. However, if Caltrans or a RWQCB determines that a non-maintenance facility may discharge pollutants to the stormwater drainage system or directly to surface waters, Caltrans will prepare an Facility Pollution Prevention Plan for that facility.

The position responsible for compliance with an Facility Pollution Prevention Plan, along with the name of MS4(s) and/or water body(s) receiving stormwater discharge from each permanent facility, are documented in the individual Facility Pollution Prevention Plans. Each Facility Pollution Prevention Plan describes the activities conducted at the facility, the BMPs to be implemented to reduce the discharge of pollutants in stormwater runoff from the facility, and the facility inspection requirements. Inspection requirements confirm that BMPs are implemented and maintained as required. Generic Facility Pollution Prevention Plan elements can be used for activities that are performed at more than one facility; however, each facility must be evaluated separately and provided with appropriate site-specific BMPs. Each Facility Pollution Prevention Plan is to include the following:

- All potential pollutants at a given facility;
- Specific BMP(s) selected to control each pollutant source;
- A facility site map showing selected BMPs for implementation;
- Name of the water body (including distance to the water body) or MS4 receiving stormwater discharges from the facility, person responsible for preparation of the Facility Pollution Prevention Plan
- Person responsible for implementing the Facility Pollution Prevention Plan; and
- Date the Facility Pollution Prevention Plan was last revised and certified.

Caltrans has developed Facility Pollution Prevention Plan templates that address the following:

- Facility Information
- Facility Activities
- Pollutant Source Identification

- Control Measures
- Inspection
- Non-Compliance Reporting

8.3.2 Facilities Subject to Facility Pollution Prevention Plans (C3.5.1)

Facility Pollution Prevention Plans are developed for the following facility types owned or operated by Caltrans or located within the Caltrans ROW:

- Maintenance yards/stations;
- Material storage facilities/permanent stockpile locations;
- Equipment repair and assembly facilities;
- Safety roadside rest areas;
- Border protection stations (agricultural inspections stations);
- Commercial vehicle enforcement facilities (weigh stations); and
- Waste or decant storage locations.

This includes all maintenance facilities. Maintenance facilities associated with construction projects do not require Facility Pollution Prevention Plans but are subject to the requirements of the construction contract and the Statewide Construction General Permit (CGP) as applicable.

Facility Pollution Prevention Plans are not required for temporary stockpile locations (in continuous use for less than one year). All temporary stockpile locations will implement the applicable Treatment BMPs determined by the Maintenance and Operations Stormwater Program. Any stockpile location in continuous use for more than one year is deemed permanent and a Facility Pollution Prevention Plan is required.

Caltrans will perform periodic evaluations of all non-maintenance facilities, excluding leased properties, for discharge of pollutants. RWQCBs have the authority to require the submittal of an Facility Pollution Prevention Plan and to require changes in the implementation of the provisions of an Facility Pollution Prevention Plan. Where discharge of pollutants is identified by Caltrans or a RWQCB, a site specific Facility Pollution Prevention Plan will be prepared if required.

8.3.3 Facility Inspections (C3.5.1 and C3.5.2)

An inspection program will be described for implementation and maintenance of maintenance BMPs. If priority pollutant reduction opportunities (e.g., improvements to existing BMPs) exist on-site, those opportunities will be discussed with priority given to sites in sensitive watersheds or at facilities where an existing or potential threat to water quality exists.

The purpose of the inspection program is to

- Identify areas that contribute to, or have potential to contribute pollutants to a discharge of stormwater or authorized non-stormwater associated with the facility activities;

- Implement the Caltrans NPDES Permit and SWMP;
- Determine whether control practices identified in the Facility Pollution Prevention Plans to reduce or eliminate pollutant loadings are adequate, properly implemented, and properly maintained, or whether additional control practices are needed.

The criteria used to evaluate the BMPs during an inspection are defined in the latest Maintenance and Operations Stormwater Program guidance and described in the Facility Pollution Prevention Plan implemented for the facility.

Facility managers or supervisor-level employees, will inspect maintenance facilities used by Caltrans staff in the performance of their activities no less than twice annually to monitor the implementation and adequacy of site BMPs as specified in the site's Facility Pollution Prevention Plan. A report that includes the date of the inspection, the name of the inspector, observations, and recommended corrective actions will be prepared by the facility manager. The District Maintenance Stormwater Coordinator will be notified through a forwarded copy of the inspection report if deficiencies related to compliance with the location's Facility Pollution Prevention Plan or potential Caltrans NPDES Permit violations are found. The District Maintenance Stormwater Coordinator will schedule a follow-up inspection with the facility manager to determine if the necessary corrective actions have been completed and/or if additional resources are needed to complete corrective actions. All follow-up inspections and corrective actions taken will be documented by the facility manager and included as part of the initial inspection report.

Commercial Vehicle Enforcement Facilities and Border Protection Stations are operated within the Caltrans ROW by other State departments.²¹ These facilities will be inspected by District Maintenance Stormwater Coordinators twice annually for BMP implementation and NPDES compliance. The District Maintenance Stormwater Coordinator will prepare the inspection report including the date and time of the inspection, location (physical address or geographic information system location), the name of the inspector, results of inspection, photographs that document conditions, and recommendations. All follow-up inspections and corrective actions taken will be documented by the District Maintenance Stormwater Coordinator and included as part of the initial inspection report. A copy of the report will be kept on-site as an attachment to the Facility Pollution Prevention Plan.

Any illicit discharge inspection and cleanup will follow procedures specified in SWMP Section 10.

Observed instances of non-compliance will be reported in accordance with the procedures provided in SWMP Section 2 and per the Enforcement Response Program.

²¹ See SWMP Section 9.4, Activities Managed Through Leases and Other Agreements

An oversight inspection through independent quality assurance (IQA) reviews are performed on facilities. The following information will be collected on inspection forms during each inspection:

- Date and time
- Location (physical address or geographic information system location)
- Name of inspector
- Results of inspection
- Photographs that document conditions
- Recommendations

Information from the IQA facility inspection forms will be uploaded to SMARTS within 60 days of an inspection. All inspection records will be maintained for a period of three years.

Training programs for maintenance activities and requirements are described in SWMP Section 11.

8.3.4 Best Management Practice Retrofit Program (C3.5.3.1, C3.5.6, C3.10.6, and C3.17)

The Caltrans BMP Retrofit Program includes, but is not limited to, identifying, prioritizing, and either upgrading or replacing existing BMPs. A prioritized list of implemented BMPs to be retrofitted will be developed that lists BMPs at high-risk of failure, due to impacts such as climate change, landslides, age, deferred maintenance, or other causes. In addition, BMPs not providing adequate stormwater treatment, for which correction of design deficiencies or performance deficiencies is needed, or for which Caltrans identifies other needs to be addressed. The prioritization of BMPs also includes those implemented under the SWMP or the following Caltrans NPDES Permit sections:

- Attachment C Section C3.5.3.1 Runoff Management
- Attachment C Section C3.5.3.4 Landslide Management Plan
- Attachment C Section C3.10.6 Post-Construction Long-Term Operation and Maintenance Plans
- Attachment C Section C5.16 Inventory of BMPs

Retrofits will be completed in phases at a rate of two percent per year of the prioritized list starting with the third year after the Caltrans NPDES Permit effective date (and then three percent per year thereafter).

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9 Non-Departmental Activities (C3.6)

9.1 Overview

Caltrans has an oversight responsibility to ensure that all activities performed on Caltrans ROW are in conformance with other sections of this SWMP, the Caltrans NPDES Permit, the Lake Tahoe CGP, the Statewide Industrial General Permit (IGP), and the Statewide CGP. This section describes the practices used by Caltrans to manage stormwater activities of non-departmental entities (third parties) within the ROW. Caltrans manages these activities primarily through the issuance of encroachment permits and other agreements. Often, more than one Division within Caltrans is involved in the stormwater management of non-departmental activities. The potential for significant impacts to the safety and operation of the State Highway System determines the level of oversight responsibility by each Division. This section includes:

- Activities Requiring Encroachment Permits
- Projects Administered by Others
- Encroachment Permit Construction Projects
- Non-Construction Encroachment Activities
- Encroachment Permits Stormwater Management
- Activities Requiring Leases and Other Agreements

9.2 Activities Requiring Encroachment Permits

All entities, except for the following, must obtain an encroachment permit before conducting any activity within, under, or over the Caltrans ROW:

- Contractors under contract with Caltrans and operating within their contract limits,
- Consultants under contract with Caltrans, and
- Local agencies with a delegation of a maintenance agreement operating within their jurisdictional boundaries and within the scope of their maintenance responsibilities.

Depending on the funding and scope of the encroachment activity, the Caltrans encroachment permit may require cooperative agreements or highway improvement agreements with the project or facility sponsors.

For projects that disturb one or more acres of soil, Caltrans requires the third-party entity to file the Notice of Intent (NOI) and seek coverage under the SWRCB's CGP, Lake Tahoe CGP, USEPA CGP or IGP, as applicable, before issuing an encroachment permit for any construction activity either partially or completely within the Caltrans ROW. Caltrans oversight and inspection of non-departmental projects is limited to the portion of the project within the Caltrans ROW. Encroachment permit projects requiring Treatment BMPs generally follow the same requirements as Caltrans projects (see SWMP Section 5.4.3).

Non-Departmental construction projects are divided into two categories: projects administered by others and encroachment permit construction projects. Oversight responsibility for non-departmental construction projects is summarized in Table 9-1. Caltrans also issues encroachment permits for non-construction activities (see SWMP Section 9.2.3). Generally, encroachment permits are issued to the project sponsor upon completion of the design prior to obtaining the Waste Discharger Identification Number. The permit has a no-work clause, meaning the contractor cannot begin any activity until the Waste Discharger Identification Number is obtained. This allows the local entity or developer to use the permit to obtain funding and provide better information to contractors bidding on the project. The contractor is then required to provide the Stormwater Pollution Prevention Plan (SWPPP) and Waste Discharger Identification Number prior to any work being performed.

9.2.1 Projects Administered by Others

Projects that require either a cooperative agreement between Caltrans and a local government, or a highway improvement agreement between Caltrans and a private entity are identified as Projects administered by others. These projects are partially or solely funded by a local or private entity. These agreements require District Design and Construction oversight. Stormwater procedures for all projects administered by others are performed in accordance with this section and SWMP Sections 5 and 6. In addition, these projects are considered for construction compliance evaluation monitoring in accordance with SWMP Section 16.3.

9.2.2 Encroachment Permit Construction Projects

Encroachment permit projects are generally smaller in scope, and most have minimal impact on the highway system. The District Encroachment Permit office is responsible for design oversight of these projects, but does rely upon assistance from Design, Maintenance, Right of Way Divisions among others. Caltrans guidance may specify requirements such as temporary Construction Site, Design Pollution Prevention, or Treatment BMPs to ensure water pollution control is provided within the project. Encroachment permit construction projects are administered in accordance with Section 406 of the Caltrans Encroachment Permits Manual.

For these projects, the permittee is responsible for SMARTS and Caltrans provides oversight.

Table 9-1: Responsibility and Oversight for Non-Departmental Construction Projects

Type of Project	Design Division	Right of Way Division	Construction Division	Encroachment Permit Office Traffic Operations Division	Third Party
Non-programmed Capital Construction Projects Administered by Others	Reviews project for Design and Treatment BMPs ²²	None	<ul style="list-style-type: none"> Establish SMARTS Profile for the purposes of the CGP (CEM-2006), submits Project Registration Documents (PRDs) and NOI²³ Reviews SWPPP Inspects site Verifies NOT²⁴ 	Issues an administrative encroachment permit	<ul style="list-style-type: none"> Prepares SWPPP per Caltrans Guidelines Files NOI Files NOT Files Construction Project Annual Report
Encroachment Permit Construction Activity and LUP	None ²⁵	None	None	<ul style="list-style-type: none"> Verifies NOI²³ Reviews SWPPP Issues the encroachment permit Inspects project²⁶ 	<ul style="list-style-type: none"> Prepares SWPPP per CGP or Lake Tahoe CGP Files NOI Files NOT Files Construction Project Annual Report
Utility relocation under encroachment permit	None ²⁵	None	<ul style="list-style-type: none"> Verifies NOI²³ Inspects the SWPPP Verifies NOT²⁴ 	Issues an administrative encroachment permit	<ul style="list-style-type: none"> Establish SMARTS profile for the purposes of the CGP Inspects site Files NOI and NOT

²² Design BMPs constructed within ROW will adhere to Caltrans SWMP requirements. Third party is responsible for compliance with local MS4 permit requirements for Treatment BMPs outside of Caltrans ROW.

²³ NOI or other applicable notification submitted and WDID issued to Permittee for construction stormwater activities that disturb one or more acres of soil.

²⁴ NOT or other applicable notification submitted and approved by RWQCB for construction stormwater activities.

²⁵ For more complex encroachment permit construction projects, the Encroachment Permit Office may refer Design BMP review to the District Design Office.

²⁶ For more complex encroachment permit construction projects, the Encroachment Permit Office may refer SWPPP review and inspection to the District Construction Office.

Type of Project	Design Division	Right of Way Division	Construction Division	Encroachment Permit Office Traffic Operations Division	Third Party
Air space improvement	None ²⁵	Provides SWD to appropriate DARC ²⁷ Members for approval	<ul style="list-style-type: none"> Establishes SMARTS Profile for the purposes of the CGP (CEM-2006), submits PRDs and NOI Reviews SWPPP Inspects site Verifies NOT²⁴ 	Issues an administrative encroachment permit	<ul style="list-style-type: none"> Prepares SWPPP per CGP or Lake Tahoe CGP Files Construction Project Annual Report

²⁷ District Airspace Review Committee.

9.2.3 Non-Construction Encroachment Projects

Caltrans also issues encroachment permits for non-construction activities, such as Adopt-A-Highway, special events (e.g., parades, sporting events), banners, snow chain installers, commercial signs, land surveys, monitoring wells, filming, traffic control, and utility maintenance or aerial crossings. Based on Caltrans guidance, the District Permit Office may specify BMP implementation requirements based on an assessment of the need for additional stormwater BMPs. Additional BMPs and/or provisions will be required as a condition of the encroachment permit where necessary. If the permit applicant proposes to perform an industrial activity subject to coverage under the IGP, the applicant will be required to obtain coverage before receiving an encroachment permit.

9.2.4 Access to Agricultural Dischargers

Caltrans will provide access to agricultural dischargers as requested to provide reasonable support to the monitoring activities of agricultural dischargers whose runoff enters the Caltrans MS4. Reasonable support includes facilitating monitoring activities, providing necessary access to monitoring sites, and cooperating with monitoring efforts as needed. Caltrans activity does not include actively conducting monitoring or providing funding. Caltrans will require agricultural dischargers to obtain encroachment permits according to established procedures to be allowed safe access to Caltrans ROW. Caltrans will allow access and follow encroachment procedures in establishing sites and conducting monitoring activities and may deny access to sites that may impact traffic flow or safety.

9.3 Acquired Properties for Transportation Projects

Prior to construction of a transportation project, acquired properties may be cleared, demolished, or relocated. This demolition is performed by contractors who are required to comply with the Caltrans NPDES Permit and the substantive provisions of the CGP.

For Caltrans projects, the Division of Right of Way administers properties associated with the development of transportation projects. The Division of Right of Way acquires, maintains, and leases suitable properties to public and private third parties. The Division of Right of Way reviews these properties for compliance with water quality management practices.

9.4 Activities Managed through Leases and Other Agreements

The Division of Right of Way manages both properties being held for future highway construction and excess lands until they are sold. The Division of Right of Way also administers leased properties located on the State Highway System and outside of the State Highway System (i.e., “airspace” property). Individuals or agencies that wish to use these properties must sign a lease or other agreement. These agreements specify standard terms and conditions with which tenants are required to comply, including compliance with stormwater requirements.

Properties held for future construction (undeveloped corridors) and excess lands may have residential and non-residential tenants. Maintenance of residential properties is performed by the tenants or Caltrans' contractors. All Caltrans properties under lease agreement are managed consistent with local MS4s, the Caltrans NPDES Permit, the Lake Tahoe CGP, the Statewide IGP, the Statewide CGP, and the SWMP, where applicable. It is accomplished by requiring tenants, via written agreement, to comply with laws and local ordinances, including those pertaining to stormwater. The Division of Right of Way will ensure that tenants are notified of MS4 and/or SWMP requirements where applicable. Standardized forms used for new leases and rental agreements include such language. Caltrans is limited in its ability to unilaterally revise existing leases. However, as current leases expire, renewals and new leases will include appropriate stormwater compliance language.

Non-residential leases may include commercial, industrial, agricultural, recreational, and other uses. Maintenance of leased non-residential property is the responsibility of the Caltrans lessee. The lessee is also required to comply with laws and ordinances.

Vacant properties outside the operating ROW (such as those held for future construction and excess lands) are maintained by contractors. Unleased properties within the operating ROW (such as vacant airspace properties) are maintained by District Maintenance.

The Division of Right of Way provides printed and/or electronic information about BMPs maintained in Caltrans' Stormwater Guidance Manual to its lessees. Treatment BMP implementation, subject to Caltrans approval, is the responsibility of the tenant. Certain minimum BMPs, required per Caltrans Stormwater Program requirements, will be approved for current and future leased uses.

Facilities managed by other state and federal agencies (Commercial Vehicle Inspection Facilities, Border Protection Stations, federal border patrol stations, etc.), and maintenance activities performed by local government entities are also under written agreement to perform their activities consistent with the Caltrans NPDES Permit, this SWMP and/or local agency's MS4 permit. These facilities will be reviewed for Facility Pollution Prevention Plan need.

9.5 Utility Relocation Activities

Utility companies (or utility contractors) are issued an administrative encroachment permit to perform utility relocation activities. Utility contractors are required to adhere to Caltrans stormwater management requirements, comply with the Statewide CGP or Lake Tahoe CGP requirements as necessary, and implement BMPs to prevent water pollution. Caltrans assigns a utility relocation engineer to coordinate and inspect the utility relocation work. The utility relocation engineer reviews all documents related to the utility relocation work including the utility contractors plan to prevent water pollution. When utility relocation work is performed by a utility company during a construction project, the construction project's RE is the utility relocation engineer.

9.6 Pavement Grindings

Caltrans will require third parties to comply with the requirements of the RWQCBs, the Department of Fish and Wildlife, and all state and local regulations for the management of pavement grindings generated by non-Departmental activities within the Caltrans ROW. See SWMP Section 6.8 for details.

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10 Non-Stormwater Activities/Discharges (C3.7)

10.1 Overview

An additional purpose for the Caltrans stormwater management program is to effectively prohibit non-stormwater discharges to the MS4 and to reduce to the maximum extent practicable pollution caused by wastes associated with non-stormwater discharges. These discharges include accidental spills, substances from illegal connection/illicit discharges (IC/IDs), and illegal dumping. They are considered “illicit” discharges. Illicit discharges are effectively prohibited unless they are authorized by a separate NPDES permit or are conditionally exempt. Other discharges, such as those that are necessary to protect the public, or those that pose no threat to water quality, are considered authorized non-stormwater discharges.

The section addresses:

- Procedures for prohibiting illicit discharges and connections, spill response, cleanup of spills, reporting, and follow-up;
- Plans for monitoring and controlling illicit discharges, including accidental spills, IC/IDs, and illegal dumping;
- Management of authorized non-stormwater discharges; and
- Emergency operations.

10.2 Accidental Spills (C3.7.1)

Accidental spills are illicit discharges resulting from one-time deposits of materials or wastes onto roadways or the ROW, which could threaten water quality by potential discharge to water conveyances. Caltrans notifies the appropriate agencies of reported or discovered spills consistent with applicable California Emergency Management Agency procedures in California Water Code Sections 13271 and 13272.

10.2.1 Highway Spills

Generally, the responsible party (transporter, etc.) is required by state law to report any spill that threatens public health or the environment. When spills are discovered on Caltrans ROW, properly credentialed personnel are mobilized to assess the situation. The agency with jurisdiction assumes authority as the incident commander, generally the California Highway Patrol. These spills are illicit discharges resulting from one-time deposits of materials or wastes. Caltrans is the lead in charge of the cleanup activity unless directed otherwise by the incident commander. All spilled materials are managed to protect public safety and the environment, including water quality. Caltrans coordinates with local health agencies and other local, state and federal agencies (e.g., Department of Fish and Wildlife, U.S. Coast Guard, RWQCB) as appropriate to determine the approach and level of cleanup needed. Depending on the circumstances of the spill, this coordination is made directly or through the California Emergency Management Agency.

10.2.1.1 Authority

Caltrans has the authority to maintain the State Highway System, which includes emergency response to highway spills (Streets and Highway Code, Sections 91 and 92). Emergency highway spill (spill) clean-up operations are initiated when the spill causes an immediate threat to life, the environment, or property, and impacts the travel way. When the spill exceeds the capabilities of Caltrans forces, contractors are called to perform clean-up activities.

10.2.2 Cleanup Activities

Caltrans' District Hazardous Materials Manager within District Maintenance oversees the spill cleanup activity unless directed otherwise by the incident commander (e.g., CHP for highways). Caltrans has trained in-house and contract hazardous response staff with the responsibility to manage and cleanup spills to protect public safety and the environment. Caltrans coordinates with local, state, and federal agencies (e.g., County Environmental Health, County Agriculture, Department of Fish and Wildlife, Coast Guard, RWQCB) as appropriate to determine the approach and level of cleanup needed. Depending on the circumstances or significance of the spill, this coordination is made directly or through the California Emergency Management Agency.

10.2.3 Construction Projects

Accidental spills occurring on a construction project are reported by the RE to the District Hazardous Waste Coordinator, the District NPDES Coordinator, and/or the District HazMat Manager as appropriate. Upon notification, the District Hazardous Waste Coordinator will assess the situation and takes appropriate action(s). Spills are reported and cleanup activities are conducted as outlined in SWMP Section 10.2.

10.3 IC/ID and Illegal Dumping (C3.7.2)

Illegal connections are prohibited as they may carry unauthorized drainage, wastewater, or other illicit discharges to Caltrans' storm drain system from adjacent properties. These connections may carry pollutants into the storm drain system. Illegal connections may be intentional or may be unknown to the property owner. Caltrans has authority over its property, investigates, and resolves illegal connections discovered within the ROW. Resolution may include elimination of the connection, proper permitting, or other appropriate actions.

Illegal dumping is a discharge characterized by one or multiple occasions of intentional dumping of trash, debris, or other liquid or chemical wastes on state highways or facilities. Such activity is prohibited by state and local laws and is enforced by the California Highway Patrol or local law enforcement agencies. Caltrans relies primarily upon the CHP for investigation, surveillance, and apprehension of suspects believed to have illegally dumped wastes within the highway system and other Caltrans facilities.

District Maintenance staff, the District NPDES Coordinator, and other appropriate stakeholders will investigate and resolve reports of suspected IC/IDs. On April 2023, Caltrans updated its procedures and BMPs for discovering, investigating, reporting, and corrective actions, prevention, training and public awareness in the “Illegal Connection, Illegal Discharge (IC/ID) and Illegal Dumping Response Plan,” CTSW-RT-23-999.43.01 as summarized below.

Discovery:

Caltrans field personnel, as part of their routine inspection or maintenance activities, will examine work areas for the existence of suspected IC/IDs and illegal dumping.

The public may report suspected IC/IDs and illegal dumping to Caltrans. Caltrans staff and the public relies upon a readily available web-based reporting system available from Caltrans’ internet home page, <https://www.dot.ca.gov> (via a Maintenance Service Request) and District phone numbers for reporting of suspected IC/IDs. Caltrans will also provide outreach to inform the public that the web link for reporting suspected IC/IDs is available. Caltrans tracks IC/ID and illegal dumping reports from initial notification through resolution.

The District Maintenance Hazardous Materials Manager is to be notified by the Maintenance Supervisor or the Maintenance Stormwater Coordinator if suspected hazardous materials or hazardous waste dumping is observed.

Investigation:

Caltrans staff will investigate IC/IDs and document findings. A field investigation on a confirmed incident is conducted to determine of the source, substance, and duration of the illegal connection or illicit discharge or dumping will be performed and reported to the NPDES coordinator using the Division of Maintenance form MTCE-07.

Reporting:

Caltrans staff investigating confirmed IC/IDs and illegal dumping will report their findings to the District NPDES Coordinator.

When an IC/ID causes an incident as defined in the Caltrans NPDES Permit Attachment G Section G4.1, the District NPDES Coordinator will complete the Incident Report Form (SWMP Appendix A: Incident Report Form), upload each incident report to the Stormwater Multiple Application and Report Tracking System (SMARTS) according to the schedule in the Non-Compliance Notification Schedule provided in Section G4.3 of Caltrans NPDES Permit Attachment G, and inform the RWQCB.

If hazardous materials are known or suspected, the District Hazardous Materials Manager will be notified. Incidents that threaten public health, safety, property, or

the environment and pose a clear and imminent danger requiring immediate action and response shall be reported to the Traffic Management System TMC who will provide notification to the California Office of Emergency Services upon discovery of the incident.

Maintenance staff will also follow the Maintenance Service Request procedures for IC/IDs and illegal dumping reported by the public.

Corrective Actions:

Actions in response to intentional introduction of harmful materials to the storm drain system (acts of terrorism) will be in accordance with Caltrans Emergency Operations Plan.

Actions taken on Highway spills requiring multi-agency response, that cause an immediate threat to life, property or the environment and impacts the traveled way, shall be in accordance with Maintenance Policy Directive Number 0601, the Emergency Highway Spill Clean-up policy and applicable sections of the Maintenance Manual Volume 1, Chapter D5.

Actions taken to remove illicit discharges due to illegal encampments will be in accordance with the Maintenance Policy Directive 1001-R1, Encampment Removal Policy.

Caltrans may immediately remove from any State highway any illicit discharge or illegal connection encroachment.

Removal of illicit discharges consisting of illegal dumping including animal carcasses will be in accordance with the California Streets and Highways Code 91.8 and Caltrans Maintenance Manual Volume 1, Chapter D1.

Progressive enforcement for IC/IDs may include the following actions:

Written Warning – District staff, where applicable, will issue a “Notice of Illegal Discharge and Demand for Correction Action” letter to the property owner where an IC/ID is discovered or to the individual responsible for the illegal discharge of material into the Caltrans ROW where the responsible party’s identity is ascertained.

Removal of Connection/Discharge – District Maintenance staff or Caltrans designee may remove the IC/ID if it has not been corrected within a specified period as indicated in the IC/ID and Illegal Dumping Response Plan.

Other Enforcement Actions – Caltrans is not a typical MS4, such as a city or county, with its own enforcement branch such as police, sheriff, or zoning board. Without its own enforcement branch, Caltrans relies on other agencies (i.e., California Highway Patrol) for enforcement assistance. Caltrans may seek the enforcement assistance of the following jurisdictions to correct an IC/ID: USEPA,

California EPA, city and county environmental departments, city and county law enforcement, and/or municipal MS4s.

Legal Action – Caltrans may pursue legal action, where applicable, to ensure corrective actions are taken to resolve an IC/ID and to recover appropriate costs.

District staff will coordinate as needed for investigation and resolution of an IC/ID. The District NPDES Coordinator will review the IC/ID database on an annual basis for inclusion in the Caltrans Stormwater Management Program Annual Report and to ascertain the number of IC/ID reports, investigations, and abatements that occurred in each District. District staff will use this information to identify and focus its efforts on areas experiencing elevated IC/IDs, and to determine if more frequent training and/or changes to existing curriculum and training materials are needed.

The procedures described above are the basis for the April 2023 Caltrans Procedures and Best Management Practices for Illegal Connection, Illegal Discharge (IC/ID) and Illegal Dumping Response Plan, CTSW-RT-23-999.43.01. This plan includes procedures for investigating reports or discoveries of IC/IDs, remediation or elimination of the IC/ID, and procedures for cleanup.

Maintenance staff IC/ID activities shall be entered as work orders in the Integrated Maintenance Management System under the F6 family problem.

Construction and Encroachment Permits staff shall follow Standard Specification 13-4.03E(2) IC/ID detection and Reporting.

Caltrans will also provide annual training sessions to appropriate District staff on how to implement the IC/ID and Illegal Dumping Response Plan (updated April 2023).

The Division of Maintenance sponsors Caltrans Annual Litter Day each April at the State Capitol in Sacramento. It is an annual media event with sponsors and displays that highlight the need to keep the State's highway system free from the dumping of trash, litter and debris.

Caltrans' Adopt-A-Highway Program provides an avenue for individuals, organizations, or businesses to help maintain sections of roadside within California's State Highway System and raise public awareness. Adopters have District contact staff to report suspected illegal dumping or other noticeable conditions that may indicate an illicit discharge encountered during their roadside clean-up activities.

Caltrans periodically uses freeway message sign displays throughout the state to raise litter and illegal dumping awareness.

10.3.1 Coordination with Local Jurisdictions

Caltrans' twelve District's boundaries overlap with the boundaries of other local jurisdictions, including, but not limited to, law enforcement, fire protection, and city and county MS4 stormwater programs. Stormwater and non-stormwater discharges, as well

as discharges from IC/IDs, often do not occur isolated within a single jurisdiction. A coordinated approach will help identify and resolve IC/IDs. More broadly, Districts will also work with local jurisdictions charged with stormwater management and environmental protection to cooperatively reduce or eliminate the discharge of pollutants to receiving waters.

10.4 Authorized Non-Stormwater Discharges

Authorized non-stormwater discharges are certain categories of discharges not composed entirely of stormwater but which do not pose a threat to water quality. In some cases, they may require the implementation of BMPs. Requirements or exemptions of separate NPDES permits are not addressed in this plan.

10.4.1 List of Conditionally Exempt Non-Stormwater Discharges (C3.7.3)

Unless otherwise identified in SWMP Section 13, this section identifies certain discharges of untreated non-stormwater that pose no threat to water quality and are currently infeasible to eliminate. Caltrans may update this SWMP to include proposed additions to the current list of authorized non-stormwater discharges as Caltrans or the SWRCB identifies them. All additional conditionally exempt non-stormwater discharges proposed by Caltrans would include an analysis and justification to present to the SWRCB for approval. In contrast, if any of the non-stormwater discharges included below is deemed sources of pollutants, by Caltrans or by the SWRCB, the discharge will then be effectively prohibited. The following non-stormwater discharges are authorized within Caltrans ROW and Areas of Special Biological Significance (ASBS) (where noted with an asterisk), provided they are found not to be a significant source of pollution, or where there are appropriate BMPs implemented to minimize or eliminate pollution.

Table 10-1 shows Authorized Non-Stormwater Discharges and addresses agricultural return flows.

Table 10-1: Authorized Non-Stormwater Discharges

Types of Authorized Non-Stormwater Discharges
<ul style="list-style-type: none"> • Diverted stream flows • Emergency firefighting operations* • Hillside dewatering* • Uncontaminated pumped ground water • Flows from riparian habitats/wetlands • Water from crawl space or basement pumps* (crawl space pumps only in Caltrans ROW) • Dechlorinated swimming pool discharges²⁸ • Uncontaminated ground water infiltration to separate storm sewers as defined at the Code of Federal Regulations Section 40 CFR § 35.2005(20) • Irrigation water²⁹ • Minor, incidental lawn watering³⁰ • Naturally occurring groundwater seepage via a storm drain^{31*} • Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff^{31*} • Water line/hydrant flushing²⁸ • Foundation and footing drains* (footing drains only in Caltrans ROW)³² • Air conditioning condensation • Minor, incidental discharges from landscape watering • Rising ground water • Springs • Foundation drains³² • Individual residential car washing • Dechlorinated discharges from potable water sources²⁸

* Conditionally Exempt Non-Stormwater Discharges into Areas of Special Biological Significance

10.5 Other Non-Stormwater Discharges

Discharges associated with utility vaults or underground structures to an ASBS are considered allowable if authorized by the Discharges from Utility Vaults and Underground Structures to Surface Water (NPDES CAG990002). However, these discharges may be considered illicit and prohibited if determined appropriate by the local RWQCB.

All other non-stormwater discharges to ASBS are considered illicit discharges and will be addressed according to the protocols in SWMP Section 10. Any of the exempt discharges to ASBS listed above may be considered illicit and prohibited if it is demonstrated that the authorized discharges contribute to a violation of water quality

²⁸ Discharges must be naturally or chemically dechlorinated.

²⁹ Return flows from irrigated agriculture are not point source discharges and are not prohibited from entering Caltrans' MS4.

³⁰ Lawn irrigation systems must be designed, operated and maintained to control non-incidental runoff.

³¹ Non-stormwater discharges to ASBS are effectively prohibited with limited exceptions (discharges essential for emergency response, structural stability, slope stability, or are naturally occurring).

³² Foundation and footing drains are both authorized non-stormwater discharges within Caltrans ROW and into ASBS.

objectives in Chapter II of the California Ocean Plan or alter natural ocean water quality in the ASBS.

10.5.1 Dewatering Permits Issued by RWQCBs

Caltrans conducts various activities that may require dewatering. Dewatering discharge requirements vary among the nine RWQCBs and they are addressed on a case-by-case basis.

10.5.2 Flows from Emergency Activities

Discharges to water conveyances can result from responding to emergency situations defined in Attachment B of the Caltrans NPDES Permit.

During emergency situations, priority of efforts will be directed toward life, property, and the environment (in descending order). Caltrans will control the pollution threat from their activities to the extent that emergency responsibility allows. BMPs are not required in emergency situations if their implementation interferes with the urgency of firefighting responsibilities. When feasible, BMPs are recommended during emergency firefighting events.

Caltrans will report emergency discharges in the Annual Report.

10.5.3 Other Non-Stormwater Discharges

Caltrans activities that have the potential to generate non-stormwater discharges to State waters include:

- Low threat waste;
- Well drilling water;
- Monitoring well purge water;
- Drainage from boring waste (drill mud or cuttings);
- Water main, storage tank or hydrant flushing water;
- Flows from small dewatering projects;
- Small inert solid waste disposal;
- Cooling water discharges;
- Discharges from utility vaults, manholes, and underground structures.

The above waste or wastewater discharges are not covered by the Caltrans NPDES Permit, and Caltrans will contact the appropriate RWQCB for separate NPDES permit or Waste Discharge Requirements coverage before discharging any of these wastes or wastewater to state water. If these discharges occur regularly on a statewide basis, Caltrans will contact State Water Board staff to obtain any necessary permits.

Table 10-2 lists the existing stormwater BMPs that may apply to the above discharge operations.

Table 10-2: Discharges to Land and Applicable BMPs

Stormwater BMP Category	Water/Observation Well Development Discharge Category	Monitoring Well/Purge Water Discharge Category	Boring Wastes Discharge Category	Water Main/Storage Tank Flushing Discharge Category	Pipeline/Tank Testing Discharge Category	Small Dewatering Projects Discharge Category	Small Inert Solid Waste Disposal Discharge Category	Cooling Discharges Discharge Category
Solid Waste Management	-	-	X	-	-	-	X	-
Concrete Waste Management	-	-	-	-	-	-	X	-
Liquid Waste Management	X	-	X	-	-	-	-	-
Water Conservation Practices	X	-	-	-	-	X	-	-
Dewatering Operations	X	-	-	-	-	X	-	-
Potable Water/Irrigation	X	X	-	X	X	X	-	-
Evaporative Water	-	-	-	-	-	-	-	X
Mud-Jacking and Drilling	-	-	X	-	-	-	-	-
Drilling Mud Disposal	-	-	X	-	-	-	-	-

Table Notes:

X May Be Applicable

- Not Applicable

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11 Training (C3.8)

11.1 Overview

Caltrans ensures its employees are trained in stormwater management concepts. Caltrans also requires its construction contractors to train their employees in stormwater management concepts. Each Caltrans Division regularly provides training sessions, either in person or online. These training sessions are designed to keep employees and construction contractors informed about such topics as:

- Regulatory requirements;
- Causes and effects of stormwater pollution;
- BMPs;
- Lessons learned; and
- Penalties for non-compliance with the Caltrans NPDES Permit.

Caltrans will continue to develop employee training using curricula and materials tailored to specific topics and personnel duties. The training program is evaluated and refined periodically to ensure that the educational messages are both timely and effective.

This section describes:

- The strategy for providing stormwater related training to employees;
- Management and approach of the training program;
- Existing and proposed training modules;
- Training program frequency;
- Training program effectiveness evaluation;
- Other employee outreach;
- Strategy for construction contractors stormwater-related training; and
- Informational exchange sessions.

11.2 Strategy for Employee Training

The Caltrans stormwater training program helps its employees to have the knowledge, skills, and abilities necessary to perform their duties so that they effectively and efficiently implement the stormwater program. The training program will also help employees consistently implement stormwater management practices throughout the state by routinely providing core stormwater training to all functional units. The training program will incorporate both routine training that are geared for introductory topics and information as well as focused training modules that are geared for more advanced topics and information.

11.2.1 Training Program Management and Approach (C3.3.4)

Caltrans' approach for developing and implementing its training program for current and new employees consists of the following:

- Maintain a statewide training database.
- Identify the training requirements and needs for each functional unit.
- Evaluate the existing training to identify modifications and/or new training that may be necessary based on existing and new needs.
- Develop focused training and materials targeted to specific topics, groups within the functional units, or levels of personnel.
- Maintain copies of the training modules and materials in the DEA Water Quality Program library.
- Provide routine and focused training pursuant to the established training frequency.
- Incorporate the use of training evaluations and surveys within each training module.
- Evaluate the effectiveness of the training modules and the overall training program on an annual basis (see below).

11.2.2 Stormwater Training

The training program will provide Caltrans employees with both routine and focused training that generally addresses the following topics (topics may be added or modified as deemed necessary):

- Caltrans NPDES Permit and/or other regulatory requirements;
- Stormwater characteristics and water quality issues;
- Causes and effects of stormwater pollution;
- The roles and responsibilities of individuals, Districts, Divisions and Programs within Caltrans regarding implementation of the SWMP to achieve Caltrans NPDES Permit compliance;
- Activities and practices conducted by Caltrans employees that are or could be sources of stormwater pollution;
- BMPs to be selected and implemented for activities or practices that are or could be sources of stormwater pollution;
- BMPs to eliminate prohibited non-stormwater discharges;
- BMPs for applicable authorized non-stormwater discharges;
- Use of guidelines or other manuals to select and implement BMPs;
- Selection, design, construction, and maintenance of BMPs;
- Lessons learned; and
- Penalties for non-compliance with the applicable NPDES permits.

Caltrans provides an in-person Statewide Stormwater Workshop for stormwater staff to discuss the Stormwater Program objectives, new policy and program changes, program strength and challenges. The Statewide Stormwater Workshops are held annually or as needed.

Caltrans has established five internal statewide Stormwater Advisory Teams (SWATs) that meet quarterly. The Chair of each SWAT is a functional office chief from Headquarters. The purpose of the SWATs is to advise the Chief Environmental

Engineer (CEE) of technical issues of concern within the program and to discuss program strengths and challenges.

Stormwater training modules have been developed for each of the functional divisions in order to provide a comprehensive overview of stormwater pollution prevention concepts and practices and to address the list of topics above. The delivery mechanisms include classroom and field training modules, webinars, and audio-visual presentations posted on websites, as appropriate. As noted above, in order to adapt to evolving stormwater technology and regulations, the module topics in Table 11-1 will be updated, as needed. Table 11-2 shows new topics proposed to train staff on the modifications to the Caltrans Stormwater Management Program.

The District Annual Workplans (DAWPs) will include a list of the pertinent training modules and targeted staff to attend each module. Training sessions held will be documented and include the dates, training course description, and names of attendees present.

