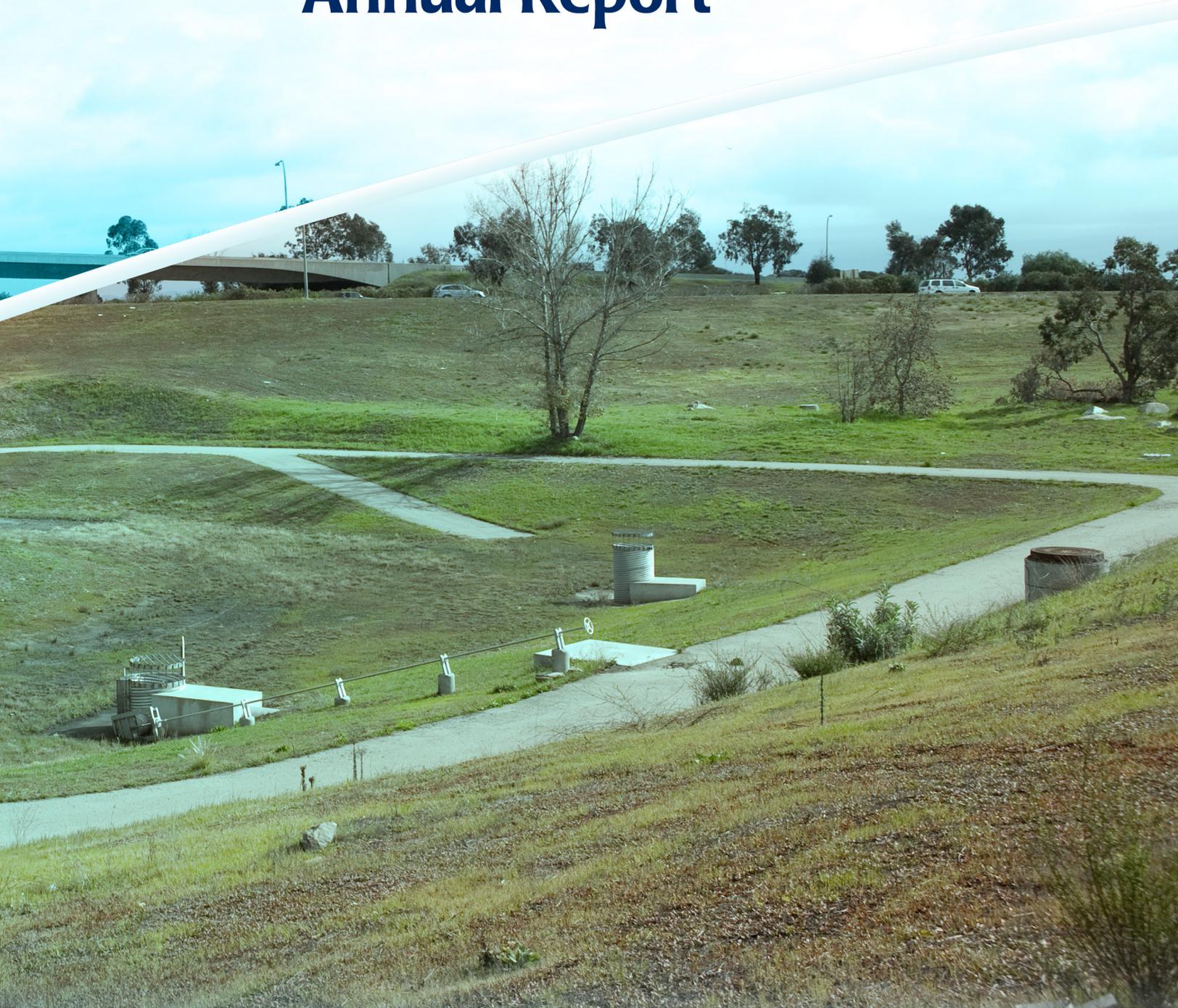




Caltrans Stormwater Management Program Annual Report



California Department of Transportation
Statewide Stormwater Management Program
Annual Report Fiscal Year 2015-2016
CTSW-RT-16-316.10.1
October 2016

California Department of Transportation Stormwater Management Program

Annual Report

Fiscal Year

2015-2016

CTSW-RT-16-316.10.1



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Division of Environmental Analysis
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October 1, 2016

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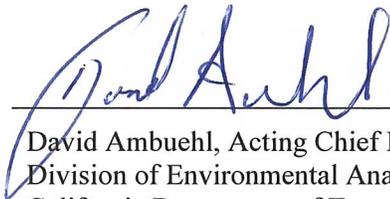
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Certification

**STORMWATER MANAGEMENT PROGRAM
ANNUAL REPORT**

October 1, 2016

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to 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. [40 CFR § 122.22(d)]



David Ambuehl, Acting Chief Environmental Engineer
Division of Environmental Analysis
California Department of Transportation

September 28, 2016

Date

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- *Annual Report to the Legislature for Calendar Year 2014, Coastal Anadromous Fish Passage Assessment and Remediation Progress Report*, October 2015, which describes the status of Caltrans' progress on locating, assessing, and remediating project-related barriers to fish passage. This report was prepared pursuant to California Streets and Highway Code Section 156, Chapter 589, Statutes of 2005 (Senate Bill 857, Kuehl).
- *Year-End Performance Report, A Summary of Construction Compliance Inspections – July 1, 2015 – June 30, 2016*, September 2016 (CTSW-RT-16-321.04.2), which summarizes the results of construction compliance inspections.
- *Year-End Performance Report FY 2015-2016, A Summary of Maintenance Activity Storm Water Compliance Reviews*, September 2016 (CTSW-RT-16-321.04.1), which summarizes the stormwater compliance reviews of Maintenance activities.
- *Year-End Performance Report FY 2015-2016, A Summary of Maintenance Facility Storm Water Compliance Reviews*, September 2016 (CTSW-RT-16-321.04.3), which summarizes the stormwater compliance reviews of Maintenance facilities.
- *Total Maximum Daily Load Status Review Report*, October 1, 2016 (CTSW-RT-16-316.01.1), which describes the activities performed to implement Total Maximum Daily Loads on a statewide basis, including the Stream Crossing Survey Workplan for Napa River and Sonoma Creek.
- *Treatment BMP Technology Report*, October 2016 (CTSW-RT-16-999), which discusses the approved and unapproved post-construction technologies Caltrans has evaluated.
- *Stormwater Monitoring and BMP Development Status Report: Fiscal Year 2015-2016 Update*, August 2016 (CTSW-RT-16-312.01.01), which provides an update on the status of stormwater treatment technology studies, source control studies (including erosion control studies), and stormwater quality characterization for the 2015-2016 fiscal year.
- Caltrans certification of legal authority, signed by Jeanne Scherer, Chief Counsel, August 15, 2016.

For immediate access to these reports and data, see the enclosed compact disc (CD). For a complete list of these and all other Caltrans stormwater management and research reports, please see the Caltrans Headquarters Stormwater Division of Environmental Analysis (DEA) [website](#).

Executive Summary

The California Department of Transportation (Caltrans) *Stormwater Management Program Annual Report* (CTSW-RT-16-316.10.1) (Annual Report) describes the stormwater management activities Caltrans performed from July 1, 2015 to June 30, 2016. It complies with Provision E.3.a of the *National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit Waste Discharge Requirements (WDRs) for State of California Department of Transportation* (Order Number 2012-0011-DWQ, NPDES Number CAS000003, Effective July 1, 2013) (NPDES Permit). An updated “conformed” permit (Conformed NPDES Permit) was produced by the State Water Resources Control Board (SWRCB) and became effective on April 7, 2015. In addition, the Annual Report complies with the *Draft Statewide Stormwater Management Plan*, which was revised during the reporting period to better address the Conformed NPDES Permit requirements and submitted to the SWRCB in June 2016) (Draft SWMP)¹.

Caltrans strives to maintain and improve water quality through implementation of its Stormwater Management Program, while fulfilling its mission to provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability. Water quality protection is a key component of Caltrans’ day-to-day business practices throughout the project delivery process, and during maintenance and operations activities.

This report describes the specific measures that Caltrans took during the year to maintain and improve runoff water quality, and assesses the effectiveness of the water pollution control activities. Among the water quality control measures used were best management practices (BMPs), including treatment controls, training courses and guidance, the [Adopt-A-Highway](#) and [Protect Every Drop](#) public education campaigns, and public outreach efforts in all twelve Caltrans Districts. In addition, Caltrans continued its research into pollution control technologies that are compatible with highway infrastructure and that effectively remove roadway pollutants.

Caltrans completed an overall effectiveness evaluation of the stormwater management program following the procedures developed by the California Stormwater Quality Association® (CASQA). This methodology uses six categories of Outcome Levels representing a general progression of water quality protections. The program substantially met its annual goals as evaluated by the CASQA methodology.

¹ All references made to the SWMP in this Annual Report pertain to the Draft June 2016 edition of the SWMP.