Table 11-1: Summary List of Existing Training Modules by Division

Division	Training Module Title	Target Audience
Environmental Analysis	An Introduction to Stormwater	Construction; Encroachment Permits; Environmental Analysis; Equipment; Maintenance; Management; Planning and Design; Right of Way; Stormwater Coordinators; Traffic Operations
Environmental Analysis	Stormwater Quality Fundamentals and Monitoring	Construction; Encroachment Permits; Environmental Analysis; Stormwater Coordinators
Design	Permanent Erosion Control Training	Maintenance; Planning and Design; Stormwater Coordinators
Design	Construction Site BMP Training for Design	Planning and Design; Stormwater Coordinators
Design	Erosion Prediction with Revised Universal Soil Loss Equation (RUSLE2)	Planning and Design; Stormwater Coordinators
Design	Project Planning Design Guidance Training	Planning and Design; Stormwater Coordinators
Design	Stormwater Data Report Training	Planning and Design; Stormwater Coordinators
Construction	Introduction to Construction Stormwater Pollution Prevention Program	Construction; Encroachment Permits; Stormwater Coordinators
Construction	Advanced Construction Site BMPs and Field Applications	Construction; Encroachment Permits; Stormwater Coordinators

Division	Training Module Title	Target Audience
Construction	Water Pollution Control Contract Administration on Construction Sites	Construction; Encroachment Permits; Stormwater Coordinators
Construction	Management of Construction Site Dewatering Operations	Construction; Encroachment Permits; Stormwater Coordinators
Construction	Construction Site Stormwater Monitoring Program	Construction; Encroachment Permits; Stormwater Coordinators
Construction	How to Review a SWPPP and/or WPCP	Construction; Encroachment Permits; Stormwater Coordinators
Construction	Construction Stormwater Refresher	Construction; Encroachment Permits; Stormwater Coordinators
Maintenance	Maintenance Stormwater for Supervisors, Superintendents and Managers (refresher)*	Equipment; Maintenance; Stormwater Coordinators
Maintenance	BMP Tailgate	Equipment; Maintenance; Stormwater Coordinators
Maintenance	Stormwater Management for Maintenance Activities (refresher)*	Equipment; Maintenance; Stormwater Coordinators
Maintenance	Stormwater Management for New Maintenance Employees	Equipment; Maintenance; Stormwater Coordinators

* Refresher courses are attended by staff as needed but no less than every four years.

Table 11-2: Summary List of Proposed Training Modules by Division

Division	Training Module Title	Target Audience
Construction	Stormwater Best Management Practices Training Videos	Construction; Encroachment Permits; Stormwater Coordinators
Construction	Construction General Permit Qualified SWPPP Developer/Qualified SWPPP Practitioner (QSP) Caltrans-specific Training	Construction; Encroachment Permits; Stormwater Coordinators
Maintenance	Facilities Pollution Prevention Plan (FPPP) Development and Implementation	Equipment; Maintenance; Stormwater Coordinators
Maintenance	TBMP Inspection, Maintenance and Repairs	Equipment; Maintenance; Stormwater Coordinators
Maintenance	Solid and Liquid Waste Management – Handling, Disposal and Reporting	Maintenance; Environmental Analysis; Stormwater Coordinators
Traffic Operations	Stormwater Management for Permit Writers and Inspectors (refresher)*	Encroachment Permits; Planning and Design; Construction; Stormwater Coordinators

Division	Training Module Title	Target Audience
Right of Way	Stormwater Management for Right of Way Agents— Introduction module	Right of Way Stormwater Real Property Services
Right of Way	Stormwater Management for Right of Way Agents— Industrial Assessment module	Right of Way Stormwater Real Property Services
Right of Way	Stormwater Management for Right of Way Agents— Commercial Assessment module	Right of Way Stormwater Real Property Services
Right of Way	Stormwater Management for Right of Way Agents— Residential Assessment module	Right of Way Stormwater Real Property Services
Right of Way	Stormwater Management for Right of Way Agents— Demolition module	Right of Way Stormwater Real Property Services

* Refresher courses are attended by staff as needed but no less than every four years

11.2.3 Training Program Frequency

Comprehensive introductory courses will be targeted to new employees and other employees that did not receive training in their first year. Training will be repeated on an annual basis, often more frequently during the SWATs. If an administrative or field non-compliance incident is reported to SMARTS, the staff involved should be required to participate in training or a training refresher and annual reporting.

11.2.4 Training Program Effectiveness Evaluation

As a part of the Annual Report, Caltrans will evaluate the effectiveness of the training program. The evaluation typically includes a summary of the training modules conducted during the reporting period, which may include:

- Estimated number of employees in each Division;
- The name of the training module;
- The date and location of training;
- Number of training attendees;
- Evaluation results; and
- Pre- and post-survey results.

A summary of the evaluation will be provided along with any recommendations to revise the training program, if necessary, to ensure it remains effective. In addition, the training modules, materials, and/or DAWPs will be updated as necessary based on the evaluation.

11.2.5 Other Employee Outreach

Caltrans distributes informational bulletins to its staff on an as needed basis. The purpose of these bulletins is to provide up-to-date information about new and proposed water quality regulations, agency guidance, general permits, water quality plans, and other related issues that affect implementation of the Caltrans NPDES Permit.

11.3 Strategy for Construction Contractor Training

Caltrans ensures that the construction contractors have a designated Water Pollution Control (WPC) manager that has the appropriate qualifications.

For projects covered by the Statewide Construction General Permit (CGP) or Lake Tahoe CGP, the Water Pollution Control manager must be a Qualified SWPPP Developer (as defined by the CGP).

For projects that require the development of a Water Pollution Control Plan (WPCP), the Water Pollution Control manager must be either a Qualified SWPPP Developer or a Qualified SWPPP Practitioner (as defined by the CGP).

Caltrans' contract documents require that contractor employees must receive initial water pollution control training before starting work at the job site. The Water Pollution Control manager is responsible for ensuring that contractor employees have current water pollution control training. This training is tracked at the project level. The training requirements include the following:

- Water pollution control rules and regulations,
- Incident reporting and notification requirement under Table 18-3 footnote 34,
- Implementation and maintenance for:
 - Temporary soil stabilization,
 - Temporary sediment control,
 - Tracking control,
 - Wind erosion control,
 - Material pollution prevention and control,
 - Waste management, and
 - Non-Stormwater management including identification of IC/IDs.

Contractor personnel that are project managers, supervisory personnel, subcontractors, and employees involved in water pollution control work must also conduct weekly training meetings covering:

- Deficiencies and corrective actions for water pollution control practices,
- Water pollution control practices required for work activities during the week,
- Spill prevention and control,
- Material delivery, storage, usage, and disposal,
- Waste management, and
- Non-stormwater management procedures.

Training for personnel who collect water quality samples must include:

- Construction Site Monitoring Program review,
- Health and safety review, and
- Sampling simulations.

Caltrans' contract documents also require the contractor to submit a Stormwater Annual Report. The Stormwater Annual Report will include documentation of training for individuals responsible for the following:

- Permit compliance
- BMP installation, inspection, maintenance, and repair
- Preparing, revising, and amending the SWPPP

Caltrans has made its stormwater BMP training videos regarding stormwater BMP installation and maintenance available to contractors for their use. The series of self-paced interactive training videos are designed to improve construction staff's understanding of the construction stormwater program, temporary construction stormwater BMPs, and construction stormwater compliance activities.

11.3.1 Informational Exchange Sessions

Caltrans may hold informational sessions for construction contractors to raise their awareness and understanding of Caltrans procedures and protocols for complying with the CGP, and Lake Tahoe CGP as well as the Caltrans NPDES Permit. Caltrans uses two types of informational exchange sessions to describe stormwater pollution prevention concepts and practices and to explain techniques for preparing SWPPPs and WPCPs for construction activities.

Informational Exchange #1, Caltrans NPDES Permit Compliance Requirements, and Pre-Bid Meeting: Pre-bid meetings may be conducted on select projects. The Project Engineer provides general information to construction contractors regarding the requirements in the Caltrans NPDES Permit and the SWMP that apply to the subject project (i.e., the project on which the contractors are considering submitting bids). Topics to be discussed include environmental commitments and permits, and water pollution control requirements.

Informational Exchange #2, Caltrans NPDES Permit Compliance Requirements, and Pre-Construction Meeting: Caltrans contract documents require the contractor to attend a preconstruction meeting with the resident engineer. One of the topics discussed at the preconstruction meeting is water pollution prevention and the SWPPP or WPCP requirements for the project. Preconstruction meetings include the resident engineer, District Construction Stormwater Coordinator, contractor's superintendent, subcontractors, and specialists. Caltrans will also notify the appropriate RWQCB of the pre-construction meeting to allow a RWQCB representative to be at the meeting to review and discuss the water quality issues relating to the construction project. The contractor is advised to submit their SWPPP or WPCP at the meeting (or prior to the meeting).

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12 Public Education and Outreach (C3.9)

12.1 Overview

The Caltrans statewide public education campaign is titled “Let’s Change This to That”.

The goal of this campaign is twofold:

- 1) Educate Californians about the sources and pathways of stormwater pollution (with a focus on trash/litter) to the State’s waterways, and the impact of stormwater pollution on the quality of receiving waters, and
- 2) Change behaviors and habits of the traveling public to reduce litter, trash, and other stormwater pollutants.

The campaign aims to change public behavior through public education about how their actions can protect and preserve receiving waters by reducing the transportation of multiple pollutants via surface water flow.

The purpose of the project is to develop and execute a statewide campaign including collecting the quantitative data to demonstrate their impact, and to influence positive behavior changes with the general public. This cohesive and integrated public relations, advertising and marketing campaign will issue information, influence behaviors and attitudes, create awareness, interest, understanding, support, and motivate the public to take action and change behaviors in ways that will lead to improving water quality in California’s streams, rivers, lakes, and coastal waters.

The public education campaign lays out an approach to behavioral and market research, social marketing, advertising, public relations, public outreach, and gathers quantitative data to gauge effectiveness.

Caltrans may partner with other organizations to implement the public education campaign and continues to seek opportunities to participate in public outreach and education activities with other MS4 permittees.

12.2 Research and Initial Implementation of the Public Education Plan

The campaign held a series of focus groups. The information gathered formed the foundation for all the public education conducted. Caltrans’ statewide public education program is designed to increase the public’s awareness of stormwater quality management and emphasize a message of individual responsibility. The program emphasizes pollution prevention and pollutant source reduction. It incorporates a variety of methods (e.g., billboards, public service announcements, paid advertisements, strategic partnerships, social media, and special events) to educate the public about the importance of managing stormwater and to inspire a change in public behaviors.

regarding the release of potential pollutants (e.g., litter, spilled loads, and vehicular leaks) on Caltrans properties and in general.

12.3 Public Education Strategy

Caltrans partners with various organizations at both the state and local levels. The campaign will focus on the six behaviors of concern and on motivating the public to change those behaviors. The campaign will also focus on education of the general public to modify behavior and communicate to commercial and industrial entities whose actions may add pollutants to Caltrans' stormwater. Joint public education initiatives are continuously evaluated to maximize use of educational materials developed from Caltrans' public education research.

Caltrans' statewide campaign and outreach efforts will expand to include target pollutants in given RWQCB boundaries. At the District level, outreach programs for public education are described in the DAWPs. A consistent message is applied statewide, and specific content may vary at the District level to align also with RWQCBs.

District NPDES Coordinators coordinate with their District's Public Information Officer to educate the public about stormwater pollution. Specific audiences, such as businesses, industry groups, community groups, and environmental groups are best reached using in-depth, targeted materials disseminated through newsletters, publications, social media, and event-oriented printed materials.

Numerous special events occur in communities throughout California. Caltrans' presence at these events will reach various target audiences within the general public, in addition to business, industry, community, and environmental groups. Examples of major community events for Districts to target are beach/waterway cleanups, workday events, fairs, and Earth Day and Coastal Cleanup events.

12.4 Use of Mass Media

Caltrans communicates public education through various media markets to educate the public on the importance of water quality. The following component options may be considered in the implementation of the statewide campaign, which may include billboard signs, newspaper advertisements, mall and airport signs, trade publications, bus wraps, and public service announcements (PSAs) on radio. Emerging new media markets that may be appropriate for advertising include digital billboards, web advertising, mobile devices, and digital, paid, and organic social media.

Table 12-1 summarizes a complete list of public education strategies Caltrans uses or can use to deliver its stormwater awareness message.

Table 12-1: Potential Public Education Strategies

Public Education Strategies
Coordination Efforts <ul style="list-style-type: none"> • Coordinated Events • Local and Regional Events • School Programs • Speakers Bureau Presentations
Community Events <ul style="list-style-type: none"> • Bring Your Child to Work Day Events • Creek Week Events • County Fairs • Beach Cleanup Events • City and County Cleanup Events • Community Science Fairs • Earth Day Celebrations • Environmental Awareness Events • California State Fair • Water Awareness Events
Media <ul style="list-style-type: none"> • Information on Stormwater Research • Fact Sheets and Guidance Documents • Media Packages • Billboard Signage • Newspaper Advertisements • Stormwater Program Brochures • Stormwater Public Education • Posters • Trade Publications • Public Service Announcements • Social Media
Press Releases <ul style="list-style-type: none"> • Public Transportation Signage • Broadcast Radio • Social Media • Internet and websites

12.5 Clean California

Clean California is a special initiative to remove litter, create jobs and beautify California and has a broader separate Public Education Campaign. Clean California makes significant investments in litter collection, community engagement and education to ultimately transform unsightly roadsides into spaces of pride for all Californians. Since it is a statewide effort, potential projects are considered in each Caltrans District with nearly a third of the funding directed to cities, counties, tribes, and transit agencies to clean local streets and public spaces. Therefore, Clean California also has a stormwater component since stormwater is identified as a conveyance of trash. Clean California is a three-year initiative, with completion of projects planned by June 30, 2024. The education campaign seeks to change public attitudes and behaviors toward litter and includes digital, earned media and advertising components as well as direct government

and community engagement. The campaign began in July 2022 and will run through June 2025.

12.6 Public Participation and Outreach Forums

12.6.1 Adopt-A-Highway Program

The Adopt-A-Highway program (<https://dot.ca.gov/programs/maintenance/adopt-a-highway>) is a cooperative program between organizations in which volunteers collect trash along the highways and receive recognition for their contribution to keeping the environment and highways clean. As part of the program, the Districts coordinate and establish strong partnerships with local organizations, giving individuals, community groups, companies, businesses, and other organizations the opportunity to clean up and beautify California. Adopting a stretch of California highway roadside is a way for these organizations to promote civic responsibility, community pride, and camaraderie while helping to improve the environmental quality along California highways. Participants agree to remove litter, plant and establish seedlings, trees and shrubs, and maintain wildflowers, remove graffiti and control vegetation. Adopt-A-Highway signs are installed to identify the participant and let the public know that the section is being maintained by other than state forces. The signs are located within each adopted segment as directed by Traffic Operations. Upon project completion, each participating group is recognized with a Certificate of Appreciation. A report on trash and litter collection activities associated with the Adopt-A-Highway program is included in the Stormwater Management Program Annual Report.

12.6.2 Partnerships

Caltrans' stormwater campaign will form paid and non-paid partnerships with organizations to improve water quality. The intent of these partnerships is to provide collaborative efforts statewide. Caltrans has established a Technical Advisory Team which includes regulators and nonprofit organizations to help direct campaign efforts. The program material will be designed with the intention that local agencies and other stakeholders can readily integrate the message into their own campaigns. Various organizations have used the previous campaign message on their materials.

12.6.3 Websites

Caltrans has an extensive Internet website (<https://dot.ca.gov/programs/environmental-analysis>) that includes information about the Stormwater Management Program, information related to the BMP development process, construction, and maintenance activities and links to key related sites.

Clean California's "Let's Change This to That" campaign materials are posted on a dedicated website (<https://cleancalifornia.dot.ca.gov/resources>).

Information about Caltrans' construction activities are provided on the Construction Department's website (<http://dot.ca.gov/hq/construc/consMap/conskml.php>).

12.7 Public Participation Program Progress Report

Caltrans submits a Public Education Program Progress Report each year as part of the Annual Report.

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13 Total Maximum Daily Loads

13.1 Regulations Summary

Total maximum daily load (TMDL) requirements are developed by the RWQCBs, State Water Resources Control Board (SWRCB), or U.S. Environmental Protection Agency (USEPA) pursuant to state and federal requirements to attain the water quality standards for a specific water body. Water Quality Control Plans, also known as Basin Plans, set standards for surface and ground water in the Regions. These standards are comprised of designated beneficial uses for surface and ground water, and numeric and narrative objectives necessary to support beneficial uses and the state's anti-degradation policy. A TMDL specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and allocates pollutant loadings to point and non-point sources. Caltrans will implement a consistent baseline approach statewide to address TMDL compliance through its Districts, who are responsible for participating in the development and implementation of plans for stakeholder participation to meet the TMDL requirements for a given water body or watershed. Compliance with the Caltrans NPDES Permit is planned to be achieved by treatment of Caltrans stormwater discharges either within or outside of the Caltrans Right of Way (ROW). This could be achieved through installing structural BMPs and non-structural BMPs, cooperative opportunities, and cooperative grant programs. See Caltrans NPDES Permit Attachments D, F, G, and the Time Schedule Order for more information on TMDL implementation and reporting requirements (SWRCB 2022c).

13.1.1 California Regulations

The Dickey Water Pollution Act (Dickey Act) was enacted in 1979 in response to water-borne disease outbreaks, recreational water degradation, rapid war-time industrial development, and population growth. The Dickey Act created the California State Water Pollution Control Board to set statewide policy for pollution control and coordinate the activities of state agencies and political subdivisions that controlled water pollution. In addition, nine Regional Water Pollution Control Boards were established by the Dickey Act to oversee and enforce pollution abatement within their region. The State Water Pollution Control Board was renamed the State Water Quality Control Board in the 1960s. Furthermore, the SWRCB was established through statutory changes that were enacted in 1967 through a merger of the State Water Quality Control Board and the State Water Rights Board. Afterwards, a panel of industrial, agricultural, state, and local government stakeholders were convened to identify revisions to existing water quality laws. The proposed amendments were approved as California's Porter-Cologne Water Quality Control Act that was enacted in 1969 to establish a framework for establishing water quality policies.

13.1.2 Federal Regulations

The federal Clean Water Act (CWA) (33 United States Code §1251 et seq.) was initially enacted in 1948 as the Federal Water Pollution Control Act, and then underwent significant expansion, reorganization, and began the use of its current title in 1972.

Through the authority granted in the CWA, the USEPA enforces these regulations in the states, or it delegates implementation and enforcement authority to states (i.e., California through the SWRCB). If water bodies are impaired and the USEPA does not approve of the state's TMDL, the USEPA must develop a replacement TMDL for water bodies and/or pollutants. Upon CWA enactment, the SWRCB developed new policies, set standards, oversaw implementation, and enforced those policies when necessary in compliance with CWA and Porter-Cologne Water Quality Control Act requirements.

13.1.3 Caltrans Requirements

The Caltrans NPDES Permit Attachment D includes TMDL requirements that apply to watersheds located throughout the state, and references the Time Schedule Order with respect to TMDL attainment schedules. The Time Schedule Order includes interim requirements and allows Caltrans an alternate schedule with more time to meet final TMDL compliance deadlines due to the complexity of its ROW and the magnitude of its stakeholder-assigned TMDLs. Following is a brief description of those requirements.

13.1.3.1 NPDES Permit Requirements (D)

The Caltrans NPDES Permit's TMDL requirements are essentially related to the BMP design and implementation process or reporting on that process. The primary guidance documents for the process will be updated appropriately to address the implementation requirements noted in Caltrans NPDES Permit Attachment D. The following requirements will be addressed through guidance updates:

- Sediment, Nutrients, Mercury, Siltation and Turbidity TMDLs Requirements
- Toxic Pollutants/Pesticides/Metals TMDLs Requirements
- Bacteria TMDLs Requirements
- Temperature TMDLs Requirements
- North Coast RWQCB Sediment and Temperature TMDLs
- Los Angeles RWQCB Trash TMDLs Requirements
- Los Angeles RWQCB Other TMDLs Requirements
- Central Valley RWQCB TMDLs Requirements

13.1.3.2 Implementation Tasks (D)

The following implementation tasks will be performed as required by Caltrans NPDES Permit Attachment D.

13.1.3.2.1 Cooperative Agreements

Caltrans will continue to pursue opportunities to efficiently expend resources and work collaboratively with other regional or TMDL stakeholders where feasible, and establish cooperative agreements, cooperative implementation agreements, financial contribution only, highway improvement agreement, or other agreement types where applicable. Prior to entering into an agreement for this purpose, Caltrans will consult with the appropriate RWQCB staff as required for the location of the project and/or stakeholders involved.

13.1.3.2.2 Performance, Effectiveness, and Adaptive Management Assessment

Caltrans' ongoing assessments of the performance and effectiveness of a portion of each type of installed Caltrans-approved BMPs and control measures will continue and those determined to be effective for certain pollutants will be installed to treat those pollutants. If BMPs or measures are noted as inadequate after installation, Caltrans will either install additional BMPs or measures where practicable or maintain BMPs or measures to ensure their adequacy for achieving TMDL-related requirements. If these additional measures or modifications are impractical, alternate Caltrans-approved BMPs or measures will be considered.

13.1.3.2.3 Lahontan RWQCB Lake Tahoe Sediment and Nutrients TMDLs Requirements

Caltrans will perform the noted required activities in compliance with the Lake Tahoe Sediment and Nutrients TMDL to achieve sediment and nutrient reductions. The Pollutant Load Reduction Plan will be reviewed and updated to demonstrate how Caltrans will reduce sediment, total nitrogen, and total phosphorus loads. It will then be submitted to the SWRCB Executive Officer for approval and implemented. Caltrans will continue participating in the Tahoe Regional Monitoring Program.

13.1.3.2.4 Santa Ana RWQCB, Lake Elsinore and Canyon Lake Nutrient TMDL Requirements

Caltrans will perform the noted required activities in compliance with the Lake Elsinore and Canyon Lake Nutrient TMDL to achieve nutrient reductions.

13.1.3.2.5 San Diego RWQCB TMDLs Requirements

Caltrans will perform the required monitoring and reporting activities in Caltrans NPDES Permit Attachment F, and participate in cooperative watershed agreements or demonstrate compliance through existing BMP implementation in the following TMDLs:

- Project I – Twenty Beaches and Creeks Bacteria – Perform bacteria monitoring through existing cooperative agreement
- Chollas Creek Dissolved Copper, Lead, and Zinc – Implement and maintain BMPs, monitor through cooperative agreement, and report results
- Los Peñasquitos Lagoon Sediment – Participate in cooperative watershed agreements or demonstrate compliance through existing BMP implementation
- Rainbow Creek Total Nitrogen and Total Phosphorus – Submit County of San Diego bacteria monitoring data collected through existing cooperative agreement

13.1.3.3 Planning Requirements (D)

The following plans will be submitted as required by Caltrans NPDES Permit Attachment D to document how the Caltrans NPDES Program will be implemented.

13.1.3.3.1 Updated Prioritized Inventory of Reaches (D3.1)

The existing Prioritized Inventory of Reaches will be reviewed, updated, and submitted within 12 months of the Caltrans NPDES Permit adoption date along with the TMDL Compliance Plan. It will include a prioritization of Caltrans TMDLs, including the following new TMDLs:

- Los Peñasquitos Lagoon Sediment TMDL in the San Diego Region
- San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL in the Los Angeles Region
- Pescadero-Butano Watershed Fine Sediment TMDL in the San Francisco Bay Region
- Petaluma River Bacteria TMDL in the San Francisco Bay Region
- Guadalupe River Mercury TMDL in San Francisco Bay Region

13.1.3.3.2 TMDL Compliance Plan (D3.3)

The TMDL Compliance Plan was prepared and submitted in June 2023. Once the plan is approved, it will be implemented and updated to describe Caltrans' long-term plan to comply with the TMDLs listed in Caltrans NPDES Permit Attachment D. It includes a discussion on the following required topics:

- Technical discussion that describes a proposed translation from previously earned compliance units achieved under the Conformed NPDES Permit to compliance with TMDL waste load allocations in the Caltrans NPDES Permit.
- Technical discussion about how the updated Prioritized Inventory of Reaches is incorporated into the TMDL Compliance Plan.
- Strategy for implementing RWQCB-specific requirements.
- Summary of cooperative agreement projects that will be implemented, that may include cooperative agreements, cooperative implementation agreements, financial contribution only, highway improvement agreements, or other agreement types where applicable.
- Schedule for completing interim and final milestones for each of the TMDLs listed in the Time Schedule Order.
- Tabulated data and/or geographic information system data containing the following information:
 - TMDL name
 - Reach name
 - Individual pollutant
 - Proposed compliance strategy
 - Total watershed acres
 - Caltrans acres in the watershed
 - Caltrans percentage of ROW ownership in the watershed that is paved
 - TMDL waste load allocations applicable to Caltrans
- Geographic information system data files including location information on the following:
 - TMDL watersheds

- Pollutants
- Location and type of BMPs, including ROW boundaries, impervious pavement, ownership type (fee or easement), and location of drainage systems
- Proposed implementation schedule for each TMDL waterbody-pollutant combination, with anticipated start and completion date for implementation of each TMDL.
- Tabulated list and accompanying description of Caltrans' compliance strategy to achieve compliance with each TMDL, including one or more of the following compliance strategies for each TMDL:
 - Modeling analysis - including analysis of cooperative projects, that quantitatively demonstrates that BMPs reduce pollutant loads to comply with TMDL waste load allocations
 - Receiving water quality monitoring - analysis demonstrating compliance with the TMDL allocations at the point of Caltrans discharge or data provided by other stakeholders, or as determined by monitoring immediately upstream and downstream of Caltrans discharge location, or measured in the receiving water body not at the point of discharge
 - Loads from other sources - results demonstrating that exceedances of receiving water limits are due to loads from other sources and Caltrans loads are not causing or contributing to exceedances
 - Discharge sampling - results demonstrating that Caltrans discharge complies with concentration-based waste load allocation
 - Mass-based waste load - results demonstrating that Caltrans discharge complies with individual or joint allocation or percent reduction where a mass-based waste load has been allocated individually, jointly to a group, or is expressed as a percent reduction in load
 - Allowable exceedance days - discharge conforms to allowable exceedance days where a waste load allocation is expressed as number of allowable exceedance days
 - No discharge - no discharges occurred during the relevant period either directly or indirectly from Caltrans ROW to the waterbody
 - TMDL-specific demonstrations - demonstration that the waste load allocations and other requirements are attained through other factors as described by the specific TMDL
- Compliance strategy options selected for North Coast, San Francisco Bay, Los Angeles, Lahontan, Santa Ana, and San Diego RWQCBs (as described in Caltrans NPDES Permit Attachment D Sections D5.7, D5.8, D5.10, D5.11, D5.12, D5.13, and D5.14)
- Inventory and Assessment Report with drainage infrastructure condition for Caltrans facilities in San Lorenzo River Watershed, as required by Central Coast RWQCB TMDL, including schedule for completing necessary upgrades to the drainage infrastructure (see Caltrans NPDES Permit Attachment D Section D5.3)
- San Francisco Bay RWQCB Mercury and Polychlorinated Biphenyls TMDLs
 - Submit a standard operating procedure (similar to that used for the 2018 demolition of the old eastern span of San Francisco Bay Bridge) to identify,

- remove and properly dispose of polychlorinated biphenyl-containing caulk prior to demolition, replacement, or rehabilitation of existing roadways, bridges, or other structures in the ROW containing such material.
- Covers the reporting period from Caltrans NPDES Permit adoption date through February 12, 2028.
 - A schedule for planned implementation of control measures to treat 2,970 acres by March 29, 2030, for polychlorinated biphenyls and by February 12, 2028 for mercury. Schedule and schedule updates included the watershed, type of BMP, installation date, and location by coordinates for controls planned in the following five years.
 - Identify watersheds where polychlorinated biphenyls and mercury BMPs are currently being implemented, the acres, and the type of BMPs.
 - Describe watersheds where polychlorinated biphenyls and mercury BMPs will be implemented, the date of planned implementation, and the acres that will be treated with BMPs. Identify the type of BMPs that will be used at each location.
 - Identify selected BMPs option for each location by choosing and reporting on one of the following options:
 - Implement BMPs within Caltrans ROW; or
 - Implement BMPs in areas managed by municipalities, local agencies, or private entities to which runoff from Caltrans ROW is discharged. Treatment controls implemented in old urban and industrial areas within municipalities will be credited three times the acres of Caltrans ROW treated. Old urban land use describes urbanized areas developed by 1974 according to the Interim Accounting Methodology published by the Bay Area Stormwater Management Agencies Association in 2017; or
 - Implement BMPs that are a combination of the two options above.
 - Other factors affecting implementation – Caltrans identified other factors (safety concerns, technical infeasibility, and conflicting local permits) that affect TMDL compliance project implementation. Caltrans included factors affecting TMDL compliance project implementation, and in subsequent TMDL Compliance Plan updates.
 - San Diego RWQCB Chollas Creek TMDL Best Practices Implementation – Report on the status of Chollas Creek TMDL best practices implementation including:
 - Current and proposed BMPs and treatment acres implemented through cooperative agreements
 - Existing acreage treated with existing Caltrans-specific BMPs
 - Proposed Caltrans-specific BMPs and acreage to be treated for the upcoming year
 - Proposed total acreage that will be treated with Caltrans-specific BMPs by the compliance deadline
 - Caltrans demonstrated that the implementation schedule will be sufficient to meet Caltrans' waste load allocation interim and final deadlines.

13.1.3.3.2.1 RWQCB-Specific Reports (D3.4)

The following RWQCB-specific reports will be submitted to the noted RWQCB.

- ***Lahontan RWQCB Updated Pollutant Load Reduction Plan*** – An updated Pollutant Load Reduction Plan that describes how Caltrans will achieve the pollutant load reduction requirements for the third five-year TMDL implementation period, defined as the fifteen-year load reduction milestone in the Lake Tahoe TMDL. The updated Pollutant Load Reduction Plan will demonstrate how Caltrans will reduce baseline fine sediment particle, total nitrogen, and total phosphorus loads by 34, 21, and 19 percent, respectively, by September 30, 2026 (end of water year 2026). Caltrans shall submit the updated Pollutant Load Reduction Plan for review and consideration of approval to the SWRCB Executive Officer. The approved Pollutant Load Reduction Plan will be implemented. The updated plan shall include, at a minimum, the following elements:
 - Pollutant Load Reduction Plan shall include Caltrans' previously approved Baseline Load Estimate.
 - Pollutant Load Reduction Plan shall include a list of catchments (i.e., Catchment Registration Schedule) that Caltrans plans to register pursuant to the approved Lake Clarify Crediting Program to comply with load reduction requirements. List shall include catchments where projects will be constructed, and other load reduction activities (capital improvements, institutional controls, and other measures/practices implement) will be taken to achieve pollutant load reduction requirements.
 - Pollutant Load Reduction Plan shall describe stormwater program activities to reduce fine sediment particle, total phosphorus, and total nitrogen loading that Caltrans will implement in identified catchments.
 - A pollutant load reduction analyses shall be conducted on a representative catchment subset to demonstrate that proposed implementation actions are expected to achieve the pollutant load requirements. For representative catchments, the analysis shall include detailed estimates of both baseline pollutant loading and expected pollutant loading resulting from implementation actions and provide justification why the conducted load reduction analysis is adequate for extrapolation to other catchments. The pollutant loading estimates shall differentiate between estimates of pollutant load reductions achieved since May 1, 2004, and pollutant load reductions from actions not yet taken.
 - The Pollutant Load Reduction Plan shall describe a schedule for achieving the pollutant load reduction requirements described in the Lake Tahoe Sediment TMDL. The schedule shall include an estimate of expected pollutant load reductions for each year of the Caltrans NPDES Permit term based on preliminary numeric modeling results. The schedule shall also describe which catchments Caltrans anticipates it will register for each year of the Caltrans NPDES Permit.
 - Pollutant Load Reduction Plan shall include a description of the processes and procedures to annually assess stormwater management activities and

- associated load reduction progress. The plan shall describe how Caltrans will use information from monitoring and implementation of other efforts to improve operational effectiveness and for achieving the pollutant load reduction requirements.
- The monitoring sampling, analysis, and reporting shall be implemented according to Caltrans NPDES Permit Attachment F.
 - The percent load reductions for each of the established reductions for each of the established five-year milestones is provided in the two tables on Caltrans NPDES Permit Attachment D Page D-20. Information provided in the Lake Tahoe Percent Load Reduction by Five Year Milestones table was obtained from the Lahontan RWQCB Resolution R6T-2010-0050 that was adopted August 16, 2011.
 - **North Coast RWQCB Sediment and Temperature Load Reduction Projects** – Caltrans will report on its progress towards compliance with sediment and temperature load reductions in the North Coast RWQCB region. The State Board Executive Director in consultation with the North Coast RWQCB Executive Officer shall evaluate Caltrans' progress by reviewing the following submitted by Caltrans:
 - For projects completed from the TMDL adoption date through Caltrans NPDES Permit adoption date, Caltrans shall provide load reductions for any completed TMDL sediment or temperature load reduction projects.
 - For projects completed under pre-approval by the RWQCB Executive Officer and after the Caltrans NPDES Permit adoption date, Caltrans shall provide load reduction for any sediment load reduction project or activity at the time of completion (if in Caltrans ROW) or upon contribution to the implementing entity (if outside Caltrans ROW).

13.1.3.3.2.2 Time Schedule Order Requirements

The Time Schedule Order was adopted concurrently with the Caltrans NPDES Permit and it allows Caltrans more time to meet final TMDL compliance deadlines due to the complexity of its ROW and the magnitude of its stakeholder-assigned TMDLs. It includes additional requirements, specifically those related to the Final Compliance and Final TMDL Compliance Report. By December 31, 2034, Caltrans will be in compliance with the TMDLs listed in Caltrans NPDES Permit Time Schedule Order Table TSO-1. By June 30, 2035, Caltrans will submit a Final TMDL Compliance Report. The Final TMDL Compliance Report will include, at minimum, the following information for each TMDL listed in Caltrans NPDES Permit Time Schedule Order Table TSO-1:

- A description of the work implemented to meet the TMDL waste load allocations or any RWQCB acceptance letters.
- A spreadsheet of tabulated data with the following information:
 - TMDL name;
 - Watershed or reach name;
 - Individual pollutant or pollutant category;
 - Implemented BMPs with installation dates;

- Cooperative agreement/project information (including requirements in Caltrans NPDES Permit), lead agency, stakeholders, and agreement start date;
- Selected strategy for demonstrating TMDL compliance using one or more of the eight strategies listed in Caltrans NPDES Permit Time Schedule Order Section 1.2;
- Dates when Caltrans achieved compliance;
- Watershed acres;
- Caltrans' acres in the watershed;
- Caltrans' proportional responsibility or percentage of ROW in the watershed;
- TMDL waste load and load allocations applicable to Caltrans.
- Electronic geographic information system data maps including the following:
 - Locations of TMDL watersheds;
 - Individual pollutants or pollutant categories;
 - ROW mapping;
 - Impervious surface locations; and
 - BMPs or cooperative agreements implemented.
- Technical information for each BMP and a description of the installed BMPs.
- Description of the BMPs that treat multiple pollutants and the pollutants treated by them.
- Identification of a TMDL waterbody in compliance, including a discussion with identification of the TMDL waterbodies (and waterbody reaches, as applicable) where Caltrans has demonstrated compliance with waste load allocations or load allocations.
- Documentation of RWQCB correspondence pertaining to compliance activities and requirements.
- Identification of a TMDL waterbody out of compliance, including a discussion and identification of the TMDL waterbodies (and waterbody reaches, as applicable) that are not in compliance with waste load or load allocations.
- Appendices including an inclusion of modeling system, modeling software, and modeling input parameters and analysis.

The Final Compliance and Final TMDL Compliance Report will be submitted to SMARTS.

13.2 Caltrans Compliance Strategy

13.2.1 Strategy to Comply with Existing TMDLs

13.2.1.1 Prioritized Inventory of Reaches

Caltrans developed a prioritized list of reaches for implementation activities as required within Section I.A of Attachment IV of the 2012 Caltrans NPDES Permit (2014 Prioritized Inventory). The 2014 Prioritized Inventory of reaches for 84 TMDLs were delineated based on the defined receiving waters within the TMDL Staff Report or, if reaches were not specified in the staff report, they were determined using the Natural

Resources Conservation Services Hydrologic Unit Code 8 or Hydrologic Unit Code 12. The 2014 Prioritized Inventory will be further reviewed, updated, and submitted within 12 months of the Caltrans NPDES Permit adoption date along with the TMDL Compliance Plan. The revised inventory will include reaches for all 89 Caltrans TMDLs identified in Attachment D of the 2022 Caltrans NPDES Permit which will include the following five new TMDLs:

- Guadalupe River Mercury TMDL in the San Francisco Bay Region
- Los Peñasquitos Lagoon Sediment TMDL in the San Diego Region
- Pescadero-Butano Watershed Fine Sediment TMDL in the San Francisco Bay Region
- Petaluma River Bacteria TMDL in the San Francisco Bay Region
- San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL in the Los Angeles Region

Caltrans will update the current ranking of reaches with the new TMDLs while considering factors such as Impairment status, Department Contributing Drainage Area, Connectivity to Receiving Waters, and Community Environmental Health Impact. The rankings from these four rating factors will be totaled to determine the overall ranking of each reach within its pollutant category.

In the updated reach prioritization, the highest priority reaches will comprise of the top third of the ranked reaches, while the medium priority reaches will be the middle third, and the low priority reaches will be the bottom third. Table 13-1 shows the reach prioritization scoring matrix that was used to develop the updated reach prioritization.

Table 13-1: Reach Prioritization Scoring Matrix

Rating Factor	High Criteria	Medium Criteria	Low Criteria
Impairment Status	Over 75%	25% - 75%	Below 25%
Caltrans' Drainage Area Contributing to Reach	Over 5% of Drainage Area	Between 1% and 5% of Drainage Area	Less than 1% of Drainage Area
Proximity to Receiving Waters	Over 75% of ROW within 0.25 miles of reach	Between 25% and 75% of ROW within 0.25 miles of reach	Less than 25% of ROW within 0.25 miles of reach
Community Environmental Health Impact	Top 3 Categories	Middle 4 Categories	Lower 3 Categories

13.2.1.2 Statewide Strategy

Attachment D of the Caltrans NPDES Permit includes general requirements that are applicable towards TMDLs in addition to pollutant-based strategies for various TMDLs, some of which comprise of region-specific control measures. This section summarizes the various requirements that Caltrans may implement to achieve compliance with the TMDLs.

13.2.1.2.1 Sediment, Nutrients, Mercury, Siltation and Turbidity TMDLs

Since sediment from roads is a source of silt, turbidity, nutrients, mercury, and sediment, Caltrans will control the discharge of sediment to address these pollutants. Source control measures, such as protecting and vegetating hillsides and filtering runoff prior to discharge into a receiving waterbody, will be implemented to prevent or minimize erosion and sediment discharge. In addition, Caltrans will minimize the discharge of sediment into a receiving waterbody through various implementation measures, such as the Caltrans Asset Management Program.

13.2.1.2.2 Toxic Pollutants, Pesticides, and Metals TMDLs

Caltrans shall implement BMPs to control toxic pollutants, pesticide, and total and dissolved metals in stormwater discharge. The BMPs can include but are not limited to source control measures 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. For dissolved fraction metals, BMPs can include adsorption, filter media, precipitation, and ion exchange. If such discharge is approved by the wastewater treatment facility, Caltrans may discharge to sewer.

13.2.1.2.3 Bacteria TMDLs

Homeless encampments can be a source of bacteria due to stormwater runoff from untreated human and pet waste. Caltrans will implement one or more of the following to minimize the discharge of bacteria to surface water:

1. Caltrans' Homeless Encampment Policy (Chapter 1, Section 1.07.3(B) of Caltrans' Maintenance Manual) or subsequent policies addressing encampment removal and cleanup;
2. Cooperative agreement participation, such as leases to local municipalities for homeless services, where available; or
3. Structural Treatment BMPs, such as retention, detention, diversion, infiltration, filtration, vegetated treatment, and similar.

13.2.1.2.4 Temperature TMDLs

Since sediment may increase surface water temperatures, Caltrans will implement sedimentation and erosion control measures such as protecting hillside from erosion, intercepting and filtering/infiltrating runoff and avoiding concentrated flows in natural channels and drains. Due to vegetation being a potential source for increased surface water temperatures, Caltrans shall:

1. Preserve existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases;
2. Provide effective shade near receiving waters susceptible to temperature increases;
3. Maintain site potential effective shade near receiving waters susceptible to temperature increases; and

4. Receive written authorization by the applicable RWQCB Executive Officer prior to conducting activities where alteration of riparian biotic conditions may increase sedimentation or reduce effective shade.

13.2.1.2.5 Trash TMDLs

Discharging trash into receiving waterbody is prohibited. Caltrans shall comply with waste load allocations by installing, operating, and maintaining a combination of full capture systems, other treatment controls, and/or institutional controls for storm drains that capture runoff from significant trash generating areas. Caltrans will provide an annual assessment of the amount of trash reduction achieved. More information can be found in SWMP Section 14.

13.2.1.2.6 Diazinon TMDLs

Caltrans does not discharge Diazinon in the ROW as it is prohibited. Therefore, no control measures for this constituent are required.

13.2.1.2.7 Selenium TMDLs

Selenium is a pollutant that naturally occurs in geologic formations, soils, and aquatic sediments. It is determined that the primary sources of selenium are dewatering, groundwater seepage, irrigation of high selenium content soils, and oil refineries amongst others. Caltrans is not considered a significant source of selenium discharge, therefore selenium control measures will be implemented, unless one of the following can be demonstrated:

- There is no exceedance of an applicable receiving water limitation for selenium in the receiving water(s) at, or immediately downstream of, Caltrans' outfall(s), or
- There is no direct or indirect discharge from Caltrans' outfall(s) to the receiving water during the time subject to the waste load allocation.

13.2.1.2.8 Chloride TMDLs

Caltrans is not a significant source of chloride discharge, resulting in no implementation of control measures to be needed.

13.2.1.3 Conversion from Compliance Units to Waste Load Allocations

Caltrans will be translating from previously earned compliance units achieved under the Conformed NPDES Permit to compliance with TMDL waste load allocations in the Caltrans NPDES Permit. Caltrans can be in compliance by default if:

- Receiving Water Quality Monitoring demonstrates compliance,
- No direct/indirect discharges from Caltrans ROW into receiving water bodies, or
- Demonstration that receiving water exceedances are due to loads from other sources.

Caltrans will continue to track the condition of BMPs in real-time in order to assess and prioritize maintenance of BMPs. This will allow Caltrans to establish a uniform list of treatment controls statewide that will allow Caltrans to accurately identify the waste load allocations. Caltrans will develop and implement a BMP retrofit plan to establish and identify structural controls to prioritize modification of treatment control as a multi-benefit BMP. Caltrans will revise the reach prioritization based on the five newly TMDLs added within the Caltrans NPDES Permit, helping Caltrans program for the upcoming SHOPP cycles.

Caltrans will continue to fund cooperative implementation agreements projects and collaborate with the RWQCB, SWRCB, and other TMDL stakeholders to show compliance with waste load allocations. Caltrans will help fund projects that support improving overall watershed quality. Caltrans will establish crediting mechanisms for non-structural controls such as public education, adopt-a-highway, litter pickup, etc.

13.3 Reporting Requirements

13.3.1 TMDL Compliance Plan Annual Updates

TMDL Compliance Plan Updates will be submitted annually by November 30 each year. The annual updates will be consistent with Caltrans NPDES Permit Attachment D Section D.3.3 and focus on those sections where updates are necessary. In addition, the updates will be reviewed and considered for approval by the SWRCB Executive Director. Prior to consideration of approval, the SWRCB Executive Director will publicly notice and issue the TMDL Compliance Plan Updates for a 30-day public comment period, with a limited scope for public comments on the TMDL Compliance Plan Updates only as applicable. Upon approval by the SWRCB Executive Director, Caltrans shall begin implementation.

13.3.2 Annual TMDL Compliance Status Report

The Annual TMDL Compliance Status Report is submitted with each Annual Report on November 30 each year following January 1, 2023. The first Annual TMDL Compliance Status Report will cover Caltrans' compliance achieved in the TMDLs listed in Caltrans NPDES Permit Attachment D Tables D-1, D-2, and D-3 during the previous fiscal year of July 1 through June 30, and the compliance proposed during the forthcoming two fiscal years. Each Annual TMDL Compliance Status Report should discuss the following topics for the TMDLs listed in Caltrans NPDES Permit Attachment D Tables D-1, D-2, and D-3:

- Proposed list of TMDL waste load and load allocations with which Caltrans has come into compliance, including documentation demonstrating compliance and any ongoing maintenance or other efforts necessary to sustain compliance.
- Tabulated inventory and descriptive summary of TMDL compliance activities performed in the previous fiscal year by watershed. Compliance activities include efforts to identify, plan, and implement TMDL compliance projects. The tabulated inventory shall include the status of planning, designing, permitting, contributions, and implementation of TMDL projects. Compliance activities shall be described in

detail and shall identify the activity location, impaired waterbody, Treatment BMPs, and TMDL pollutant. TMDL work completed to date, work completed during the reporting period, work anticipated in the next two reporting periods, obstacles, and unresolved issues of concern.

- TMDL compliance activities planned for the forthcoming two fiscal years for each impaired watershed. Compliance activities shall be described in detail and shall identify the activity, location, Treatment BMPs, and watersheds. Compliance activities shall include efforts to identify, plan, and implement TMDL compliance projects and monitoring efforts.
- Results of ongoing assessments of the performance, effectiveness assessments, and adaptive management of a representative fraction of each type of Caltrans-installed Treatment BMPs and control measures.
- Tabulated list of cooperative agreements that includes the name of each agreement, signatories or major participating entities, the impaired waterbody, the waste load allocation/TMDL pollutant, project type (e.g., within Caltrans ROW, outside Caltrans ROW, monitoring, Treatment BMPs), and the applicable waste load allocation implementation requirement. (See Caltrans NPDES Permit Attachment B, definition of cooperative agreements.)
- Descriptive summary and tabulated data of the cooperative agreements, including the status of planning, designing, permitting, contributions, and implementing the cooperative agreement projects.
- For the San Francisco Bay RWQCB polychlorinated biphenyl and mercury TMDLs, project status of Treatment BMPs and control shall be included, as required by Caltrans NPDES Permit Attachment D Section D5.8.
- For the Santa Ana RWQCB Lake Elsinore and Canyon Lakes nutrients TMDL, an annual status report on the in-lake nutrient reduction program must be included, as described in Caltrans NPDES Permit Attachment D Section D5.13.
- Updates to the Pollutant Load Reduction Plan required by the Lahontan RWQCB.
- Delays affecting project implementation, including delays or cancellations due to environmental or permitting factors (e.g., California Coastal Commission, California Department of Fish and Wildlife, U.S. Army Corps of Engineers, local flood control agencies, local county) beyond Caltrans' control.
- Copies of watershed implementation reports for cooperative agreements established to comply with Caltrans NPDES Permit Attachment D. Watershed implementation reports may be uploaded to SMARTS as separate attachments if each electronic filename includes the report date, name, and TMDL watershed.

13.3.2.1 San Diego RWQCB Chollas Creek TMDL Reporting

Caltrans will report on the status of Chollas Creek TMDL BMP implementation including the following:

- Current and proposed BMPs and treatment acres implemented through cooperative agreements or other agreements to perform cooperative activities;
- Existing acreage treated with existing Caltrans-approved BMPs;

- Proposed Caltrans-approved BMPs and acreage to be treated for the upcoming year; and
- Proposed total acreage that will be treated with Caltrans-approved BMPs by the compliance deadline.

Caltrans will demonstrate that the implementation schedule will be sufficient to meet its waste load allocation interim and final deadlines.

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14 Attachment E Trash Implementation Requirements

14.1 Overview

On April 7, 2015, the SWRCB adopted Order 2012-0011-DWQ as an amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (together, referred to as the Trash Provisions). The Trash Provisions were created to address the impacts of trash on the beneficial uses of surface waters. On June 1, 2017, the SWRCB issued a Water Code Section 13383 Order (13383 Order) to Caltrans that required the submittal of an Implementation Plan describing how Caltrans will comply with the Trash Provisions. Caltrans NPDES Permit was adopted on June 22, 2022, replaces Order 2012-0011-DWQ and becomes effective on January 1, 2023. Caltrans NPDES Permit includes Attachment E – Trash Implementation Requirements – which describes planning, implementation, monitoring, and reporting activities associated with reducing trash discharges from the Caltrans storm drain system to receiving waters. SWMP Section 14 discusses Caltrans NPDES Permit Attachment E requirements, Caltrans’ strategy for compliance, structural and non-structural trash control options, and reporting requirements.

14.2 Summary of Attachment E Requirements

Attachment E of Caltrans NPDES Permit contains 13 subsections that include SWRCB definitions and guidance, planning, monitoring, and reporting requirements, compliance milestones, and submittal deadlines. The following subsections require submittals to the SWRCB:

- **E.9: Trash Assessment Methodology** – Due January 1, 2023 (effective date of Caltrans NPDES Permit) and subject to a 30-day public comment period and SWRCB Executive Officer approval.
- **E.10: Revised Trash Assessment Map** – Due within six months of SWRCB Executive Director approval of the Trash Assessment Methodology.
- **E.11: Trash Monitoring Plan** – Due within six months of SWRCB Executive Director approval of the Trash Assessment Methodology.
- **E.13: Annual Trash Monitoring Report Requirements** – Due November 30 of each year as part of Caltrans Annual Report.

14.2.1 Significant Trash Generating Areas

As stated in Section E4 of the Caltrans NPDES Permit Attachment E, Significant Trash Generating Areas (STGAs) include all locations or facilities within Caltrans’ jurisdiction where trash accumulates in substantial amounts, such as:

1. Highway on-ramps and off-ramps in high density residential, commercial, and industrial land uses.
2. Rest areas and park-and-rides.

3. State highways in commercial and industrial land uses (such land uses are defined under Priority Land Uses in Caltrans NPDES Permit Attachment B).
4. Mainline highway segments to be identified by Caltrans through pilot studies and/or surveys (as required).
5. Areas identified by the SWRCB Executive Director in consultation with the appropriate RWQCB Executive Officer to be STGAs.

The STGA acreage identified in the 2019 Implementation Plan is based on the completed desktop analyses, maintenance staff input, on-land visual trash assessment (OVTA) data, and drainage analysis. All STGAs identified in the 2019 Implementation Plan will remain STGAs, and moderate areas identified through the 2019 efforts will be added as STGAs. Caltrans plans to continue to refine its STGA dataset through implementation of the SWRCB-approved Trash Assessment Methodology.

14.2.2 SWRCB-Certified Full Capture Systems

The Trash Provisions require Caltrans to address all STGAs either using certified full capture systems or through an approach that achieves full capture system equivalency. Caltrans is not required to demonstrate full capture system equivalency (Caltrans NPDES Permit Attachment E Section E5) where it installs certified full capture systems.

Certified full capture systems are defined as those that are certified by the SWRCB Executive Director and include both trash treatment control devices and multi-benefit treatment systems. Certified full capture systems are listed on the SWRCB's Trash Implementation Program website (https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html). Certified full capture systems trap all particles five millimeters or greater, and have a design treatment capacity that is either:

1. Not less than the peak flow rate resulting from a one-year, one-hour, storm in the sub-drainage area, or
2. Designed and sized to carry at least the same flows as the corresponding storm drain.

To add a new trash treatment control device to the SWRCB Executive Director's Certified Full Capture System List of Trash Treatment Control Devices, Caltrans can submit a Trash Treatment Control Device application to the SWRCB Executive Director. The Executive Director will issue a written determination approving or denying the certification of the proposed trash treatment control device. The SWRCB certification is only issued after prior approval by the Mosquito and Vector Control Association of California.

The Caltrans guidance describes the process and procedures for evaluating project scope and site conditions to determine the need for and feasibility of incorporating BMPs into projects within Caltrans ROW. It provides design guidance for incorporating full capture systems into projects during the project delivery process.

14.2.3 Full Capture System Equivalency

For areas where Caltrans is not implementing all certified full capture systems, Caltrans can try to obtain approval for a full capture system equivalency approach, where the use of any combination of other treatment controls, source control activities, and/or institutional controls achieves full capture equivalency. Full capture system equivalency is a trash load reduction equivalent to the performance of certified full capture systems that are properly installed, operated, and maintained for all storm drains that capture runoff from STGAs. Caltrans will quantify these equivalency targets by using an approach that is technically acceptable and reviewed by the SWRCB Executive Director.

14.2.4 Trash Reduction Milestones and Compliance

Caltrans will report its status towards compliance annually in the Trash Annual Monitoring Report per the following Trash Reduction Milestones specified in Caltrans NPDES Permit Attachment E Section E7:

1. By December 2, 2025, Caltrans shall achieve full capture system equivalency at 35 percent (5,756 acres) or more of the 16,445 acres of STGAs identified in its April 12, 2019 Statewide Trash Implementation Plan submitted to the SWRCB.
2. By December 2, 2028, Caltrans shall achieve full capture system equivalency at 70 percent (11,512 acres) or more of 1) the 16,445 acres identified in Caltrans' April 12, 2019 Statewide Trash Implementation Plan and 2) the acres identified as STGAs in its Revised Trash Assessment Map.
3. Final Compliance. By December 2, 2030, Caltrans shall achieve full capture system equivalency at 100 percent of the acres identified as STGAs in the Revised Trash Assessment Map required in Caltrans NPDES Permit Attachment E Section E10. Until Caltrans completes its Trash Monitoring Plan as required in Caltrans NPDES Permit Attachment E Section E11, Caltrans shall implement its existing procedures and schedules to achieve compliance with the above milestones.

Caltrans may submit its own Trash Reduction Milestones for SWRCB Executive Director review and consideration of approval as part of the Trash Monitoring Plan required in Caltrans NPDES Permit Attachment E Section E11.1. If approved, Caltrans' own Trash Reduction Milestones will supersede the First and Second Milestones.

14.3 Trash Compliance Strategy

Caltrans will develop a Trash Assessment Methodology and a Trash Monitoring Plan as part of its compliance requirements with Caltrans NPDES Permit Attachment E. These documents will outline strategies to achieve full capture system equivalency of 35 percent by 2025, 70 percent by 2028, and 100 percent by 2030.

14.3.1 Trash Assessment Methodology

The Trash Assessment Methodology addresses the following:

- Trash assessments for the Caltrans ROW within a MS4's jurisdiction
- Proposed implementation schedule for each fiscal year following the Caltrans NPDES Permit effective date until December 2, 2030
- Identification and geographic information system mapping of STGAs
- Determination of full capture equivalency
- Compliance with interim trash reduction milestones
- Visual assessments of all highway segments, highway on-ramps, and highway off-ramps within or adjacent to the jurisdiction of permitted MS4s to identify where trash accumulates in substantial amounts
- Visual assessments of known homeless encampments within Caltrans ROW
- Technical details and locations for substitutes for visual assessments
- Assessment of the amount of annual trash reduction

14.3.2 Revised Trash Assessment Map

Caltrans will revise its trash assessment map that identifies the STGAs requiring treatment. The map will be developed in concert with implementation of the SWRCB-approved Trash Assessment Methodology and will be submitted within six months of the Trash Assessment Methodology approval date.

14.3.3 Trash Monitoring Plan Requirements

Within six months of receiving Executive Director approval of its Trash Assessment Methodology, Caltrans will develop and submit a Trash Monitoring Plan for SWRCB Executive Director review and approval. The Trash Monitoring Plan will contain procedures and schedules that demonstrate:

- Implementation of the approved trash assessment methodology.
- Compliance with interim milestones in the Caltrans NPDES Permit or approved by the SWRCB Executive Director.
- The quantification and reporting method for annual trash reduction.
- The effectiveness of implemented full capture systems, other treatment controls and/or institutional controls.
- Compliance with full capture system equivalency.
- Necessary maintenance of the full capture systems, other treatment controls, and/or institutional controls. Maintenance frequency shall not be less than the maintenance frequency of at least once every two years required for BMPs per the Caltrans NPDES Permit Attachment C Section C3.10.6.
- The quantity of trash discharged from Caltrans' MS4 compared to the previous year.
- The quantity of trash in the receiving waters, compared to the previous year and by how much it has decreased. Caltrans will work with other permittees and agencies to determine an appropriate method to address this requirement.

14.4 Off-site/On-site Trash Treatment Due to Infeasibility

Where Caltrans finds that it is infeasible to implement trash controls sufficient to achieve full capture system equivalency, due to: 1) site-specific limitations within Caltrans ROW or 2) health and safety concerns, Caltrans will submit an Off-site Trash Treatment Project proposal for equivalent off-site treatment through implementation of permanent structural trash control devices for approval by the Deputy Director of Water Quality. Per Caltrans NPDES Permit Attachment E Section E.12.1, off-site treatment locations must be outside of Caltrans ROW, have significant trash generation, and must discharge to the same receiving water body or watershed as the significant trash generating area for which on-site treatment is feasible. Implementation of controls is considered feasible where the trash generated at the STGA can be treated through implementation of controls in the jurisdiction of the immediately adjacent MS4.

The Off-site Trash Treatment Project proposal submitted to the Deputy Director of Water Quality must include the identification of the significant trash generating area, explanation of the factors that have made achievement of full capture system equivalency infeasible, and details for the proposed equivalent off-site compliance measured by the volume of trash captured. Prior to the approval or denial of the proposal by the Deputy Director of Water Quality, the State Water Board must provide public notice of the proposal and a minimum 30-day period for public comments. Upon receiving approval by the Deputy Director of Water Quality, Caltrans will identify the areas that will not achieve full capture equivalency in its Revised Trash Assessment Map and equivalent off-site location(s). Per Caltrans NPDES Permit Attachment E Section E.12.1, proposals will not be approved before the first milestone of Caltrans NPDES Permit.

14.5 Structural and Non-Structural Trash Controls

To address the Caltrans NPDES Permit requirements, Caltrans evaluated its approved structural BMPs and non-structural practices (i.e., maintenance procedures, cooperative agreement practices, established agreements and partnerships) to determine if they could be considered full capture devices or the equivalent of such devices. Based on the results of the review, existing structural BMP types and non-structural practices were determined to be feasible for classification as full capture devices or equivalent to such devices. The following section describes those structural BMPs and the non-structural practices that Caltrans will include in its compliance strategy.

14.5.1 On-System Structural Full Trash Capture Devices

Caltrans has approved on-system structural full trash capture devices for use in the ROW to prevent the discharge of trash to surface waters of the State in STGA areas with a trash TMDL.

14.5.1.1 Detention Devices

A detention device is a volume-based permanent Treatment BMP designed to reduce the sediment and particulate loading in runoff from the water quality design storm. A detention device is typically configured as a basin. Detention basins can remove litter, settleable solids, total suspended solids, particulate metals, and sorbed pollutants such as heavy metals, oil, and grease by capturing, temporarily detaining, and gradually releasing stormwater runoff.

14.5.1.2 Infiltration Devices

Infiltration devices are designed to remove pollutants from surface discharges by retaining and infiltrating stormwater runoff and infiltrating it directly to the soil rather than discharging it to surface waters. Infiltration devices are most effective at reducing total suspended solids total dissolved solids, nutrients, pesticides, particulate metals, dissolved metals, pathogens and bacteria, litter/trash, turbidity, temperature, and mercury.

14.5.1.3 Media Filters

Media filters treat stormwater through filtration. Runoff is directed into an initial chamber for removal of large particles, then directed into a second chamber to be filtered through a medium such as sand. Media filters are most effective at treating total suspended solids, particulate metals, dissolved metals, trash, pesticides, turbidity, and nutrients.

14.5.1.4 Gross Solids Removal Devices

Gross solids removal devices use screen technology to trap trash and gross solids such as paper, plastics, glass, and naturally occurring debris in urban stormwater runoff. The screens are designed to remove all litter and solids larger than 0.2 inches (five millimeters) in diameter, and to meet the one-year, one-hour storm event. Two types of gross solids removal devices, linear radial gross solids removal devices and inclined screen gross solids removal devices, are approved that have the capacity to retain one year of solids loading to facilitate annual cleaning.

14.5.1.5 End-of-Pipe Trash Nets

End-of-Pipe Trash Nets are attached to the end of a pipe and provide high trash removal effectiveness for trash that has entered the drainage system. Configurations of End-of-Pipe Trash Nets include at the end of an existing extended culvert, pipes attached to a headwall, installed with a transition channel, installed in-channel, or installed down drain. End-of-Pipe Trash Nets can fit in narrow ROW and can be made with either reusable or disposable bags.

14.5.1.6 Capture Housing

Capture housing devices are designed to be installed to retrofit BMPs and as a newly installed BMP in locations within or outside of the clear recovery zone where drain inlets are present and require less space and depth than a gross solids removal device or an End-of-Pipe Trash Nets. They can be installed at all locations where a normal flush mount drainage inlet would be placed and can be located at the beginning of a drainage system, at intermediate junctions, or before the system outfall. Capture housing devices use screen technology to trap trash and gross solids such as paper, plastics, glass, and naturally occurring debris in urban stormwater runoff. The screens are designed to remove all litter and solids larger than 0.2 inches (five millimeters) in diameter, and to meet the one-year, one-hour storm event.

14.5.2 Multi-Benefit BMPs

The following are Caltrans approved Treatment BMPs that trap trash in accordance with the Trash Provisions and have multiple environmental benefits such as capture, reuse, treatment, and/or infiltration of stormwater runoff. Additional BMP design details are available on the SWRCB website (https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/trash_implementation/2022/list-multi-benefit-09092022.pdf).

14.5.2.1 Bioretention

Bioretention treatment systems remove pollutants from stormwater runoff via physical filtration through a sequence of media layers. These treatment systems can come in a variety of shapes and sizes, and consist of a ponding layer, a vegetated and mulched layer, an engineered soil layer, and a supporting bed layer of sand or gravel. After entering the treatment area, stormwater either evapotranspires or passes through the treatment layers to infiltrate into native soil or collect into an underdrain to convey to a discharge point.

14.5.2.2 Capture and Use Systems

Capture and use treatment systems collect stormwater runoff to store for later or release for immediate use. Stormwater can then be used for variety of applications including irrigation, toilet flushing, and other non-potable uses.

14.5.2.3 Detention Basin

Detention basin treatment systems are also known as dry ponds, holding ponds, retarding basins, or dry detention basins. These systems either permanently or temporarily store stormwater runoff in a holding area that removes pollutants via infiltration through media or infiltration to underlying soils. Detention basins may be topographical depressions or underground systems of pipes, chambers, concrete vaults, or similar void structures of various shapes and sizes.

14.5.2.4 Infiltration Trench or Basin

Infiltration trench or basin treatment systems capture stormwater runoff, remove stormwater runoff pollutants, and infiltrate stormwater runoff into native soils. Infiltration trenches or basins may incorporate porous media or subsurface designs that include perforated pipes, chambers, open bottom concrete galleries, or other high voids structures.

14.5.2.5 Media Filter

Media filter treatment systems remove pollutants from stormwater by physically separating sediment and sediment-bound pollutants using a bed of sand, peat, fabrics, zeolite, anionic and/or cationic media, granite or other fine-grained materials.

14.5.2.6 Other SWRCB Certified Devices

The SWRCB certifies trash full capture systems available to public. Many are not currently approved by Caltrans but are included here as additional options. The trash full capture systems are:

- 1) new trash full capture systems certified by the State Water Board Executive Director after adoption of the Trash Provisions, and
- 2) legacy trash full capture systems that were certified pursuant to the Trash Provisions include those full capture systems that were listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014).

All trash full capture systems remain certified unless and until they are decertified by the State Water Board's Executive Director or designee.

14.5.3 Off-System Structural Full Trash Capture Devices and Cooperative Agreements

Caltrans NPDES Permit encourages partnerships with local municipalities to provide funding for regional water quality treatment facilities that treat trash or other TMDL pollutants. Per Caltrans NPDES Permit Attachment E Section E12.1.d, off-site treatment facility locations must:

- Be located outside Caltrans ROW in an area with significant trash generation, discharge to the same water body or watershed as the original significant trash generating area within Caltrans ROW for which on-site treatment is infeasible. When offsite treatment is also infeasible, Caltrans may perform one of the following:
 - Select a location within Caltrans ROW without a STGA discharge to the same water body or watershed as the original significant trash generating area within Caltrans ROW for which on-site treatment is infeasible; or

- Consider an off-site location with a STGA that does not discharge to the same water body or watershed as the original significant trash generating area within Caltrans ROW for which on-site treatment is infeasible when the above conditions are not met.

Caltrans District NPDES Coordinators will explore local and regional opportunities to partner with local agencies to formulate partnerships to evaluate for equivalent off-site compliance non-structural treatment or install treatment controls. Through these partnerships, resources will be leveraged to contribute towards meeting trash reduction compliance milestones. The Caltrans options for funding these partnerships are the SHOPP financial contribution only and the cooperative implementation agreement programs.

Currently the following systems are not on the Caltrans list of approved devices; however, there are some on the SWRCB approved list that may be considered by Caltrans in the future.

14.5.3.1 SHOPP Financial Contribution Only Program

Caltrans partners with local agencies to fund capital construction costs for water quality improvement projects that treat both Caltrans and local agency runoff. The local agencies administer the design, construction, and maintenance of the project. Caltrans Districts will explore partnership opportunities with local agencies to address trash from both Caltrans and Municipal ROW throughout the state.

14.5.3.2 Cooperative Implementation Agreement Program

These programs provide capital and support funding for planning, design, environmental studies, ROW acquisition (easement only) and construction of stormwater treatment facilities. This program does not have a dedicated funding source, meaning the amount of funds are limited and vary from year to year. RWQCB approval of the proposed project is required. Prospective municipal partners are encouraged to submit project details to the appropriate Statewide Stormwater Coordinators I and II. Projects under consideration are prioritized and funding determinations are made by June of each year.

14.5.4 Institutional Controls – Trash Removal Programs

Caltrans' current trash removal programs include cleanup efforts by Caltrans Maintenance crews, the Adopt-A-Highway Program, partnerships with local entities or other state agencies to engage re-entry or back-to-work programs for underserved and disadvantaged populations, including but not limited to the Veterans Outreach Program, and contracts with California Department of Corrections and Rehabilitation for the Parolee Work Crew Program. Caltrans also partners with certified rehabilitation programs to engage the disabled populations for litter removal. The amount of trash collected in recent fiscal years and the amounts expended are included in the Caltrans Stormwater Program Annual Reports.

14.5.4.1 Caltrans Maintenance Crews

Caltrans collects trash through several activities that District Maintenance personnel perform or oversee on a regular basis. These activities include storm drain maintenance, roadway sweeping, and trash pickup and removal.

14.5.4.1.1 Street Sweeping

Caltrans Districts conduct ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials from the roadway surfaces.

14.5.4.1.2 Storm Drain Maintenance

Caltrans Districts clean storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and by specialized trucks.

14.5.4.1.3 District's Maintenance Crew Litter Removal

District Maintenance crews conduct manual cleanup of trash from the Caltrans ROW. Because this work is often completed in conjunction with other maintenance activities, such as vegetation management and guardrail repair, trash removal volumes are not always easily tracked for reporting purposes.

14.5.4.2 Illegal Encampment Cleanups

The Caltrans ROW has certain areas that are attractive locations for illegal encampments because they provide overhead shelter (beneath overpasses or tall vegetation) and are proximate to necessary urban area resources. A typical cleanup begins with a notification posted at an identified site at least 72 hours prior to the start. In some cases where partnerships exist with local agencies, Caltrans employees are accompanied by homeless advocates or social workers, and at least one law enforcement officer, as advocates attempt to help inhabitants find more suitable housing and other necessary services.

Many local counties and cities have programs aimed at reducing homelessness and its associated environmental impacts. Several regional studies have been performed to better understand homeless demographics, encampment characteristics, and available options for reducing homelessness. Caltrans will continue to explore opportunities for partnerships to work towards eliminating illegal encampments and their associated safety and environmental impacts within the ROW.

14.5.4.3 Adopt-A-Highway Program

The Adopt-A-Highway Program provides an opportunity for individuals, organizations, and businesses to help maintain sections of roadside within California's state highway system. Under the program, volunteers collect a substantial amount of roadside trash every year. Program participants collect the trash in bags and leave the filled bags at the edge of the shoulder for pickup by Caltrans maintenance personnel. The amount

and frequency of highway litter maintenance under the Adopt-A-Highway Program varies from quarter to quarter as the program is subject to other entities' participation. Caltrans continues to explore opportunities at feasible locations to expand the program locations and increase the frequency of trash pick-up through the Adopt-A-Highway Program.

14.5.4.4 Caltrans Partnership Programs

Caltrans partners with other state agencies and local entities to engage in back-to-work and re-entry programs to engage the underserved, underrepresented, disadvantaged populations to assist with litter removal activities. Caltrans partners with the California Department of Corrections and Rehabilitation for the Parolee Work Crew Program. Caltrans partners with other entities including but not limited to the Butte County Office of Education, San Bernardino Community College District, and the City of Oakland to provide transitional employment through the programs such as the Veterans Outreach Program and others. Caltrans also partners with Certified Rehabilitation Programs such as Lincoln Training Center to engage the disabled populations.

14.5.4.5 Construction Site Litter Abatement

To address roadside construction site litter, Caltrans works with contractors to implement Caltrans standard specifications and project specific special provisions on maintaining construction zones free of construction-related litter and debris (Caltrans Standard Specifications Section 5-1.31 and Section 14-10.01).

14.5.5 Clean California Initiative

The Clean California Initiative (Clean CA) was authorized in 2021 to expand litter collection, community engagement, and public education in an effort to maintain the highway system, fund beautification projects in public spaces for underserved communities, create career opportunities, and positively impact California's waterways. Clean CA is scheduled to sunset on June 30, 2024. Progress of Clean CA litter collection efforts are estimated using level of service assessments as well as the number of cubic yards of litter and debris collected.

14.5.5.1 Level of Service Assessments

Caltrans conducts quarterly level of service visual assessments in select highway segments to monitor the trash reduction progress by litter removal efforts. Level of service ratings are assigned to one-mile segments per the following visual assessment rating definitions:

- Need 0: No litter present in one-mile segment
- Need 1: One localized instance of litter in one-mile segment
- Need 2: More than one localized instance of litter in one-mile segment

14.5.6 Source Controls

While Attachment E of the Caltrans NPDES Permit does not recognize source controls as a compliance credit mechanism, they are a key component of long-term behavioral change that results in less trash deposited in Caltrans ROW, and subsequently discharged to the storm drain system and receiving waters. The following sections discuss the types of trash reduction source controls available to Caltrans.

14.5.6.1 Enforcement Activities

Caltrans plans to work with the CHP to explore ways to reduce trash loading in the ROW through increased and more effective enforcement of existing littering laws. Understanding each agency's respective trash challenges and sharing ideas for potential solutions will expectantly lead to improved trash source control within the ROW.

14.5.6.2 Waste Hauler and Waste Facility Coordination

Caltrans Maintenance staff identified routes to and from landfills and transfer stations as being STGAs, with the likely source of trash being waste hauling vehicles (both commercial and private) with inadequate load containment. With thousands of trips per day, these waste hauling vehicles are suspected of being significant sources of trash loading in the ROW. Caltrans plans to build collaborative partnerships with waste hauling and waste facilities to reduce this trash source by improving containment of commercial waste hauling vehicles and promoting proper load covering for private vehicles through improved education and enforcement.

14.5.6.3 Public Education and Outreach Programs

After implementing a pilot program in fiscal year 2001-2002 (Caltrans, 2002) to understand the impact of public education as an effective BMP, Caltrans implemented a successful public education campaign, *Don't Trash California*, to reduce the rates of littering within the state. Caltrans later expanded the program and initiated a statewide, multimedia, bilingual (English/Spanish) campaign to educate the public on the importance of keeping pollutants out of the storm drain system.

In cooperation with the California Stormwater Quality Association (CASQA) and the RWQCBs, Caltrans implemented a public education campaign aimed at reducing stormwater pollution, with a targeted emphasis on trash. The *Protect Every Drop* campaign educated Californians about the sources and pathways of stormwater pollution to enlist their help in reducing stormwater pollution along the state highway system.

Caltrans' current *Let's Change This to That* campaign is a public education campaign with an objective to educate Californians about the sources and pathways of stormwater pollution, and to change their behaviors towards reducing stormwater pollution in and around the state highway system. The campaign focuses on TMDL pollutants within the individual local regional watersheds. Additional information regarding the campaign can

be found in SWMP Section 12 and on the Clean California website: <https://clean.california.dot.ca.gov/resources>.

14.6 Reporting Requirements

The Caltrans NPDES Permit requires that the Annual Trash Monitoring Report is prepared annually to describe the Trash Provisions implementation progress achieved during each fiscal year. As a part of the Annual Trash Monitoring Report, Caltrans will include the Annual Trash Reduction Assessment to evaluate its progress in achieving the Trash Provisions objectives. Reporting requirements for these assessments are described in the following sections.

14.6.1 Annual Trash Reduction Assessment

Caltrans will perform an annual assessment of the amount of trash reduction achieved through implementation of full capture systems, other treatment controls, and institutional controls. This assessment will be performed and documented consistent with the Trash Assessment Methodology that is approved by the SWRCB. Results of the annual trash reduction assessment will be included in the Annual Trash Monitoring Report.

14.6.2 Annual Trash Monitoring Report

A report of compliance progress of the trash reports, plans, or maps will be submitted to the SWRCB on an annual basis per fiscal year as an attachment to the Annual Report, which is submitted on November 30 of each year. The overall objective is to demonstrate Caltrans' statewide trash reduction by discussing the following topics:

- Status of compliance with interim trash reduction milestones as required in Caltrans NPDES Permit Attachment E Section E7.
- Annual amount of trash reduction as required in Caltrans NPDES Permit Attachment E Section E8.
- Implementation summary of the approved assessment methodology as required in Caltrans NPDES Permit Attachment E Section E9.
- Effectiveness of implemented controls as required in Caltrans NPDES Permit Attachment E Section E11.1.4.
- Compliance with full capture system equivalency as required in Caltrans NPDES Permit Attachment E Section E11.1.5.
- Geographic information system-maps as required in Caltrans NPDES Permit Attachment E Section E11.2.1 and Section 11.2.2.
- Estimated trash generation in all remaining STGAs.
- Description of each of the implemented full capture systems, other treatment controls, and/or institutional controls.
- Proposed implementation schedule for the upcoming five fiscal years.
- Status of any approved off-site projects as described in Caltrans NPDES Permit Attachment E Section E12.

If updates are identified while implementing the trash reports, plans, or maps during the fiscal year, those updates will be discussed in the Annual Trash Monitoring Report. This report will also include the Annual Trash Reduction Assessment.

15 Asset Management Plan (C3.5.5)

Caltrans' Asset Management Plan encompasses the following plans, strategies, and policies:

- Transportation Asset Management Plan – A statewide asset management plan with a broad scope that includes state and federal transportation assets, in which one of the performance objectives is stormwater mitigation.
- Stormwater Asset Management Strategy – A strategy that was designed to meet the Caltrans NPDES Permit requirements.
- Climate Change and Resiliency Policies – Multiple climate change and resiliency plans and guidance that have been developed for designing the State Highway System.

15.1 Statewide Transportation Asset Management Plan

The Transportation Asset Management Plan is a coordinated plan between Caltrans and its partner agencies to maintain California's transportation infrastructure assets. Furthermore, the Transportation Asset Management Plan manages the life cycle of transportation assets strategically to minimize costs and manage risks. The California Transportation Commission adopted the Transportation Asset Management Plan guidelines in 2017, following the requirement of Senate Bill 486. These guidelines require the Transportation Asset Management Plan to include pavement, bridge, culverts, Transportation Management System, and a list of supplementary State Highway System assets. In July 2022, the Transportation Asset Management Plan was updated and approved by the California Transportation Commission. Per the Code of Federal Regulations 23 CFR § 515.13, the Transportation Asset Management Plan is required to be updated every four years to incorporate improvements and re-evaluate conditions, targets and performance.

The Transportation Asset Management Plan evaluated the condition of all assets and determined their current condition (Good, Fair, and Poor). Assets are either in the Caltrans-maintained State Highway System (portions of which are included in the National Highway System) or in the National Highway System (portions of the state system and the local system managed by regions, cities, counties, and tribal governments). The State Highway System includes primary asset classes (including pavement, bridges and tunnels, drainage [culverts], and Transportation Management Systems) as required and eight supplementary asset classes (including drainage pump plants, highway lighting, office buildings, overhead sign structures, Safety Roadside Rest Areas, transportation-related facilities, and weigh in motion scales). The stormwater devices that are implemented to address the Caltrans NPDES Permit requirements are included in the State Highway System. In addition, the Transportation Asset Management Plan includes a stormwater mitigation category as a performance objective.

The remaining level of service of the primary asset classes were evaluated and cost estimates for the required repairs to change Fair and Poor ranked assets to Good were

also prepared. The potential risks, mitigation actions, and a monitoring approach for each were determined and incorporated into the funding prioritization and gap analysis. Strategies to address the funding gaps are also discussed with recommendations on existing funding sources to cover funding gaps. The 10-year funding plan for the State Highway System under Sustainability includes a Storm Water Mitigation category. Caltrans' Stormwater Management Program Annual Report already documents the condition of existing stormwater treatment devices and maintenance needs. For more information about the Transportation Asset Management Plan, see this website: <https://dot.ca.gov/programs/asset-management/california-transportation-asset-management-plan>.

See the Fiscal Planning Strategy and Available Resources section (SWMP Section 2.5) for information about the evaluation of cost forecasts to rehabilitate or replace assets.

15.2 Stormwater Asset Management Strategy

The Stormwater Asset Management Strategy is designed to maintain or restore stormwater Treatment BMPs to their proper function. The primary focus of the strategy is to identify the conditions of the Treatment BMPs, actions required to maintain, restore, or retrofit the deficient Treatment BMPs, and costs needed to maintain, restore, or retrofit the Treatment BMPs over each 10-year period of a State Highway System Management Plan (SHSMP).

15.3 Stormwater Asset Management Strategy Evaluation Process

The Stormwater Asset Management Strategy describes the process for evaluating the current condition of each Treatment BMP asset and determining the need for repair, rehabilitation and/or replacement of each asset. Generally, the process includes the following steps:

- Identification of the minimum condition necessary to achieve effective performance for each asset or asset type, including procedures.
- Identification of the current performance level and effectiveness of each asset, which may include factors such as Treatment BMP footprint, undesired or lack of vegetation growth, sediment buildup, and compared to the Treatment BMP condition accepted as an asset and consistent with as-built plans.
- A cost estimate for the repair, rehabilitation or replacement of assets.
- Identification of potential climate change-related threats to assets and appropriate adaptation strategies.

Caltrans stormwater Treatment BMPs are inspected at a minimum of once every two years by Maintenance Division staff and routinely maintained when necessary to keep the Treatment BMPs functioning as designed. If any component of a Treatment BMP asset is not functioning properly, the District Maintenance, NPDES Coordinator, and Stormwater Design shall hold a meeting to discuss corrective action(s). District will update its stormwater asset needs inventory regularly based on the results of inspection and recommended corrective action(s).

Caltrans has been installing, operating, and maintaining Treatment BMPs to improve water quality along its roadways and highways' discharge points. Frequent inspections and maintenance of Treatment BMPs are conducted to ensure that they are functioning as designed and to prevent the potential discharge of pollutants to receiving waters. Maintenance indicators of potential problems may include structural damage, erosion, blockages, debris, trash, and siltation and undesirable vegetation. Inspections can identify required maintenance before the problems exacerbate.

15.4 Stormwater Asset Management Strategy Inventory (C3.14)

Caltrans maintains databases of its Treatment BMP stormwater assets, which are defined as post-construction Treatment BMPs per SWMP Section 5 and stored in the Caltrans Stormwater Portal and the Integrated Maintenance Management System. Based on Caltrans experience, a range of 20-year lifecycle for Low Impact Development BMPs to 50-year lifecycle of structural type Treatment BMPs. Field data sources include field verification conducted prior to capital project closeout. In addition, the database maps include the following minimum data types as required:

- Location (Caltrans District number, county name, route number, post mile, latitude, longitude, and watershed name) of the primary and major assets
- Size, type and treatment mechanism (i.e., volume or flow base)
- Pollutant(s) addressed
- Construction Contract Acceptance date
- Party responsible for maintenance (if another party is responsible)
- Dates and findings of maintenance verifications, maintenance description, lifecycle, maintenance cycle, and description of each asset
- Corrective actions and/or resolutions when applicable (e.g., follow-up inspection required if standing water is noted in prior inspections; Treatment BMP inlet, outlet, flow path should be free of debris built up).

Each District maintains Treatment BMP asset needs inventory, including asset condition and recommended corrective action(s), if any. Caltrans Headquarters (HQ), in working with Districts, prepares the statewide asset inventory maps every two years when creating the new SHSMP. See SWMP Section 2 for additional information on the Caltrans fiscal planning strategy and available resources.

15.5 Climate Change and Resiliency Plans and Policies (C3.13)

Caltrans has evaluated its assets and processes to identify climate change vulnerabilities as documented in many existing plans and guidance. The California Transportation Plan 2050 (CTP 2050) (Caltrans, 2021) describes statewide policies and strategies to achieve a resilient transportation network to potential climate change impacts through transparency, addressing varied rural, suburban, and urban needs, and implementation through designated responsibilities. The CTP 2050 is accessible from the Caltrans Transportation Planning website: <https://dot.ca.gov/programs/transportation-planning>. Climate change guidance has also been developed that discusses the results of a high-level review of potential climate impacts to each District's portion of the

State Highway System (2019 Climate Change Vulnerability Assessments; <https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/air-quality-and-climate-change/2019-climate-change-vulnerability-assessments>), and preliminarily prioritized a list of potentially exposed assets in each District (2020 Adaptation Priorities Reports; <https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/air-quality-and-climate-change/2020-adaptation-priorities-reports>). Both reports are also posted on the Caltrans Transportation Planning website.