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Background and Purpose

The California Department of Transportation (Caltrans) *Stormwater Management Program Annual Report* (CTSW-RT-16-316.10.1) (Annual Report) describes the stormwater management activities Caltrans performed from July 1, 2015 to June 30, 2016 (reporting period). It complies with Provision E.3.a of the *National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit Waste Discharge Requirements (WDRs) for State of California Department of Transportation* (Order Number 2012-0011-DWQ, NPDES Number CAS000003, Effective July 1, 2013) (NPDES Permit).

The NPDES Permit was amended by Orders WQ 2014-0006-EXEC (January 17, 2014), WQ 2014-007-DWQ (May 20, 2014), and WQ 2015-0036-EXEC (April 7, 2015). An updated “conformed” permit (Conformed NPDES Permit) was produced by the State Water Resources Control Board (SWRCB) on April 7, 2015 and made publicly available on the SWRCB website² in March 2016.

In addition, the Annual Report complies with the *Draft Statewide Stormwater Management Plan* (submitted to the SWRCB in June 2016) (Draft SWMP)³. During the reporting period, the Draft SWMP was revised to better address the Conformed NPDES Permit requirements. The Conformed NPDES Permit became effective on July 1, 2013 and the Conformed NPDES Permit Amendments were effective on April 7, 2015.

This Annual Report is organized consistent with the Draft SWMP sections. The accomplishments achieved during the reporting period are discussed in each section, and the supporting data and additional detailed information is compiled in the appendices and attachments on the associated compact disc (CD). These activities protected stormwater quality while maintaining motorist and worker safety and meeting Caltrans’ mission of providing a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability. Caltrans uses a variety of strategies to control the discharge of pollutants from roadways and other transportation facilities, and construction projects, while promoting consistency statewide when possible, over diverse geographic, climatic, population, and regulatory conditions.

Status of Permit and SWMP Requirements

Table 1 lists Conformed NPDES Permit reporting requirements for the 2015-2016 reporting period.

Table 1: Caltrans Annual Reporting Requirements in Conformed NPDES Permit (from Order 2012-0011-DWQ)

Conformed NPDES Permit Section(s)	Requirement(s)	Location in Annual Report
E.1.a., Pg. 19, and Att. IX	Caltrans shall update, maintain and implement an effective SWMP that describes how Caltrans will meet requirements of this Order as outlined in E.1.b below. ... The SWMP shall be reviewed annually and modified as necessary to maintain an effective program in accordance with the procedures of this Order.	Section 2
E.2.b.1)b), Pg. 21	Caltrans shall include a MUNICIPAL COORDINATION PLAN in the SWMP. ... Caltrans shall report on the status and progress of interagency coordination activities in each Annual Report.	Section 2

² http://www.swrcb.ca.gov/board_decisions/adopted_orders/water_quality/2012/wq2012_0011_dwq_conformed_signed.pdf

³ All references made to the SWMP in this Annual Report pertain to the Draft June 2016 edition of the SWMP.

**Table 1: Caltrans Annual Reporting Requirements in Conformed NPDES Permit
(from Order 2012-0011-DWQ)**

Conformed NPDES Permit Section(s)	Requirement(s)	Location in Annual Report
E.2.b.2)b), Pg. 22, and Att. IX	Caltrans shall submit annually, as part of the Annual Report, a CERTIFICATION OF THE ADEQUACY OF LEGAL AUTHORITY .	Section 2
E.2.b.3)b), Pg. 22, and Att. IX	Caltrans shall submit a FISCAL ANALYSIS of the storm water program annually. At a minimum, the fiscal analysis shall show: i) The allocation of funds to the Districts for compliance with this Order; ii) The funding for each program element; iii) A comparison of actual past year expenditures with the current year's proposed expenditures and next year's proposed expenditures; iv) How funding has met the goals specified in the SWMP and District work plans; v) Description of any cost sharing agreements with other responsible parties in implementing stormwater management program.	Section 2
E.2.b.6), Pg. 23	Incident Reporting –Non-Compliance and Potential/ Threatened Non-Compliance: Caltrans shall report all known incidents of non-compliance with this Order.... Caltrans shall include in the Annual Report a summary of all incidents by type and District, and report on the status of each.	Section 2
E.2.c.2)(a)i)(1)(b), Pg. 25	For storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width, including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State Water Board. Report measurements annually for each precipitation season to the State and Regional Water Boards.	Section 3
E.2.c.5), Pg. 31, and Att. IX	Caltrans shall submit, separate from the Annual Report, a MONITORING RESULTS REPORT (MRR) by October 1 of each year.	Section 3
E.2.c.6)b), Pg. 32 E.2.f.6), Pg. 43	E.2.c.6)b) Caltrans shall summarize, by District, all non-compliance incidents, including construction, in the Annual Report. E.2.f.6) Caltrans shall provide in the Annual Report a summary of all construction project non-compliance.	Section 2
E.2.d.4), Pg. 40	Caltrans shall submit to the State Water Board by October 1 of each year the same report required under Article 3.5 of the Streets and Highways Code requiring Caltrans to report on the status of its efforts in locating, assessing, and remediating barriers to fish passage.	Section 5
E.2.e., Pg. 40, and Att. IX	Caltrans shall submit updates to the STORM WATER TREATMENT BMP TECHNOLOGY REPORT and the STORM WATER MONITORING AND BMP DEVELOPMENT STATUS REPORT in the Annual Report.	Section 4
E.2.e.2)d) Pg. 41	Caltrans shall develop and utilize a watershed-based database to track and inventory treatment BMPs and treatment BMP maintenance within its jurisdiction. A summary of the tracking system data shall be included in the Annual Report along with a report on maintenance activities for post construction BMPs.	Section 4
E.2.h.2), Pg. 43, and Att. IX	Caltrans shall identify in each Annual Report the status of the FPPP (Facility Pollution Prevention Plan) for each Maintenance Facility by District and Region, including the date of the last update or revision and the nature of any revisions.	Section 8

**Table 1: Caltrans Annual Reporting Requirements in Conformed NPDES Permit
(from Order 2012-0011-DWQ)**

Conformed NPDES Permit Section(s)	Requirement(s)	Location in Annual Report
E.2.h.3)a)iii), Pg. 44	Identify road segments with slopes that are prone to erosion and sediment discharge and stabilize these slopes to control the discharge of pollutants to the MEP. An inventory of vulnerable road segments shall be maintained in the District Work Plans. Stabilization activities shall be reported in the Annual Report. This section does not apply to landslides and other forms of mass wasting which are covered under section E.2.h.3)d).	Section 8
E.2.h.3)b)i)(1)-(2), Pg. 44-45	Apply herbicides and pesticides in compliance with federal, state and local use regulations and product label directions. (1) Violations of regulations shall be reported to the County Agricultural Commissioners within 10 business days. (2) The Annual Report shall include a summary of violations and follow-up actions to correct them.	Section 8
E.2.h.3)b)vii) (1) through (7), Pg. 45-46	Include the following items in the Annual Report [regarding Vegetation Control]: (1) A summary of Caltrans' chemical use; (2) An assessment of long-term trends in herbicide usage; (3) A comparison of the statewide herbicide use with Caltrans' herbicide reduction goals; (4) An analysis of the effectiveness of implementation of vegetation control BMPs; (5) Justification of any increases in use of herbicides, pesticides, and fertilizers; (6) 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; (7) Training materials, if requested by the State Water Board.	Section 8
E.2.h.3)d), Pg. 46, and Att. IX (1st Annual Report only)	Caltrans shall submit the LANDSLIDE MANAGEMENT PLAN with the Year 1 Annual Report and implement the LANDSLIDE MANAGEMENT PLAN for the remainder of the Permit term.	Section 8
E.2.h.4)c), Pg. 47	Reporting Requirements for Trash and Litter: ... Results shall be submitted as part of the Annual Report in a summary format by District. Prior year's data shall be included to facilitate an analysis of trends.	Section 8
E.2.k.3), Pg. 49	Caltrans shall provide a review and assessment of all training activities in the Annual Report.	Sections 11 & Section 14
E.2.l.2), Pg. 50, and Att. IX	A PUBLIC EDUCATION PROGRAM PROGRESS REPORT shall be submitted as part of the Annual Report.	Section 12
E.2.m.2), Pg. 50, and Att. IX	Field Activities SELF-AUDIT : ... The results of the field compliance evaluations for each fiscal year will be provided in the Annual Report.	Section 5, Section 6, Section 8, and Section 14
E.2.m.3), Pg. 50, and Att. IX	OVERALL PROGRAM EFFECTIVENESS EVALUATION : Each year, Caltrans shall submit an OVERALL PROGRAM EFFECTIVENESS EVALUATION together with the Annual Report.	Section 14
E.2.n., Pg. 51	Measurable Objectives: ... In the Annual Report, Caltrans shall report on its progress in meeting the measurable objectives.	Section 15