In addition, the Design Manual for Hybrid Coastal Protection Strategies (March 2022; https://design.onramp.dot.ca.gov/downloads/design/files/Design%20Manual%20for%20Hybrid%20Coastal%20Protection%20Strategies_Mar2022-a11y.pdf) describes coastal protection strategies for assets located along the Pacific Ocean coastline. These nature-based hybrid strategies include engineered shore protection structures that are combined with existing natural conditions. Structures are designed to protect existing conditions during climate change modeled storm conditions.

Caltrans HDM provides step by step guidance to evaluate the sea-level rise for various emission scenarios and risk aversions, based on the Ocean Protection Council 2018 guidance. HEC-25 (3rd edition) and HEC-17 presents tools and techniques for actionable hydrologic design of transportation infrastructure accounting for the potential effects of climate change. The “State Agency Sea Level Rise Action Plan for California” was prepared by the California Ocean Protection Council (February 2022) to plan for coastal resiliency in response to model-predicted sea level rise of up to one foot by 2050 and 3.5 feet by 2100. Caltrans committed to a couple key activities in this plan, as well as supporting agency activities to support other state agencies. The key activities include the following:

- Engage and coordinate to ensure alignment and inclusion of State, tribal, regional, and local SLR adaptation strategies/efforts in Regional Transportation Plans and Sustainable Communities Strategies, by consulting with tribes and engaging with the public and local stakeholders.
- Ensure critical infrastructure facilities have resiliency plans that are implementable within their maintenance period, and longer-term projects are addressed with adaptive management, to the extent feasible.

The other commitments require Caltrans to coordinate with other agencies to develop inventories, update data sets, and coordinate with tribal governments to ensure guidance is updated. For more information on the State Agency Sea Level Rise Action Plan, see this website: <https://www.opc.ca.gov/2022/08/sea-level-rise-action-plan/>. Caltrans will revise and update its planning and design practices to address climate change based on the most current guidance provided by Ocean Protection Council or other responsible agencies.

16 Program Evaluation (C3.16)

16.1 Overview

The program evaluation is conducted as a part of the Annual Report to determine whether the various programs and/or activities are resulting in the desired outcomes. The Caltrans NPDES Permit requires a program evaluation that includes two major elements: the Field Compliance Evaluations and Field Activities Self-Audit, and the Overall Program Effectiveness Evaluation.

16.2 Overall Program Effectiveness Evaluation

Caltrans' program evaluation includes the following components as required by the Caltrans NPDES Permit:

- a) Assessment of program effectiveness in achieving Caltrans NPDES Permit requirements and measurable objectives.
- b) Assessment of program effectiveness in protecting and restoring water quality and beneficial uses.
- c) Identification of quantifiable effectiveness measurements for each BMP, including measurements that link BMP implementation with improvement of water quality and beneficial use conditions.
- d) Identification of how Caltrans will propose revisions to optimize BMP effectiveness when effectiveness assessments identify BMPs or programs that are no longer effective or need improvement.

The program evaluation will assess the Caltrans Stormwater Program's effectiveness per CASQA's latest programmatic effectiveness assessment guidance, *A Strategic Approach to Planning for and Assessing the Effectiveness of Stormwater Programs* (February 2015). This approach categorizes stormwater management into three primary components:

- **Sources and Impacts** – Addresses the generation, transport, and fate of urban runoff pollutants and flows. This component includes the following outcome levels:
 - Level 6: Receiving Water Conditions
 - Level 5: MS4 Characterization
 - Level 4: Source Contributions
- **Target Audiences** – Understanding the behaviors of the people responsible for source contributions. This component includes the following outcome levels:
 - Level 3: Target Audience
 - Level 2: Barriers and Bridges to Action

- **Stormwater Management Programs** – Descriptions of the strategies that program managers plan to implement and attain receiving water beneficial uses, which may include facilitating changes in key target audiences behaviors and associated administrative and data gathering functions. This component includes the following outcome level:
 - Level 1: Stormwater Program Activities

Table 16-1 shows the CASQA components in which the Caltrans components are covered (“X” identifies where coverage is applicable).

Table 16-1: Evaluation Components Relationship

Caltrans Component	Level 6: Receiving Water Conditions CASQA Component	Level 5: MS4 Characterization CASQA Component	Level 4: Source Contributions CASQA Component	Level 3: Target Audience CASQA Component	Level 2: Barriers and Bridges to Action CASQA Component	Level 1: Stormwater Program Activities CASQA Component
Assessment of program effectiveness in achieving Caltrans NPDES Permit requirements and measurable objectives.	-	-	-	-	-	X
Assessment of program effectiveness in protecting and restoring water quality and beneficial uses.	X	X	X	X	X	X
Identification of quantifiable effectiveness measurements for each BMP, including measurements that link BMP implementation with improvement of water quality and beneficial use conditions.	X	X	-	-	-	X
Identification of how Caltrans will propose revisions to optimize BMP effectiveness when effectiveness assessments identify BMPs or programs that are no longer effective or need improvement.	X	X	-	-	-	X

Table Notes:
 X Applicable
 - Not Applicable

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To address each component, Caltrans has the following goals:

- The Division of Maintenance inspects approximately 20 percent of the slopes in each District annually, depending on weather conditions and workload priorities.
- The Maintenance Division compliance monitoring program inspects 10 activities and 20 percent of the facilities statewide each year as part of its self-audit program.
- Caltrans' chemical use (i.e., pesticide) reduction.

Each statewide Caltrans Stormwater Program element will be evaluated for its effectiveness through the iterative program management cycle that consists of program planning and modification, program implementation, and effectiveness assessment. Through continuous implementation and assessment over the Caltrans NPDES Permit term, the Caltrans Stormwater Program should make progress towards improving its program and achieving desired results.

16.3 Field Compliance Evaluations and Field Activities Self-Audit

The overall program effectiveness evaluation described above includes Caltrans performing compliance evaluations and self-audits for various field activities such as:

- Construction Activities
- Highway Maintenance Activities
- Facility Maintenance
- Targeted Program Components

The self-audit results are incorporated into the effectiveness evaluation portion of the Annual Report.

Program evaluation activities are performed and reported under the direction of Caltrans' Chief Environmental Engineer (CEE). The CEE will provide a management review of program activities on an annual basis.

This section describes how Caltrans complies with self-audit requirements by implementing field compliance evaluation activities and reviewing certain targeted program elements for SWMP adherence. This section describes:

- Compliance evaluation program for field activities
- Construction Compliance Evaluation
- Maintenance and Operations Compliance Evaluations
- Evaluation of Targeted Program Components

16.3.1 Compliance Evaluation Program for Field Activities

Field compliance evaluation plans are prepared for construction and maintenance operation activities. The following plans have been developed:

- Stormwater Program – Construction Compliance Evaluation Plan (CCEP)
- Stormwater Program – Maintenance and Operations Compliance Review Plan

The field compliance evaluation plans generally contain the following elements:

- Compliance Review Method
- Field Evaluation Selection Criteria
- Review Frequency
- Compliance Rating Criteria
- Feedback and Program Improvement

The results of the field evaluation program activities for each fiscal year will be provided in the Annual Report.

16.3.1.1 Construction Compliance Evaluations

Construction compliance evaluations will be performed under the direction of the Headquarters Division of Environmental Analysis (DEA) Water Quality Program with the following objectives:

- Evaluate compliance of construction projects statewide with the requirements of the applicable NPDES Permits.
- Satisfy the self-audit of field activities requirement of the Caltrans NPDES Permit.
- Report compliance status to Caltrans' management.
- Evaluate BMP implementation trends and suggest areas of improvements.

16.3.1.1.1 Project Selection Criteria

The CCEP describes how construction projects are reviewed, identified and prioritized. The criteria specified in the CCEP for prioritizing site reviews includes risk level, proximity to 303(d) listed watersheds, geographic region, time of year and project stage. Every year, all construction projects listed as Risk Level 2 or Risk Level 3 will be reviewed. District Construction Stormwater Coordinators will provide 24-hour notice for RE reviews. CCEP reviews will be conducted during project site normal working hours. The third-party CCEP inspectors will have a current Qualified SWPPP Developer certification throughout the project and may not be involved in the preparation of the construction documents for the site.

16.3.1.1.2 Project Review Criteria

Projects are reviewed for overall effectiveness and compliance with Caltrans NPDES Permit requirements. Construction BMPs are evaluated in accordance with the CCEP as are the required stormwater administrative documentation. Construction Project independent quality assurance (IQA) reviews are conducted year-round with emphasis

placed on seasonal considerations. Construction BMPs and administrative documentation not meeting applicable permit and contract requirements are documented in an IQA as findings requiring corrective action.

16.3.1.1.3 Feedback and Program Improvement

The CCEP specifies review procedures of feedback, thereby enhancing the program performance. A type of review procedure includes trend evaluation in reported deficiencies identifying BMPs requiring improvement. Additionally, information the CCEP reviews evaluates includes recommendations for the administration of a more effective program. Caltrans will perform an analysis of all CCEP IQA reviews annually and summarized in the Annual Report.

16.3.1.1.4 Construction Compliance Tracking

The DEA Water Quality Program staff monitors IQA reviews for Caltrans NPDES Permit compliance. Monitoring includes tracking the status of corrective actions and resolution findings.

16.3.1.2 Maintenance and Operations Compliance Evaluations (Activities and Facilities)

The evaluations of Maintenance and Operations evaluations are performed under the direction of the DEA Water Quality Program with the following objectives:

- Evaluate compliance of maintenance activity and maintenance facility sites with the requirements of the Caltrans NPDES Permit.
- Satisfy the self-audit of field activities requirement of the Caltrans NPDES Permit.
- Report compliance status to Caltrans' management.
- Evaluate BMP implementation trends and suggest areas of improvement.

16.3.1.2.1 Maintenance Activity and Maintenance Facility Site Review Criteria

Maintenance activity and maintenance facility sites are reviewed for overall effectiveness of BMP implementation. Each fiscal year facilities are inspected and maintained, if necessary, no less than twice annually. Reviews are conducted annually. Records of inspections are preserved for at least three years.

District Maintenance Stormwater Coordinators will provide advance notice to the Maintenance Area Supervisor or facility manager the morning of a review except in cases where the review location is in a remote area or when safety, emergencies, or workload priorities necessitate a 24-hour advance notice.

During a review, the implementation of BMPs, non-stormwater management, waste management and disposal controls, and required documentation are rated. Compliance status is documented on a standardized site review form. The effectiveness of the BMPs observed is summarized and documented on the IQA report.

16.3.1.2.2 Feedback and Program Improvement

Information evaluated from the maintenance compliance reviews will determine recommendations for the administration of a more effective Maintenance and Operations Stormwater Program. Information gathered from the compliance reviews will be shared with the Maintenance SWAT, HQ Maintenance, and the Division of Equipment on a regular basis. IQA review results will be summarized in the Annual Report.

16.3.1.2.3 Maintenance and Operations Compliance Tracking

The DEA Water Quality Program monitors IQA reviews for Caltrans NPDES Permit compliance. Monitoring the status of corrective actions and resolution of findings is tracked. DEA reviews are kept internally and IQA review results will be uploaded to SMARTS.

16.3.1.3 Evaluation of Targeted Program Components

Caltrans' compliance evaluations for field activities will include examining several targeted components and processes within the program. The following evaluated components include:

- Illegal connection/illicit discharge (IC/ID)
- Training
- Facility Pollution Prevention Plan

Caltrans DEA will develop a plan and an implementation schedule for evaluating targeted program components. The review findings and the corrective actions recommended for each component will be provided in the Annual Report.

17 Measurable Objectives (C3.7.3 and C3.15)

Caltrans has identified measurable objectives to meet the SWMP's goals, proposed activities and tasks to meet the objectives, and a time schedule for the proposed activities and tasks. Table 17-1 includes the following and addresses agricultural return flows:

- Program effectiveness evaluation category that the measurable objective applies to, such as:
 - a) Assessment of program effectiveness in achieving Caltrans NPDES Permit requirements and measurable objectives.
 - b) Assessment of program effectiveness in protecting and restoring water quality and beneficial uses.
 - c) Identification of quantifiable effectiveness measurements for each BMP, including measurements that link BMP implementation with improvement of water quality and beneficial use conditions.
 - d) Identification of how Caltrans will propose revisions to optimize BMP effectiveness when effectiveness assessments identify BMPs or programs that are ineffective or need improvement.
- Measurable objective name
- Goal of the measurable objective
- Measurable objective task
- Caltrans NPDES Permit section and page number for more information on the measurable objective
- Frequency of the specific measurable objective task, such as:
 - Annually (submitted via the Annual Report or performed annually)
 - As needed (where applicable on a case-by-case basis)
 - Biennially (activities performed every other year)
 - Ongoing (activities performed throughout the Caltrans NPDES Permit term)
 - Year 1 (Fiscal Year 2023-2024)
 - Year 2 (Fiscal Year 2024-2025)
 - Year 3 (Fiscal Year 2025-2026)
 - Year 4 (Fiscal Year 2026-2027)
 - Year 5 (Fiscal Year 2027-2028)

Caltrans will report on its progress in meeting the measurable objectives in the Annual Report.

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Table 17-1: Measurable Objectives and Caltrans NPDES Permit Requirements

Program Effectiveness Evaluation (a-d)	Measurable Objective	Goal	Task	Caltrans NPDES Permit Section/Page #	Frequency
a	Fish Passage Design for Road Crossings	A. Develop Program	Review/revise guidance	Attachment C Section C3.11, p. C-25	Year 1
a	Fish Passage Design for Road Crossings	B. Implement Program	Report on review of document	Attachment C Section C3.11, p. C-25	Year 2
b	Fish Passage Design for Road Crossings	C. Evaluate Program	Evaluate guidance and guidance implementation	Attachment C Section C3.11, p. C-25	Year 2
b	Annual Certification of Legal authority	C. Evaluate Program	Evaluate legal authority	Attachment C Section C3.2.2, p. C-2	Annually
b	Agricultural Return Flows	C. Evaluate Program	Evaluate guidance implementation	Attachment C Section C3.7.3, p. C-15	Annually
d	Annual Stormwater Management Plan Report	B. Implement Program	Prepare report	Attachment C Section C5, p. C-30	Annually
b	Article 3.5 of Streets and Highways Code SWRCB report - On status of locating, assessing, and remediating barriers to fish passage.	C. Evaluate Program	Submit report	Attachment C Section C5.14.2, p. C-32	Annually
a	ASBS Compliance Plan	A. Develop Program	Prepare plan	15, p. 21; Attachment C Section C4, p. C-28	Year 1
a	ASBS Compliance Plan	B. Implement Program	Implement plan	15, p. 21; Attachment C Section C4, p. C-28	Year 2
a	Monitoring Plan	A. Develop Program	Develop plan	Attachment F Section F1, p. F-1; Attachment F2, p. F-1	Year 1
a	Monitoring Plan	B. Implement Program	Implement plan	Attachment F Section F1, p. F-1; Attachment F2, p. F-1	Year 2
d	Annual Monitoring Results Report	B. Implement Program	Prepare report	Attachment F Section F3, p. F-14; Attachment F Section F4, p. F-15	Annually
d	Construction guidance	C. Evaluate Program	Evaluate guidance	Attachment C Section C3.3.2-C3.3.5, p. C-5	Annually
a	District Annual Workplans	B. Implement Program	Prepare plan	Attachment C Section C5.15, p. C-33	Annually
d	District Annual Workplans	C. Evaluate Program	Evaluate plan	Attachment C Section C5.15, p. C-33	Annually
a	Incident Notifications and Reporting	B. Implement Program	Document and report	Attachment G Section G4, p. G-3	Annually
d	Incident Notifications and Reporting	C. Evaluate Program	Evaluate documentation and reporting procedure	Attachment G Section G4, p. G-3	Annually
a	Develop Stormwater Management Plan (SWMP) that describes how the Caltrans NPDES Permit will be implemented.	A. Develop Program	Develop plan	Attachment C Section C1, p. C-1; Attachment C Section C2, p. C-1; Attachment C Section C3, p. C-1	Year 1
a	Fiscal Analysis	C. Evaluate Program	Evaluate fiscal analysis	Attachment C Section C3.2.3, p. C-3	Annually
a	Fiscal Analysis	C. Evaluate Program	Prepare budget	Attachment C Section C3.2.3.2.j, p. C-4	Year 4
a	FPPP Template and Guidance	C. Evaluate Program	Evaluate plan implementation	Attachment C Section C3.5, p. C-6; Attachment C Section C3.5.1, p. C-7	Annually
b	Guidance to ensure industrial activities and facilities are covered by Industrial General Permit.	C. Evaluate Program	Evaluate guidance	Attachment C Section C3.4, p. C-6	Annually
b	Highway maintenance activities as required.	C. Evaluate Program	Evaluate implementation	Attachment C Section C3.5.3, p. C-9; C3.5.3.1, p. C-9; C3.5.3.2, p. C-10; C3.5.4, p. C-12	Annually
a	Asset Management Plan	A. Develop Program	Develop plan	Attachment C Section C3.5.5, p. C-12	Year 1
b	Asset Management Plan	C. Evaluate Program	Evaluate plan implementation	Attachment C Section C3.5.5, p. C-12	Annually
a	BMP Retrofit Program	A. Develop Program	Develop program	Attachment C Section C3.5.6, p. C-13	Year 1
a	BMP Retrofit Program	B. Implement Program	Implement program	Attachment C Section C3.5.6, p. C-13	Year 3
b	BMP Retrofit Program	C. Evaluate Program	Evaluate program implementation	Attachment C Section C3.5.6, p. C-13	Annually
a	Illegal Connection, Illicit Discharge, and Illegal Dumping Response Plan.	A. Develop Program	Develop plan	Attachment C Section C3.7.2, p. C-15	Year 1
b	Illegal Connection, Illicit Discharge, and Illegal Dumping Response Plan	C. Evaluate Program	Evaluate plan implementation	Attachment C Section C3.7.2, p. C-15	Annually
b	Implementation of SWMP and propose revisions in Annual Report	C. Evaluate Program	Evaluate plan implementation	14, p. 20; Attachment C, p. C-1	Annually
a	List of highway facility projects that meet exception criteria in Attachment C Sections C3.10.2.1.a.i and C3.10.2.1.a.ii within six months of the Caltrans NPDES Permit effective date.	B. Implement Program	Submit list	Attachment C Section C3.10.2.1.a.ii, p. C-18	Annually
c	Design, operate, and maintain Treatment BMPs that retain stormwater are operated and maintained to minimize mosquito production and drain within 96 hours of rain event (except per Caltrans NPDES Permit).	C. Evaluate Program	Evaluate records	Attachment C Section C3.10.10, p. C-25	Ongoing
d	Inspection Program	C. Evaluate Program	Evaluate facilities and activities	Attachment C Section C3.5, p. C-6; Attachment C Section C3.5.2, p. C-8; Section C.6, p. C-34; Section C3.10.6.2., p. C-20; Section C3.10.6.4., p. C-20	Annually
a	Lake Tahoe Pollutant Load Reduction Plan	A. Develop Program	Develop plan	Attachment D Section D5.12.2, p. D-19	Year 2
b	Lake Tahoe Pollutant Load Reduction Plan	C. Evaluate Program	Evaluate plan implementation	Attachment D Section D5.12.2, p. D-19	Year 2
a	Landslide Management Plan	A. Develop Program	Develop plan	Attachment C Section C3.5.3.4, p. C-12	Year 1
b	Landslide Management Plan	C. Evaluate Program	Evaluate plan implementation	Attachment C Section C3.5.3.4, p. C-12	Annually
a	Municipal Coordination Plan	A. Develop Program	Develop plan	Attachment C Section C3.2.1, p. C-2	Year 1

Program Effectiveness Evaluation (a-d)	Measurable Objective	Goal	Task	Caltrans NPDES Permit Section/Page #	Frequency
c	Municipal Coordination Plan	C. Evaluate Program	Evaluate plan implementation	Attachment C Section C3.2.1, p. C-2	Annually
d	Update construction guidance as needed to comply with the current Statewide Construction General Permit (CGP) and Lake Tahoe Construction General Permit (TCGP) requirements.	C. Evaluate Program	Evaluate guidance	Attachment C Section C3.3, p. C-4	As needed
c	Overall Program Effectiveness, including field compliance evaluations and field activities self-audit.	C. Evaluate Program	Evaluate effectiveness	Attachment C Section C3.16, p. C-27	Annually
a	Policies and procedures that address General Discharge Prohibitions, Non-Stormwater Discharges, Effluent Limitations, Receiving Water Limitations, and Standard Provisions requirements (including others in these sections) where appropriate.	C. Evaluate Program	Evaluate policies and procedures	3 - 13, p. 5	Annually
c	Public Education Program	C. Evaluate Program	Evaluate Public Education Program	Attachment C Section C3.9, p. C-16;	Annually
b	Self-Audit	C. Evaluate Program	Evaluate/prepare report	Attachment C Section C3.16.1., p. C-27	Annually
c	Technology, Monitoring, and Development Status Report	C. Evaluate Program	Prepare and submit updates	Attachment C Section C5.3, p. C-31	Annually
a	Structural BMP inventory (which retain water for more than 96 hours) to California Department of Public Health electronically.	C. Evaluate Program	Submit inventory	Attachment C Section C3.10.10.6., p. C-25	Biennially
a	Structural BMPs (which retain water for more than 96 hours) inventory.	A. Develop Program	Develop inventory	Attachment C Section C3.10.10.6., p. C-25	Year 2
a	Structural BMPs (which retain water for more than 96 hours) inventory.	B. Implement Program	Maintain inventories	Attachment C Section C3.10.10.6., p. C-25	Biennially
a	TMDL - Reach Prioritization	A. Develop Program	Develop inventory	Attachment D Section D3.1, p. D-2	Year 1
c	TMDL – Annual TMDL Compliance Status Reports	C. Evaluate Program	Evaluate/prepare report	Attachment D Section D3.2, p. D-2	Annually
a	TMDL Compliance Plan	A. Develop Program	Develop plan	Attachment D Section D3.3, p. D-4	Year 1
c	TMDL Compliance Plan	C. Evaluate Program	Evaluate plan implementation	Attachment D Section D3.3, p. D-4	Annually
c	Training	C. Evaluate Program	Review/assess training	13.18, p. 20; Attachment C Section C3.3.4, p. C-5; Attachment C Section C3.8, p. C-16	Annually
a	Trash Monitoring Plan	A. Develop Program	Develop plan	Attachment E, p. E-1	Year 1
a	Trash Monitoring Plan	B. Implement Program	Implement plan	Attachment E, p. E-1	Year 2
c	Trash Annual Monitoring Report	C. Evaluate Program	Evaluate/prepare report	Attachment E Section E13, p. E-1	Annually
c	Vegetation controls (applications of pesticides, herbicides, and fertilizers) program.	C. Evaluate Program	Evaluate controls	Attachment C Section C3.5.3.2, p. C-10	Annually
a	Waste Management Plan	A. Develop Program	Develop plan, inventory	Attachment C Section C3.5.3.3, p. C-11	Year 1
d	Waste Management Plan	C. Evaluate Program	Evaluate plan implementation	Attachment C Section C3.5.3.3, p. C-11	Annually
b	Report of Waste Discharge	B. Implement Program	Prepare report	12, p. 14; Attachment G Section G3, p. G-1	Year 4

Table Notes:

- a) Assessment of program effectiveness in achieving Caltrans NPDES Permit requirements and measurable objectives.
- b) Assessment of program effectiveness in protecting and restoring water quality and beneficial uses.
- c) Identification of quantifiable effectiveness measurements for each BMP, including measurements that link BMP implementation with improvement of water quality and beneficial use conditions.
- d) Identification of how Caltrans will propose revisions to optimize BMP effectiveness when effectiveness assessments identify BMPs or programs that are ineffective or need improvement.

Annually Submitted via the Annual Report or performed annually
 As needed Where applicable on a case by case basis
 Biennially Activities performed every other year
 Ongoing Activities performed throughout the Caltrans NPDES Permit term
 Year 1 Fiscal Year 2023-2024
 Year 2 Fiscal Year 2024-2025
 Year 3 Fiscal Year 2025-2026
 Year 4 Fiscal Year 2026-2027
 Year 5 Fiscal Year 2027-2028

18 Reporting

18.1 Overview

This section describes the following reporting activities:

- Report of Waste Discharge
- Annual Report
- SWMP revisions
- District Annual Workplans (DAWPs)
- Incident Reporting – Non-Compliance and Anticipated Non-Compliance

Caltrans is required to provide documentation on specific elements of the Caltrans NPDES Permit (activities and deliverables) to the online SMARTS. All SMARTS entries will be conducted by a designated Legally Responsible Person (LRP) or by the “duly authorized representative(s),” designated by the LRP(s). Designated LRP(s) for SMARTS reporting will be assigned for the sole purpose of adhering to the electronic filing requirements required by the Caltrans NPDES Permit. Caltrans may develop a reporting structure for each program area that requires electronic filing in SMARTS. Table 18-1 shows the Caltrans NPDES Permit Attachment G reporting requirements and the Caltrans reporting responsibility designation.

Table 18-1: Reporting and Notification Due Dates and Caltrans Reporting Responsibility

Reporting Requirement	Caltrans NPDES Permit Section	Due Date	Reporting Responsibility
Report of Waste Discharge	Caltrans NPDES Permit, Table 2 and Section 12	No later than 180 days before expiration date of the Caltrans NPDES Permit	Headquarters Division of Environmental Analysis
SWMP	Attachment C, Sections C1 through C3.15	By November 30 after the effective date of the Caltrans NPDES Permit	Headquarters Division of Environmental Analysis
Areas of Special Biological Significance Compliance Plan	Attachment C, Section C4	Within 12 months of effective date of the Caltrans NPDES Permit	Headquarters Division of Environmental Analysis
List of Highway Facility Projects	Attachment C, Section C3.10.2.1.a.i and ii	Within six months of the effective date of the Caltrans NPDES Permit	Headquarters Division of Environmental Analysis
Prioritized Inventory of Reaches by Pollutant Category	Attachment D, Section D3.1	Within 12 months of Adoption Date of the Caltrans NPDES Permit	Headquarters Division of Environmental Analysis
TMDL Compliance Plan	Attachment D, Section D3.3	Within 12 months of Adoption Date of the Caltrans NPDES Permit	Headquarters Division of Environmental Analysis

Reporting Requirement	Caltrans NPDES Permit Section	Due Date	Reporting Responsibility
TMDL Compliance Plan Annual Updates	Attachment D, Section D3.3	Annually by November 30 of each year	Headquarters Division of Environmental Analysis
Trash Assessment Methodology	Attachment E, Section E9	By the effective date of the Caltrans NPDES Permit	Headquarters Division of Environmental Analysis
Revised Trash Assessment Map	Attachment E, Section E10	Within six months of approval of the Trash Assessment Methodology	Headquarters Division of Environmental Analysis
Trash Monitoring Plan	Attachment E, Section E11	Within six months of approval of the Trash Assessment Methodology	Headquarters Division of Environmental Analysis
Monitoring Plan	Attachment F, Sections F2 through F2.15	Within 12 months of effective date of the Caltrans NPDES Permit	Headquarters Office of Stormwater Planning and Development
Lake Tahoe Regional Stormwater Monitoring: demonstration of participation in the Lake Tahoe Regional Stormwater Monitoring Program or submittal of a self-monitoring plan	Attachment F, Section F2.12.5	Within 60 days of the effective date of the Caltrans NPDES Permit	Headquarters Division of Environmental Analysis and District 3 NPDES
Annual Stormwater Management Plan Report (includes District Annual Workplans and summary of the Inventory of Best Management Practices)	Attachment C, Sections C5 through C5.16	Annually by November 30 of each year	Headquarters Division of Environmental Analysis
Annual TMDL Compliance Status Report	Attachment D, Section D3.2	Annually by November 30 of each year	Headquarters Division of Environmental Analysis
Annual Meeting to discuss Cooperative Projects	Attachment D, Section D3.3	Caltrans must meet annually by March 1 with the appropriate Regional Water Quality Control Board (RWQCB) Executive Officers or designee to discuss proposed and active cooperative projects that may provide compliance with load allocations or waste load allocations.	Headquarters Division of Environmental Analysis

Reporting Requirement	Caltrans NPDES Permit Section	Due Date	Reporting Responsibility
Annual Trash Monitoring Report	Attachment E, Section E13	Annually by November 30 of each year	Headquarters Division of Environmental Analysis
Monitoring Plan Annual Update	Attachment F, Section F2	Annually by November 30 of each year	Headquarters Office of Stormwater Planning and Development
Annual Monitoring Results Report	Attachment F, Section F3	Annually by November 30 of each year	Headquarters Office of Stormwater Planning and Development
Database of Inventory of BMPs	Attachment C, Section C5	Upon SWRCB Executive Director or RWQCB Executive Officer request	Headquarters Division of Design, Maintenance, and Environmental Analysis
Maintenance Facility Inspection Reports	Attachment C, Sections C3.5 and C6	Upload to SMARTS within 60 days of the inspection	Headquarters Division of Maintenance
Post-Construction Inspection Report	Attachment C, Sections C5.8 and C6	Upload to SMARTS within 60 days of the inspection	District Maintenance NPDES Coordinators
Incident Notifications and Reports	Attachment C, Section C5.12 and Attachment G, Sections G4 – G4.3	- Verbal Notification by Telephone: within 24 hours of incident occurrence. - Written Notification by Email: within five days of incident occurrence. - Upload to SMARTS: within 30 days of incident occurrence	District NPDES Coordinators

The following Caltrans NPDES Permit Attachment G reporting requirements are discussed in the noted SWMP sections and not in SWMP Section 18:

- SWMP (see SWMP Section 1)
- List of Highway Facility Projects and Time Extension (where applicable) (see SWMP Section 5)
- Prioritized Inventory of Reaches by Pollutant Category (see SWMP Section 13)
- TMDL Compliance Plan (see SWMP Section 13)
- TMDL Compliance Plan Annual Updates (see SWMP Section 13)
- Trash Assessment Methodology (see SWMP Section 14)
- Revised Trash Assessment Map (see SWMP Section 14)
- Trash Monitoring Plan (see SWMP Section 14)
- Monitoring Plan (see SWMP Section 3)
- Lake Tahoe Regional Stormwater Monitoring (demonstration of participation in the Lake Tahoe Regional Stormwater Monitoring Program or submittal of a self-monitoring plan) (see SWMP Section 3)
- Annual TMDL Compliance Status Report (see SWMP Section 13)
- Annual Meeting to discuss Cooperative Projects (see SWMP Section 13)
- Annual Trash Monitoring Report (see SWMP Section 14)

- Monitoring Plan Annual Update (see SWMP Section 3)
- Annual Monitoring Results Report (see SWMP Section 3)
- Database of Inventory of BMPs (see SWMP Section 4)
- Maintenance Facility Inspection Reports (see SWMP Section 8)
- Incident Notifications and Reports (see SWMP Section 2)

18.2 Report of Waste Discharge (12)

Caltrans will prepare and file a Report of Waste Discharge no later than 180 days before the Caltrans NPDES Permit expires. It serves as Caltrans' application for the reissuance of the Caltrans NPDES Permit and will be accompanied by an updated SWMP and a summary of all available water quality data for the discharges regulated under the Caltrans NPDES Permit, and receiving waters, including conventional pollutant data from a minimum of the most recent three years and toxic pollutant data from at least the most recent five years from the discharge and receiving waters. In addition, the final results of all studies that may have a bearing on the requirements of a subsequent reissued Caltrans NPDES Permit will be included.

18.3 Annual Report

18.3.1 Overview of the Annual Report (C3.12)

The Annual Report summarizes significant activities and events related to implementation of the SWMP for each fiscal year (i.e., July 1 through June 30) and the forthcoming fiscal year (as required and where applicable per the Caltrans NPDES Permit). Caltrans uploads an electronic portable document format (PDF) version into the statewide SMARTS database by November 30 each year according to the schedule shown in Table 18-2.

Table 18-2: Annual Report Submittal Dates

Fiscal Year (Reporting Period)	Annual Report Due Date
July 2023 – June 2024	November 30, 2024
July 2024 – June 2025	November 30, 2025
July 2025 – June 2026	November 30, 2026
July 2026 – June 2027	November 30, 2027
July 2027 – June 2028	November 30, 2028

The Annual Report will contain all information and submittals required by Caltrans NPDES Permit Attachment C Section C5 including, but are not limited to:

- A fiscal analysis that includes the requirements specified in the Fiscal Planning Strategy and Annual Fiscal Report section.
- A Certification of Adequacy of Legal Authority.
- A Stormwater Best Management Practice Technology, Monitoring, and Development Status Report that will include pilot study results of any new BMP evaluations and investigations.
- An overall Public Education Program Progress Report with details regarding how Caltrans complied with the public education requirements.

- An Overall Program Effectiveness Evaluation Report based on the conclusions for the Field Activities Self-Audits.
- A report on the vegetation control and chemical usage that includes the following:
 - Summary of chemical use, including the quantity of chemicals used during the previous reporting period by chemical name, type of chemical, by District, and by month.
 - An assessment of long-term trends in herbicide usage and a table with yearly herbicide totals by chemical type and by District.
 - A comparison of Caltrans' statewide herbicide uses with Caltrans' herbicide reduction goals.
 - An analysis of the effectiveness of implementation of vegetation control BMPs, including a discussion of the improvements to BMPs in use, proposed for use, and an explanation when no improvements are proposed.
 - A justification for any increase in the use of chemicals, herbicides, pesticides, and fertilizers.
 - A report on the number and percentage of employees who apply pesticides and have been trained and licensed in Caltrans' Pesticide and Fertilizer Pollution Control Program policies.
 - Training materials if requested by the SWRCB Executive Director.
- A summary table of BMPs installed during the reporting period with certification dates for proper operation and maintenance. Caltrans shall include discharge to sanitary sewer as a BMP in the summary table where applicable.
- A report on any post-construction BMPs maintenance activities, including descriptions regarding how Caltrans complied with the post-construction requirements.
- A District-by-District description of construction and post-construction stormwater BMPs implemented during the reporting period. A summary of BMP effectiveness and a description of iterative improvements implemented to address underperforming BMPs will be included.
- A progress report on how the required measurable objectives were met.
- Proposed SWMP revisions, including revisions to the existing BMPs and corresponding justifications.
- A summary of non-compliance with the Caltrans NPDES Permit and SWMP, including incident dates, types, locations, and the status of non-compliance.
- A summary table of updates to the Facility Pollution Prevention Plans for each maintenance facility, arranged by Caltrans District and RWQCB, including the date of the last update or revisions, and the nature of any revisions.
- A report on the following other items:
 - Status and progress of interagency coordination activities under the Municipal Coordination Plan.
 - Information required under Article 3.5 of the Streets and Highways Code requiring a report on the status of efforts in locating, assessing, and remediating barriers to fish passage.
 - Compliance evaluations for field activities including construction, highway maintenance, facility maintenance, and selected targeted program

- components. The results of the field compliance evaluations for each fiscal year shall be provided.
- A summary of all construction project non-compliance items.
 - An inventory of vulnerable road segments, including the identity of road segments with slopes that are prone to erosion and sediment discharge and any stabilization of slopes to control the discharge of pollutants.
 - Details of Regional Monitoring Programs participation activities, such as the contributed amount to the regional monitoring program, the Caltrans activities performed, and achievement of waste load allocations.
- DAWPs (see below).

The Annual Report will also include a summary of the Inventory of Structural BMPs that will be maintained and kept current. However, the Inventory of Structural BMPs will not be uploaded into the statewide SMARTS database annually, but will be made available upon request by the SWRCB Executive Director or a RWQCB Executive Officer. See SWMP Section 4.6 for more information about the Inventory of Structural BMPs.

The Annual Report documents the results of evaluating, assessing, and reporting on each relevant element of the stormwater program, and revising activities, control measures, BMPs, and measurable objectives, as necessary, to meet the applicable standards.

The format of the Annual Report will be consistent with the organization of the SWMP. Consequently, activities described in the Annual Report can be compared to the commitments or activities defined in the SWMP. In some cases, information to be reported may not be suitable or convenient for inclusion in the Annual Report and may be issued as supplements, for example, documentation of monitoring data. When supplements are applicable, the narrative portion of the Annual Report will identify the supplement, and the supplement is provided with the Annual Report, if it has not been previously submitted. The Annual Report and supplemental materials will be available to the public via Caltrans' website (<http://www.caltrans.ca.gov/hq/env/stormwater>), Caltrans' Stormwater library, or by a public records request.

18.4 SWMP Revisions (14 and C5.17)

When Caltrans divisions identify needed SWMP changes, they submit these in writing to the DEA. Any Caltrans entity (e.g., Office, SWAT, and Division) may request a change, as well as the SWRCB and RWQCBs.

When Caltrans proposes significant SWMP changes, the changes are identified in a proposed SWMP that depicts deleted text in ~~strikeout~~ and added text in underline. The purpose and need of these changes are described either in the Annual Report or in a separate submittal. Significant changes to the SWMP will require a public notice and approval by the SWRCB at a Board Hearing. Minor changes may be approved by the Executive Director. All proposed changes will be included in a formal request from Caltrans to the SWRCB.

18.5 District Annual Workplans

Caltrans NPDES Permit Attachment C Section C5.15 requires the submittal of DAWPs as part of the Annual Report to the SWRCB each year by November 30. DAWPs describe the organization of each Caltrans District's stormwater program and outline the planned stormwater activities the District will conduct to implement the SWMP for the upcoming fiscal year. The District is responsible for implementation of the stormwater program consistent with statewide model practices in collaboration with HQ DEA and other applicable Headquarters Functions consistent with the process as described in SWMP Section 2.2.

The DAWPs will also be forwarded by HQ DEA to the appropriate RWQCB Executive Officer for acceptance. The DAWPs are deemed accepted 60 days after receipt by the RWQCB unless rejected in writing. When requested by a RWQCB Executive Officer, District staff will meet with RWQCB staff annually before submitting the DAWPs to discuss alternatives and ensure appropriate post construction controls are included in the project development process through review of the DAWPs and early consultation and coordination between District and RWQCB staff. DAWPs will conform to the requirements of applicable RWQCB Basin Plans and will include, at a minimum:

- A description of all anticipated soil disturbing activities and projects to be undertaken by the Districts for the upcoming fiscal year of July 1 through June 30. This will include a description of the construction and post construction controls to be implemented for each activity and project.
- The area of new impervious surface and the percentage of new impervious surface to existing impervious surface for each project.
- The area of disturbed soil associated with each project or activity.
- A description of other permits required by the RWQCBs for each project or activity.
- Potential and actual impacts of the discharges from each project or activity.
- The proposed BMPs to be implemented in coordination with other MS4 permittees to comply with waste load allocations and load allocations assigned to Caltrans for specific pollutants in specific watersheds or sub watersheds.
- The elements of the statewide monitoring program to be implemented in the District.
- Identification of high-risk areas (such as locations where spills or other releases may discharge directly and indirectly to municipal or domestic water supply reservoirs or ground water percolation facilities).
- Spill containment, prevention, response, and control measures for high-risk areas.
- An inventory of vulnerable road segments with slopes prone to erosion and sediment discharge.

DAWP Section 1 – Introduction – contains general statements regarding the DAWP and its organization.

DAWP Section 2 – District Personnel and Responsibilities – describes positions, addresses, and telephone numbers of personnel with responsibilities for stormwater operations within the District. This section also identifies positions having signatory authority for various notifications or documents required for submittal by a District (e.g., notice of construction).

DAWP Section 3 – District Facilities and Water Bodies – identifies maintenance stations (to include identification of crew function and street address), vista points, commercial vehicle enforcement areas, roadside rest areas, park and ride facilities, and toll road and bridge plazas. In addition, this section contains a map depicting the roadways, significant water bodies, and RWQCB watersheds (Hydrologic Unit Boundaries).

DAWP Section 4 – Drinking Water Reservoirs and Recharge Facilities – describes and identifies high-risk areas (such as locations where spills or other releases from Caltrans-owned Rights of Way, roadways or facilities may discharge directly to municipal or domestic water supply reservoirs or ground water percolation facilities. Projects that potentially drain to these areas consider project features that enhance spill response.

DAWP Section 5 – Slopes Prone to Erosion – identifies the road segments within each District that have slopes that are prone to erosion and sediment discharge.