**Table 1: Caltrans Annual Reporting Requirements in Conformed NPDES Permit
(from Order 2012-0011-DWQ)**

Conformed NPDES Permit Section(s)	Requirement(s)	Location in Annual Report
E.3.a., Pg. 51-52	<p>Caltrans shall submit 13 copies of an ANNUAL REPORT to the State Water Board Executive Director by October 1 of each year. An electronic copy shall also be uploaded into SMARTS in the portable document format (PDF). The reporting period for the Annual Report shall be July 1 through June 30. The Annual Report shall contain all information and submittals required by this Order including, but not limited to:</p> <ol style="list-style-type: none"> 1) A District-by-District description of storm water pollution control activities conducted during the reporting period; 2) A progress report on meeting the SWMP's measurable objectives; 3) An Overall Program Effectiveness Evaluation as described in section E.2.m.3); 4) Proposed revisions to the SWMP, including revisions to existing BMPs, along with corresponding justifications; 5) A report on post-construction BMP maintenance activities; 6) A list of non-approved BMPs that were implemented in each District during the reporting period including the type of BMP, reason for use, physical location, and description of any monitoring; 7) An evaluation of project planning and design activities conducted during the year; 8) A summary of non-compliance with this Order and the SWMP as specified in Section E.2.c.6)b). The summary shall include an assessment of the effectiveness of any Caltrans enforcement and penalties, and as appropriate, proposed solutions to improve compliance; 9) An evaluation of the Monitoring Results Report, including a summary of the monitoring results; 10) Proposed revisions to Caltrans' Vegetation Control Program; 11) Proposals for monitoring and control of non-storm water discharges that are found to be sources of pollutants as described in Section B. of this Order; 12) District Workplans (see below); and 13) Measures implemented to meet region-specific requirements. 	Section 16

**Table 1: Caltrans Annual Reporting Requirements in Conformed NPDES Permit
(from Order 2012-0011-DWQ)**

Conformed NPDES Permit Section(s)	Requirement(s)	Location in Annual Report
E.3.b., Pg. 52-53, and Att. IX	<p>DISTRICT WORKPLANS Caltrans shall submit DISTRICT WORKPLANS (workplans) for each District by October 1 of each year, as part of the Annual Report.... Workplans shall conform with the requirements of applicable Regional Water Board Basin Plans and shall include, at a minimum:</p> <ol style="list-style-type: none"> 1) A description of all activities and projects, including maintenance projects, to be undertaken by the Districts. For all projects with soil disturbing activities, this shall include a description of the construction and post construction controls to be implemented; 2) The area of new impervious surface and the percentage of new impervious surface to existing impervious surface for each project; 3) The area of disturbed soil associated with each project or activity; 4) A description of other permits needed from the Regional Water Boards for each project or activity; 5) Potential and actual impacts of the discharge(s) from each project or activity; 6) The proposed BMPs to be implemented in coordination with other MS4 permittees to comply with WLAs and LAs assigned to Caltrans for specific pollutants in specific watersheds or sub watersheds; 7) The elements of the statewide monitoring program to be implemented in the District; 8) Identification of high-risk areas (such as locations where spills or other releases may discharge directly to municipal or domestic water supply reservoirs or ground water percolation facilities); 9) Spill containment, spill prevention and spill response and control measures for high-risk areas; and 10) Proposed measures to be taken to meet Region-specific requirements included in Attachment V. 11) An inventory of vulnerable road segments having slopes that are prone to erosion and sediment discharge. 	Section 16
E.4.b., Pg. 53, Att. IV Section I.B.1., Pg. IV-3 - IV-4, and Att. IX	<p>Status Review Report</p> <p>Caltrans shall prepare a TMDL STATUS REVIEW REPORT to be submitted with each Annual Report. The TMDL STATUS REVIEW REPORT shall include all the information required in Attachment IV.</p>	Section 16

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2 Management and Organization

Program Management

Caltrans internal meetings were held with Management to discuss Conformed NPDES Permit requirements, new commitments, resources, and in collaboration with Caltrans legal on the development of the SWMP and its deliverables.

Caltrans continued to meet with SWRCB staff to discuss Conformed NPDES Permit ASBS monitoring, Cooperative Implementation, and Attachment IV, Total Maximum Daily Load Requirements, including the required TMDL Status Review Report.

Caltrans Management and each of the Headquarters and District Functional Units held briefings regarding Conformed NPDES Permit requirements and TMDL compliance, via the Headquarters Stormwater Management Team and the Water Quality Management Assurance Team.

Caltrans participated in discussions regarding upcoming requirements for the following:

- Statewide Trash Amendments and the *Caltrans Trash Load Reduction Workplan for the San Francisco Bay Region*
- Regional watershed programs, including Cooperative Implementation Agreements
- Caltrans Statewide Stormwater Strategic Plan
 - Value Analysis Study of Caltrans' Stormwater Program (Roles and Responsibilities)
 - Construction Compliance Evaluation Plan (CCEP)
 - Cooperative Implementation Agreement Template
- Areas of Special Biological Significance monitoring

Caltrans continues to hold collaborative meetings with the SWRCB to discuss the mission and objectives of the Stormwater Management Program. Expectations on Conformed NPDES Permit implementation on all program functional elements were discussed with key members of the Caltrans Stormwater Management Program. The program elements include Project Planning, Design, Construction, Maintenance, Region-Specific, and new stormwater regulations (TMDL compliance, ASBS, the *Caltrans Trash Load Reduction Workplan for the San Francisco Bay Region*, reporting, and program effectiveness).

Revised SWMP Status

The SWMP describes how Caltrans addresses stormwater pollution control related to Caltrans activities, including planning, design, construction, maintenance, and operation of roadways and facilities. It explains how Caltrans will comply with the requirements of the Conformed NPDES Permit and the following:

- The State Water Resources Control Board's (SWRCB) *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order No. 2009-0009-DWQ) (2009) (Statewide Construction General Permit or Statewide CGP) as amended by Order No. 2010-0014-DWQ.
- The Lahontan Regional Water Quality Control Board's (RWQCB) *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) (2016) (Lake Tahoe CGP).
- The SWRCB's *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Industrial Activities* (Order NPDES No. CAS000001) (July 1, 2015) (Industrial General Permit).

Caltrans submitted the Draft SWMP to the State Water Board in July 2014. During the fiscal year, the State Water Board reviewed the Draft SWMP, posted it for public release and review, and addressed public comments.

Caltrans incorporated comments received from the State Water Board and the public and resubmitted the Draft SWMP to the State Water Board for final approval in June 2016. The State Water Board approved the revised Draft SWMP on July 20, 2016.

Municipal Coordination Plan Activities

Caltrans' Municipal Coordination Plan was under development during the reporting period. In the interim, the Districts participated in municipal coordination activities by attending meetings, taking part in special studies, and collaborating with local agencies. District staff attended meetings statewide with municipal stormwater permittees to coordinate public education and outreach, regional planning, and other related activities. Appendix A has detailed information on the municipal coordination activities performed during the reporting period. The cooperative agreement activities that Caltrans performed during the reporting period are summarized in Appendix M. In addition, the municipal coordination activities to implement TMDLs are discussed in the attached TMDL Status Review Report.

Fiscal Analysis

Caltrans' Stormwater Management Program was supported by an appropriation of \$103,106,000 for compliance with the Conformed NPDES Permit and related activities in fiscal year 2015-2016. Total expenditures were \$102,450,059, with \$45,747,777 in personal services, \$56,702,281 in operating expense and 472 in Personal Years (PYs). This fiscal year the infrequent storm events continued to depress monitoring costs, while the Conformed NPDES Permit provisions increase expenses. Consequently, Caltrans' Stormwater Management Program expended more than the 99% of its total fiscal year 2015-2016 appropriation.

In fiscal year 2015-2016, Caltrans continued to assess the Conformed NPDES Permit requirements and the programmatic and fiscal impacts. Consistent with previous fiscal year, more than 100 sites (excluding cooperative monitoring sites) continued to be monitored for stormwater quality. Caltrans anticipates that stormwater quality monitoring will continue to increase in future years, as new TMDLs are promulgated, additional treatment BMPs are installed and BMP retrofits are completed. The State Water Resources Control Board amended the Conformed NPDES Permit to include 84 TMDLs comprised of 382 reaches on May 20, 2014 and approved the prioritized list of TMDLs submitted by Caltrans on September 10, 2015. Caltrans continued to implement the Cooperative Implementation Agreement program by entering into four agreements this fiscal year and anticipates entering into two more agreements in the next eighteen months, which will provide additional compliance units. Resource limitations are likely to prevent the Stormwater Management Program's ability to enter into additional agreements until some of the current projects funded by these agreements are completed in 2019. In summary, Caltrans' Stormwater Management Program is likely to grow as California returns to a more "typical" weather pattern, continues to implement Conformed NPDES Permit requirements, and strives to attain the required 1,650 compliance units.

Coordination with Statewide and National Associations

Caltrans actively participated as a member of the California Stormwater Quality Association® (CASQA) keeping abreast and commenting on NPDES-related initiatives, municipal separate storm sewer system (MS4) permits, policy, participated in workgroups at quarterly meetings, and co-sponsored the Water Quality NewsFlash as part of its public education and outreach effort. In addition, in coordination with the California Stormwater Quality Association (CASQA) and the SWRCB, Caltrans developed, launched and implemented its public education and outreach program, Protect Every Drop.

Caltrans coordinated nationally with other transportation departments on stormwater implementation strategies via the American Association of State Highway and Transportation Officials (AASHTO). The Chief Environmental Engineer chaired the AASHTO Stormwater Working Group, in which members discussed emerging issues, developed briefing papers, collaborated on lessons learned.

Caltrans also participated in several National Cooperative Highway Research Program project panels assisting and guiding stormwater research.

Legal Authority

The Conformed NPDES Permit requires Caltrans to review its legal authority and ensure it is adequate to comply with its provisions and with the Draft SWMP. There were no changes in Caltrans' legal authority regarding the protection of stormwater. Caltrans' legal authority certification is attached to the Annual Report on the CD.

Incident Reporting – Non-Compliance and Potential/Threatened Non-Compliance

Caltrans reported known emergency, field, administrative, and anticipated (threatened) non-compliance incidents via the Storm Water Multiple Application Report and Tracking System (SMARTS) (Conformed NPDES Permit Section E.2.b.6 and Draft SWMP, Table 16-1). During the 2015-2016 fiscal year, Caltrans complied with this requirement as summarized in Appendix A.

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3 Monitoring and Discharge Characterization Program

The Conformed NPDES Permit states in Section E.2.c, in part, that a minimum of 100 Tier-1 and Tier-2 sites (if needed) be monitored each year. The Conformed NPDES Permit defines Tier-1 sites as either Areas of Special Biological Significance (ASBS) or TMDL sites. Tier-2 sites are located outside of both ASBS and TMDL watersheds where further characterization monitoring may be of interest.

Tier 1 Site Monitoring

For the 2015–2016 season, 104 Tier 1 sites were monitored to address Section E.2.c requirements. These sites consisted of:

- ASBS monitoring, 86 sites
- TMDL monitoring, 18 sites

Table 2 summarizes the monitoring performed during the reporting period at Tier 1 sites. Results of this monitoring effort are included in the Monitoring Results Report, which is submitted as a separate document. The Monitoring Results Report will be submitted separately as required by the Conformed NPDES Permit on October 1, 2016.

Table 2: Permit-Required Monitoring (Tier 1)

ASBS Core Monitoring Sites (77)
<ul style="list-style-type: none"> • 17 Core Monitoring sites in District 1 • 6 Core Monitoring sites in District 4 • 2 Core Monitoring sites in District 5 • 47 Core Monitoring sites in District 7 • 5 Core Monitoring sites in District 12
ASBS Ocean Receiving Water and Reference Monitoring Sites (9)
<ul style="list-style-type: none"> • 2 Ocean receiving water sites and 2 Ocean Reference monitoring sites are proposed in District 1 • 2 Ocean receiving water sites in District 4 • 1 Ocean receiving water site in District 5 • 1 Ocean receiving water site in District 7 • 1 Ocean receiving water site in District 12
TMDL Monitoring Sites (18)
<ul style="list-style-type: none"> • 1 Monitoring site in District 3 • 4 Monitoring sites in District 4 • 3 Monitoring sites in District 7 • 2 Monitoring sites in District 8 • 1 Monitoring site in District 10 • 4 Monitoring sites in District 11 • 3 Monitoring sites in District 12

ASBS Monitoring

The purpose of the ASBS monitoring is to assess if Caltrans discharges are compromising natural ocean water quality. Comparisons between (1) the Natural Water Quality (NWQ) values (also referred to as the 85 percentile threshold values) and Caltrans ocean receiving water values and (2) pre-storm and during-storm ocean receiving water values are used to assess compliance.

Caltrans is responsible for its discharges in 86 ASBS sites, consisting of 77 core discharge locations, seven ocean receiving water (ORW) sites, and two ocean reference area (ORA) sites. Furthermore, Caltrans participated in two ASBS regional monitoring groups (RMGs): Northern California and Central Coast. The Southern California RMG effort is complete; however, Caltrans continues to monitor sites within the Southern California RMG area

to meet the minimum number of required storm events. Caltrans conducted the stormwater monitoring consistent with the quality assurance project plans for each RMG.

At a few sites, due to the buildup of sand berms, the runoff from the coupled outfall, i.e., the outfall that discharges runoff to the ORW site, was not able to reach the ORW site, which is required for a successfully captured storm event. Coupled outfalls are associated with ocean receiving water sites (located within the surf zone of the ocean adjacent to coupled outfalls) and uncoupled outfalls are not. In ASBS 24, no storm events were captured during 2015-16 season because stormwater runoff from the coupled outfall never reached the ocean for the entire season. For ASBS 24, no storm events have been successfully captured since the 2013–2014 season due to a sand berm.

Table 3 lists the number of storm events successfully captured during 2015-16 wet season at the core discharge sites and ocean reference sites.

Table 3: 2015–16 ASBS Storm Event Summary

ASBS	Number of Forecasted Events	Number of Non-mobilized Storm Events ^{1, 3}	Number of False Start Storm Events ^{2, 3}	Number of Successfully Captured Storm Events ^{2, 3}
ASBS 5 (Saunders)	20	16	1	3
ASBS 8 (Redwood)	26	21	3	2
ASBS 9 (Fitzgerald)	28	24	2	2
ASBS 15 (Año Nuevo)	34	30	2	2
ASBS 34 (Carmel Bay)	34	31	0	3
ASBS 24 (Mugu to Latigo)	21	21	0	0 ⁴
ASBS 33 (Irvine Coast)	13	8	2	3

Notes:

¹ A non-mobilized storm event occurs when a forecasted storm event fails to meet the mobilization criteria at the point in time when a “Go” or “No-Go” decision needs to be made.

² A false start or successfully captured storm event is a storm event that met the criteria for mobilization and resulted in (a) a successfully captured storm event, (b) an incomplete storm event, (c) a false start, or (d) a ground-truthing storm event. An incomplete storm event occurs when a field crew mobilizes to a site, collects the pre-storm samples, but is not able to collect the during-storm samples. A false start occurs when a field crew mobilizes to a site, but neither the pre-storm nor the during-storm samples are collected. A ground-truthing storm event occurs when a field crew mobilizes to a site to verify the approximate drainage area during a storm event—no samples are collected.

³ Number of Non-mobilized Storm Events + Number of False Start Storm Events + Number of Successfully Captured Storm Events = Number of Forecasted Events.

⁴ For the second consecutive season, no storm events were successfully captured due to a sand berm that is preventing runoff from the coupled outfall entering the ocean.

Table 4 lists the cumulative number of storm events captured over the four monitoring seasons. The 2015–2016 season is the fourth monitoring season for the ASBS monitoring effort. The Conformed NPDES Permit requires a minimum of three storm events per wet season to be captured at the ORW sites, for two seasons—see Sections E.2.c.2)a)i)(2)(b)(i) and (iii).

Table 4: Cumulative Number of Storm Events Captured 2012 through 2016

ASBS	Ocean Receiving Water Site ID	2015-16 Number of Successfully Captured Storm Events	Cumulative Number of Successfully Captured Storm Events	Target Number of Storm Events
ASBS 5 (Saunders)	1-338	3	6	6
ASBS 8 (Redwood)	1-323	1	3	6
ASBS 9 (Fitzgerald)	4-342	2	6	6
ASBS 15 (Año Nuevo)	4-346	2	5	6
ASBS 34 (Carmel Bay)	5-305	3	4	6
ASBS 24 (Mugu to Latigo)	7-369	0	1	6
ASBS 33 (Irvine Coast)	12-350	3	9 ¹	6

Notes:

¹ Monitoring continued at the ASBS 33 ORW site beyond the minimum six storm events at the direction of State Water Board staff.

Seasonal runoff volumes were estimated at the monitored ASBS outfall locations. The runoff volume estimates were calculated based on the drainage area, depth of measured rainfall for the season at a nearby rain gage, and a runoff coefficient that is a function of percent imperviousness. The drainage areas were estimated from maps and verified by direct field observations for selected sites. The runoff volume estimation method and seasonal runoff volumes are included in Appendix O.

The NWQ values are assigned on a regional basis: Northern California, Central California, and Southern California regions. NWQ values for the Northern California and Central Coast RMG areas were finalized during the 2015-16 season. The NWQ values for the Southern California region had previously been finalized. Table 5 lists the constituents found in the NWQ exceedances identified to date for all seven ASBS.