DAWP Section 6 – Implementation – identifies projects within Project Initiation Document, Project Approval/Environmental Document, Plans, Specifications, and Estimates (PS&E), and Construction phases. These projects are limited to those meeting any of the following criteria:

- All projects that require soil disturbing activities
- Adjacent to a Drinking Water or Ground Water Recharge Facility, as described in DAWP Section 4
- A supplemental environmental project
- Additional projects per agreement between the District and local RWQCB

Projects are presented in a manner that identifies the following, if applicable:

- Location (county, route and post mile limits)
- Project number (Expense Authorization)
- Basic Project Description
- Disturbed soil area
- Presence of receiving waters within or adjacent to project limits, with special designation for 303(d) listed water bodies (adopted)
- Drinking Water Reservoir or Ground Water Recharge Facility within or adjacent to project (as identified in Section 4 of the DAWP)
- Projected milestone dates of Project Approval/Environmental Document, PS&E, Begin Construction Date, and End Construction Date
- Description of Construction Controls

- Post-Construction Treatment Controls (types and quantities)
- Dredge and fill (Clean Water Act [CWA]-401) activities within the project
- Other RWQCB permits required
- Potential and Actual Impacts of Project's Discharge
- Area of New Impervious Surface
- Percentage of New Impervious Surface to Existing Impervious Surface

Furthermore, DAWP Section 6 identifies planned maintenance activities involving water bodies that may require action by the RWQCB under Section 401 of the CWA. Information associated with the activities includes location, affected water body, and area of disturbance. In addition, DAWP Section 6 describes planned efforts of stormwater monitoring within the District; however, these activities may be conducted jointly with other Districts and HQ. Consequently, information contained in a DAWP may be repeated in another DAWP.

DAWP Section 7 – Statewide Trash Provisions – discusses the District's planned activities for compliance with the SWRCB Statewide Trash Provisions.

18.6 Incident Reporting – Non-Compliance and Anticipated Non-Compliance

18.6.1 Overview

Caltrans NPDES Permit Attachment G Section G4 requires Caltrans to report all known incidents of non-compliance. Each DAWP will identify the responsible parties for non-compliance reporting within each District.

Non-compliance incidents consist of emergency, field, and administrative. Emergency incidents are sudden, unexpected, unpreventable incidents that threaten public health, public safety, property, or the environment that pose a clear and imminent danger requiring immediate action to prevent or mitigate the damage or threat, and that result in a discharge or potential discharge.

Field non-compliance may arise from the following:

- Discharge of pollutants to surface water caused by lack of BMP(s), ineffective implementation of BMP(s), or failure of BMP(s).
- Monitoring data indicating an exceedance of a defined standard. Defined standards include TMDL requirements, and water quality standards in the Water Quality Control Plans and promulgated policies and regulations of the State and RWQCBs, including California Ocean Plan limitations and prohibitions.
- Discharge of prohibited non-stormwater to surface water.
- Failure to comply with a site's Facility Pollution Prevention Plan BMP requirements, which results in a discharge to surface water.
- Failure to comply with inspection, monitoring, and reporting requirements and protocols.

Reports of field non-compliance may come from the following sources:

- Construction Project Activities not subject to the Statewide Construction General Permit (CGP) or the Lake Tahoe CGP – Discharges on a construction site should first be addressed by the contractor, as that is where the responsibility for Caltrans NPDES Permit compliance rests. The contractor's own quality control (QC) program, such as conducting inspections and submitting inspection reports, and providing annual certifications, should prevent or catch discharges missed by the contractor's crews. A contractor's implementation or QC failure will be verified by the RE, site inspectors, or other District staff.
- Encroachment Permit Activities not subject to the CGP or Lake Tahoe CGP– Noncompliance may be discovered by the Encroachment Permit inspector. Notice may also come from local agencies. Any discharge will be referred to the District NPDES Coordinator who ensures an Incident Report Form is submitted.
- Caltrans Staff – Caltrans staff is to notify the District NPDES Coordinator for compliance assurance and follow-up for all construction, maintenance and encroachment permit issues. The District NPDES coordinator will contact the appropriate staff member of the Construction Division, Maintenance Division, or Traffic Operations (Encroachment Permits).
- Notification from a RWQCB – RWQCB staff may contact Caltrans staff regarding a potential non-compliance incident. Appropriate action, based on where the incident occurs, will be taken by the District NPDES Coordinator.
- Reports from the Public – Public complaints may come directly to Caltrans or through other local, state, or federal government agencies. Communication is referred to the District NPDES Coordinator for compliance assurance and follow-up.

Administrative non-compliance arises from the following:

- Failure to submit reports or documents required by the Caltrans NPDES Permit and/or SWMP, failure of timely submittal, and/or failure to submit required information.
- Failure to develop and/or maintain a site-specific Facility Pollution Prevention Plan, or
- Failure to implement any other procedural requirement of the Caltrans NPDES Permit.

Reports of administrative non-compliance may come from the following sources:

- Third-party independent reviews conducted as part of the Caltrans self-audit program.
- Quality assurance reviews performed by Caltrans personnel.
- Stormwater program audits performed by regulatory or oversight agencies.

Non-compliance incidents for the following activities are not subject to the reporting requirements of Caltrans NPDES Permit Attachment G Section G4 and are instead subject to the requirements of their respective permits:

- Construction activities (projects) covered by the CGP and the Lake Tahoe CGP.
- Industrial activities covered by the Industrial General Permit.
- 401 certification.

18.6.2 Reporting of Incidents of Non-Compliance (C3.10.4)

Non-compliance reporting for actual non-compliance incidents will occur via verbal notification and the electronic filing of an Incident Report form in SMARTS. Each DAWP will identify the responsible parties for non-compliance reporting within each District.

Caltrans will report non-compliant incidents as listed in Table 18-3 (see SWMP Appendix A for the Incident Reporting form for field and administrative incidents). Distribution of incident reports internally between the SWRCB and any RWQCB will be conducted through SMARTS.

Table 18-3: Notification Schedule for Incidents of Non-Compliance

Type of Incident	Within 24 Hours of Awareness (Verbal/Telephone Notification)	Within 5 Working Days (Written Notification) ³⁷	Within 30 Calendar Days (Written Notification)	Report In Annual Report
Emergency Incidents ^{33,34}	Notify RWQCB Executive Officer.	To SWRCB and RWQCB Executive Director and Executive Officer.	Upload to SMARTS.	Chronological summary and status of all incidents.
Field ^{34,35}	Notify Caltrans HQ DEA-SWP; Notify RWQCB Executive Officer.	To SWRCB and RWQCB Executive Director and Executive Officer; Copy HQ DEA-SWP.	Upload to SMARTS.	Chronological summary and status of all incidents.

³³ Incidents that threaten public health, public safety, property, or the environment that pose a clear and imminent danger requiring immediate action to prevent or mitigate the damage or threat, and that result in a discharge or potential discharge to surface waters shall be reported to the California Office of Emergency Services upon discovery of the incident.

³⁴ Additional immediate reporting to the Office of Emergency Services is required in compliance with Water Code §13271 if Caltrans causes or permits a discharge of a hazardous substance or sewage to waters of the state or discharges or deposits hazardous waste or sewage where it will or probably will be discharged to waters of the state. See Cal OES Notification Guidance (https://www.caloes.ca.gov/wp-content/uploads/Fire-Rescue/Documents/CalOES-Spill_Booklet_Feb2014_FINAL_BW_Acc.pdf).

³⁵ Failure to meet any non-administrative requirement of this SWMP, the Caltrans NPDES Permit, or applicable water quality standard. This includes failure to install required BMPs or failure to conduct required monitoring or maintenance. It also includes discharges of prohibited non-stormwater that do not meet the definition of emergency incidents. It does not include determinations by Caltrans or a RWQCB Executive Officer that a discharge is causing or contributing to an exceedance of an applicable Water Quality Standard. See Attachment G Section G4.3 of the Caltrans NPDES Permit.

Type of Incident	Within 24 Hours of Awareness (Verbal/Telephone Notification)	Within 5 Working Days (Written Notification) ³⁷	Within 30 Calendar Days (Written Notification)	Report In Annual Report
Administrative ^{36,37}	Notify HQ DEA-SWP; Notify RWQCB Executive Officer.	N/A	To SWRCB and RWQCB Executive Director Officer and Executive Officer; Copy to Caltrans HQ DEA-SWP.	Chronological summary and status of all incidents.

18.6.3 Anticipated Non-Compliance

Caltrans will report all potential or threatened anticipated non-compliance to the SWRCB and appropriate RWQCB in accordance with “Anticipated non-compliance” provisions described in Caltrans NPDES Permit Section 13.14.2. The report will describe the timing, nature, and extent of the anticipated non-compliance. Potential non-compliance may be for field or administrative incidents as described in SWMP Section 18.6 only. Threatened non-compliance is when any planned changes at a facility, at a Caltrans construction site, or at a maintenance activity site covered under the Caltrans NPDES Permit may result in non-compliance with the Caltrans NPDES Permit requirements. The submittal of an Incident Report Form is not required for anticipated non-compliance.

³⁶ Failure to meet any administrative or procedural requirement of this SWMP or the Caltrans NPDES Permit including submission of required reports, notifications and certifications. The report of non-compliance must be submitted to the same organization (SWRCB or RWQCB) to which the required report was originally due.

³⁷ Written documentation for discharges to receiving water must be submitted through an Incident Report Form, all other field and administrative non-compliance incidents may be submitted through a letter.

19 References

Following is a list of items referenced in this SWMP.

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Appendix A: Incident Report Form

INCIDENT NOTIFICATION REPORT FORM

SECTION 1: Incident Type, Agency, and Contact Information

Type of Incident: Field Administrative

Name of person completing this form: _____

Person's agency name and address: _____

Person's phone and email: _____

SECTION 2: Field Incidents

1. Incident dates _____ Time(s) _____

2. Location of incident, county: _____

a. Nearest city/town: _____

b. Street address/nearest cross street: _____

c. Latitude/longitude: _____

d. Additional location detail: _____

3. Name of each material discharged: _____

4. Approximate quantity discharged (specify units): _____

5. Approximate concentration of material: _____

6. Discharge to surface water? Yes No

a. Name of implicated waterbody: _____

b. Apparent effects (if any) on waterbody: _____

c. Estimated extent of impacts to waterbody: _____

7. California Office of Emergency Services Notification

a. Date and time of notification: _____

b. Name of person making the notification: _____

c. Phone number of persons making the notification: _____

8. Verbal RWQCB Notification

a. Name of RWQCB contact: _____

b. RWQCB contact's phone/e-mail: _____

c. Name of person making the notification: _____

d. Date of telephone notification to RWQCB person notified: _____

e. Date of Email follow up documentation: _____

9. Notification of downgradient communities/appropriate person(s)

a. Date and time of notification: _____

b. Name of person making the notification: _____

c. Phone number of persons making the notification: _____

d. Name of downgradient community/persons: _____

10. Field Non-Compliance (check all that apply)

- a. Lack of, ineffective implementation of, or failure of best management practices that resulted in a discharge of pollutants to surface water. Yes No
- b. Monitoring data indicates an exceedance of a defined standard. Defined standards include Total Maximum Daily Load waste load allocation, water quality standards in the Water Quality Control Plans, and promulgated policies and regulations of the SWRCB and RWQCB, including California Ocean Plan limitations and prohibitions. Yes No
- c. Discharge or prohibited non-stormwater. Yes No
- d. Failure to comply with FPPP requirements. Yes No
- e. Failure to comply with inspection, monitoring, and reporting requirements and protocols. Yes No
- f. Other (If you response to any question above is no, please explain – use Comments Section below if needed).

SECTION 3: Administrative Non-Compliance (check all that apply)

- 1. Failure to timely submittal of reports, documents, or information required by the Caltrans NPDES Permit and/or SWMP: Yes No
- 2. Failure to develop and/or maintain a site-specific FPPP or to implement any other procedural requirement of the Caltrans NPDES Permit: Yes No
- 3. Other (If you response to either question above is no, please explain – use Comments Section below if needed): _____

SECTION 4: Description of Incident:

Activities in the area prior to the incident (If any): _____

Initial assessment of any impact caused by the discharge (If any): _____

Samples collection and analysis requested (If any): _____

Steps taken to mitigate damage and prevent reoccurrence (If any): _____

Current Status: _____

Schedule for proposed mitigation/abatement (If any): _____

Other Comments:

Certification – *I certify that under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

	Title	Telephone	Date
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	Title	Telephone	Date
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NON-COMPLIANCE NOTIFICATION SCHEDULE

Type of Incident	Within 24 hours of Becoming Aware (Verbal/Telephone)	Within 5 Working Days (Written)	Within 30 Calendar Days (Written)	Report In Annual Report
Emergency Incidents ³⁸	Notify RWQCB Executive Officer	To SWRCB and RWQCB Executive Director and Executive Officer	Upload to SMARTS	Chronological summary and status of all incidents
Field ³⁹	Notify RWQCB Executive Officer	To SWRCB and RWQCB Executive Director and Executive Officer	Upload to SMARTS	Chronological summary and status of all incidents
Administrative ⁴⁰	Notify RWQCB Executive Officer ³⁹	N/A	To SWRCB and RWQCB Executive Director and Executive Officer	Chronological summary and status of all incidents

³⁸ Incidents that threaten public health, public safety property, or the environment that pose a clear and imminent danger requiring immediate action to prevent or mitigate the damage or threat, and that result in a discharge or potential discharge to surface waters shall be reported to the California Office of Emergency Services upon discovery of the incident.

³⁹ Failure to meet any non-administrative requirement of the SWMP, the Caltrans NPDES Permit, or applicable water quality standard. This includes failure to install required best management practices or failure to conduct required monitoring or maintenance. It also includes discharges of prohibited non-stormwater that do not meet the definition of emergency incidents. It does not include determinations by Caltrans or a RWQCB Executive Officer that a discharge is causing or contributing to an exceedance of an applicable water quality standard.

⁴⁰ Failure to meet any administrative or procedural requirement of the SWMP or the Caltrans NPDES Permit including submission of required reports, notifications, and certifications. The report of non-compliance shall be submitted to the same organization (SWRCB or RWQCB) to which the required report was originally due.

Appendix B: BMP Descriptions by Function

Overview

Caltrans implements stormwater pollution controls through the use of BMPs. BMPs are used during design, construction, and maintenance activities of Caltrans' highways and facilities. Where feasible, Treatment BMPs are built into the design of projects. This appendix provides:

- A description of the primary types of BMPs.
- A table that lists Caltrans' approved BMPs and divisional responsibility for implementing each type.
- A brief description of each approved BMP (i.e., "toolbox") used by Caltrans for water quality protection.

BMP Types

For the purpose of describing BMPs implemented by Caltrans, BMPs are categorized into four types as described below:

Design BMPs

Design BMPs incorporate permanent water quality protection or control into a project after construction is completed. These include both Design Pollution Prevention and Treatment BMPs. Design Pollution Prevention BMPs are those BMPs that Caltrans uses when projects create DSA. Treatment BMPs are those BMPs that have been scientifically proven to reduce pollutant discharges. Caltrans has a variety of approved Treatment BMPs; however, additional devices can be considered after following the process described in SWMP Section 4.

Administrative BMPs

These are indirect practices and policies that are employed to ensure that stormwater protection is addressed during the construction of a project or during maintenance of Caltrans highways or facilities.

Erosion and Sediment Control BMPs

Caltrans employs a variety of BMPs to control erosion on its property and limit the amount of sediment entering drainages. Most of these BMPs are employed during highway construction projects but may be also used during the course of some maintenance activities.

Non-Stormwater Pollutant Control BMPs

These practices address the control of authorized non-stormwater discharges as listed in the SWMP and Caltrans NPDES Permit. These BMPs are used during both construction and ongoing maintenance of highways and facilities.

BMPs used by Caltrans

The tables below list all the currently approved BMPs by category. BMP descriptions will vary depending on the particular guidance and application. The Divisions of Design, Construction, and Maintenance have developed guidance documents for the BMPs. Detailed descriptions within individual guidance documents may vary to a minor degree depending on the specific application performed by the Division.

Design BMPs

BMP Category	BMP Name	Construction Division	Design Division	Maintenance Division
Design Pollution Prevention BMPs	Channel Linings	-	X	-
Design Pollution Prevention BMPs	Ditches, Berms, Dikes and Swales	-	X	X
Design Pollution Prevention BMPs	Energy Dissipation Devices	-	X	-
Design Pollution Prevention BMPs	Flared Culvert End Sections	-	X	X
Design Pollution Prevention BMPs	Hard Surfaces	-	X	X
Design Pollution Prevention BMPs	Outlet Protection/Velocity Dissipation Devices	X	X	X
Design Pollution Prevention BMPs	Overside Drains	-	X	X
Design Pollution Prevention BMPs	Peak Flow Attenuation Devices ⁴¹	-	X	-
Design Pollution Prevention BMPs	Preservation of Existing Vegetation	-	X	-
Design Pollution Prevention BMPs	Reduction of Paved Surface	-	X	-
Design Pollution Prevention BMPs	Slope Roughening/Terracing/Rounding/Stepping	-	X	-
Design Pollution Prevention BMPs	Soil Modification	-	X	-
Design Pollution Prevention BMPs	Vegetated Surfaces	-	X	-
Treatment BMPs	Biofiltration: Strips/Swales	-	X	-
Treatment BMPs	Detention Devices	-	X	-
Treatment BMPs	Dry Weather Flow Diversion	-	X	-

⁴¹ BMP may be designed to attain Treatment BMP credits.

BMP Category	BMP Name	Construction Division	Design Division	Maintenance Division
Treatment BMPs	Gross Solids Removal Devices	-	X	X
Treatment BMPs	Infiltration Devices	-	X	X
Treatment BMPs	Media Filters	-	X	X
Treatment BMPs	Multi-Chamber Treatment Train	-	X	X
Treatment BMPs	Traction Sand Trap Devices	-	X	-
Treatment BMPs	Wet Basin	-	X	-

Table Notes: X Applicable; - Not Applicable

Administrative BMPs

BMP Name	Construction Division	Design Division	Maintenance Division
Anti-Litter Signs	X	-	X
Baseline Stormwater Drainage Facilities Inspection and Cleaning	-	-	X
Enhanced Storm Drain Inlet Inspection and Cleaning Program	-	-	X
Illegal Spill Discharge Control	X	-	X
Illegal Connection/Illicit Discharge Detection, Reporting, and Elimination	X	-	X
Maintenance Facility Housekeeping Practices	-	-	X
Preservation of Existing Vegetation	X	X	X
Safer Alternative Products	X	-	X
Scheduling	X	X	X
Vegetated Slope Inspection	-	-	X
Vegetated Treatment System Maintenance	-	-	X
Work in a Water Body	X	-	X

Table Notes: X Applicable; - Not Applicable

Sediment/Erosion Control BMPs

BMP Name	Construction Division	Design Division	Maintenance Division
Check Dam	X	X	X
Clear Water Diversion	X	X	X
Fiber Rolls	X	X	X
Geotextiles, Mats/Plastic Covers and Erosion Control Blankets	X	X	X
Gravel Bag Berm	X	X	X
Hydraulic Mulch	X	X	X
Hydroseeding	X	X	X
Sandbag Barrier	X	X	X
Sediment Trap	X	X	X
Sediment/Desilting Basin	X	X	-
Silt Fence	X	X	X
Slope Drains	X	X	X
Slope Roughening	X	X	-
Soil Binders	X	X	X
Stabilized Construction Entrance/Exit	X	X	X

BMP Name	Construction Division	Design Division	Maintenance Division
Stabilized Construction Roadway	X	X	-
Stockpile Management	X	X	X
Storm Drain Inlet Protection	X	X	X
Straw Bale Barrier	X	X	X
Straw Mulch	X	X	X
Streambank Stabilization	X	X	-
Street Sweeping and Vacuuming	X	X	X
Temporary Stream Crossing	X	X	-
Tire Inspection and Sediment Removal	X	X	X
Wind Erosion Control	X	X	X
Wood Mulching	X	X	X

Table Notes: X Applicable; - Not Applicable

Non-Stormwater Pollution Control BMPs

BMP Name	Construction Division	Design Division	Maintenance Division
Chemical Vegetation Control	-	-	X
Concrete Curing and Finishing	X	-	X
Concrete Waste Management	X	-	X
Construction/Structure Demolition Over Water	X	-	X
Contaminated Soil Management	-	-	X
Dewatering Operations	X	-	X
Evaporative Water	-	-	X
Hazardous Waste Management	X	-	X
Liquid Waste Management	X	-	X
Litter and Debris	-	-	X
Material Delivery and Storage	X	-	X
Material Use	-	-	X
Mud-Jacking and Drilling	-	-	X
Paving and Grinding Operations	X	-	X
Pile Driving Operations	X	-	X
Potable Water/Irrigation	X	-	X
Sanitary/Septic Waste Management	X	-	X
Snow Removal and De-icing Agents		-	X
Solid Waste Management	X	-	X
Spill Prevention and Control	X	-	X
Structure Demolition/Removal Over or Adjacent to Water	-	X	-
Vehicle and Equipment Cleaning	X	-	X
Vehicle and Equipment Fueling	X	-	X
Vehicle and Equipment Maintenance	X	-	X
Water Conservation Practices	X	-	X

Table Notes: X Applicable; - Not Applicable

BMP Summary Descriptions

A summary description of each BMP, as listed in the tables above, is provided below. The list is arranged alphabetically and organized by BMP type (Administrative Design, Erosion/Sediment Control, and Non-Stormwater). Detailed descriptions within individual guidance documents may vary depending on the specific application performed by the Division.

Design BMPs

Biofiltration – Strips/Swales – Designated treatment areas that receive stormwater discharges from the highway or other impervious surfaces. Biofiltration strips are vegetated sections of land over which stormwater flows as overland sheet flow. Biofiltration swales are vegetated channels that convey stormwater. Pollutants are removed by filtration through the vegetation, sedimentation, sorption to soil or grass, and infiltration through the soil.

Detention Devices – Used to temporarily detain runoff and reduce flow velocity to allow particles to settle out.

Ditches, Berms, Dikes, and Swales – Concentrated flow conveyances that are either earthen, concrete, or asphalt structures used to intercept, divert, and convey surface runoff in a manner that minimizes erosion.

Dry Weather Flow Diversion – Direct flow through a pipe or channel to a local sanitary sewer system for conveyance and treatment at a local wastewater treatment plant during dry weather.

Energy Dissipation Devices – A broad category of devices that release the concentrated flow energy to prevent scour and minimize erosion.

Flared Culvert End Sections – Used at inlets and outlets of culverts to prevent scour and minimize erosion.

Gross Solids Removal Devices (GSRD) – A device installed at drainage outlets designed to capture gross solids (litter, vegetation, and other large particles). Two types are: Linear Radial and Inclined Screen.

Hard Surfaces – Used for slope/surface protection consisting of placed concrete, rock, or combination of materials.

Infiltration Devices – Devices that allow stormwater to infiltrate into the ground. Infiltration effectively prevents pollutants in the captured runoff from reaching the surface waters.

Media Filters – Devices that removes fine sediments, particulate-associated pollutants, and sometimes, dissolved pollutants. The normal configuration of such devices consists

of an initial sedimentation basin or chamber followed by a filtering basin or chamber that contains a filter media.

Multi-Chamber Treatment Train – A Treatment BMP device that uses three treatment mechanisms in three different chambers. These include a catch basin with a sump, a sedimentation chamber with tube settlers and/or sorbent pads, and a filtering chamber lined with media.

Outlet Protection/Velocity Dissipation Devices – Devices placed at pipe outlets to prevent scour and reduce the velocity and/or energy of exiting stormwater flows.

Overside Drains – Pipes, downdrains, flumes, or asphalt concrete overside drains used to protect slopes against erosion.

Peak Flow Attenuation Devices – Facilities designed to reduce peak discharges. A typical device type would be a detention basin.

Preservation of Existing Vegetation – Involves the identification and protection of desirable vegetation that provides erosion and sediment control benefits.

Reduction of Paved Surface – When considering downstream effects related to potentially increased flow always consider reducing impervious areas.

Slope Roughing/Terracing/Rounding/Stepping – Techniques used reduce velocities and surface runoff from slopes.

Soil Modification – Modifications to site soils used to improve infiltration characteristics.

Traction Sand Trap Devices – Devices that temporarily detain runoff and allows for traction sand, which was applied to snowy or icy roads, to settle out.

Vegetated Surfaces – Establishment of permanent perennial vegetative cover on areas previously disturbed.

Wet Basin – A Treatment BMP consisting of permanent pools of water designed to mimic naturally occurring wetlands. The main distinction between construction and natural wetlands is that constructed wetlands are placed in upland areas and are not subject to wetland protection regulations; also referred to as Constructed Wetlands.

Administrative BMPs

Anti-Litter Signs – Placement of signs on Caltrans property to prohibit and discourage dumping and littering on the highways.

Stormwater Drainage Facilities Inspection and Cleaning – Culverts, ditches, gutters, underdrains, horizontal drains, and downdrains require inspection and cleaning to prevent flooding and to provide for sufficient hydraulic capacity.

Enhanced Storm Drain Inlet Inspection and Cleaning Program – An inspection and cleaning program for drain inlets and catch basins located in priority areas.

Illegal Spill Discharge Control – Reporting procedures for field staff that detect illegal dumping, discharges, and spills of pollutants on Caltrans properties.

Illegal Connection/Illicit Discharge Detection, Reporting, and Elimination – This procedure directs maintenance, construction or Right of Way staff, to detect and report illegal connections and illicit discharges into Caltrans stormwater drainage systems. Illegal connections are connections to Caltrans drainage systems that have not been approved by Caltrans.

Maintenance Facility Housekeeping Practices – Practices and procedures to eliminate the potential for discharge of pollutants to drainage paths, stormwater drainage systems or watercourses by promoting efficient and safe storage, use and cleanup of potentially harmful materials.

Preservation of Existing Vegetation – The identification and preservation of vegetation that provides erosion and sediment control benefits.

Safer Alternative Products – A process of evaluating new products for potential effect on stormwater in order to reduce the potential for the discharge of harmful pollutants to drainages.

Scheduling – Planning construction activities in a manner that will reduce the amount and duration of soil exposed to erosion and sediment transport.

Vegetated Slope Inspection – District procedures to routinely inspect and identify slopes in need of repair or revegetation to reduce erosion.

Vegetated Treatment System Maintenance – Regular inspection and maintenance of approved installed treatment systems to ensure these devices continue to perform their intended function.

Work in a Water Body – Maintenance activities occasionally require equipment or personnel to enter a stream, river, channel, or other water body. This BMP describes measures that are required for maintenance activities in water bodies.

Erosion and Sediment Control BMPs

Check Dam – A small device constructed of rock, gravel bags, or other impedance-like material that are placed across a natural or man-made channel or drainage ditch. Sediment within runoff is reduced by reducing flow velocity.

Clear Water Diversion – A system of structures that intercept runoff upstream of a project site or activity, transports it around the site, and discharges it downstream.

Fiber Rolls – Straw or other organic materials rolled or bound into a roll and placed on a slope to intercept runoff.

Geotextiles, Mats/Plastic Covers, and Erosion Control Blankets – Non- vegetative materials applied to disturbed soil surfaces to prevent erosion.

Gravel Bag Berm – Gravel bags installed end-to-end to form a barrier across a slope to intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and provide some removal of sediment from the runoff.

Hydraulic Mulch – A mixture of shredded wood fiber that is applied to slopes and open soil surfaces to control erosion.

Hydroseeding – The application of a mixture of wood fiber, seed, fertilizer, and stabilizing emulsion to disturbed areas requiring protection against erosion.

Sandbag Barrier – Stacked sandbags designed to intercept and slow the flow of sediment-laden runoff.

Sediment Trap – A small temporary containment area with a controlled release structure formed by excavating or constructing an earthen embankment across a ditch or low drainage area.

Sediment/Desilting Basin – A temporary basin that allows sediment to settle out before the runoff is discharged. A desilting basin is generally less extensive than a Sediment Basin.

Silt Fence – A constructed barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff from exposed, erodible soil.

Slope Drains – A pipe or lined ditch used to intercept and direct surface runoff or groundwater from slopes into a stabilized watercourse, trapping device, or stabilized area.

Slope Roughening – Practice of creating defined imprints upon soil surfaces on a slope to establish vegetation or provide interim stabilization.

Soil Binders – Polymetric or plant-based soil stabilizers. Typically applied to disturbed areas requiring temporary protection from erosion.

Stabilized Construction Entrance/Exit – Sorted gravel or steel gratings placed at the entrance/exit to a construction site to reduce the tracking of mud and dirt onto public roads by vehicles.

Stabilized Construction Roadway – A temporary access road connecting existing public roads to a remote construction area designed to control vehicular tracking.

Stockpile Management – Procedures and practices to control stormwater runoff from contacting stockpiles of soil or other materials.

Storm Drain Inlet Protection – Practice used to detain and allow sediment to settle prior to discharge of stormwater into stormwater drainage systems.

Straw Bale Barrier – Sediment barrier consisting of straw bales designed to intercept and slow the flow of sediment-laden sheet flow runoff.

Straw Mulch – Fibrous organic material incorporated into the soil to reduce erosion, often used in conjunction with hydroseeding.

Streambank stabilization – Placement of rock gabion, riprap, and other measures to improve bank stability and reduce erosion.

Street Sweeping and Vacuuming – Practices to remove tracked sediment and other materials to prevent them from entering a storm drain or watercourse.

Temporary Stream Crossing – Structure placed across a waterway that allows vehicles to cross the waterway during without entering the water during construction activities.

Tire Inspection and Sediment Removal – Practices followed at construction road egress point facilities to remove sediment from tires and under carriage, and to reduce or prevent sediment from being transported off site.

Wind Erosion Control – Application of water or covering of material as necessary to prevent windblown sediment from entering drainages.

Wood Mulching – Application of chipped material or commercially available wood mulch products to disturbed soil to reduce the potential for erosion.

Non-Stormwater Pollutant Control BMPs

Chemical Vegetation Control – Practices to reduce the potential for the discharge of pollutants generated during chemical vegetation control. This method of vegetation control uses herbicides to eliminate and prevent weed growth. The purpose is to control weed growth that may cause a fire hazard or visually block safety devices or line of sight for the travelling public.

Concrete Finishing and Curing – Procedures to minimize the discharge of materials from the finishing and curing of concrete to storm drain systems or to watercourses

Concrete Waste Management – Procedures and practices used to minimize the discharge of concrete waste materials to storm drain systems or to watercourses.

Contaminated Soil Management – Procedures and practices to protect stormwater from contaminated soil.

Dewatering Operations – Practices that address the discharge of water produced by the removal of water from construction site activities.

Evaporative Water – Water used for vehicle and equipment cleaning where no discharge to a sanitary sewer system is available.

Hazardous Waste Management – Procedures and practices used to protect stormwater from wastes defined as “hazardous” in accordance with CCR, Title 22.

Liquid Waste Management – Procedures and practices used to protect water quality and during the creation, collection, and disposal of non-hazardous liquid wastes.

Litter and Debris – The collection of litter and debris from roadsides and other Caltrans facilities to prevent their mobilization by runoff.

Material and Equipment Use Over Water – Procedures for the proper use, storage, and disposal of materials and equipment on barges, boats, temporary construction pads, or similar locations that minimize or eliminate the discharge of potential pollutants to a watercourse.

Material Delivery and Storage – Procedures and practices for the proper handling and storage of materials in a manner that minimizes or eliminates the discharge of pollutants.

Mud-Jacking and Drilling – Procedures used to prevent release of grout material to stormwater drainages typically used to maintain and repair rigid type surfacing, base and concrete shoulders.

Paving and Grinding Operations – Procedures that protect stormwater runoff during the paving of new roadways or treatment of existing roadways.

Pile Driving Operations – Procedures for sites near or adjacent to a water body where structure foundation elements are being installed.

Potable Water/Irrigation – Measures taken to ensure discharges are not exposed to materials that would introduce pollutants into the runoff.

Sanitary/Septic Waste Management – Practices used to minimize or eliminate the discharge of sanitary/septic waste materials to storm drain systems or to watercourses.

Snow Removal and De-icing Agents – Practices to reduce the discharge of potential pollutants generated during the mechanical spreading of abrasives and de-icing agents and mechanical removal of snow from the travel way.

Solid Waste Management – Procedures and practices to protect stormwater from the temporary storage or removal of solid wastes generated from construction or maintenance.

Spill Prevention and Control – Procedures and practices to prevent and control spills in a manner that minimizes or prevents the discharge of spilled material to the storm drain system or watercourses.

Structure Demolition/Removal Over or Adjacent to Water – Procedures to protect water bodies from debris and wastes associated with structure demolition or removal over or adjacent to watercourses.

Vehicle and Equipment Cleaning – Procedures and practices used to reduce or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to storm drain systems or to watercourses.

Vehicle and Equipment Fueling – Procedures and practices used to minimize or eliminate the discharge of fuel spills and leaks into storm drain systems or to watercourses.

Vehicle and Equipment Maintenance – Procedures and practices used to minimize or eliminate the discharge of pollutants from vehicle and equipment maintenance procedures to storm drain systems or to watercourses.

Water Conservation Practices – Procedures and practices that reduce the amount of water needed to perform a specific activity by either reducing the amount of water required or eliminating the activity entirely to avoid causing erosion and/or the transport of pollutants off-site.

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Appendix C: Acronyms and Abbreviations (C2)

ASBS	Areas of Special Biological Significance
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practice
Caltrans	California Department of Transportation
CASQA	California Stormwater Quality Association
CCEP	Construction Compliance Evaluation Plan
CEE	Chief Environmental Engineer
CGP	Construction General Permit
CWA	Clean Water Act
DEA	Headquarters Division of Environmental Analysis
DPE	District Permit Engineer
DPP	Design Pollution Prevention
DAWP	District Annual Workplan
HQ	Headquarters
IC/ID	Illegal Connection/Illicit Discharge
IGP	Industrial General Permit
IQA	Independent Quality Assurance
LID	Low Impact Development
LRP	Legally Responsible Person
MEP	Maximum extent practicable
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
PE	Project Engineer
PID	Project Initiation Document
PRD	Permit Registration Document
PS&E	Plans, Specifications, and Estimates
QC	quality control
QSP	Qualified SWPPP Practitioner
RE	resident engineer
ROW	Caltrans Right of Way
RWQCB	Regional Water Quality Control Board
SHSMP	State Highway System Management Plan
SMARTS	Stormwater Multiple Application and Report Tracking System
STGA	Significant Trash Generation Areas
STIP	State Transportation Improvement Program
SWAT	Stormwater Advisory Team
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency

WPCP	Water Pollution Control Plan
WQMAT	Water Quality Management Assurance Team

Appendix D: Glossary (C2)

Adaptive Management. An ongoing iterative process to evaluate, modify, and manage best management practices to ensure that the eventual goals of compliance with water quality standards, such as waste load allocations, are met.

Areas of Special Biological Significance. Thirty-four State Water Board-designated areas along the California coast that require special protection to maintain natural ocean water quality.

Basin Plans. Regional Water Quality Control Board-adopted water quality control plans that serve as the principal set of regulations for protection of water quality in the specific region. Basin Plans designate beneficial uses to water bodies within the region, water quality objectives to protect the beneficial uses, and the implementation program to maintain those objectives.

Batch Plant. A processing plant where concrete, asphalt or other batch materials are prepared and mixed prior to transport to a construction site. Batch plants are industrial activities as defined in 40 C.F.R. section 122.26(b)(14)(iii) and are regulated under the State Water Resources Control Board statewide NPDES Permit for Discharges of Stormwater from Industrial Activities (Industrial Stormwater General Permit).

Beneficial Uses. Uses of water and water bodies that are protected against water quality degradation, including but not limited to: municipal and domestic supply (MUN), agricultural supply (AGR), cold freshwater habitat (COLD), commercial and sport fishing (COMM), domestic supply (MUN), estuarine habitat (EST), freshwater replenishment (FRESH), groundwater recharge (GWR), industrial service supply (IND), marine habitat (MAR), and other uses.

Best Management Practices. Structural or non-structural controls, methods, measures, or practices designed and implemented to reduce or prevent pollutant discharges in stormwater to receiving waters. Best management practices include but are not limited to the following:

Institutional Controls. Non-structural best management practices that may include street sweeping, sidewalk trash bins, collection of trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Non-Structural Best Management Practices. Non-structural best management practices focus on the prevention of pollution generation, and may include institutional changes, education, ordinance development, low impact development, and source control.

Post-Construction Best Management Practices. Structural or non-structural best management practices that are implemented after construction is complete to capture, reduce, or prevent the release of pollutants in post-construction stormwater runoff.

Source Control Best Management Practices. Schedules of activities, prohibitions of practices, maintenance procedures, managerial practices, and other operational practices that prevent stormwater pollution to receiving waters by reducing the potential for contamination at the pollutant source.

Structural Best Management Practices. Stationary and permanent structures that are designed, constructed, operated, and maintained to prevent or reduce the discharge of pollutants in stormwater to receiving waters, or to mitigate the adverse impact of stormwater runoff into receiving waters. Structural best management practices include structural treatment control processes as defined below.

Treatment Control Best Management Practices. Engineered systems designed to reduce or remove pollutants in stormwater using physical, biological, and/or chemical processes, including but not limited to gravity settling of particulate pollutants, filtration, biological uptake, and media absorption. For example, a treatment control best management practice may include the capturing, infiltrating, and reusing of stormwater runoff.

California Ocean Plan. The statewide water quality control plan for California near-coastal waters adopted by the State Water Board. The California Ocean Plan serves as statewide regulations to protect the beneficial uses and water quality of ocean water, adjacent coastal water bodies, and Areas of Special Biological Significance.

California Toxics Rule. United States Environmental Protection Agency (USEPA) promulgated water quality criteria for priority pollutants applicable to California inland surface waters, enclosed bays, estuaries and ocean waters that are waters of the United States. (40 C.F.R. section 131.38).

Catch Basin. An engineered subsurface structure that collects and diverts stormwater runoff to a storm sewer system. The structure is designed to collect and prevent obstructive material from entering the storm sewer system.

Certified Full Capture Systems. Certified full capture systems are trash full-capture systems that are certified by the State Water Board Executive Director. Certified full capture systems include both trash treatment control devices and multi-benefit treatment systems. Certified full capture systems are listed on the State Water Board's Trash Implementation Program website (https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html).

Construction Activity. Any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

Cooperative Agreement. Cooperative agreements are agreements with other agencies/parties to implement projects, either within or outside of Caltrans ROW, that result in, or progress towards, compliance with TMDLs. Cooperative agreements for the

purposes of compliance with TMDL-related requirements in this Order, are for the implementation of cooperative projects, that either alone or in combination with other dischargers' projects in the watershed, are consistent with complying with Caltrans' waste load allocations for the watershed.

Cut and Fill. The process of (1) moving earth by excavating part of an area, and (2) placing earth to create embankments or to raise area elevations.

Department Facility. A maintenance facility, non-maintenance facility, highway facility, industrial facility, or vehicle maintenance facility.

Highway Facility. Linear facilities designed to carry vehicles and pedestrians, including freeways, highways, and expressways. Support infrastructure (including bridges, toll plazas, inspection and weigh stations, sound walls, retaining walls, culverts, vegetated slopes, shoulders, intersections, off ramps, on ramps, over passes, lights, signal lights, gutters, and guard rails) is considered a highway facility only when accompanied by an increase in highway impervious surface.

Industrial Facility. A collection of industrial processes discharging stormwater associated with industrial activity within the property boundary or operational unit.

Maintenance Facility. A facility under Caltrans ownership or control that contains fueling areas, maintenance stations or yards, waste storage or disposal facilities, wash racks, equipment, vehicle storage, materials, or storage areas.

Non-Highway Facility. Any facility not meeting the definition of a highway facility, including rest stops, park and ride facilities, maintenance stations, vista points, warehouses, laboratories, and office buildings.

Non-Maintenance Facility. Facilities including, but not limited to, laboratories and office buildings used exclusively for administrative functions.

Discharge. When used without qualification, discharge means the discharge of a pollutant.

Direct Discharge. Any discharge from the municipal separate storm sewer system that does not meet the definition of an indirect discharge.

Indirect Discharge. Any discharge from the municipal separate storm sewer system that is conveyed to the receiving water through 300 feet or more of an unlined ditch or channel as measured between the discharge point from the outlet of the municipal separate storm sewer system and the receiving water.

Discharge of a Pollutant. The addition of any pollutant or combination of pollutants to waters of the United States from any point source, or any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. The term includes additions of pollutants to waters of the United

States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. (40 C.F.R. section 122.2(b)).

District Annual Workplans. District-specific workplans prepared by each Caltrans District with descriptions of activities and projects for the upcoming year necessary to comply with the requirement of this Order.

Drainage Inlet. A location where stormwater runoff enters a storm sewer system.

Effluent. Any discharge from a municipal separate storm sewer system.

Emergency. Any sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, other soil or geologic movements, and occurrences such as riot, accident, or sabotage.

Erosion. The diminishing or wearing away of land due to wind or water. Often, eroded material (silt or sediment) becomes a pollutant in stormwater runoff.

Existing Stormwater Outfalls. When used in reference to Areas of Special Biological Significance, outfalls that were constructed or under construction prior to January 1, 2005.

eRule. The USEPA Electronic Reporting Rule that modernizes reporting under the Clean Water Act. The rule requires entities regulated under the Clean Water Act to report information electronically instead of filing paper reports. The rule also requires that regulatory authorities share data electronically with USEPA.

Facility Pollution Prevention Plan. A plan that describes a facility's activities and implemented best management practices to reduce or eliminate the discharge of pollutants in stormwater runoff.

Full Capture System. A treatment control, or series of treatment controls, including but not limited to, a multi-benefit project or a low-impact development control that traps all particles that are 5-millimeters or greater, and has a design treatment capacity that is either:

1. Of not less than the peak flow rate, Q , resulting from a one-year, one-hour, storm in the sub-drainage area, or
2. Appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: $Q = C \cdot I \cdot A$, where Q = design flow rate (cubic feet per second); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = sub-drainage area (acres).]

Full Capture System Equivalency. The trash load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land. The full capture system equivalency is a trash load reduction target that Caltrans quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of State Water Board Executive Director.

Illegal Connection, Illicit Discharge, and Illegal Dumping.

Illegal Connection. Any conveyance that is connected to a municipal storm sewer system without authorization by local, state, or federal statutes, ordinances, codes, or regulations.

Illicit Discharge. Any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater except discharges pursuant to a NPDES permit and discharges resulting from fire-fighting activities.

Illegal Dumping. Disposal of trash and other wastes in non-designated areas within Caltrans' ROW, properties, or facilities, intentionally or unintentionally, that may contribute to stormwater pollution.

Impervious Cover or Surface. A surface that cannot effectively absorb or infiltrate rainfall, such as sidewalks, rooftops, roads, and parking lots.

Incidental Runoff. Unintended small amounts (volume) of runoff from landscape irrigation, such as minimal over-spray from sprinklers that escapes the irrigated area. Water leaving an irrigated area is not considered incidental if it is due to improper (e.g., during a precipitation event) or excessive application, if it is due to intentional overflow or application, or if it is due to negligence. Leaks and other discharges (e.g., broken sprinkler heads) are not considered incidental if not corrected within 72 hours of learning of the discharge or if the discharge exceeds 1,000 gallons.

Land Use. How land is managed or used by humans (e.g., residential and industrial development, roads, mining, timber harvesting, agriculture, grazing).

Load Allocation. The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which can range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. (40 C.F.R. section 130.2(g)).

Low Impact Development. Systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration, or use of stormwater to protect water quality and aquatic habitat with the goal of mimicking or replicating the pre-project hydrologic regime using design techniques to create a functionally equivalent hydrologic site design.

Hydrologic functions of storage, infiltration and ground water recharge, as well as the volume and frequency of discharges are maintained through the use of integrated and distributed micro-scale stormwater retention and detention areas, reduction of impervious surfaces, and the lengthening of runoff flow paths and flow time. Other strategies include the preservation/protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, mature trees, flood plains, woodlands, and highly permeable soils.

Maximum Extent Practicable. The minimum required performance standard for implementation of municipal stormwater management programs to reduce pollutants in stormwater. Clean Water Act section 402(p)(3)(B)(iii) requires that municipal permits “shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.”

“Maximum extent practicable” is the cumulative effect of implementing, evaluating, and making corresponding changes to a variety of technically appropriate and economically feasible best management practices, ensuring that the most appropriate controls are implemented in the most effective manner. To achieve the maximum extent practicable standard, municipalities must employ whatever best management practices are technically feasible and are not cost-prohibitive. Reducing pollutants to the maximum extent practicable means choosing effective best management practices and rejecting applicable best management practices only where other effective best management practices will serve the same purpose, or the best management practices would not be technically feasible, or the costs would be prohibitive. A final determination of whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the State or RWQCBs.

Method Detection Limit. Minimum concentration of a substance that can be reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minimum Level. Concentration at which the entire analytical system gives a recognizable signal and acceptable calibration point. The minimum level is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming all method-specified sample weights, volumes, and processing steps have been followed.

Multi-Benefit Project. A treatment control project designed to achieve any benefits per section 10562(d) of the Water Code. Examples include projects to infiltrate, recharge or

store stormwater for beneficial reuse; develop or enhance habitat and open space through stormwater and non-stormwater management; and reduce stormwater and non-stormwater runoff volume.

Municipal Separate Storm Sewer System. A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is (1) owned or operated by a state, city, town, village, or other public entity that discharges to waters of the United States; (2) designed or used to collect or convey stormwater; (3) not a combined sewer; and (4) not part of a publicly owned treatment works.

Natural Ocean Water Quality. The water quality that is required to sustain marine ecosystems and is without apparent human influence.

New Impervious Surface. The total impervious surface area after completion of a project minus the total impervious surface before the start of the project. Also see the definition of Redevelopment.

New Contribution of Waste. When used in reference to Areas of Special Biological Significance, any addition of waste beyond what would have occurred as of January 1, 2005.

New Development. Any newly constructed facility, street, road, highway, or contiguous road surface installed as part of a street, road, or highway project within Caltrans ROW.

Non-Department Activities and Projects. Third party activities that are primarily controlled by encroachment permits, leases, and rental agreements. They include both construction and non-construction activities.

Non-Stormwater. Discharges that are not induced by precipitation and are not composed entirely of stormwater. Non-stormwater discharges include process water, air conditioner condensate, non-contact cooling water, vehicle wash water, concrete washout water, paint wash water, irrigation water, pipe testing water, lawn watering overspray, hydrant flushing, and firefighting activities.

Nonpoint Source. Any source of water pollution that is not released through a discrete conveyance but originates from dispersed sources over a relatively large area. Nonpoint sources can be divided into source activities related to either land or water use, including failing septic tanks, animal agriculture, forest practices, and urban and rural runoff.

Nuisance. Includes but not limited to the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and (3) occurs during, or as a result of, the treatment or disposal of wastes. (Water Code section 13050(m)).

Pervious Cover. A surface that can effectively absorb or infiltration rainfall, such as soil, pervious pavements, gravel roads, shoulder backing, embankments, fills, rock slope protection, gravel, and mulches.

Pesticide. Any substance used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest that may infest or be detrimental to vegetation, man, animals, or households, or present in any agricultural or nonagricultural environment whatsoever. The family of pesticides includes herbicides, insecticides, rodenticides, fungicides, algicides, and bactericides.

Algicide. A pesticide used to kill and prevent the growth of algae.

Bactericide. A pesticide used to control or destroy bacteria.

Fungicide. A pesticide used to control or destroy fungi on food or grain crops.

Herbicide. A pesticide designed to control or kill plants, weeds, or grasses.

Insecticide. A pesticide used to kill or prevent the growth of insects.

Rodenticide. A pesticide or other agent used to kill rats and other rodents or to prevent them from damaging food, crops, or forage.

pH. A measure of the degree of acidity or alkalinity in a water sample.

Point Source. Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.

Pollutant. Includes conventional pollutants (biological oxygen demand, pH, total suspended solids, fecal coliform) (Clean Water Act 304(a)(4)); oil and grease (44 Federal Register 44501); 65 toxic pollutants (40 C.F.R. section 401.15); 126 priority pollutants (40 C.F.R. section 424, Appendix A); and dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. (Clean Water Act section 502(c)).

Pollutants of Concern. Pollutants in a discharge with potential to cause a condition of pollution or nuisance due to the discharge of excessive amounts, proximity to receiving waters, or the properties of the pollutant. Pollutants that impair waterbodies listed under Clean Water Act section 303(d) are pollutants of concern.

Pollution. An alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: (1) the waters for beneficial uses or (2) facilities which serve those beneficial uses. (Water Code section 13050(l)(1)).

Porter-Cologne Water Quality Control Act. The part of the Water Code that governs water quality regulation in California, established to protect water quality and beneficial uses. It applies to surface water, groundwater, and wetlands, and point source and nonpoint sources of pollution.

Portland Cement Concrete or Asphalt Concrete Grindings. Pulverized or ground particles of Portland cement concrete or asphalt concrete.

Priority land uses. Developed sites, facilities, or uses (i.e., not simply zoned land uses) within a municipal separate stormwater sewer system permittee's jurisdiction from which discharges of Trash are regulated by the Trash Provisions as follows:

Commercial. Land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.).

High-Density Residential. Land uses with at least ten (10) developed dwelling units/acre.

Industrial. Land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).

Mixed Urban. Land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).

Public Transportation Stations. Sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Project Limit. Expressed in latitude/longitude or milepost markers along the ROW of a project. For east-west oriented projects, the limits are the eastern and western boundaries of the project. For north-south oriented projects, the limits are the north and south boundaries of the project.

Reach. A section of a stream or river along which similar hydrologic conditions exist, such as discharge, depth, area, and slope. It can also be the length of a stream or river (with varying conditions) between two stream gages, or a length of river for which the characteristics are well described by readings at a single stream gage. In practical use, a reach is just any length of a stream or river. The term is used by hydrologists when referring to a small section of a stream or river rather than its entire length.

Receiving Waters. For the purpose of this Order, receiving waters means waters of the United States, as defined under the Clean Water Act.

Redevelopment. The creation, addition, or replacement of impervious surface on an already developed site. Replacement of impervious surfaces includes any activity that removes impervious materials and exposes the underlying soil or pervious subgrade.

Redevelopment includes the expansion of a building footprint, road widening, the addition or replacement of a structure, and creation or addition of impervious surfaces.

Redevelopment does include replacement of existing roadway surfaces where the underlying soil or pervious subgrade is exposed during construction. Replaced impervious surfaces of this type shall be considered “new impervious surfaces” for purposes of determining the applicability of post construction treatment controls as provided in Attachment C of this Order.

Redevelopment does not include (1) trenching and resurfacing associated with utility work; (2) pavement grinding and resurfacing of existing roadways; (3) construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; (4) new pavement underneath existing guard rails; or (5) routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway.

Roadway. Any road within Caltrans ROW.

Routine Maintenance. Activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of a facility. Routine maintenance does not include replacement of existing roadway surfaces where the underlying soil or pervious subgrade is exposed.

Right-of-Way. Real property that is either owned or controlled by Caltrans or subject to a property right of Caltrans. ROW that is in current use is referred to as operating ROW.

Sediment. Soil, sand, and minerals washed from land into water, usually after rain.

Significant Trash Generating Areas. All locations or facilities within the Caltrans jurisdiction where trash accumulates in substantial amounts, such as (1) highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses); (2) rest areas and park-and-rides; (3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses); (4) mainline highway segments to be identified by Caltrans through pilot studies or surveys.

Slope Lateral Drainage. Horizontal drains placed in hillside embankments to intercept groundwater and direct it away from slopes to provide stability.

Spill. Sudden release of a potential pollutant to the environment, including pollutants such as sewage, hazardous waste, priority pollutants, pesticides, oils, and petroleum.

Standard Urban Stormwater Mitigation Plan. A design manual that designates the best management practices that must be used in specific development and redevelopment categories.

Storm Sewer System Asset Management. Storm sewer system asset management is the practice of managing stormwater infrastructure capital assets to minimize the total

cost of owning, managing and operating the system(s). According to the Clean Water Act Regulations (40 C.F.R. section 122.41), NPDES permits must include requirements for dischargers to develop and implement operations and maintenance procedures and financial plans sufficient to ensure future operational integrity and to help their facilities to comply with permit discharge conditions. A storm sewer system infrastructure asset is any long-lived capital asset that is operated as part of a system or network. Asset Management Plans prioritize the most necessary projects by cataloging assets, identifying performance objectives, completing a life-cycle analysis, and identifying appropriate maintenance schedules.

Stormwater. Stormwater runoff, snowmelt runoff, and surface runoff and drainage, as defined in 40 C.F.R. section 122.26(b)(13).

Stormwater Multiple Application and Report Tracking System (SMARTS). A platform where dischargers, regulators, and the public can enter, manage, and view stormwater data including permit registration documents, compliance, and monitoring data associated with California's Stormwater General Permits.

Stormwater Runoff. The portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels, or pipes.

Stream Crossing and Fish Passage Projects. Stream crossing and fish passage projects remove barriers in order to provide the ability for aquatic organisms, adult fish, and juvenile fish to safely move upstream and downstream. The manual, California Department of Fish and Wildlife, California Salmonid Stream Habitat Restoration Manual, XII-1, was published by Fish Passage Design and Implementation in July 2009.

Surface Water Ambient Monitoring Program. The State Water Board's monitoring, assessment, and reporting program for ambient surface water.

Threshold Drainage Area. Area draining to a location at least 20 channel widths downstream of a stream crossing (pipe, swale, culvert, or bridge) within project limits.

Threatened Noncompliance. Any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

Total Dissolved Solids. A quantitative measure of the residual minerals dissolved in water that remain after evaporation of a solution.

Total Kjeldahl Nitrogen. The sum of organic nitrogen and total ammonia nitrogen.

Total Maximum Daily Load. The maximum amount of a pollutant that a waterbody can receive while still meeting water quality standards. It is the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background.

Total Maximum Daily Load Characterization Monitoring. Monitoring performed on untreated stormwater discharges from Caltrans ROW to determine whether a discharge is a significant contributor to a total maximum daily load for the pollutant of concern.

Total Petroleum Hydrocarbon. Any mixture of hydrocarbon compounds that originally come from crude oil, such as gasoline, jet fuels, and diesel.

Total Suspended Solids. Particulates, fine material, or soil particles that remain suspended in the water column.

Toxicity. Adverse response of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Toxicity Reduction Evaluation. Study conducted in a stepwise process designed to (1) identify the causative agents of effluent or ambient toxicity, (2) isolate the sources of toxicity, (3) evaluate the effectiveness of toxicity control options, and (4) confirm the reduction in toxicity.

Trash. All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions. Amendment to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) to Control Trash and Amendment to Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The provisions establish a narrative water quality objective for trash and provide implementation requirements for permitted dischargers.

Turbidity. Murkiness or cloudiness of water.

United States Environmental Protection Agency (USEPA). A federal agency that works to develop and enforce regulations that implement environmental laws enacted by the United States Congress. USEPA is responsible for researching and setting national standards for the Stormwater Program.

Waste. Includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

Waste Load Allocation. The portion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution.

Water Quality Control Plan. A designation or establishment for the waters within a specified area of all the following: the beneficial uses to be protected, water quality

objectives, and a program of implementation needed for achieving water quality objectives. Plans may be adopted by the State Water Board or the RWQCBs.

Water Quality Objectives. The description or numeric levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or to prevent nuisance within a specific area. Water quality objectives may be numeric or narrative.

Water Quality Standards. Provisions of state, territorial, authorized tribal or federal law approved by USEPA that describe the desired condition of a water body and the means by which that condition will be protected or achieved. Water quality standards consist of three core components: designated uses, criteria, and antidegradation requirements.

Waters of the State. Any surface water or groundwater, including saline waters, within boundaries of the state, as defined in Water Code section 13050(e).

Waters of the United States. For purposes of this Order, the term “waters of the United States” means the term as it is defined at 40 C.F.R. section 122.2.

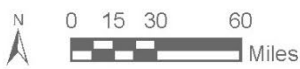
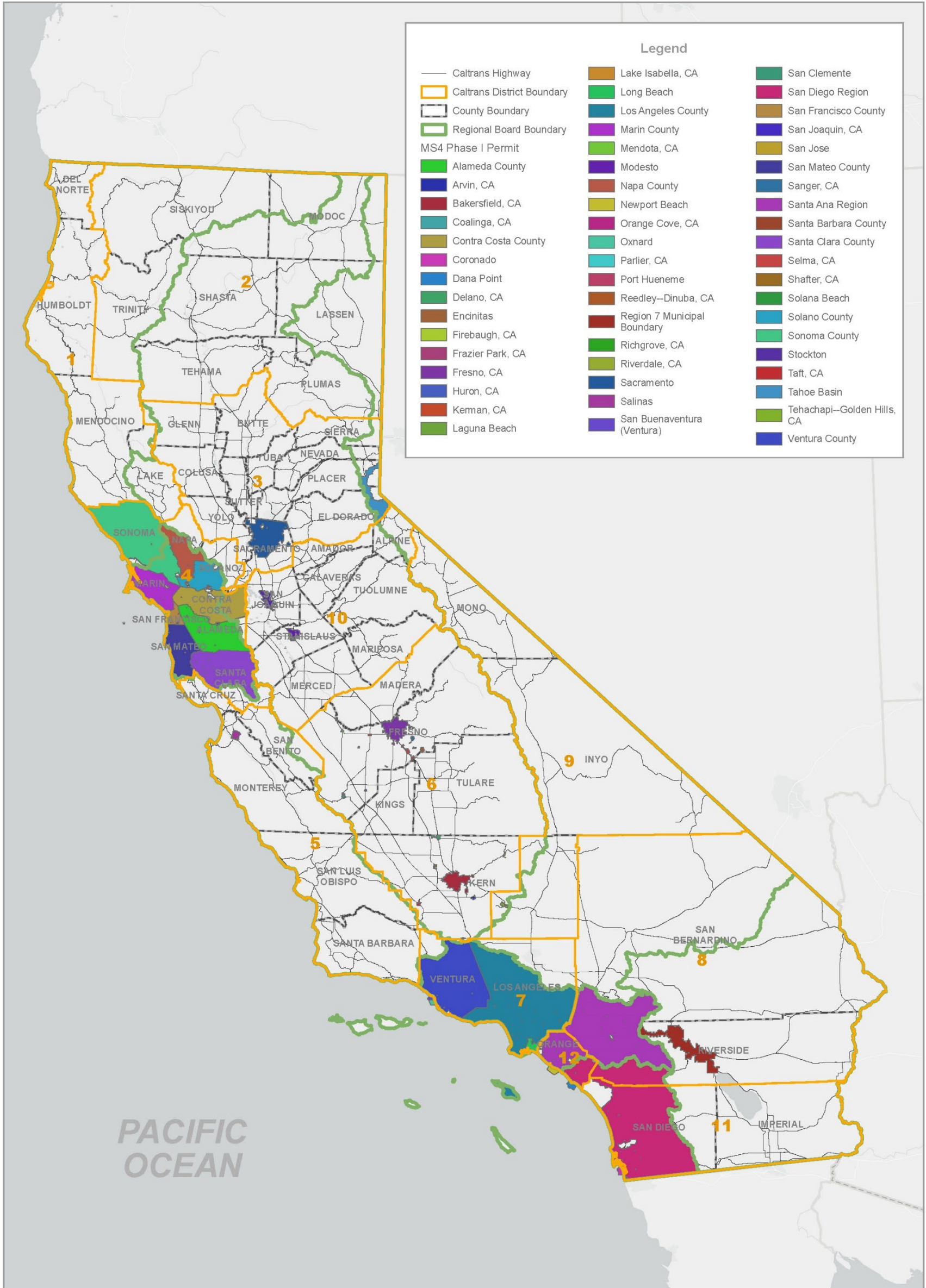
Watershed. A drainage area or basin in which all water drains or flows toward a central collector such as a stream, river, or lake at a lower elevation.

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

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Appendix E: MS4 Maps

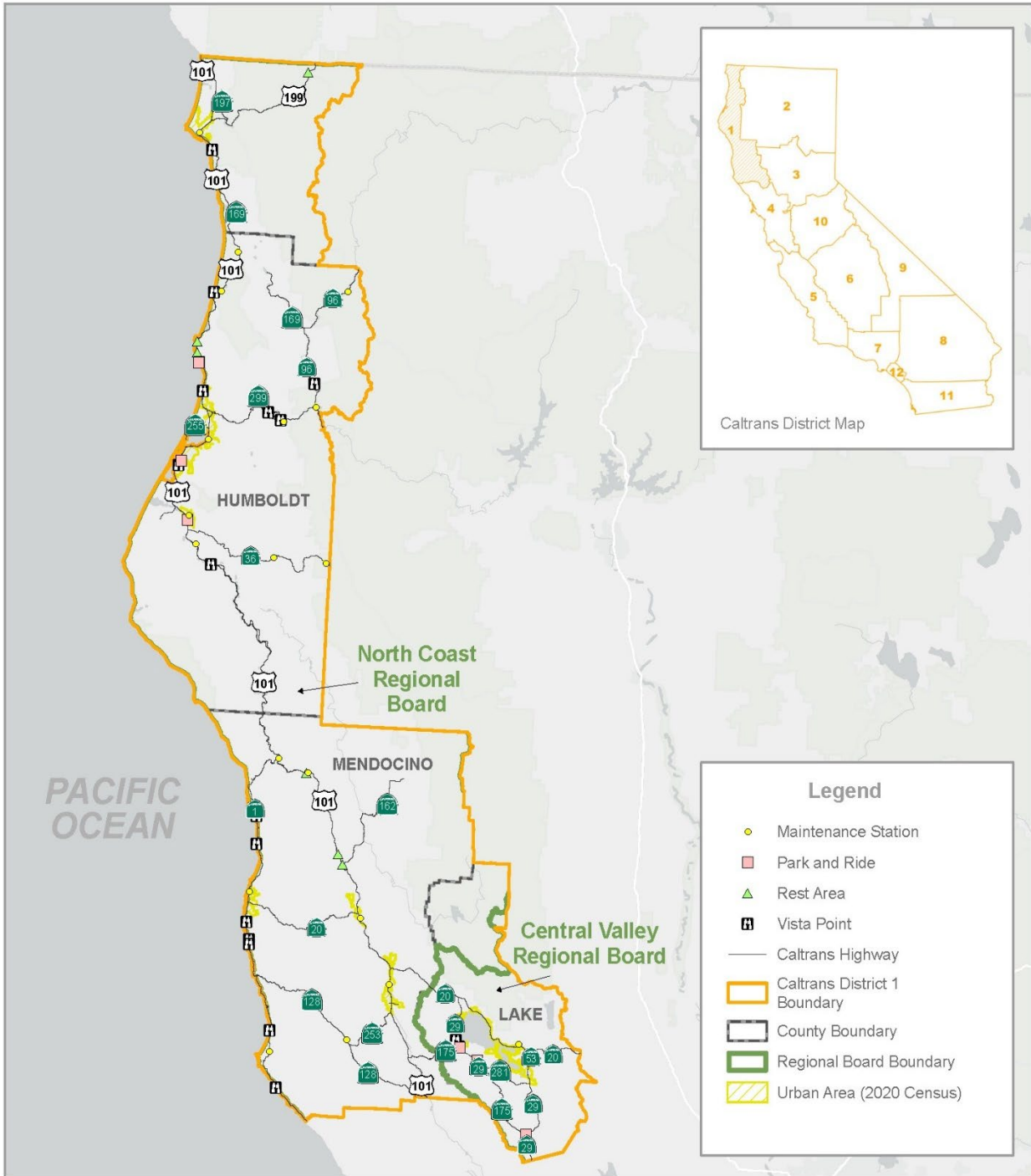
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Sources: Caltrans, ESRI, and SWRCB

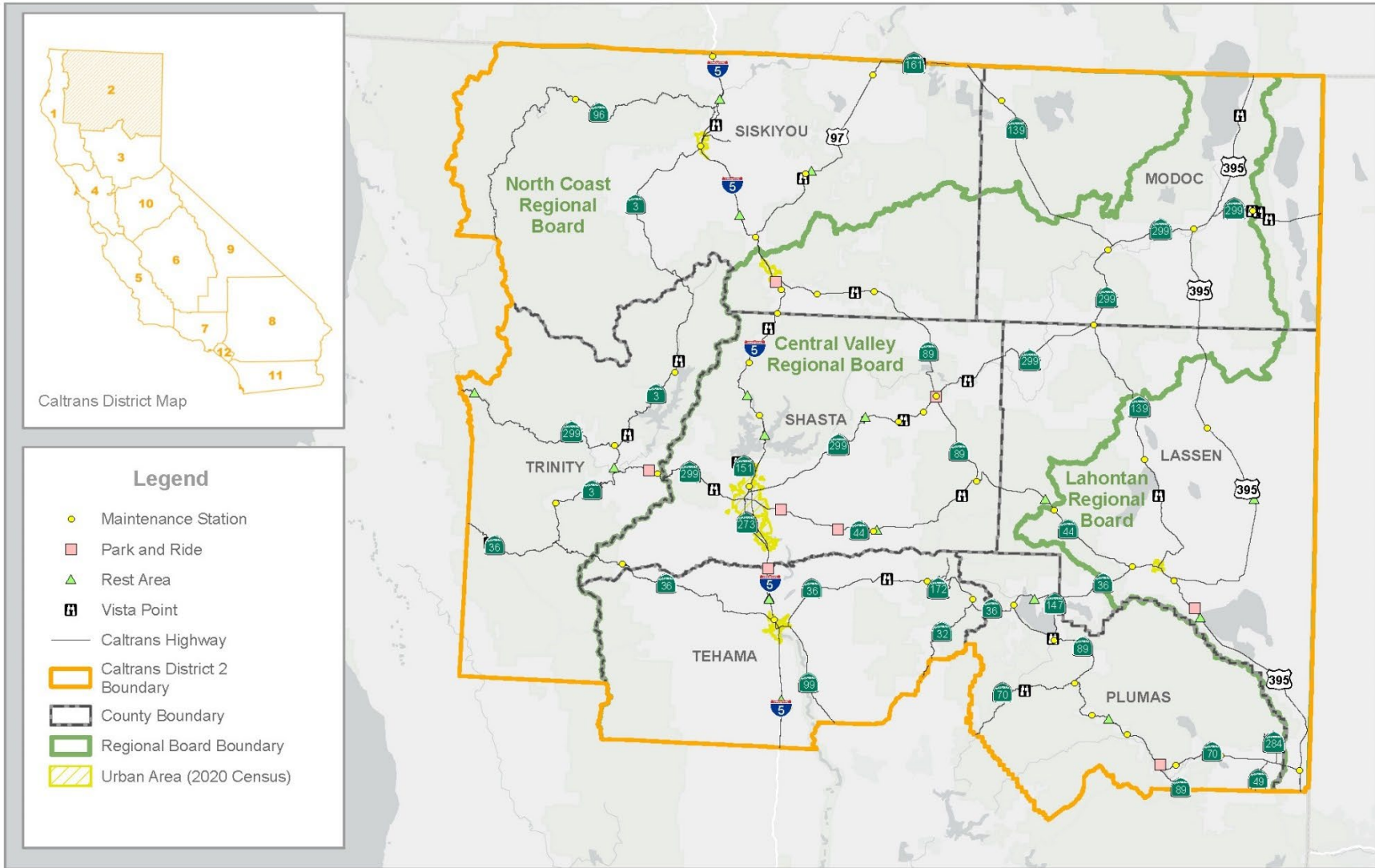
STATEWIDE MS4 MAP

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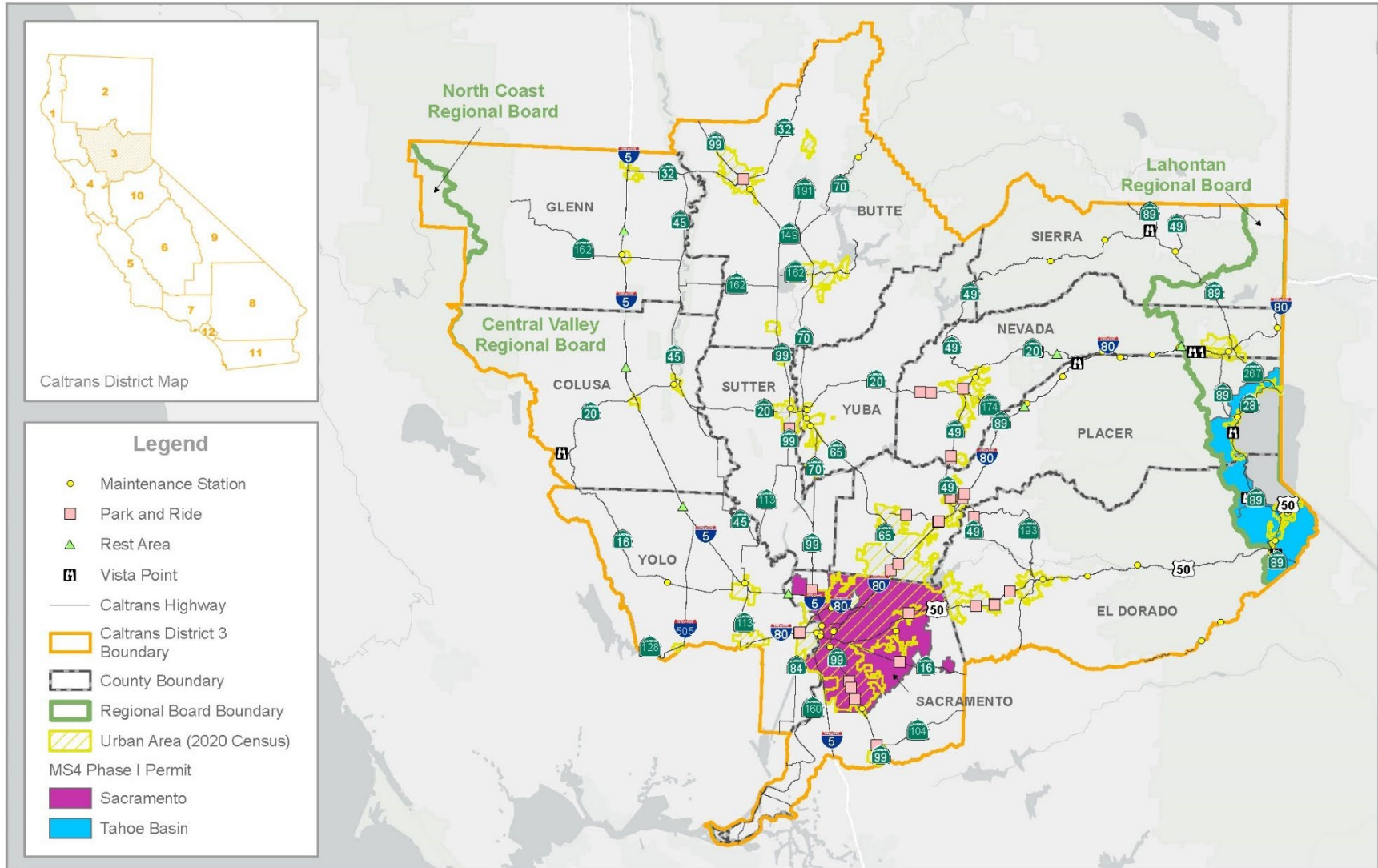


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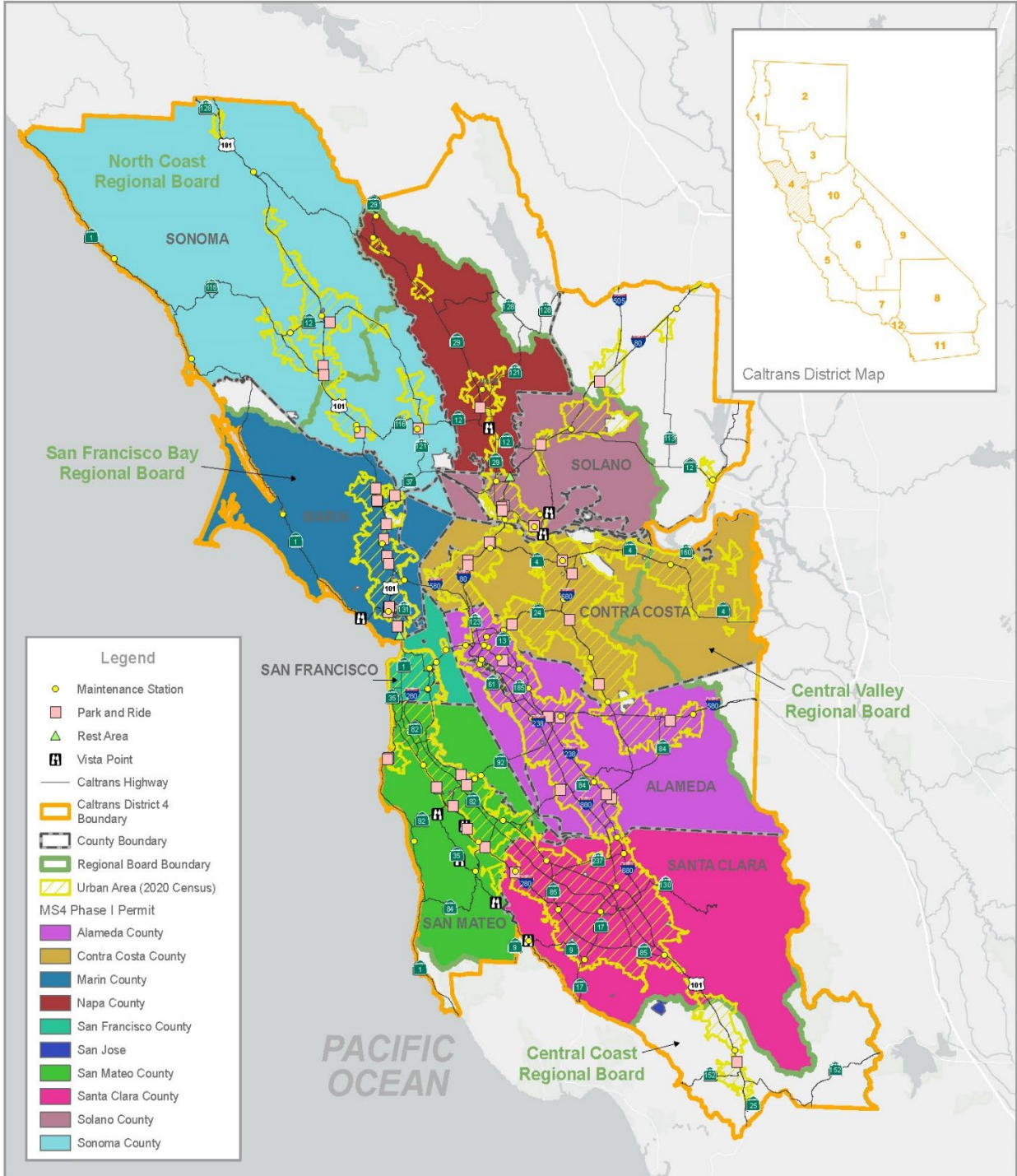


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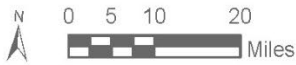
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DISTRICT 3



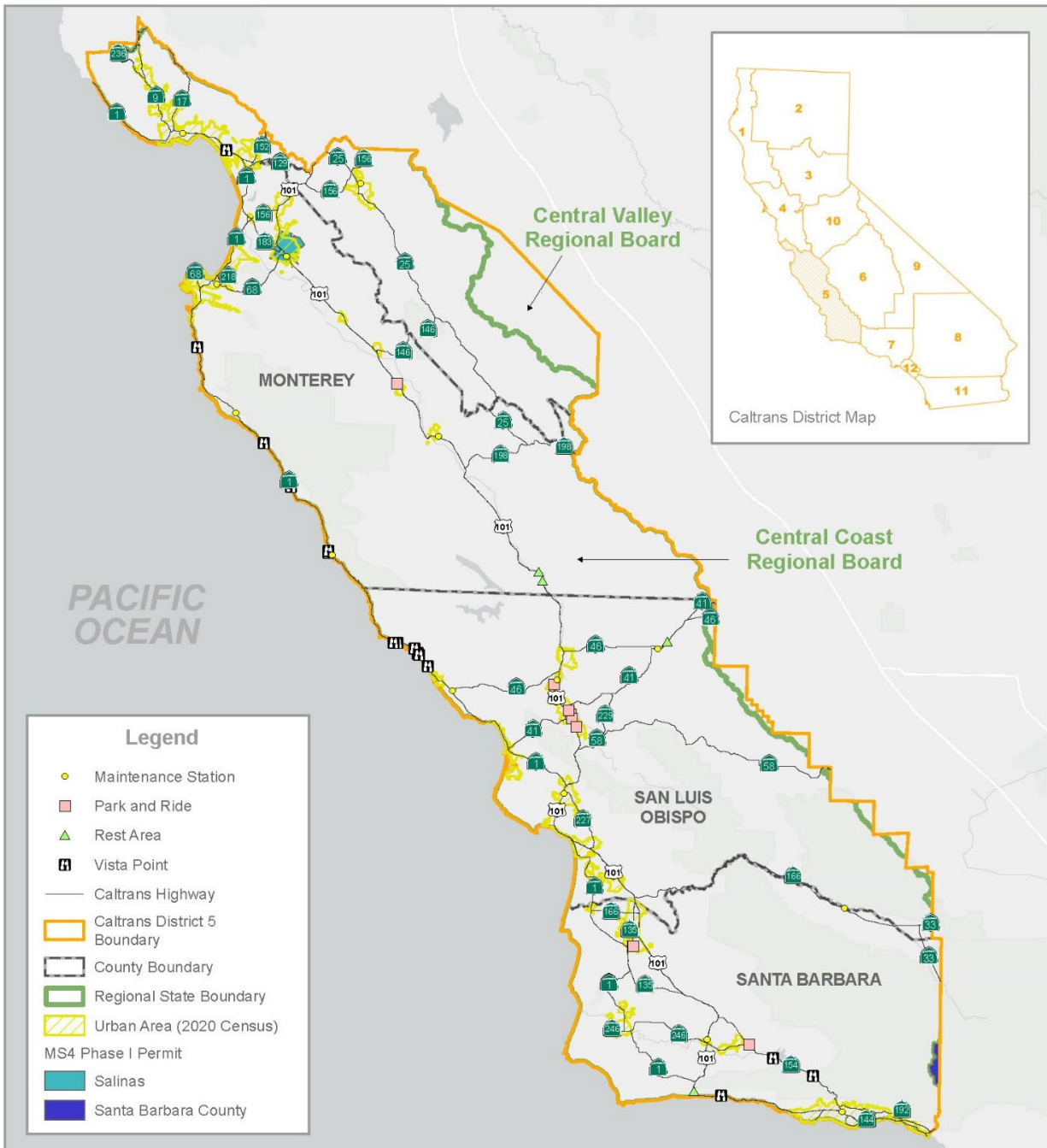
Legend

- Maintenance Station
- Park and Ride
- Rest Area
- Vista Point
- Caltrans Highway
- Caltrans District 4 Boundary
- County Boundary
- Regional Board Boundary
- Urban Area (2020 Census)
- MS4 Phase I Permit**
- Alameda County
- Contra Costa County
- Marin County
- Napa County
- San Francisco County
- San Jose
- San Mateo County
- Santa Clara County
- Solano County
- Sonoma County



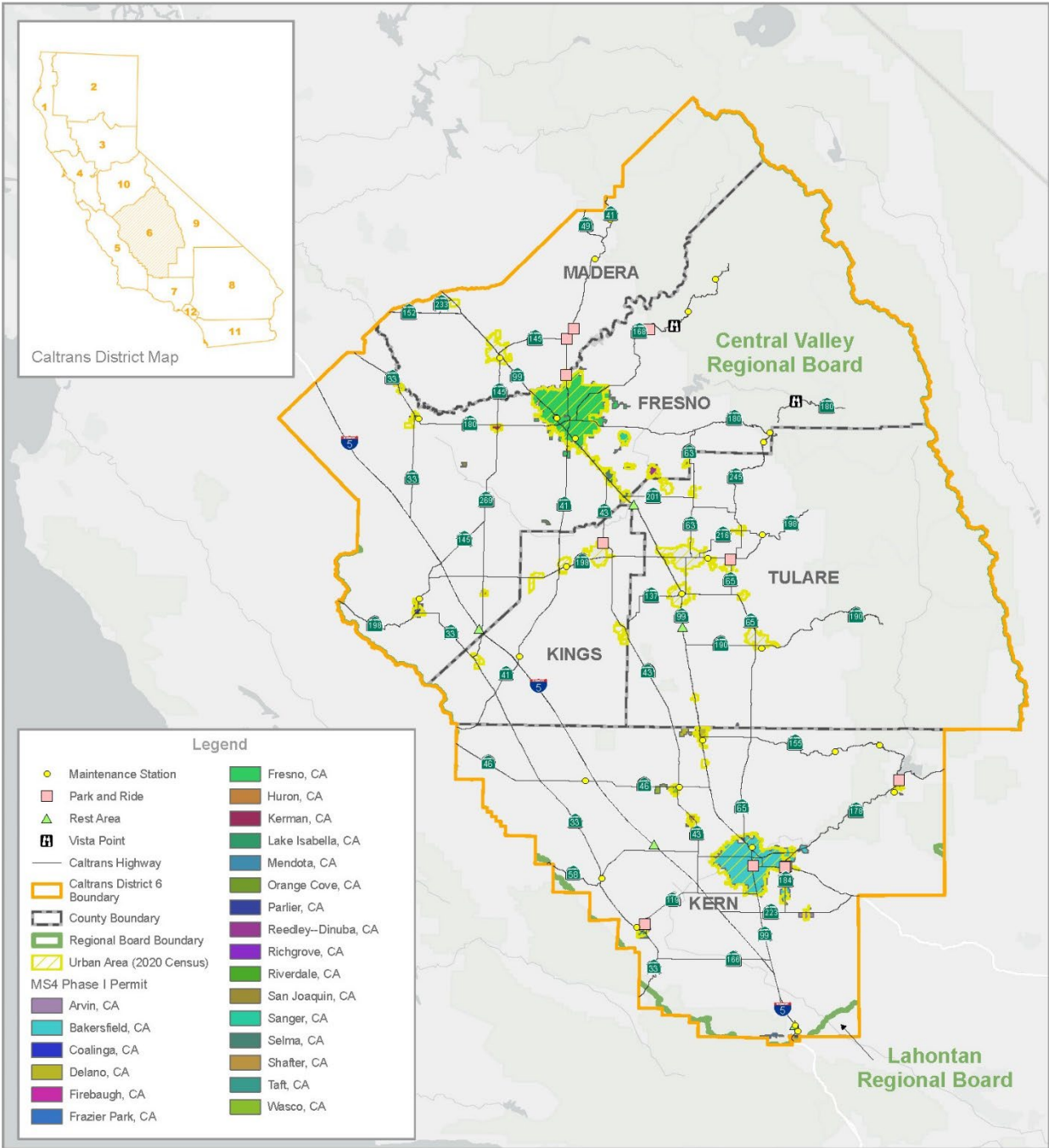
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DISTRICT 4