Table 5: ASBS Exceedances to Date

ASBS	Constituents that Exceed Natural Water Quality ¹
ASBS 5 (Saunders)	Selenium
ASBS 8 (Redwood)	None
ASBS 9 (Fitzgerald)	TBD ¹
ASBS 15 (Año Nuevo)	TBD ²
ASBS 34 (Carmel Bay)	TBD ²
ASBS 24 (Mugu to Latigo)	None
ASBS 33 (Irvine Coast)	Copper, Selenium
Notes:	
1. Exceedances were determined in accordance with Figure 2, Page 56 of the Conformed NPDES Permit and all storms sampled were included in the evaluation.	
2. Caltrans is working with the other Central Coast RMG dischargers on a consistent approach to apply the NWQ values for the determination of exceedances.	

Additional information on the Caltrans ASBS monitoring is located in the Monitoring Results Report, which was submitted separately from this report.

TMDL Monitoring

Caltrans also conducted stormwater monitoring at 18 TMDL sites covering 15 TMDLs. The TMDLs covered by this effort include:

- Chollas Creek Diazinon TMDL
- Chollas Creek Dissolved Metals TMDL
- Coachella Valley Stormwater Channel Bacterial Indicator Monitoring TMDL
- Los Angeles River Metals TMDL
- Los Angeles River Watershed Bacteria TMDL
- Malibu Creek and Lagoon Bacteria TMDL
- Malibu Creek and Lagoon Sedimentation and Nutrients TMDL
- Rainbow Creek Total Nitrogen and Total Phosphorus TMDL
- Sacramento-San Joaquin River Delta Estuary Methyl Mercury TMDL
- San Diego Creek and Newport Bay, including Rhine Channel (Metals (Cu, Pb, and Zn))
- San Diego Creek and Upper Newport Bay (Cadmium)
- San Diego Creek Watershed (Organochlorine Compounds (DDT, Chlordane, PCBs, and toxaphene))
- San Francisco Bay Mercury TMDL
- San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL
- San Francisco Bay Area Urban Creeks Diazinon and Pesticides TMDL

The number of successfully captured storm events at the 18 TMDL sites range from 0 to 5.

Caltrans has completed stormwater monitoring in one TMDL watershed:

- Clear Lake (Nutrients)

Caltrans has no stormwater monitoring effort planned in the following TMDLs (listed in Attachment IV):

- Rhine Channel Area of Lower Newport Bay (Chromium and Mercury). Caltrans has no tributary area in the TMDL
- Upper and Lower Newport Bay (Organochlorine Compounds (DDT, Chlordane & PCBs). Caltrans is partnering with “the Orange County Flood Control District (OCFCD), County of Orange, City of Irvine, City of Tustin, and IRWD (hereby identified as PARTNERS) in the Peters Canyon Wash Channel Water Capture and Reuse Pipeline Project (PROJECT) as a permanent long-term solution to address high nitrate and selenium concentrations in the groundwater that is pumped from under State Route 261 (SR-261).”[2] While the project is for nitrate and selenium, Upper and Lower Newport Bay TMDL pollutants (DDT, Chlordane and PCBs) will also be controlled. Caltrans’ contribution of \$2,400,000 will be funded by Transportation Corridor Agency (TCA) through Cooperative Agreement 12-081, Amendment 6 (Coop 12-081 A6), between TCA and Caltrans. Notice of Award was issued on May 27, 2015 and completion is expected August 2016.
- Project 1 – Twenty Beaches and Creeks in the San Diego Region (Indicator Bacteria), Resolution No. R9-2010-0001, February 10, 2010, revised TMDL for indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek). It was determined that for these bacteria TMDLs, although the Municipal MS4s and Caltrans land use categories are assigned WLAs, the TMDL states: “Caltrans WLA = Point source waste load allocation (WLA) for discharges from Caltrans land uses, assumed to be equal to Caltrans Existing Load.”^[1] There are no plans for monitoring discharges at this time.

Additional information on the Caltrans TMDL and Cooperative TMDL monitoring is located in the Monitoring Results Report, which was submitted separately from this report.

Tier 2 Monitoring

Selection and monitoring of Tier-2 sites are only required when the number of Tier-1 sites being monitored fall below 100 sites. The total number of Tier 1 sites exceeded the Conformed NPDES Permit minimum requirement of 100; therefore, no Tier 2 sites were monitored.

Other Water Quality Monitoring

Other water quality monitoring efforts include independently funded projects, as well as collaborative efforts with other stakeholders, such as municipalities, the SWRCB and RWQCBs, and stormwater quality researchers. For the 2015–16 season, cooperative agreements covered activities in approximately a dozen TMDL watersheds. Some of these cooperative agreements include provisions to perform monitoring activities related to adopted TMDLs. Monitoring under cooperative agreements occurred within at least four TMDL watersheds and within multiple ASBS. The table below summarizes monitoring and applied studies completed or in progress and reports prepared during the reporting period. Cooperative monitoring efforts do not have standard document numbers, and only the report titles are available.

^[1] Resolution No. R9-2010-0001, page A29

Table 6: 2015-2016 Fiscal Year Monitoring Efforts and Associated Reports

Document ID No.	Title/Description	Report Type
CTSW-TM-16-324.03.02D	Chollas Creek Dissolved Metals TMDL Implementation Monitoring 2015-2016 Wet Season and Study Report	TM In progress
CTSW-TM-16-324.04.02	Rainbow Creek Nutrient TMDL Implementation Monitoring 2015-2016 Wet Season Project Final Report	TM In progress
CTSW-RT-15-326.2.1D	D3 Linear Filtration Pilot Study	In progress
CTSW-TM-16-326.4.1	Lake Tahoe Austin Media Filter Pilot Study, Report Addendum	Technical Memorandum
TBD	Lake Tahoe Sand Vault Retrofit Pilot Study	In progress
CTSW-RT-15-327.02.5	Caltrans 2 Years Monitoring in Conformance with Phase I Implementation for the Indicator Bacteria Total Maximum Daily Load (TMDL) for Coachella Valley Stormwater Channel (CVSC)	Report
CTSW-RT-16-327.4.1D	D7 Linear Filtration Pilot Study	TM In Progress
CTSW-RT-15-305.05.04	Third Quarter 2015 Monitoring Report: Emergency Truck Escape Ramp Facility Class II Surface Impoundment	Report
CTSW-RT-15-305.05.06	Fourth Quarter 2015 Monitoring Report: Emergency Truck Escape Ramp Facility Class II Surface Impoundment	Report
CTSW-RT-16-305.05.07	Fourth Quarter 2016 Monitoring Report: Emergency Truck Escape Ramp Facility Class II Surface Impoundment	Report
CTSW-RT-16-305.05.08	Fourth Quarter 2016 Monitoring Report: Emergency Truck Escape Ramp Facility Class II Surface Impoundment	Report
CTSW-RT-16-312.01.01	Stormwater Monitoring and BMP Development Status Report: Fiscal Year 2015-16 Update	Report
Cooperative Monitoring Effort	2015 Annual Monitoring Report A report of the Regional Monitoring Program for Water Quality in the San Francisco Bay	Report
Cooperative Monitoring Effort	ASBS Regional Monitoring Program – Ocean Reference Areas Central Coast	Report
Cooperative Monitoring Effort	Calleguas Creek Watershed TMDL Monitoring Program Seventh Year Annual Monitoring Report	Report
Cooperative Monitoring Effort	Marina del Rey Harbor Toxic Pollutants TMDL Coordinated Monitoring Plan Monitoring Results August 2014 to July 2015	Report
Cooperative Monitoring Effort	Ventura River Estuary Trash TMDL: Ventura River Estuary Trash TMDL 2013-2014 TMRP Annual Report	Report

Notes:

NA – Not Available

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4 BMP Development and Implementation

BMP Development

Caltrans continued to track new and/or emerging post-construction stormwater treatment technologies. However, during the reporting period, there were no updates to the Stormwater Treatment BMP Technology Report. The *Treatment BMP Technology Report, October 2016*, (CTSW-RT-16-999) is an attachment to this Annual Report (CD attachment).

The *Stormwater Monitoring and BMP Development Status Report: Fiscal Year 2015-16 Update* (CTSW-RT-16-312.01.01) is an attachment to this Annual Report (CD attachment). This report provides an update on the status of stormwater treatment technology studies, source control studies (including erosion control studies), and stormwater quality characterization for the 2015-2016 fiscal year.

Treatment BMP Inspection and Maintenance

Treatment BMPs that retain water for more than 96 hours are reported to the local vector control districts. An inventory of structural BMPs that retain water for more than 96 hours is maintained and updated every two years. Appendix B contains data on the Treatment BMPs installed and inspected/maintained within each District. The table below is a summary of the Treatment BMP inspection and maintenance activities that occurred during the fiscal year.