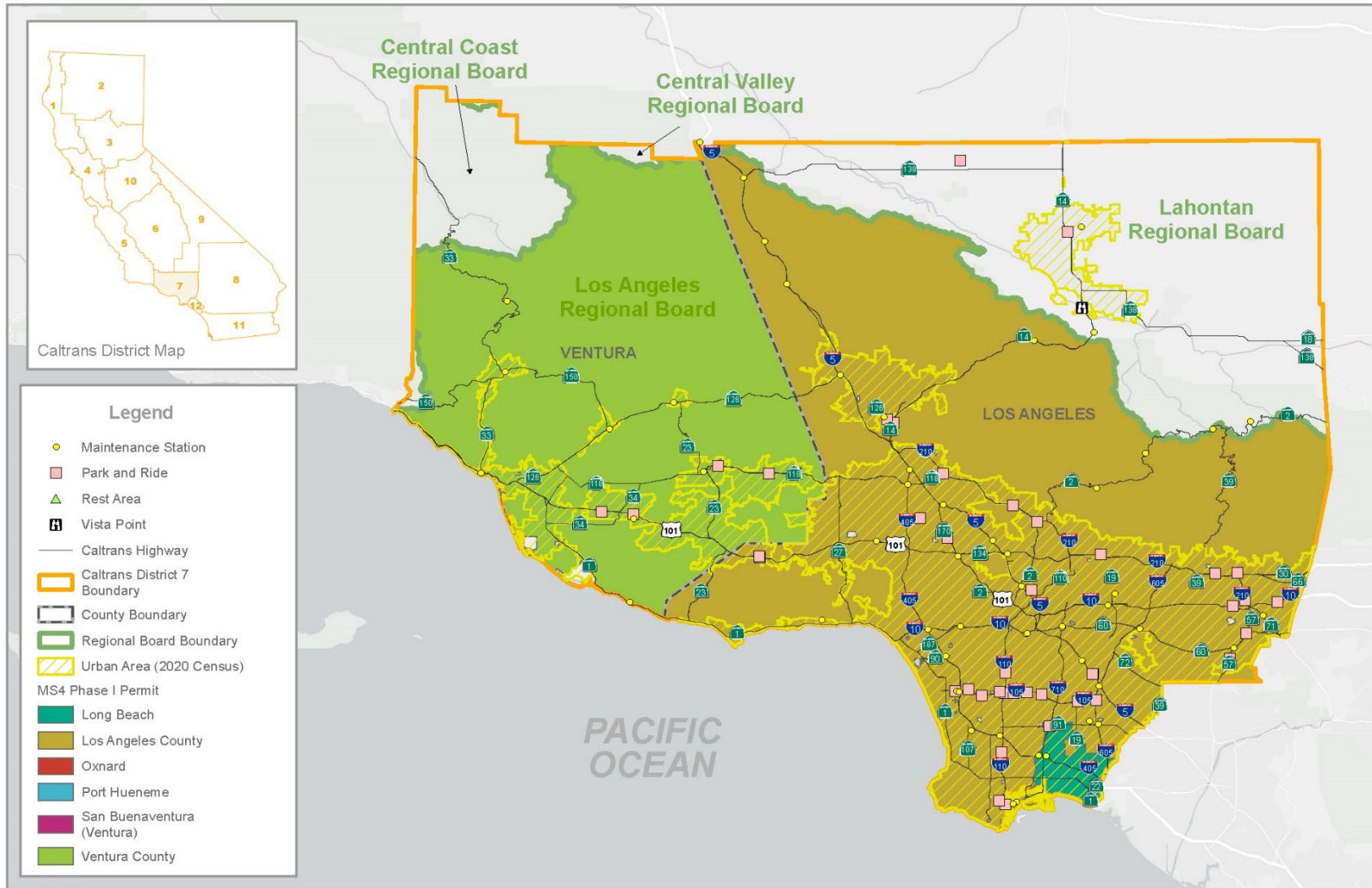


Sources: Caltrans, ESRI, and SWRCB

DISTRICT 5

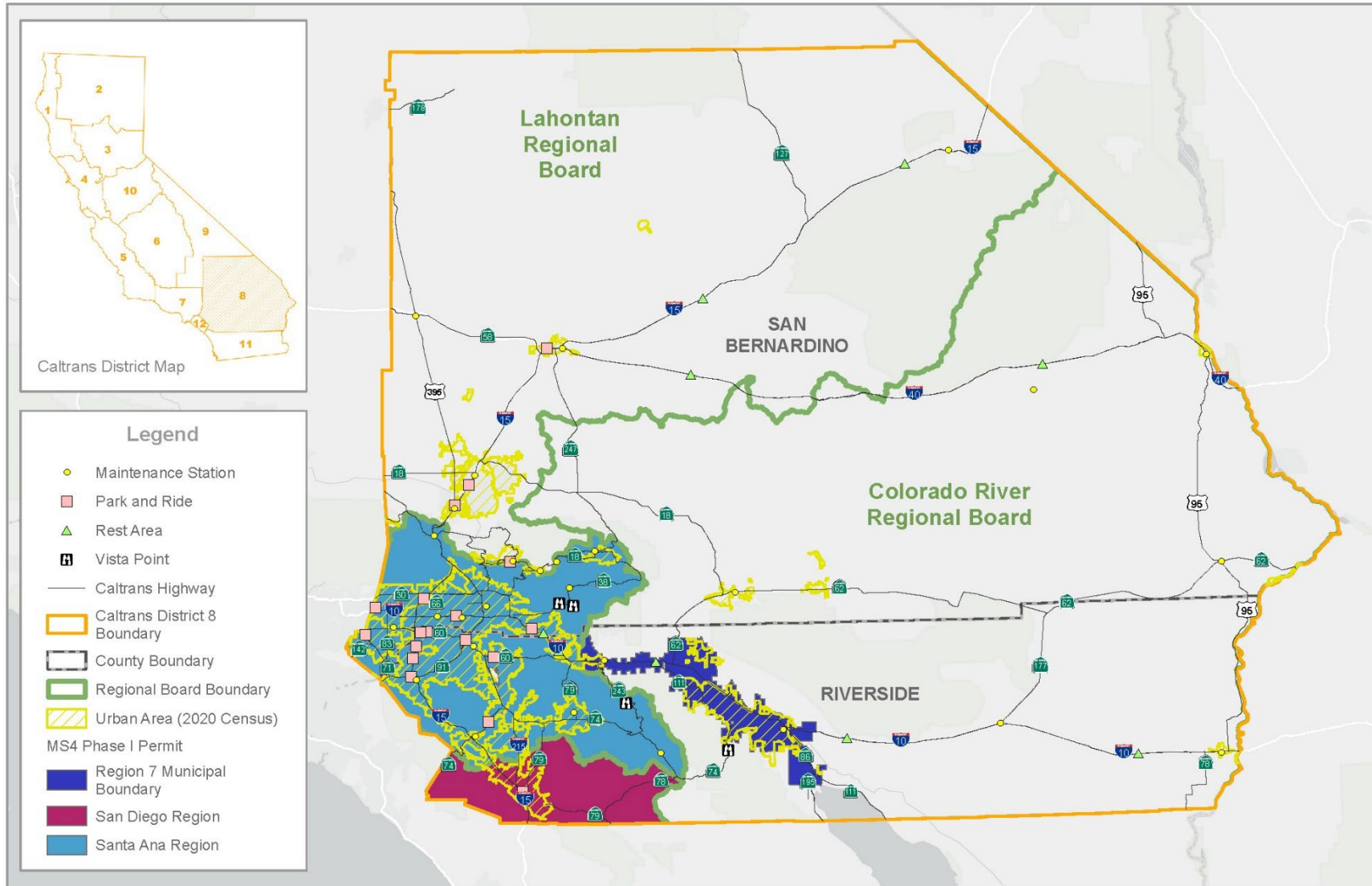


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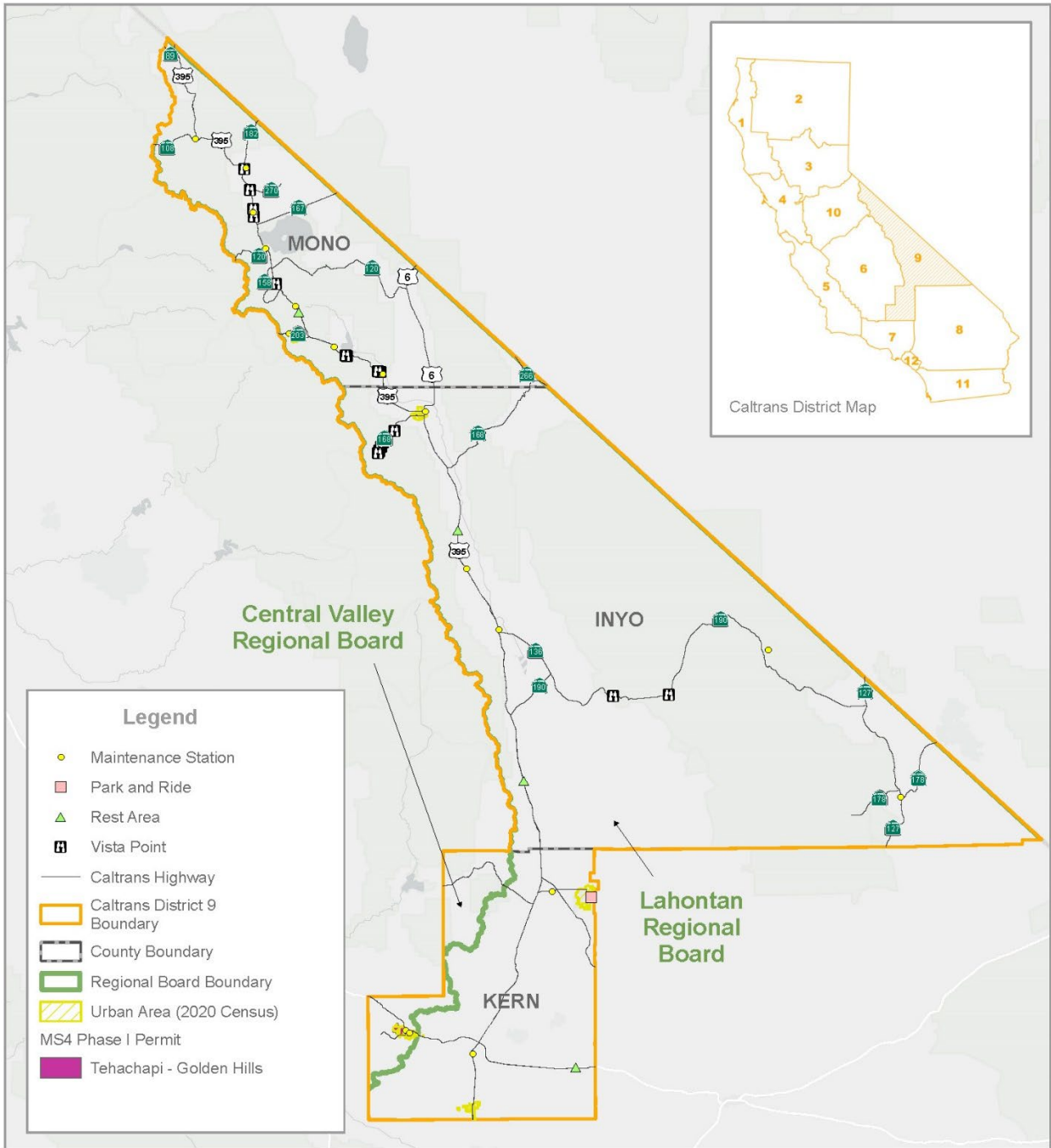
Sources: Caltrans, ESRI, and SWRCB

DISTRICT 7

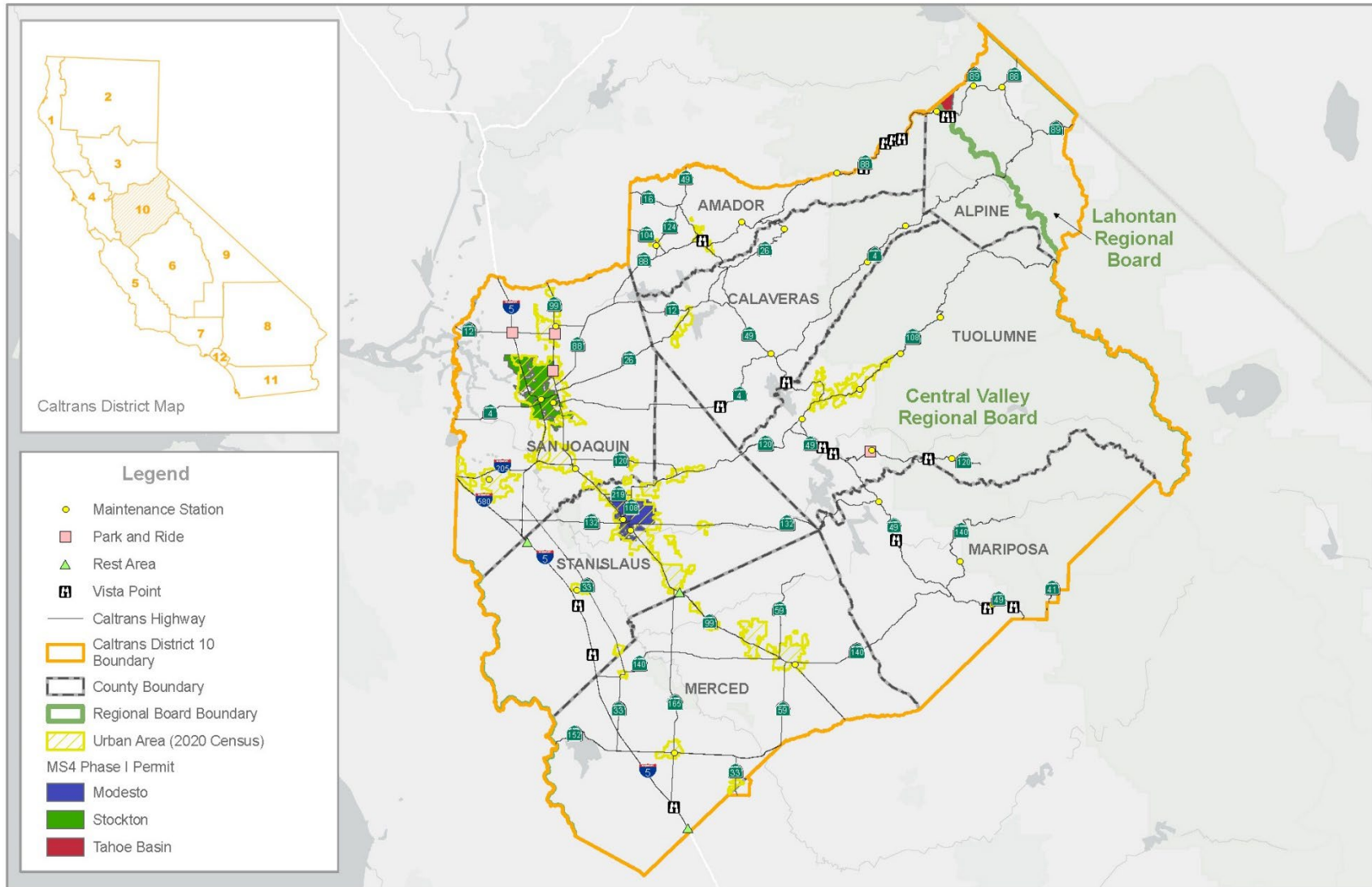


Sources: Caltrans, ESRI, and SWRCB

DISTRICT 8

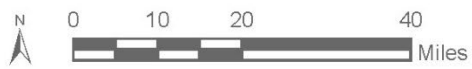
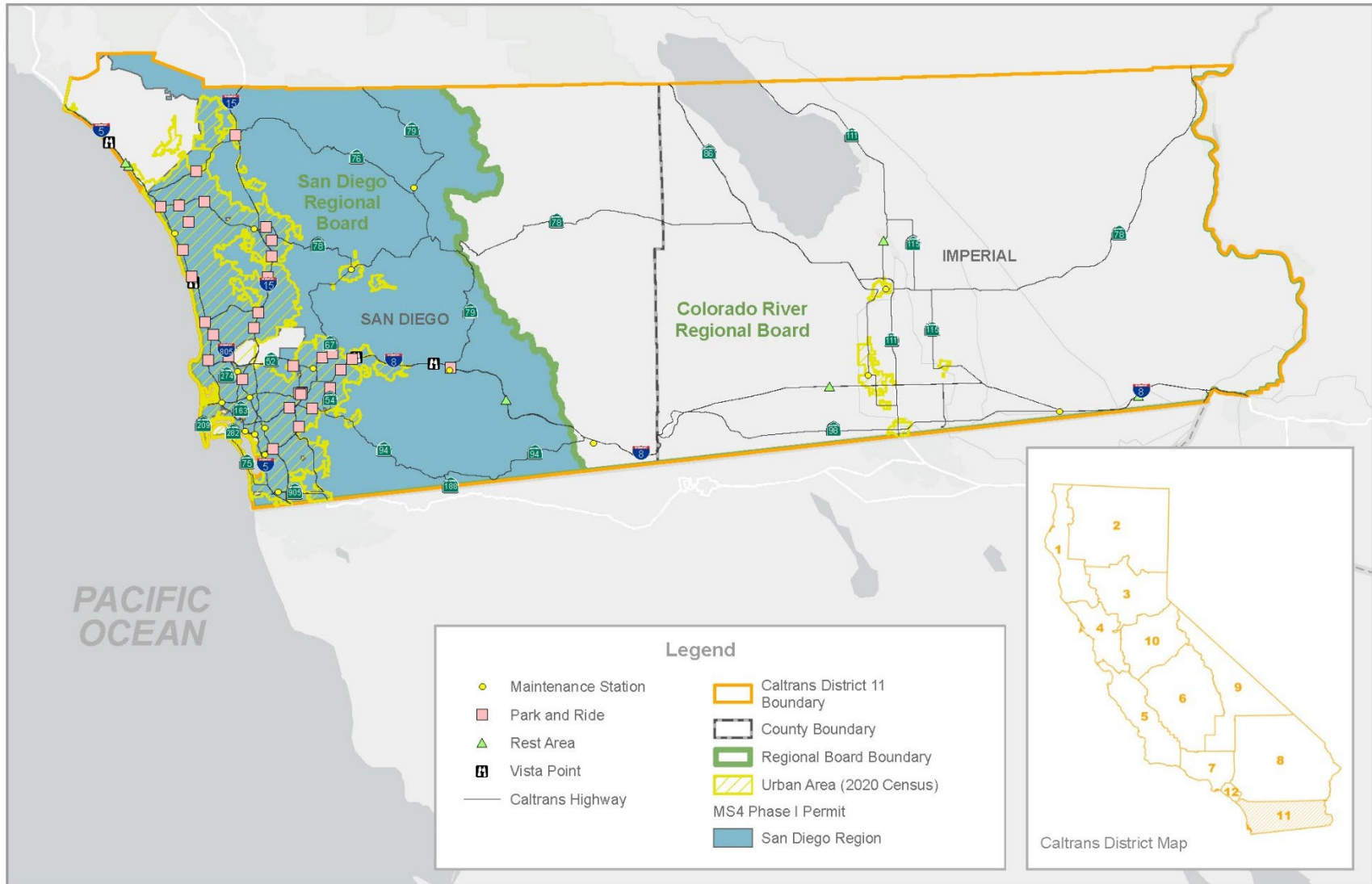


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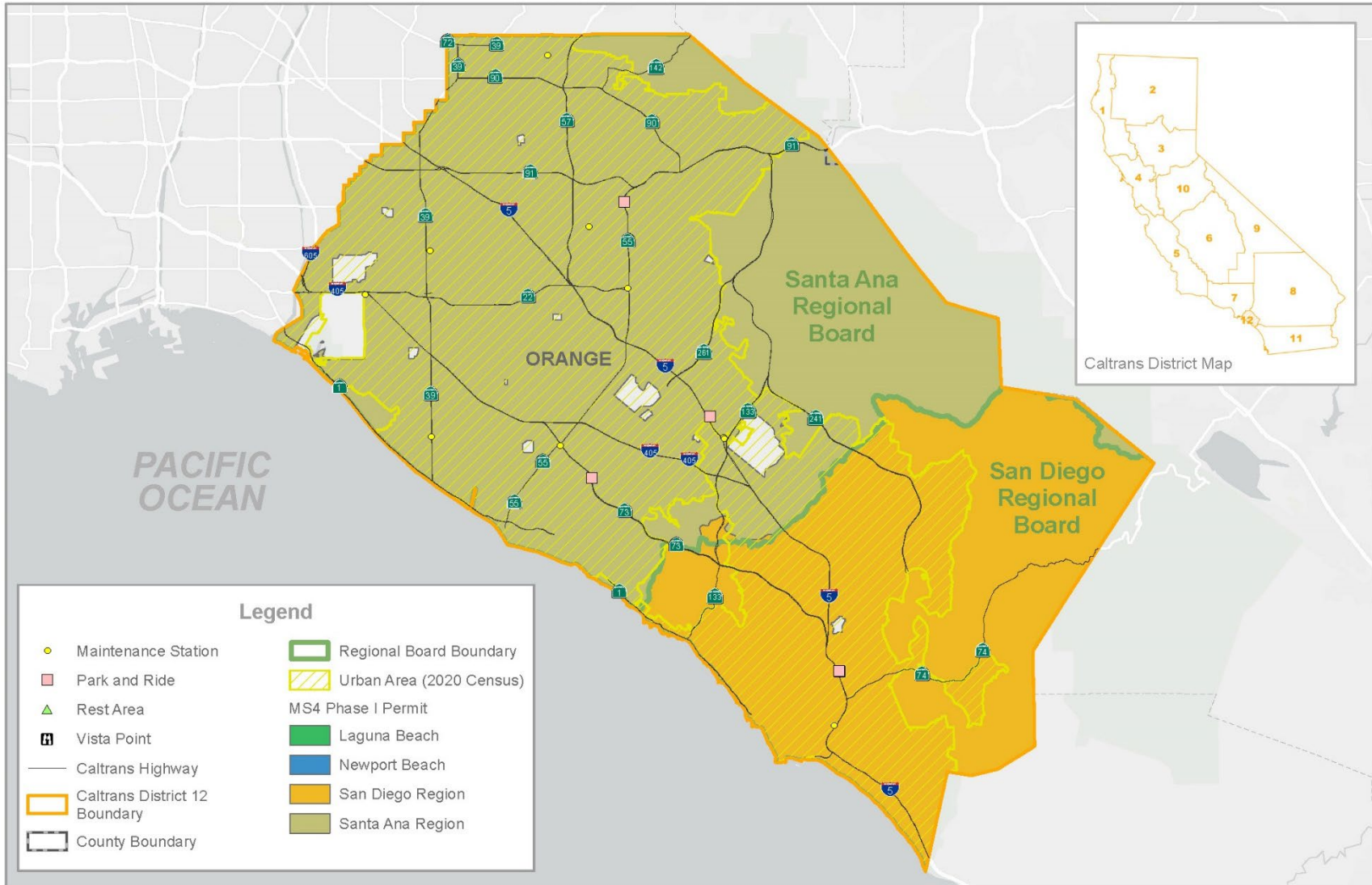
Sources: Caltrans, ESRI, and SWRCB

DISTRICT 10



Sources: Caltrans, ESRI, and SWRCB

DISTRICT 11



Sources: Caltrans, ESRI, and SWRCB

DISTRICT 12

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Appendix F: Caltrans NPDES Permit SWMP Requirements

Caltrans NPDES Permit SWMP Requirements and their SWMP Section

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
5.1.5	<i>“Incorporation of Revised Best Management Practices into Stormwater Management Plan – If the Department complies with the above requirements and is implementing its approved Stormwater Management Plan that is modified to address the subject exceedances, the Department is not required to repeat the above technical report procedures in [Caltrans NPDES Permit] section 5.1.2 through 5.1.4 for continuing or recurring exceedances of the same receiving water limitations unless directed by the State Water Board Executive Director or a Regional Water Board Executive Officer to immediately implement additional best management practices.”</i>	4.5
12	“REPORT OF WASTE DISCHARGE – In accordance with Title 23, Division 3, Chapter 9 of the California Code of Regulations, the Department shall file a report of waste discharge no later than 180 days before the Expiration Date of this Order. The report of waste discharge serves as the Department’s application for reissuance of this Order and waste discharge requirements. The application shall be accompanied by an updated Stormwater Management Plan and a summary of all available water quality data for the discharges regulated under this Order, and receiving waters, including conventional pollutant data from at minimum the most recent three years and toxic pollutant data from at least the most recent five years in the discharge and receiving water.”	18.2
14	“STORMWATER MANAGEMENT PLAN – The Department shall update and implement the Stormwater Management Plan developed per the requirements of Order 2012-0011-DWQ (previous permit), as described in Attachment C of this Order. This Order requires the Department to implement and update its Stormwater Management Plan consistent with the requirements of this Order. This Order requires the Department to submit the updated Stormwater Management Plan within 12 months of the Effective Date of this Order to the State Water Board Executive Director for review and consideration of approval. Upon approval, this Order requires that the Department to implement the approved Stormwater Management Plan.”	18.4
Attachment C Section C1	“STORMWATER MANAGEMENT PLAN – The Stormwater Management Plan is a document that describes the Department’s plans for each of its 12 districts to comply with the requirements of this Order. The Department shall continue to implement its existing Stormwater Management Plan, to the extent that it does not conflict with the requirements of this Order, until an	1

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	updated Stormwater Management Plan is approved by the State Water Board Executive Director.”	
Attachment C, Section C2	<p>“The Department shall comply with the following general requirements:</p> <ol style="list-style-type: none"> 1. The Department shall implement its updated Stormwater Management Plan as approved by the State Water Board Executive Director. If there is a conflict between the Department’s Stormwater Management Plan and the requirements of this Order, the requirements of this Order supersede. 2. The Department shall define terms used in its Stormwater Management Plan consistently with definitions in 40 C.F.R section 122.2 and in Attachment B (Acronyms, Abbreviations, and Definitions) of this Order. 3. The Department’s referenced policies, guidelines, and manuals shall facilitate implementation of the Stormwater Management Plan and shall be consistent with the requirements of this Order. 4. The Department’s manuals, guidance, and other related reference materials shall be revised as appropriate to reflect any approved updates to the Stormwater Management Plan.” 	1 and 2
Attachment C, Section C3	<p>“Overview The Department shall provide an updated overview of its Stormwater Management Program that describes the following components:</p> <ol style="list-style-type: none"> 1. A Statement of Purpose for the Stormwater Management Plan; 2. A description of the regulatory background and current NPDES permit requirements; and 3. A description of the other regulatory permits that are addressed through, or overlap with, the Stormwater Management Plan.” 	1, 1.1, 1.1.1, and 1.1.4
Attachment C, Section C3.2 (C3.2.1)	<p><i>“Municipal Coordination Plan</i> The Department shall include a Municipal Coordination Plan in its Stormwater Management Plan, that provides the strategy for compliance with the following requirements:</p> <ol style="list-style-type: none"> 1. Comply with the lawful requirements of municipalities and other local, regional, or other State agencies regarding discharges of the Department’s stormwater to separate storm sewer systems or other watercourses under agencies’ jurisdictions; 2. Communicate, cooperate, and collaborate with other municipal separate storm sewer system agencies and their programs, including establishing local agreements with municipalities, flood control agencies, or districts as necessary or appropriate; 3. Identify the name and direct telephone number of one Designee and one Substitute Designee for each District 	1.1.2, 2, and 2.3

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>who will serve as the primary District Stormwater Liaison and primary point of contact. This information shall be posted on the Department’s website. The Department shall update the Department’s website whenever designees are changed; and</p> <p>4. Upload District-specific municipal coordination plans to the State Water Board’s Stormwater Multiple Application and Report Tracking Systems (SMARTS) whenever the Municipal Coordination Plan defers implementation details to individual Districts. Upload to SMARTS within one month after the State Water Board Executive Director approves the Stormwater Management Plan. The Department shall notify the appropriate Regional and State Water Board municipal stormwater staff upon uploading to SMARTS.”</p>	
<p>Attachment C, Section C3.2 (C3.2.2)</p>	<p><i>“Annual Certification of Legal Authority</i> The Department shall maintain and annually certify its legal authority to implement and enforce each of the key regulatory requirements contained in 40 C.F.R. sections 122.26(d)(2)(i)(A) - (F). The Stormwater Management Plan shall provide detailed procedures for the Department’s inclusion of its Certification of the Adequacy of Legal Authority in the Annual Stormwater Management Plan Report (Annual Report). The procedures shall address how the Department will establish, maintain, and certify that it has adequate legal authority through statute, permit, contract, or other means to control discharges to and from the Department’s properties, facilities, and activities.</p> <p>As part of the annual certification, the Department shall provide a statement certified by its chief legal counsel that the Department has adequate legal authority to implement and enforce each of the key regulatory requirements contained in 40 C.F.R. section 122.26(d)(2)(i)(A)-(F).”</p>	<p>2.4.4</p>
<p>Attachment C, Section C3.2.3</p>	<p><i>“Fiscal Planning Strategy and Annual Fiscal Analysis Reports</i> The Department shall include the Fiscal Planning Strategy and the Annual Fiscal Analysis Reports, as described below:</p> <p>1. The Fiscal Planning Strategy shall be included in the Stormwater Management Plan. The Fiscal Planning Strategy shall include the fiscal strategy to comply with this Order for the following stormwater program elements:</p> <p>a. Installation, implementation, inspection, maintenance, rehabilitation, and replacement of all stormwater related assets and best management practices;</p> <p>b. Development, implementation, and iterative improvement of an effective stormwater monitoring program; and</p>	<p>2.5.3</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	c. Retention of qualified personnel to implement and manage the stormwater program.”	
Attachment C, Section C3.2.3	<p>“The Annual Fiscal Analysis Report shall be submitted in each Annual Report. The Department shall submit an Annual Fiscal Analysis Report of its statewide stormwater management program in each Annual Report. At a minimum, the annual fiscal analysis shall provide the following:</p> <ul style="list-style-type: none"> a. Funds allocated for stormwater asset rehabilitation and replacement activities, as identified in the Asset Management Plan and Retrofit Plan; b. Funds allocated for trash reduction and implementation as required in Attachment E; c. Funds allocated to each Department District for compliance with this Order; d. Funds allocated for each element of the Stormwater Management Plan; e. Funds allocated for an effective stormwater monitoring program; f. Funds allocated for reporting; g. Comparison of actual past year expenditures with the current year expenditures and the next year proposed expenditures for each Stormwater Management Plan element; h. Discussion of how the funding met the goals specified in the Stormwater; Management Plan and District Annual Workplans; i. Description of all cost sharing agreements with other parties in implementing the Stormwater Management Program; and j. A Fourth-Year Budget Analysis for consideration of the next 5-year permit cycle of this Order. This analysis shall be submitted in the fourth year’s Annual Fiscal Analysis Report and no later than 180 days before the expiration date of this Order.” 	2.5.3
Attachment C, Section C3.2.4	<p><i>“Conflicts Between Stormwater Management Plan and Department’s Policies and Practices</i></p> <p>The Department shall include a description of any of its practices and policies that conflict with the implementation of the Stormwater Management Plan, proposed modifications to the Stormwater Management Plan, and implementation schedules to resolve any conflicts.”</p>	2.7
Attachment C, Section C3.3	<p><i>“Pollution Prevention Program for Construction Activities</i></p> <p>The Department shall describe its pollution prevention program for construction activities, which shall be consistent with the requirements described in sections C3.3.1 through C3.3.5 of [Attachment C].”</p>	6
Attachment C, Section C3.3.1	<p><i>“Statewide or Lake Tahoe Construction Stormwater General Permits</i></p> <p>For stormwater discharges associated with construction</p>	6 and 6.2

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>activities not subject to the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction Stormwater General Permit) or the General Waste Discharge Requirements and NPDES General Permit for Storm Water Discharges Associated with Construction Activity in the Lake Tahoe Hydrologic Unit, Counties of Alpine, El Dorado, and Placer (Lake Tahoe Construction Stormwater General Permit), including demolition, clearing, grading, excavation, and other land disturbance activities that result in the disturbance of less than one acre of total land area that is not part of a larger common plan of development, the Department shall implement best management practices to reduce the discharge of pollutants to the maximum extent practicable. The Department shall comply with any region-specific waste discharge requirements, including any requirements applicable to activities involving less than one-acre land disturbance area.</p> <p>For any stormwater discharges associated with construction activities which are subject to the statewide Construction Stormwater General Permit or the Lake Tahoe Construction General Permit, the Department shall obtain coverage and maintain compliance under the appropriate permit.”</p>	
Attachment C, Section C3.3.2	<p><i>“Lead-Contaminated Soils</i> For construction projects that are regulated under the Department of Toxic Substances Control June 2016 Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils, the Department shall notify the appropriate Regional Water Board in writing 30 days prior to advertisement for bids to allow a determination by the Regional Water Board Executive Officer of the need for additional waste discharge requirements.”</p>	6 and 6.7
Attachment C, Section C3.3.3	<p><i>“Portland Cement Concrete and Asphalt Concrete Grindings</i> The Department shall include the following procedures for Portland cement concrete and asphalt concrete grindings:</p> <ol style="list-style-type: none"> 1. The discharge to waters of the state of stormwater runoff that has come in contact with Portland cement concrete or asphalt concrete grindings is prohibited; 2. The Department shall include procedures to ensure Portland cement concrete and asphalt concrete grindings, produced from the Department’s right-of-way and activities, are not stockpiled or used in a manner that may result in an unauthorized stormwater discharge to waters of the state; 3. The Department shall comply with its January 12, 1993, Memorandum of Understanding with the 	6 and 6.8