Table 7: Summary of 2015-2016 Fiscal Year Treatment BMP Inspection and Maintenance

District	Treatment BMP Type	Number of Treatment BMPs	Number of Treatment BMPs Inspected/Maintained
1	Traction Sand Traps	3	0
	District 1 Total	3	0
2	Biofiltration Strips	29	29
	Biofiltration Swales	33	33
	Detention Basins	14	14
	Infiltration Basins	8	8
	Infiltration Trench	1	1
	Media Filter	2	2
	Traction Sand Traps	128	128
District 2 Total	215	215	
3	Biofiltration Strips	12	3
	Biofiltration Swales	47	5
	Detention Basins	130	109
	Infiltration Basin	78	12
	Infiltration Trench	13	3
	Oil/Water Separator	2	1
	Traction Sand Traps	1,012	267
District 3 Total	1,294	400	
4	Biofiltration-Bio-Strip	69	68
	Biofiltration-Bio-Swale	57	46

Table 7: Summary of 2015-2016 Fiscal Year Treatment BMP Inspection and Maintenance

District	Treatment BMP Type	Number of Treatment BMPs	Number of Treatment BMPs Inspected/Maintained
	Detention Basins (Ext/Other)	69	56
	Infiltration Device – Basin	1	1
	Infiltration Device – Trench	4	4
	Multi-Chambered Treatment Train	1	1
	Wet Basin	4	3
District 4 Total		205	179
5	Biofiltration Strips	44	25
	Biofiltration Swales	28	21
	Detention Basins	8	8
District 5 Total		80	54
6	Biofiltration Swales	21	7
	Detention Basins	366	62
District 6 Total		387	69
7	Biofiltration Strips	13	5
	Biofiltration Swales	116	61
	Continuous Deflection Separation	5	3
	Detention Basins	8	5
	Drain Inlet Inserts	4	1
	Gross Solids Removal Device	258	171
	Infiltration Basin	5	1
	Infiltration Trench	1	1
	Media Filter	38	26
	Multi-Chambered Treatment Train	3	1
	Oil/Water Separator	1	0
	Storm Filter	1	0
District 7 Total		453	275
8	Biofiltration-Bio-Strip	28	24
	Biofiltration-Bio-Swale	41	39
	Continuous Deflection Separation	2	2
	Detention Basins	29	27
	Gross Solids Removal Device	1	1
	Infiltration Device – Basin	16	16
	Media Filters	2	2
	Traction Sand Traps	34	34
District 8 Total		153	145
9	Infiltration Basin	3	1
	Traction Sand Traps	10	0
District 9 Total		13	1

Table 7: Summary of 2015-2016 Fiscal Year Treatment BMP Inspection and Maintenance

District	Treatment BMP Type	Number of Treatment BMPs	Number of Treatment BMPs Inspected/Maintained
10	Detention Basins	3	3
	Traction Sand Traps	1	1
District 10 Total		4	4
11	Biofiltration Strips	1	1
	Biofiltration Swales	99	66
	Continuous Deflection Separation	8	2
	Detention Basins	17	6
	Gross Solids Removal Device	1	1
	Infiltration Trench	5	2
	Media Filters	5	3
	Oil/Water Separator	6	2
Wet Basin	1	1	
District 11 Total		143	84
12	Biofiltration Strips	7	4
	Biofiltration Swales	46	32
	Detention Basins	43	26
	Drain Inlet Inserts	93	89
	Gross Solids Removal Device	4	3
	Media Filters	13	9
	Oil/Water Separator	1	0
District 12 Total		207	163
Statewide Total		3,157	1,589

Post-Construction Treatment BMPs Tracking System and Maintenance

The Division of Construction staff continued providing the coordinates of treatment BMPs to facilitate transfer to the Division of Maintenance using a designated handoff form. The Division of Maintenance uses its Integrated Maintenance Management System (IMMS) to track maintenance records of treatment BMPs as provided by the Districts. Treatment BMPs are maintained according to Caltrans maintenance guidance. Data from the Caltrans Treatment BMP Database and from Treatment BMP maintenance activities are located in Appendix B.

Non-Approved BMP Implementation

Caltrans did not implement any non-approved BMPs during the reporting period.

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5 Project Planning and Design

Re-use of Aerially Deposited Lead Contaminated Soils

The Department of Toxic Substances Control (DTSC) regulates activities involving the re-use of soils that contain aerially deposited lead (ADL), ensuring that lead-contaminated soils are not discharged to waters of the U.S. Soil containing hazardous waste levels of lead were reused in accordance with a variance issued by the DTSC (SWMP Section 6.7, Use of Lead Contaminated Soils). If suitable locations for re-use were unavailable, the excavated soil containing hazardous waste levels of lead was disposed of at Class I landfill facilities. Each Caltrans District notified DTSC and the appropriate Regional Board at each instance invoking the variance and kept records for each variance in a statewide database.

Design Consultation in the Lahontan Region

The Conformed NPDES Permit requires that Caltrans participate in early project design consultation for all projects within the Lake Tahoe, Truckee River, East and West Forks Carson River, and Mammoth Creek Hydrologic Units prior to the Project Approval and Environmental Document, 60% design level, and 90% Plans, Specifications, and Estimates phases. No projects were designed in the East and West Forks Carson River or the Mammoth Creek Hydrologic Units. However, in the Truckee River and Lake Tahoe Hydrologic Units, District 3 participated in early design consultation with the Lahontan Regional Board. On a tri-annual basis, the District NPDES Unit provided the Lahontan Regional Board with a list of projects in the design and construction phases. If total soil disturbance information was available, the projects were identified as either Water Pollution Control Program (WPCP) or Storm Water Pollution Prevention Plan (SWPPP) type projects.

At the 60 percent design phase, Drainage Plan, Drainage Profile, Drainage Details and Water Quality (WQ) Treatment Strategy plan sheets were submitted to the Water Board for a two-week review and comment period. Focus meetings were scheduled with permitting agencies (Water Board and Tahoe Regional Planning Agency (TRPA) staff), the Caltrans Design Branch, the TRPA Coordinator and the NPDES Coordinator to discuss WQ treatment strategies. Input from the permitting agencies were noted and considered to further refine the WQ treatment strategies. The same process occurred at the 90 percent design milestone. Finally, during the District's Plans, Specification & Estimate (PS&E) circulation, a PS&E package was submitted to the Lahontan Regional Board to show that all WQ treatment strategies that had been agreed upon were incorporated into the contract plans, and obtain treatment strategy concurrence.

Stream Crossing Design Guidelines to Maintain Natural Stream Processes

Caltrans, in coordination with the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS), the California Department of Fish and Wildlife (CDFW), and the United States Fish and Wildlife Service, continued to use the "Fish Passage Design for Road Crossings" (Caltrans, August 2009) guidance to ensure conformance with state and federal fish passage standards and regulations. Caltrans also relied upon the Highway Design Manual, Section 800, "Highway Drainage Design," with its goals of perpetuating natural drainage while considering environmentally sensitive issues, such as fish passage.

Caltrans Fish Passage for Road Crossings guidance document, CA Fish & Wildlife's (CFW) Part XII: Fish Passage Design and Implementation document, CFW's Culvert Criteria for Fish Passage, and NOAA Fisheries Service Guidelines for Salmonid Passage at Stream Crossings document, is used in the design and development of Caltrans fish passage projects. The guidance will be updated again if there are changes to referenced regulatory guidance.

Caltrans works with regulatory agencies in compliance with Article 3.5 of the streets and highway code documenting progress and compliance. The *Caltrans Hydromodification Requirements Guidance, Storm Water Best Management Practices, Rapid Assessment of Stream Crossings, and Higher Level Stream Stability Analysis* (CTSW-OT-14-314.05) (February 2015) serves as the status report for Caltrans fish passage projects. It provides

guidance on assessing pre-project channel stability and implementing mitigation measures that are appropriate to protect structures and minimize stream channel bank and bed erosion.

Design Best Management Practices

During the reporting period, the Office of Stormwater Management Design (OSWMD) evaluated its program to ensure that it complies with the Conformed NPDES Permit.

The OSWMD continued to maintain an interactive website for the Caltrans-approved treatment BMPs that includes standalone design guidance, plans, specifications, and other pertinent information. An animated depiction with narration is provided for each type of treatment BMP to illustrate how it functions. Various improvements were made to certain BMPs based on lessons learned to improve implementation and constructability. The website also includes information on the *Project Planning and Design Guide (PPDG)*, which provides design guidance for BMPs, for development of a Stormwater Data Report, and other tools and training available to facilitate the inclusion of BMPs in Caltrans projects. The PPDG (February 2016) was updated during the fiscal year and is available on Caltrans’ website: http://www.dot.ca.gov/hq/oppd/stormwtr/ppdg/PPDG-Final_2016-02.pdf. Caltrans is currently updating the treatment BMP design guidance documents.

Treatment BMPs Planned for Projects

Figure 1 below summarizes the percentage of treatment BMP types planned for projects during the Design phase for the reporting period. This information is based on estimated project completion end dates documented in the PS&E and the Stormwater Data Report (SWDR). Treatment BMPs are included to comply with the Conformed NPDES Permit post construction treatment requirements and to implement TMDL waste load allocations, location specific and other requirements by following the selection process defined in the Project Planning and Design Guide. Appendix C contains more information about the treatment BMPs planned for projects during the fiscal year.