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>California Department of Fish and Wildlife regarding the reuse of grindings in embankments, shoulder backings, and other areas within its right of way, as referenced in the Department’s November 2017 Highway Design Manual, Section 110.11, or subsequent updates thereof; and</p> <p>4. The Department shall comply with the requirements of local and State regulations, and Titles 22 and 27 of the California Code of Regulations for management of temporary stockpiles of Portland cement concrete and asphalt concrete grindings.”</p>	
<p>Attachment C, Section C3.3.4</p>	<p><i>“Contractor Compliance</i> The Department shall include procedures to ensure that contractors comply with this Order, applicable requirements of the Construction General Permit, and with applicable requirements of the Lake Tahoe Construction General Permit. The Department shall ensure pollution prevention awareness training is provided to contractor personnel. Training shall include general stormwater awareness, implementation of this Order, and implementation of the Construction General Permit and the Lake Tahoe Construction General Permit, as applicable. Training shall also include identification of stormwater pollution potential, spill response, and spill reporting.”</p>	<p>6, 6.5.1, 7.2, and 11.2.1</p>
<p>Attachment C, Section C3.3.5</p>	<p><i>“Environmentally Friendly Best Management Practices</i> The Department shall include procedures regarding the design and implementation of effective temporary and construction-stage best management practices consistent with the following requirements: 1. Ensure that all best management practices do not constitute a hazard to wildlife; 2. Utilize wildlife-friendly 100 percent biodegradable erosion and sediment control products. For purposes of this Order, photodegradable synthetic products are not considered biodegradable; 3. Remove when no longer needed any erosion and sediment control products containing non-biodegradable materials that are used for temporary site stabilization; and 4. Remove and replace any erosion control material, sediment control netting, or other best management practices or products that have entrapped or harmed wildlife at any site or facility. The Department shall immediately remove and replace any best management practices with wildlife-friendly biodegradable products.”</p>	<p>6 and 6.6</p>
<p>Attachment C, Section C3.4</p>	<p><i>“Statewide General Permit for Stormwater Discharges Associated with Industrial Activities</i> When the Department or a Department contractor has an industrial facility described in Attachment A of the Statewide General Permit for Stormwater Discharges</p>	<p>7</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>Associated with Industrial Activities (Industrial General Permit), such as a concrete batch plant or borrow area, the Department or the Department contractor shall:</p> <ol style="list-style-type: none"> 1. Enroll under the Industrial General Permit and submit required Permit Registration Documents to SMARTS for all facilities subject to regulatory coverage; and 2. Require the industrial facility owner/operator to comply with all applicable requirements of the Industrial General Permit. 3. The discharge of pollutants from facilities not covered by the Industrial General Permit must be reduced to the maximum extent practicable through implementation of best management practices.” 	
<p>Attachment C, Section C3.5</p>	<p><i>“Maintenance and Operations</i> The Department shall describe the compliance protocol for maintenance and non-maintenance facility and highway maintenance activities described in sections C3.5.1 through 3.5.5, below. For activities that include inspections, inspection reports shall be prepared and submitted that include the following information: (1) date and time; (2) location (physical address or GIS location); (3) name of inspector; (4) results of inspection; (5) photographs that document conditions; and (6) recommendations. Inspection reports shall be uploaded to SMARTS within 60 days of an inspection.”</p>	<p>8</p>
<p>Attachment C, Section C3.5 (C3.5.1)</p>	<p><i>“Maintenance and Non-Maintenance Facility Pollution Prevention Plans</i> The Department shall provide and implement Facility Pollution Prevention Plans to reduce or eliminate the discharge of pollutants in stormwater runoff from maintenance facilities and activities. At a minimum, the Department shall:</p> <ol style="list-style-type: none"> 1. Prepare Facility Pollution Prevention Plans for all Department maintenance facilities. Each facility shall be evaluated separately and assigned site-specific best management practices to reduce or eliminate pollutant discharges in stormwater. The Facility Pollution Prevention Plans shall describe the activities conducted at the facility and the best management practices to be implemented to reduce or eliminate the discharge of pollutants in stormwater runoff from the facility. Facility Pollution Prevention Plans shall describe the inspection program used to ensure that maintenance best management practices are implemented and maintained. 2. Identify priority pollutant reduction opportunities (e.g., improvements to existing best management practices) with priority given to sites in sensitive watersheds or where there is an existing or potential threat to water quality. 3. Establish and implement procedures for best management practices in accordance with this Order. 	<p>8.3.1 and 8.3.3</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>4. Include program and implementation requirements to reduce pollutant discharges from non-emergency firefighting flows from its fire suppression systems in tunnels and other structures in anticipation of the non-emergency firefighting flows.</p> <p>5. Evaluate all non-maintenance facilities, excluding leased properties, for stormwater runoff quality problems. If the Department identifies a stormwater runoff quality problem at a non-maintenance facility, then the Department shall prepare a Facility Pollution Prevention Plan for that facility. If a Regional Water Board Executive Officer determines that a non-maintenance facility may discharge pollutants to the stormwater drainage system or directly to surface waters, the Department shall prepare a Facility Pollution Prevention Plan for that facility.</p> <p>6. Identify in each Annual Report the status of the Facility Pollution Prevention Plan for each maintenance facility by District and by Water Board Region, including the date of the last update or revision to the Facility Pollution Prevention Plan and the nature of the updates or revisions.”</p>	
<p>Attachment C, Section C3.5 (C3.5.2 and C3.5.2.1)</p>	<p>“<i>Maintenance Facility Inspection Program and Plan</i> The Department shall provide and implement a Maintenance Facility Inspection Program and Plan. 1. The Maintenance Facility Inspection Program shall ensure that this Order and the Stormwater Management Plan are implemented and that facilities are constructed, operated, and maintained in accordance with this Order and the Stormwater Management Plan. The program shall include training for inspection personnel, documentation of field activities, a reporting system that can be used to track effectiveness of control measures, enforcement procedures (or referral for enforcement) for non-compliance, procedures for taking corrective action, and responsibilities and responsible personnel of all affected functional offices and branches. The inspection program shall also include standard operating procedures for documenting inspection findings, a system of escalating enforcement response to non-compliance (including procedures for addressing third party (i.e., contractor) noncompliance), and a system to ensure the timely resolution of all violations of this Order or the Stormwater Management Plan. The Department shall delegate adequate authority to appropriate personnel within all affected functional offices and branches to require corrective actions (including stop work orders).”</p>	<p>8.3.3</p>
<p>Attachment C, Section C3.5 (C3.5.2.2)</p>	<p>“The Maintenance Facility Inspection Plan shall include protocols to ensure that maintenance facilities are constructed, operated, and maintained in accordance with the requirements of this Order and with the</p>	<p>8.3.3</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>approved Stormwater Management Plan. Training and documentation, inspection, and inspection follow-up protocols shall be included, as described below: Training and documentation that describes training for inspection personnel; documentation of field activities; and a reporting system for tracking noncompliance, enforcement, and effectiveness of control measures.</p> <p>b. Procedures to inspect and maintain facilities no less than twice annually, as follows:</p> <ul style="list-style-type: none"> i. Identify areas contributing to discharge of pollutants; ii. Determine if the control practices for reducing pollutant loadings identified in the Facility Pollution Prevention Plans are adequate and properly implemented; iii. Determine whether additional control practices are needed; iv. Conduct follow-up inspections when deficiencies are noted; v. Maintain records of all inspections, compliance certifications, and non-compliance reporting for a period of at least three years; vi. Maintain each District’s record of inspections; Assure inspection records include inspection dates, names and contact information of individuals performing the inspection, report of observations and recommendations for all corrective actions identified as needed; and viii. Describe all previously recommended corrective actions undertaken since the prior inspection. <p>c. Procedures for inspection follow-up to implement the following:</p> <ul style="list-style-type: none"> i. Standard operating procedures for documenting inspection findings; ii. Responsibilities and responsible personnel for all functional offices and branches affected by inspection findings; and iii. Delegation of adequate authority to require corrective actions and stop work orders within all affected maintenance facilities and activities. <p>d. Procedures for non-compliance and enforcement, including the following:</p> <ul style="list-style-type: none"> i. A system for escalating enforcement for non-compliance (including procedures for addressing third party (e.g., contractor) noncompliance, ii. Procedures for taking corrective action, iii. Enforcement referral procedures, and iv. A system to ensure the timely resolution of all violations of this Order and the Stormwater Management Plan.” 	
<p>Attachment C, Section C3.5 (C3.5.3)</p>	<p><i>“Highway Maintenance Activities</i> The Department shall include runoff management, vegetation control, waste management, and landslide</p>	<p>8.2</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	management for highway maintenance activities, as described below.”	
Attachment C, Section C3.5 (C3.5.3.1)	<p><i>“Runoff Management</i> The Department shall describe procedures, programs, and systems for maintenance of existing roads, highways, and bridges to reduce runoff pollutant concentrations and volumes entering surface waters according to the following requirements:</p> <ol style="list-style-type: none"> 1. Collect trash before mowing vegetated areas and dispose of the trash appropriately; 2. Prioritize watershed pollutant reduction opportunities (e.g., improvements to existing best management practices). Priority shall be given to sites in sensitive watersheds or where there is an existing or potential threat to water quality; 3. Establish schedules for implementing appropriate best management practices; and 4. Prioritize road segments with slopes that are prone to erosion and sediment discharge in order to stabilize slopes to control the discharge of pollutants to the maximum extent practicable. An inventory of vulnerable road segments shall be addressed in each District Annual Work Plan. This section does not apply to landslides and other forms of mass wasting which are covered in the Landslide Management Plan section of [Attachment C].” 	8, 8.2, and 8.3.4
Attachment C, Section C3.5 (C3.5.3.2)	<p><i>“Vegetation Control Plan</i> The Department shall include a Vegetation Control Plan in its Stormwater Management Plan. The Department and its contractors shall control handling and application of chemicals, pesticides, and fertilizers to reduce or eliminate the discharge of pollutants to the maximum extent practicable. The Vegetation Control Plan shall implement integrated pest management and integrated vegetation management practices that avoid the use of pesticides in locations, times, and quantities on right-of-way that could result in discharges that cause toxicity in receiving waters. The Department shall incorporate the Department’s existing integrated pest management and integrated vegetation management practices into its Vegetation Control Plan that is required by this Order. The Department’s Vegetation Control Plan shall comply with California Department of Pesticide Regulation requirements and shall incorporate the surface water protection requirements described below.</p> <ol style="list-style-type: none"> 1. Prohibit the use of Diazinon. Diazinon is no longer registered by the California Department of Pesticide Regulation for non-agricultural uses. 2. Require Districts to have individual written vegetation control implementation protocol in every instance where the Vegetation Control Plan defers implementation details to the Districts. Written District protocol shall be 	8.2.4

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>uploaded to SMARTS within 30 days of the State Water Board’s approval of the Stormwater Management Plan. The Department shall notify the appropriate State and Regional Water Board municipal stormwater programs upon uploading.</p> <p>3. Provide pesticide and fertilizer handling and application procedures to reduce or eliminate the discharge of pollutants in stormwater to the maximum extent practicable.</p> <p>4. Require that applicators and supervisors be certified and licensed according to the Department of Pesticide Regulations.</p> <p>5. Apply herbicides and pesticides in compliance with federal, state, County Agricultural Commissioner, and product label directions. Require that pesticide reportable quantity releases and spills be immediately reported to the California Governor’s Office of Emergency Services per the Office of Emergency Services guidelines.</p> <p>6. Provide a protocol to assess site- and application specific conditions to prevent chemical and pesticide discharge, which shall include the following variables:</p> <ul style="list-style-type: none"> a. Expected precipitation events, particularly precipitation events with the potential for high intensity; b. Presence of wind that may cause drift; c. Proximity to water bodies; d. Intrinsic mobility of the chemical; e. Application method and any tendency for aerial dispersion; f. Fate and transport of the chemical after application; g. Effects of using combinations of chemicals; and h. Other conditions as identified by the applicator. <p>7. Require that violations of federal and state regulations identified by the Department or Department’s contractor be reported to the California Governor’s Office of Emergency Services within 24-hours at 1-800-852-7550; and</p> <p>8. Require that violations of regulations be reported to the County Agricultural Commissioners within 10 business days.”</p>	
<p>Attachment C, Section C3.5 (C3.5.3.3)</p>	<p><i>“Waste Management Plan</i> The Department shall include a Waste Management Plan that includes the following information and procedures:</p> <ul style="list-style-type: none"> 1. Inventory of waste storage, transfer, and disposal sites. The inventory shall include the sources and the physical and chemical characterization of the waste at each site. The inventory shall include estimated annual volumes of waste and existing or planned waste management practices for each waste and facility type; 	<p>8</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<ol style="list-style-type: none"> 2. Procedures to perform a minimum of once per year inspections of urban drainage inlets and catch basins; 3. Procedures to remove waste and debris from drainage inlets and catch basins when waste and debris have accumulated to a depth of 50 percent of the inlet or catch basin capacity; and 4. Procedures to manage, dispose, and report waste and debris, sweeper truck waste, and vacuum truck waste in accordance with applicable laws and regulations, including California Code of Regulations Title 27, Division 2, Subdivision 1.” 	
<p>Attachment C, Section C3.5 (C3.5.3.4)</p>	<p><i>“Landslide Management Plan</i> The Department shall include a Landslide Management Plan with best management practices for construction and maintenance of landslide-related activities (e.g., prevention, containment, clean-up). The Landslide Management Plan shall address all forms of mass wasting such as slumps, mud flows, and rock falls, and shall include best management practices specifically for burn site management activities.”</p>	<p>8.2.9</p>
<p>Attachment C, Section C3.5 (C3.5.4)</p>	<p><i>“Contractor Activities Outside the Right-of-Way</i> The Department shall include contract provisions that require contractors to obtain and comply with applicable permits for project-related facilities and operations outside the Department’s right-of-way. The types of facilities may include concrete or asphalt batch plants, staging areas, concrete slurry processing or other material recycling operations, equipment and material storage yards, material borrow areas, and access roads.”</p>	<p>7.2 and 8</p>
<p>Attachment C, Section C3.5 (C3.5.5)</p>	<p><i>“Asset Management Plan</i> For this Order, asset management is the process of managing stormwater best management practices capital assets to minimize total cost of owning and operating the assets. To treat stormwater to comply with this Order and to ensure the satisfactory condition of all stormwater best management practices assets implemented and installed during this and previous permit terms, the Department shall meet the following asset management requirements: <ol style="list-style-type: none"> 1. The Department shall implement and update its current asset management program through June 30, 2025, to address changing conditions, resources, and requirements. 2. The Department shall prepare and implement a revised Asset Management Plan by June 30, 2025 in accordance with the requirements below. The Department may include elements of the revised Asset management Plan by referencing specific sections and portions from its existing plans and programs. </p>	<p>15</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>3. The Asset Management Plan shall provide an asset inventory that includes the following: (i) location (latitude, longitude, and watershed); (ii) type and design criteria of asset and structural best management practices. (iii) date of construction; (iv) party responsible for maintenance; (v) dates and findings of maintenance verifications, maintenance description, life cycle, maintenance cycle, and description of each asset; and (vi) corrective actions and/or resolutions when applicable.</p> <p>4. The Asset Management Plan shall include an asset assessment strategy for prioritizing and scheduling maintenance, rehabilitation, and replacement of inventoried assets. The strategy shall include:</p> <ul style="list-style-type: none"> a. A process for prioritizing and scheduling operation and maintenance activities. b. A process for evaluating the current condition of each asset and for identifying the need for the rehabilitation and replacement of each asset. The process shall include: <ul style="list-style-type: none"> i. Identification of the minimum condition necessary to achieve adequate performance level for each asset or asset type, including procedures. ii. Identification of the current performance level and effectiveness of each asset. Asset effectiveness shall be based on, at a minimum, factors such as design, capacity, and condition and function relative to the asset's design, intended operating conditions, and intended function, as necessary and applicable. iii. An evaluation or forecast of costs necessary for the rehabilitation and replacement of assets through the end of the current permit term. On an ongoing basis, the Department shall compare projections with available funding sources to determine the best manner in which to fund the operation, maintenance, rehabilitation, and replacement of assets. iv. Identification of potential climate change-related threats to assets and appropriate adaptation strategies. <p>5. The Department shall report any asset rehabilitation and replacement activities and costs in the Annual Fiscal Analysis Report.”</p>	
<p>Attachment C, Section C3.5 (C3.5.6)</p>	<p><i>“Best Management Practices Retrofit Program</i> The Department shall prepare and implement a Best Management Practices Retrofit Program that includes, but is not limited to, identifying, prioritizing, and either upgrading or replacing existing best management practices as described below. The Retrofit Program shall include the following components:</p> <ul style="list-style-type: none"> 1. Create a prioritized list of implemented best management practices for retrofitting. This includes best management practices at high-risk of failure, due, for 	<p>8.3.4</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>example, to impacts such as climate change, landslides, age, deferred maintenance, or other causes. It also includes best management practices not providing adequate stormwater treatment, for which correction of design deficiencies or performance deficiencies is needed, or for which the Department identifies other needs to be addressed. This includes the prioritization of best management practices implemented under sections C3.5.3.1, Runoff Management; section C3.5.3.4, Landslide Management Plan; section C3.10.6, Post-Construction Long-Term Operation and Maintenance Plans; section C5.16, Inventory of Best Management Practices; and other components of the Stormwater Management Plan.</p> <p>2. Phase-in completion of retrofits over the term of the Order at a rate of 2 percent per year starting with the third year after the Effective Date of the Order and then 3 percent per year thereafter over the term of the Order.</p> <p>3. Report the status of retrofits according to section C3.17.”</p>	
<p>Attachment C, Section C3.6</p>	<p><i>“Non-Departmental Activities</i> The Department shall address non-departmental activities for the following requirements:</p> <ol style="list-style-type: none"> 1. Summary of the Department’s control over all non-departmental (e.g., third party) activities performed in the Department’s right-of-way. The summary shall describe how the Department is going to ensure compliance with this Order in all non-departmental activities. 2. Description of the Department’s process to refuse grants or renew encroachment permits or easements for any third party that is required to obtain coverage under the Statewide General Permit, Lake Tahoe Construction General Permit, or the Industrial General Permit unless the party has obtained coverage under the appropriate general permit. 3. In all leases, rental agreements, and all other contracts with third parties conducting activities within the right-of-way, the Department shall require the third party to comply with applicable requirements of this Order, the Construction General Permit, the Lake Tahoe Construction Permit, and the Industrial General Permit. The Department is ultimately responsible for stormwater and non-stormwater discharges from leased sites, including sites addressed by Executive Order N-23-20.” 	<p>2.2.8, 7.4, and 9</p>
<p>Attachment C, Section C3.7</p>	<p><i>“Non-Stormwater Discharges</i> The Department shall describe the management activities for all non-stormwater discharges, including spills; illicit discharges, illegal dumping, and illegal connections; and agricultural return flows. The Department shall include the following information and protocols.”</p>	<p>3.7 and 10</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
Attachment C, Section C3.7 (C3.7.1)	<p><i>“Spills</i> A spill is the sudden release of a potential pollutant to the environment, including pollutants such as sewage, hazardous waste, priority pollutants, pesticides, oils, and petroleum. The Department shall describe the protocol to comply with the following requirements for spills to receiving waters or municipal separate storm sewer systems from the Department’s right-of-way and for spills outside the Department’s right-of-way that include Department-generated pollutants:</p> <ol style="list-style-type: none"> 1. The Department shall immediately control, abate, and cleanup all spills to its municipal storm separate sewer system and to receiving waters. 2. The Department shall follow the California Governor’s Office of Emergency Services procedures and timelines specified in Water Code sections 13271 and 13272 for reporting spills. 3. The Department shall report to the California Office of Emergency Services, upon discovery, incidents that threaten public health, public safety, property, or the environment that pose a clear and imminent danger requiring immediate action to prevent or mitigate the damage or threat, and that result in a discharge or potential discharge to surface waters.” 	10.2
Attachment C, Section C3.7 (C3.7.2)	<p><i>“Illegal Connection, Illicit Discharge, and Illegal Dumping</i> 1. The Department shall implement best management practices and other requirements of the Stormwater Management Plan to reduce, eliminate, and remediate illegal connections, illicit discharges, and illegal dumping. 2. The Department shall provide and implement procedures for preventing, detecting, investigating, reporting to the appropriate Regional Water Board, and cleaning up illegal connections, illicit discharges, and illegal dumping. 3. The Department shall provide and implement plans for educating the public, raising awareness, and changing behaviors regarding illegal connections, illicit discharges, illegal dumping, and encouraging the public to contact the local authorities if the local authorities witness illegal dumping.”</p>	10.3
Attachment C, Section C3.7 (C3.7.3)	<p><i>“Agricultural Return Flows</i> The Department shall describe its protocol to provide reasonable support of monitoring activities for agricultural dischargers whose runoff enters the Department’s municipal separate storm sewer system. Reasonable support shall include facilitating monitoring activities, providing access to monitoring sites, and cooperating with monitoring efforts as needed. It does not include actively conducting monitoring or providing funding. The Department may require agricultural dischargers to follow established Department access</p>	10.4.1 and 17

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	and encroachment procedures when establishing sites and conducting monitoring activities. The Department may deny access at sites that may restrict traffic flow or pose a danger to any party.”	
Attachment C, Section C3.8	<p><i>“Training Program</i> The Department shall describe its protocol to ensure that its employees and contractors who conduct operations in the Department’s right-of-way are trained annually in stormwater pollution prevention. The training shall include the following:</p> <ol style="list-style-type: none"> 1. Causes and effects of stormwater pollution, 2. Regulatory requirements, 3. Best management practices, 4. Penalties for non-compliance with this Order, and 5. Lessons learned.” 	11
Attachment C, Section C3.9	<p><i>“Public Education and Outreach Program</i> The Department shall include a Statewide Public Education and Outreach Plan that includes the following elements:</p> <ol style="list-style-type: none"> 1. Continuation of statewide public education and outreach efforts that focus public awareness on preventing pollutants and litter from entering surface water. Continuation of stormwater management advertising campaigns. The Department may cooperate with other organizations to implement the public education campaign. Continuation of efforts to participate in public outreach and education activities with other municipal separate storm sewer system permittees. 2. Participation in public outreach events to influence the public’s behavior. 3. Communication with commercial and industrial entities whose actions may add pollutants to the Department’s stormwater.” 	12
Attachment C, Section C3.10	<p><i>“Post-Construction Requirements</i> The Department shall describe the plans, designs, implementation, and maintenance for post-construction best management practices, which shall be consistent with the requirements in section C3.10.1 through C3.10.10, below. The requirements are applicable to all new and redevelopment projects that (1) meet the size thresholds provided in this Attachment and (2) that have not completed the project initiation phase as of the Effective Date of this Order or that have completed the project initiation phase prior to the effective date of this order but have not commenced construction within five years of the effective date of this order. The Department may submit a request for an extension for long-lead projects to the State Water Board Executive Director for review and consideration of approval in coordination with the Regional Water Board Executive Officer.</p>	5.4

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>Where a Regional Water Board Executive Officer finds that a project will have a minimal impact on water quality, the Executive Officer may waive post-construction treatment control requirements or lessen the stringency of the requirements for a project. Waivers may not be granted for projects subject to post-construction treatment control requirements based on a waste load allocation assigned to the Department.”</p>	
<p>Attachment C, Section C3.10 (C3.10.1)</p>	<p><i>“Alternative Compliance Projects Located Within or Outside the Right-of-Way</i> Alternative compliance may be achieved outside the Department’s project limits, either within or outside the Department’s right-of-way, including within another Department project. An alternative compliance project may be a cooperative agreement with another entity. If the Department determines that all or any portion of on-site treatment for a project is infeasible on-site, the Department shall prepare a proposal for alternative compliance for review and consideration of approval by the State Board Executive Director in coordination with the applicable Regional Water Board Executive Officer. The Department’s proposal shall include documentation supporting the determination of infeasibility. Alternative compliance shall be based on an equivalent rate such as acres of right-of-way to acres of an alternative compliance project; proportional responsibility calculated from pollutant loadings at the right-of-way compared to the loadings at an alternative compliance project; the Department’s land use coverage in the watershed; or other methods as approved by the State Water Board Executive Director in consultation with the applicable Regional Water Board Executive Officer. Examples of potential alternative compliance projects include the following: 1. Maximizing stormwater treatment design and construction beyond the minimum mandatory post-construction best management practice controls. 2. Cooperating with municipalities for post-construction best management practice controls or cost-sharing projects. Alternative compliance projects that the Department implements outside the project limits shall include provisions for the long-term maintenance of such alternative compliance projects.”</p>	<p>5.4.3.5</p>
<p>Attachment C, Section C3.10 (C3.10.2.1)</p>	<p><i>“Projects Subject to Post-Construction Treatment Requirements</i> The Department shall describe the post-construction treatment requirements as required below: 1. The Department shall implement post-construction treatment control best management practices for the following new development or redevelopment projects: a. Highway Facility projects that create 10,000 square</p>	<p>5.4.3</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>feet or more of new impervious surface, except for Highway Facility projects that create less than one (1) acre of new impervious surface and:</p> <ul style="list-style-type: none"> i. That have completely proceeded through the Department’s Project Initiation Document stage prior to the Effective Date of this Order, and ii. For which project construction has commenced within five (5) years of the Effective Date of this Order or seven (7) years of completing the Project Initiation Document stage, whichever is sooner. <p>The Department shall submit a list of the Highway Facility projects that meet the exception criteria in section 1.a.i and ii above, within 6 months of the Effective Date of this Order.</p> <p>The Department may submit a request for an extension to the time criteria in item ii above, to the State Water Board Executive Director for review and consideration of approval in coordination with the Regional Water Board Executive Officer.</p> <p>b. Non-Highway Facility projects that create 5,000 square feet or more of new impervious surface.”</p>	
<p>Attachment C, Section C3.10 (C3.10.2.2)</p>	<p>“For non-Department projects within the Department’s right-of-way, the Department shall:</p> <ul style="list-style-type: none"> a. Exercise control or oversight on non-Department projects through encroachment permits or other means. b. Ensure the new development or redevelopment projects comply with the same post-construction treatment control requirements as Department projects. c. Review and approve the design of post construction treatment controls and best management practices prior to implementation for all non-Department projects that trigger post-construction treatment control requirements.” 	<p>5.4.3</p>
<p>Attachment C, Section C3.10 (C3.10.3)</p>	<p><i>“Post-Construction Planning</i> The Department shall describe procedures and methodologies used in the selection of design and post-construction best management practices for Department projects. The Department shall ensure that Long-Term Operation and Maintenance Plans are prepared and implemented for every site subject to post-construction stormwater treatment design standards and best management practices required under this Order. The Department may prepare cooperative agreements with local agencies for post-construction treatment of highway runoff that is located outside of the Department’s right-of-way.”</p>	<p>5.2</p>
<p>Attachment C, Section C3.10 (C3.10.4)</p>	<p><i>“Post-Construction Implementation</i> 1. The Department may drain effluent from stormwater best management practices to a local municipal separate storm sewer system only if the discharge does not cause or contribute to exceedances of water quality</p>	<p>4.2.1.5, 6.5, and 18.6.2</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>standards.</p> <p>2. The Department shall complete required installation and shall inspect post-construction best management practices on or before the overall project completion date. The Department's inspections shall ensure the construction and installation is in accordance with the Long-Term Operation and Maintenance Plans. The Department shall take appropriate remedial actions for any best management practices or controls to comply with approved plans, as applicable.</p> <p>3. The Department shall assure that all post construction best management practices do not constitute a hazard to wildlife."</p>	
<p>Attachment C, Section C3.10 (C3.10.5)</p>	<p><i>"Site Design Pollution Prevention Best Management Practices</i></p> <p>The Department shall incorporate the following Site Design Pollution Prevention Best Management Practices into all projects that create disturbed soil area, including projects designed to comply with this Order's post-construction treatment requirements. The Department shall list site design measures that shall be considered for each project, including, but not limited to following:</p> <ol style="list-style-type: none"> 1. Conserve natural areas by minimizing land disturbance, such as existing trees, stream buffer areas, vegetation, and soils. 2. Minimize the impervious footprint of the project. 3. Minimize disturbances to natural drainages. 4. Design and construct pervious surface to effectively receive runoff from impervious surfaces, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors. 5. Implement landscape and soil-based best management practices such as compost-amended soils, vegetated strips, and vegetated swales. 6. Use climate-appropriate landscaping that minimizes irrigation and runoff, promotes surface infiltration, and minimizes the use of pesticides and fertilizers. 7. Design landscapes to comply with the California Department of Water Resources Water Efficient Landscape Ordinance (https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Model-Water-Efficient-Landscape-Ordinance). Where the California Department of Water Resources Water Efficient Landscape Ordinance conflicts with a local water conservation ordinance, the Department shall comply with the local ordinance." 	<p>5.4.1 and 5.4.2</p>
<p>Attachment C, Section C3.10 (C3.10.6.1)</p>	<p><i>"Post-Construction Long-Term Operation and Maintenance Plans</i></p> <p>The Department shall describe the post-construction long-term operation, inspection, and maintenance</p>	<p>8 and 8.3.4</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>program, which includes cooperative agreements with any local agency for post-construction treatment that is located outside the Department's right-of-way. Post-construction long-term operation and maintenance program shall be consistent with the following requirements:</p> <ol style="list-style-type: none"> 1. Prepare and implement long-term operation and maintenance plans for every site subject to the post-construction stormwater treatment design standards. The plans shall ensure that: <ol style="list-style-type: none"> a. Long-term structural low impact development best management practices are maintained as necessary to ensure that the Department continues to work effectively, b. Proprietary devices are maintained according to the manufacturer's directions, and c. Post-construction best management practices are replaced if the best management practices lose their effectiveness." 	
<p>Attachment C, Section C3.10 (C3.10.6.2 to C3.10.6.5)</p>	<ol style="list-style-type: none"> 2. Inspect all installed best management practices at minimum of once every two years. 3. Dispose retained sediments in accordance with applicable local, state, and federal acts, laws, regulations, ordinances, and statutes. 4. Inspect all newly installed best management practices and controls within 45 days of installation to ensure the construction and installation is in accordance with approved plans. The Department shall take appropriate remedial actions for the best management practices or control to comply with approved plans, as applicable. 5. Provide online and maintenance station access to the Long-Term Operation and Maintenance Plans." 	<p>8 and 8.3.4</p>
<p>Attachment C, Section C3.10 (C3.10.7)</p>	<p><i>"Best Management Practices Design and Numeric Sizing Criteria</i></p> <p>The Department shall include procedures for design and numeric sizing criteria for best management practices according to the following:</p> <ol style="list-style-type: none"> 1. Include procedures for construction of best management practices and treatment controls for Department and non-Department projects. The projects shall be designed to control and abate the discharge of pollutants in stormwater with primary consideration to infiltrating, harvesting, and/or re-using the stormwater runoff prior to consideration of treatment and discharge (e.g., biofiltration). The first priority shall be the use of vegetated landscape and soil based best management practices to treat stormwater runoff. The Department may identify in its Stormwater Management Plan areas of the state with deep vadose zones where non-vegetated landscape and soil based best management practices may be prioritized. The Department shall also consider other effective stormwater treatment control 	<p>5.4.3.1</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>methods or devices for Department approval.</p> <p>2. Include procedures for stormwater runoff volumes and rates that are used to size best management practices that shall be based on the 85th percentile, 24-hour storm event. This sizing criterion shall apply to the entire treatment train (i.e., a series of best management practices) within the project limit. Design pollution prevention best management practices can be used to comply with this requirement.</p> <p>3. Include procedures for the event when the entire runoff volume from an 85th percentile, 24-hour storm event cannot be infiltrated, harvested, re-used, or evapotranspired. In this case, the excess volume may be treated by low impact development-based flow through treatment devices. Where low impact development-based flow-through treatment devices are not feasible, excess volume may be treated through conventional volume-based or flow-based stormwater treatment devices.</p> <p>4. The Department shall provide technical reports documenting the effectiveness and performance of any new Department approved best management practices, including any updates to previously approved best management practices.”</p>	
<p>Attachment C, Section C3.10 (C3.10.8.1)</p>	<p>“<i>Design Criteria for Redevelopment Projects</i></p> <p>1. For redevelopment projects of highway facilities with new impervious surface less than or equal to 50 percent of the total post-project impervious surface within project limits, the Department shall implement the following:</p> <p>a. The numeric sizing criteria shall only apply to the new impervious surface area and not to the entire project.</p> <p>b. When new impervious surface cannot be hydraulically separated from the existing impervious surface, the Department shall either provide treatment for redeveloped areas and as much of the hydraulically inseparable flow as feasible (based on site conditions and constraints) and divert any excess flow around the treatment device to prevent overloading, or identify treatment opportunities equivalent to the untreated portion of the redeveloped area.</p> <p>c. The Department shall complete post-construction best management practice installations on or before the overall project completion date.”</p>	<p>5.4</p>
<p>Attachment C, Section C3.10 (C3.10.8.2 – C3.10.8.3)</p>	<p>“2. For redevelopment projects of highway facilities with new impervious surface greater than 50 percent of the total post-project impervious surface, the Department shall implement the following:</p> <p>a. The numeric sizing criteria apply to the entire project.</p> <p>b. The Department may identify treatment opportunities equivalent to the untreated portion of the entire impervious area at an alternative compliance site (see the section on Alternative Compliance, above).</p>	<p>5.4</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>c. The Department shall complete post-construction best management practice installations on or before the overall project completion date.</p> <p>3. For redevelopment projects of non-highway facilities with new impervious surface less than or equal to 50 percent of the total post-project impervious surface, the Department shall do the following:</p> <p>a. The numeric sizing criteria shall only apply to the new impervious surface increase and not to the entire project.</p> <p>b. If the redeveloped impervious surface cannot be hydraulically separated from the existing impervious surface, the Department shall either provide treatment for redeveloped areas and as much of the hydraulically inseparable flow as feasible (based on site conditions and constraints) and divert any excess flow around the treatment device to prevent overloading or identify treatment opportunities equivalent to the redeveloped area (see the section on Alternative Compliance, above).</p> <p>c. The Department shall complete post-construction best management practice installations on or before the overall project completion date.”</p>	
Attachment C, Section C3.10 (C3.10.8.4)	<p>“4. For redevelopment projects of non-highway facilities with new impervious surface increase greater than 50 percent of the total post-project impervious surface, the Department shall do the following:</p> <p>a. The numeric sizing criteria apply to the entire project; and</p> <p>b. The Department shall complete post-construction best management practice installations on or before the overall project completion date.”</p>	5.4
Attachment C, Section C3.10 (C3.10.9.1- C3.10.9.2)	<p>“<i>Stability of Stream Channels</i></p> <p>The Department shall provide a protocol to ensure that all new development and redevelopment projects do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. Unstable stream channels negatively impact water quality by yielding greater quantities of sediment than stable channels. The approach is described in section C3.10.9.1 through C3.10.9.5, below:</p> <p><i>C3.10.9.1 Threshold Drainage Areas</i></p> <p>The three sections below include requirements for Threshold Drainage Areas, which is defined as an area draining to a location at least 20 channel widths downstream of a stream crossing (pipe, swale, culvert, or bridge) within the Department’s project limits.</p> <p><i>C3.10.9.2 Projects that Add Between Five and Ten Thousand Square Feet of New Impervious Surface</i></p> <p>Highway or non-highway facility projects that add between 5,000 and 10,000 square feet of new impervious surface shall implement the Site Design</p>	5.5

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	Pollution Prevention Best Management Practices section of this Attachment.”	
Attachment C, Section C3.10 (C3.10.9.3)	<p><i>“C3.10.9.3 Projects that Add Ten Thousand Square Feet of New Impervious Surface that is Completely Outside a Threshold Drainage Area</i></p> <p>Highway or non-highway facility projects that add 10,000 square feet or more of new impervious surface completely outside of a Threshold Drainage Area shall implement the Site Design Pollution Prevention Best Management Practices and the Post-Construction Long-Term Operation and Maintenance Plans sections of this Attachment.”</p>	5.5
Attachment C, Section C3.10 (C3.10.9.4)	<p><i>“C3.10.9.4 Rapid Assessment for Projects that Add Ten Thousand Square Feet or More of New Impervious Surface with Any Portion of New Impervious Surface Located Within a Threshold Drainage Area</i></p> <p>Highway or non-highway facility projects that add 10,000 square feet or more of new impervious surface with any impervious portion of the project located within a Threshold Drainage Area shall conduct a rapid assessment of stream stability at each stream crossing (e.g., pipe, culvert, swale or bridge) within that Threshold Drainage Area.</p> <p>Guidance and worksheets for the rapid assessment of stream stability are in the 2006 Federal Highway Administration publication ‘Assessing Stream Channel Stability at Bridges in Physiographic Regions,’ (https://www.fhwa.dot.gov/publications/research/infrastructure/hydraulics/05072).</p> <p>If the stream crossing is a bridge, a follow up rapid assessment of stream stability is required, which may be coordinated with the federally mandated bridge inspection process. The assessment will be conducted within a representative channel reach to assess lateral and vertical stability. A representative reach is a length of stream channel that extends at least 20-channel widths upstream and downstream of a stream crossing. For example, a 20-foot-wide channel would require analyzing a 400-foot distance upstream and downstream of the discharge point or bridge. If sections of the channel within the 20-channel width distance are immediately upstream or downstream of steps, culverts, grade controls, tributary junctions, other features, or other structures that significantly affect the shape and behavior of the channel, then more than 20 channel widths should be analyzed.”</p>	5.5
Attachment C, Section C3.10 (C3.10.9.5)	<p><i>“C3.10.9.5 Results of Rapid Assessment</i></p> <p>If the results of the rapid assessment indicate that the representative reach is laterally and vertically stable (i.e., a rating of excellent or good), then the Department does not have to conduct further analyses and shall</p>	5.5, 5.5.1, 5.5.2, and 5.5.3

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>implement the requirements for Projects Subject to Post-Construction Treatment Requirements described in this Attachment.</p> <p>If the results of the rapid assessment indicate that the representative reach will not be laterally and vertically stable (i.e., a rating of poor), the Department shall determine whether the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures by conducting appropriate Level 2 (and, if necessary, Level 3) analyses. The Department shall follow the Level 2 and 3 analysis guidelines contained in Hydraulic Engineering Circular No. 20 (Federal Highway Administration, fourth edition, 2012) or a suitable equivalent within an accessible portion of the reach. If the results of the appropriate Level 2 (and, if necessary, Level 3) analyses indicate that there is no risk to existing or proposed highway structures, the Department shall (1) implement the requirements for Projects Subject to Post-Construction Treatment Requirements described in this Attachment and document the methodologies used, (2) the results and the mitigation measures suggested as part of the appropriate Level 2 and, (3) if necessary, Level 3 analyses.</p> <p>If the results of the Level 2 and 3 analysis indicate that the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures, other options shall be implemented, including, but not limited to, (1) in-stream and floodplain enhancement or restoration, (2) fish barrier removal as identified in the report required under Article 3.5 of the California Streets and Highways Code, (3) regional flow control, (4) off-site best management practices, and, (5) if necessary, project re-design.”</p>	
<p>Attachment C, Section C3.10 (C3.10.10)</p>	<p><i>“Vector Control</i> The Department shall develop and implement post-construction stormwater best management practices to control mosquitoes and vectors in compliance with the following conditions: 1. The Department shall design, operate, and maintain best management practices to (a) minimize mosquito production and (b) drain within 96 hours of the end of a rain event unless specifically designed to control vectors through other features. The Lake Tahoe Basin and in other high-elevation regions of the Sierra Nevada above 5,000 feet elevation with similar alpine climates are exempt from the vector control-related post-construction requirements of this paragraph between October 1 and April 15. In addition, the requirements of this paragraph do not apply to Certified Full Capture Systems installed</p>	<p>4.5.1</p>

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>for compliance with the Trash Provisions and Attachment C if the installation complies with local Mosquito Vector Control District guidance.</p> <p>2. All best management practices shall be maintained at the frequency specified in the Department’s Maintenance Staff Guide or by the manufacturer, whichever results in more frequent maintenance;</p> <p>3. The Department shall operate and maintain best management practices to prevent the propagation of vectors;</p> <p>4. The Department shall comply with applicable provisions of the California Health and Safety Code relating to vector control;</p> <p>5. The Department shall design and install best management practices to allow for inspections and treatment by mosquito and vector control agency staff;</p> <p>6. The Department shall prepare and maintain an inventory of best management practices that retain water for more than 96 hours. The inventory shall be provided to California Department of Public Health in electronic format for distribution to local mosquito and vector control agencies. The initial inventory shall be provided within two years from the Effective Date of this Order. Subsequent inventories shall be provided to the California Department of Public Health every two years of the initial inventory submittal; and</p> <p>7. The Department shall cooperate and coordinate with the California Department of Public Health and mosquito and vector control agencies on issues related to vector production in the Department’s structural best management practices.”</p>	
Attachment C, Section C3.11	<p><i>“Stream Crossing Design Guidelines</i></p> <p>The Department shall include the following stream crossing design protocols:</p> <p>1. The Department shall review and revise as necessary its 2009 Fish Passage Design for Road Crossings, which is a guidance document. In reviewing and revising the guidance document, the Department shall be consistent with the latest stream crossing design, construction, and rehabilitation criteria contained in the California Department of Fish and Wildlife’s 2010 California Salmonid Stream Habitat Restoration Manual and the National Marine Fisheries Service’s 2001 Guidelines for Salmonid Passage at Stream Crossings. The review shall be completed no later than one year after the Effective Date of this Order.</p> <p>2. If it is infeasible to comply with any of the guidelines specified above, the Department shall prepare written documentation justifying the determination of infeasibility. Documentation shall be provided to the Regional Water Board Executive Officer for review and consideration of approval.”</p>	5.6.3

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
Attachment C, Section C3.12	<p><i>“Discharge to Sanitary Sewer Systems</i> Provided that the Department receives approval from the relevant sanitary sewer system or wastewater treatment plant agency, the Department may discharge to that sanitary sewer system for treatment by the wastewater treatment plant. The Department’s application for discharge to the sanitary sewer system shall identify and provide the concentration of any pollutant anticipated to be in the discharge.”</p>	18.3.1
Attachment C, Section C3.13	<p><i>“Climate Change Impacts</i> The Department shall conduct a vulnerability assessment that identifies potential impacts due to climate change. The vulnerability assessment shall include increasing frequencies of extreme temperatures, drought, heavy rainfall, flooding, wind, wildfires, and sea level rise. The Department shall implement its vulnerabilities evaluations and strengthen efforts to implement adaptation measures for the storm sewer system’s resilience to climate and severe weather impacts.</p> <p>The Department shall provide the vulnerability assessment upon request.”</p>	15.5
Attachment C, Section C3.14	<p><i>“Storm Sewer Mapping</i> The Department shall maintain storm sewer maps. The Department shall include the (1) locations of best management practices via geographic informational system data layers, (2) information on structural best management practices (e.g., type, size, flow, pollutant, installation date), and (3) an indication of any green technology best management practices. Storm sewer mapping shall be made available upon request.”</p>	15.4
Attachment C, Section C3.15	<p><i>“Measurable Objectives</i> The Department shall identify measurable objectives to meet the requirements of this Order and the goals, proposed activities, tasks, and time schedule for the proposed activities and tasks in the Stormwater Management Plan.</p> <p>In the Annual Report, the Department shall report progress in meeting the measurable objectives, proposed activities, proposed tasks, and schedule for proposed tasks.”</p>	17
Attachment C, Section C3.16	<p><i>“Program Evaluation, Field Compliance Evaluations, Self-Audits, and Effectiveness</i> 1. Field Compliance Evaluations and Field Activities Self-Audit. The Department shall perform compliance evaluations for field activities for construction, highway maintenance, facility maintenance, and targeted program components. Results of the field compliance evaluations for each fiscal year shall be submitted as a</p>	16

Caltrans NPDES Permit Section(s)	Requirement(s)	SWMP Section(s)
	<p>Field Activities Self-Audit with the Annual Report.</p> <p>2. Overall Program Effectiveness Evaluation. The Overall Program Effectiveness Evaluation shall be comparable to that outlined in the California Stormwater Quality Association (CASQA) Municipal Stormwater Program Effectiveness Assessment Guidance (https://www.casqa.org/resources/stormwater-effectivenessassessment/guidance-document). This evaluation shall be conducted annually. The Department shall conduct the Overall Program Effectiveness Evaluation each year in response to collected environmental monitoring data. Based on the monitoring data evaluations, the scope shall be increased by adding more program effectiveness evaluation measures.</p> <p>The Overall Program Effectiveness Evaluation shall target pollutants of concern and shall emphasize the assessment of best management practices. The effectiveness evaluation shall include the following components:</p> <ul style="list-style-type: none"> a. Assessment of program effectiveness in achieving permit requirements and measurable objectives. b. Assessment of program effectiveness in protecting and restoring water quality and beneficial uses. c. Identification of quantifiable effectiveness measurements for each best management practice, including measurements that link best management practice implementation with improvement of water quality and beneficial use conditions. d. Identification of how the Department will propose revisions to optimize best management practice effectiveness when effectiveness assessments identify best management practices or programs that are ineffective or need improvement.” 	
Attachment C Section C3.17	<p>“Annual Report of Retrofits</p> <p>The Department shall annually report the status of its Best Management Practice Retrofits Program, including the prioritized list of retrofit projects, the rate of retrofits, and the number of completed retrofits per year.”</p>	8.3.4
Attachment C Section C5.17	<p>“The Department shall review the storm water management plan annually, modify as necessary, and submit any revised plan to the Executive Director for review and consideration of approval. Revisions to the Stormwater Management Plan are subject to public notice and the opportunity for a public hearing.”</p>	18.4