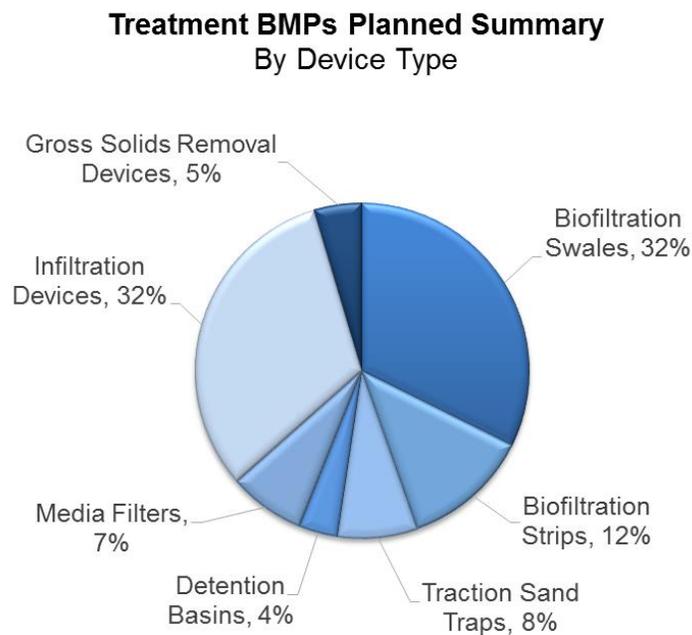


Figure 1: Treatment BMPs Planned Summary by Device Type

Design Self-Audit Program

The Caltrans Design Self-Audit Program uses the SWDR as a tool for documenting compliance with the design pollution prevention and treatment BMP requirements of the Conformed NPDES Permit and Draft SWMP. The SWDR and its checklists are reviewed by District staff to ensure that all BMP types are being considered and incorporated into Caltrans' projects. This review also ensures stormwater compliance throughout the project planning and design phases. The Headquarters Office of Stormwater Management Design then selects representative SWDRs and reviews them as part of a quality improvement process. These reviews are used to determine whether improvements are needed in the design guidance and training classes.

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Implementation of Construction General Permit

For the reporting of stormwater discharges associated with construction activity, the Conformed NPDES Permit defers to the reporting requirements of the CGP. Full implementation of the CGP occurred in this fiscal year.

The CGP requires dischargers, including Caltrans, to electronically file Permit Registration Documents (PRDs) with the SWRCB via the SMARTS. All Caltrans construction projects with one acre or more disturbed soil area, or that were part of a larger common project, fully implemented the CGP requirements by filing PRDs in SMARTS. Details of each project's CGP compliance is provided on SMARTS including, but not limited to, Stormwater Pollution Prevention Plans, BMP implementation, inspection, annual reporting, monitoring, and other tasks required by the CGP.

Construction Enforcement Actions Response

During fiscal year 2015-2016, 24 of the 50 enforcement actions issued for construction activities were resolved, and one is pending resolution or is in progress. Caltrans continuously strives to improve its enforcement action tracking procedures, and closely monitors all Districts and projects for enforcement activity. Caltrans tracks all enforcement actions on construction projects. Headquarters provides the Districts with a consultant contract to assist them, when needed, for assistance at problematic sites and for response to enforcement actions.

Construction Self-Audit Compliance Monitoring

The CCEP outlines the independent quality assurance portion of the self-audit program implemented by Caltrans for evaluating construction activities at construction sites as required by the Conformed NPDES Permit. The plan assesses compliance with water quality requirements, evaluates stormwater contract administration, and incorporates independent quality assurance. The data gathered provides information to ascertain whether an appropriate level of stormwater pollution control is achieved at construction sites, as well as helping to evaluate trends and providing recommendations for program improvement.

In the third quarter of 2015, Caltrans revised the CCEP to meet regulatory changes over the past several years and implemented a new approach to assess the appropriate level of stormwater pollution control at construction sites. This revised *Stormwater Management Plan – Construction Compliance Evaluation Plan* [CTSW-PL-16-999](#) received approval by the SWRCB on July 5, 2016. The Independent Quality Assurance (IQA) review process includes the following activities:

- Developing and maintaining a list of construction projects for review;
- Providing 24-hour notification of IQA site review to the RE, Senior RE, Construction Manager, and DCSWC;
- Conducting the site review and completing the Construction Review Report;
- Initiating the Corrective Action process;
- Collecting and tracking IQA site review report, Project Construction Stormwater Review Report (PCSRR); and
- Initiating the Enforcement Response Program (ERP).

During the reporting period, July 1, 2015 through June 30, 2016, Caltrans conducted 236 IQA reviews. A summary of the results from the inspections performed during the reporting period at each Caltrans District is included in Appendix D.

The IQA reviewer evaluated stormwater compliance at a construction site by comparing observed site conditions, including project stormwater contract administration, with the following:

- SWRCB regulatory drivers, e.g., the CGP and the Conformed NPDES Permit;

- Permits, Licenses, Agreements, Certifications and Approvals, and the Lahontan RWQCB Permit, as applicable;
- Caltrans latest Standard Specifications and Standard Plans.

For detailed information on the CCEP and IQA review process, consult the *Year-End Performance Report, A Summary of Construction Compliance Reviews – July 1, 2015 – June 30, 2016 (CTSW-RT-16-321.04.2)* September 2016, and the data included in Appendix D as an attachment on the CD.

Construction Best Management Practices

No new construction site BMPs were approved for use on Caltrans projects during the reporting period.

7 Compliance with the Industrial General Permit

Caltrans' stormwater discharges are regulated by the Conformed NPDES Permit, and it is not typically necessary to apply for coverage under the Industrial General Permit (IGP). However, three areas of Caltrans' Stormwater Management Program that may involve industrial activities are

- Construction activities administered by Caltrans,
- Caltrans activities subject to the IGP, and
- Requirements for lessees of Caltrans property that conduct activities subject to the IGP.

Caltrans contract specifications require the construction Contractor to obtain coverage for applicable general permits, including the Industrial General Permit if warranted.

During the fiscal year, Maintenance facilities were evaluated for whether they require coverage under the IGP, and its Facilities Pollution Prevention Plan was prepared and updated as appropriate during the reporting period. See Section 8 of the Annual Report for more information about the Waste Management Plan listing the status of the facilities. Caltrans requires lessees to comply with the stormwater management program, including complying with the IGP, if applicable. Caltrans standard leases include stormwater language to require compliance with the IGP, if applicable, and Caltrans right of way agents make periodic site inspections to monitor compliance.

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8 Maintenance Program Activities and Facilities Operations

Illegal Connections/Illicit Discharges

During the reporting period, 10 of 19 illegal connections/illicit discharges (IC/IDs) were resolved and nine are in the process of being resolved. Unresolved incidents are being researched, improvements are in progress, or further monitoring is required to indicate that the discharge has been eliminated. Detailed information about IC/ID investigations is provided in Appendix E.

IC/ID and Illegal Dumping Response Plan

The *Illegal Connection, Illicit Discharge (IC/ID) and Illegal Dumping Response Plan* (CTSW-RT-13-999.02) was submitted to the SWRCB in December 2013. The plan describes procedures and BMPs used to protect the Caltrans MS4 and stormwater quality from potential pollutant loading due to the illicit deposition of solid or liquid materials to Caltrans' right of way.

Vegetation Control

After reviewing the Districts' proposed Vegetation Control Plans for the upcoming fiscal year, Caltrans' Headquarters Roadside Maintenance Office allocates active ingredient for each District. Caltrans assists local agencies with fire suppression (fuel abatement) and in combating invasive and noxious weeds. To prevent the development of herbicide resistance in vegetation, chemical products with slightly different modes of action are used every two to three years, which can result in minor but noticeable fluctuations in active ingredient.

Caltrans evaluated its process to track the violations of herbicide and pesticide applications on a statewide basis during the reporting period. In future Annual Reports, Caltrans will report this information and the corrective actions taken to address the violations.

Herbicide, Pesticide, and Fertilizer Applications

The Conformed NPDES Permit requires that Caltrans report its chemical use in the Annual Report. This information is located in Appendix F (on the attached CD) and includes monthly chemical usage by type. Appendix E summarizes chemical use during the fiscal year and compared to the previous 11 years. Approximately 208,000 pounds of active ingredient were used to treat over 58,000 acres in Caltrans' Integrated Vegetation Management program during fiscal year 2015-2016. Seven districts had an increase in the use of herbicides during the reporting period, except for Districts 4, 5, 6, 9, and 10. Appendix E lists the reasons for the increases in chemical use.

Chemical Use on Vegetated Treatment BMPs

No chemicals were applied to any vegetated treatment BMPs.

Maintenance Self-Audit Compliance Monitoring

A third party (consultant) reviewed maintenance facilities and activities for compliance with the requirements of the Draft SWMP and the Conformed NPDES Permit. Caltrans' goal is to inspect a minimum of 10 maintenance activities per District and a minimum of 20% of maintenance facilities per year. Each review consists of a documentation audit and a site inspection. The required review frequency for each facility is at least once every 5-year period. The Division of Maintenance staff provided support to the consultant and facilitated the inspections. Appendix E contains the statistical information from the reviews. There were neither releases nor discharges to surface water of pollutants from any of the facility during the reporting period.

At each facility, the following areas were reviewed for compliance:

- Building and Grounds Maintenance
- Storage of Hazardous Materials (Working Stock)
- Material Storage Control (Hazardous Waste)
- Outdoor Storage of Raw Materials
- Vehicle and Equipment Fueling
- Vehicle and Equipment Cleaning
- Vehicle and Equipment Maintenance and Repair
- Aboveground and Underground Tank Leak and Spill Control
- Presence and adequacy of a FPPP.

This year Caltrans developed a new Self-Audit Compliance Monitoring rating system. The system is described in the Caltrans *Annual Maintenance and Operation Compliance Review Plan* (CTSW-PL-16-299.02.1) dated June 2016. The system consists of a rating from 1 to 5, where 1 or 2 indicates that BMPs are effective and compliant with stormwater requirements, and a 3, 4, or 5 indicate that BMPs were not implemented, potentially allowing a release of pollutants to outside the Caltrans' right-of-way, or discharge to surface water. BMPs that received a 3, 4, or 5 indicate the need for immediate corrective action and may initiate a Level 2 Maintenance Enforcement Response Program.

Appendix G lists the facilities that were inspected during the fiscal year, as well as the inspections that occurred in the past 12 fiscal years.

Facility Pollution Prevention Plans

Caltrans is required to develop a Facility Pollution Prevention Plan (FPPP) for each of its maintenance facilities. Each FPPP describes the activities conducted at the facility and the BMPs to reduce or eliminate the discharge of pollutants in stormwater runoff from the facility. All FPPPs are updated or revised as needed during the year. Presently, there are 864 completed FPPPs for maintenance yards, storage and material sites, California Highway Patrol (CHP) and Border Protection Stations, rest areas, and equipment shops. However, the number may vary as sites open or close in future operations. An inventory of FPPPs is included in Appendix J on the attached CD.

Erosion Control and Stabilization Activities in Areas Prone to Erosion

District staff is responsible for ensuring that work orders are properly prepared and submitted for major/minor erosion repair activities. The work order defines the limits of the activity. Areas prone to erosion are defined as segments of highway requiring erosion control and stabilization activities for the past three consecutive years.

The Headquarters Division of Maintenance staff conducts a geographic information system analysis of the submitted work orders for erosion work. IMMS data for three consecutive years is mapped to define the segments of highway where continuous work has been needed.

Slides and slip-outs encountered during routine surveillance and inspections are evaluated for repair with priority going to eroding slopes in Environmentally Sensitive Areas. Recommendations were developed for site-specific remedial measures, from minor grading or seeding to installation of major slope stabilization systems to maintain slope and soil stability. Detailed information about Caltrans' erosion control and stabilization activities performed in areas prone to erosion during the reporting period is provided in Appendix H.

Waste Management Plan

The *Waste Management Plan* describes Division of Maintenance field crews' activities and BMPs that are used to protect the environment from waste stored within Caltrans' right of way. It fulfills the Conformed NPDES Permit requirement to develop a *Waste Management Plan* that includes a comprehensive inventory of waste storage, transfer, and disposal sites; the source(s) of waste and the physical and chemical characterization of the waste

retained at each site; estimated annual volumes of material; and existing or planned waste management practices for each waste and facility type. Caltrans characterized its waste programmatically according to the procedures described in the *Waste Management Plan*.

Landslide Management Plan

The *Landslide Management Plan* (CTSW-OT-13-999.02) describes the Division of Maintenance field crew activities and BMPs used to protect stormwater quality from potential pollutant loading due to landslide (earth, rock or debris), debris flows, rockfall and post-wildfire events within Caltrans' right of way. Summaries of the activities that Caltrans committed to in the Landslide Management Plan and that were completed during the reporting period to meet these requirements are discussed in the following sections. The data for these activities is available in Appendix E and Appendix H.

Enhanced Storm Drain Inspection and Cleaning Activities

The Division of Maintenance implements an Enhanced Annual Storm Drain Inlet Inspection and Cleaning Program in the metropolitan areas of Los Angeles and Ventura (District 7), Orange (District 12), and San Diego (District 11) counties. Detailed information about Caltrans' enhanced storm drain inspection and cleaning activities during the reporting period is provided in Appendix E.

Slope Inspections

Caltrans' Division of Maintenance has an ongoing program in accordance with the Conformed NPDES Permit Section E.2.h.3)a)iii) and the Draft SWMP to inspect roadside vegetated slopes for erosion. This requirement is led by District Maintenance Stormwater Coordinators who are members of the Maintenance Stormwater Advisory Team. The inspections are conducted on a five-year cycle. In addition to the SWMP mandated program, the Division of Maintenance conducts a storm patrol and erosion control program. Maintenance Supervisors and delegated staff patrol the state's highway system to inspect for any issues related to safety, facility preservation and erosion control due to storm events.

The Division of Maintenance also investigates public complaints related to stormwater damage. The Division of Maintenance will normally conduct minor storm damage repair on projects in which the cost does not exceed \$1,000 per site or \$15,000 per mile. Major storm damage repair projects exceed these cost levels. During the fiscal year, the Districts identified 68 minor and 29 major slope problems. Detailed information about slope inspections conducted by District Maintenance Stormwater Coordinators during the fiscal year is available in Appendix H.

Trash and Litter Removal Activities

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, District crew/California Conservation Corps (CCC) trash collection, the Caltrans Parolee Program, and the Adopt-A-Highway Program, and public education emphasizing trash and litter prevention. Table E-16, in Appendix E, shows the amount of trash and litter removed by Caltrans' activities.

The Division of Maintenance has several integrated categories in its activities to reduce and eliminate trash and litter from affecting surface waters.

Storm Drain Maintenance

The Division cleans storm drainage system inlets and culverts of accumulated materials. These activities are conducted manually and by vector trucks.

Road Sweeping

The Division conducts ongoing road sweeping activities with mechanized sweepers to collect and dispose of materials off the roadway surfaces.

District Crew Collection

District Maintenance crews conduct manual cleanup of trash and litter from Caltrans' right of way.

California Department of Corrections and Rehabilitation (CDCR) and California Conservation Corps (CCC) Programs

The Division of Maintenance has partnership programs with the California Department of Corrections and Rehabilitation and the CCC. Parolees and Corps employees provide contracted services to assist in the removal of trash and litter from Caltrans' right of way.

Adopt-A-Highway Program

The Caltrans [Adopt-A-Highway](#) Program provides an avenue for individuals, organizations, or businesses to help maintain sections of roadside for various activities including litter removal within California's State Highway System.

Public Education

The Division of Maintenance helps sponsor the California Statewide Litter Collection, Enforcement and Beautification Day event held in the spring on or around Earth Day each year. Caltrans staff volunteers to collect litter and raise public awareness of the issue. Caltrans participates in supporting the California "Keep California Beautiful" campaign with Caltrans' "Protect Every Drop" campaign.

The estimated annual volumes of trash and litter removed by District are summarized in Table E-16 (Appendix E). The litter reduction and elimination protocols established by Caltrans are defined in its [California Department of Transportation Litter Abatement Plan](#) (2007).

Drain Inlets/Culverts Inspected and Cleaned

Caltrans inspected and cleaned over 106,000 drainage system facilities as needed during fiscal year 2015-2016. Detailed information about drain inlets and culverts inspected and cleaned during the fiscal year is provided in Appendix I.

9 Non-Departmental Activities

Encroachment Permits Implementation Activities

The Encroachment Permits Division implements the Conformed NPDES Permit requirements by ensuring that any permits issued include requirements to comply with the Conformed NPDES Permit. The Division's activities generally include preliminary engineering review, site inspection, verification of Conformed NPDES Permit coverage, plan review, meeting and communication with the Permittee during Encroachment Permit review for municipalities, developers, utilities and private entities, and monitoring and documentation of the Permittee's implementation and maintenance of Best Management Practices during construction activities. In addition, District Permit staff supported the processing and inspection of the stormwater components associated with Encroachment Permit submittals. A majority (54%) of the stormwater review submittals involved linear construction or utility and drainage maintenance and/or improvements, while the remainder (46%) consisted of highway reconstruction, rehabilitation and maintenance activities.

Illegal Connections/Illicit Discharges

The permit applicant was responsible for controlling discharges of storm water and non-storm water from their construction site. Under contract delegation by the permit applicant, the contractor ensured that appropriate conveyance systems were in place to minimize or eliminate the uncontrolled run-ons through the construction activity. Illegal connections or illicit discharges were referred by the Permit Inspector to the Area Maintenance Manager until the discharge has been eliminated. Detailed information about IC/ID investigations is provided in Appendix E.

Implementation of Construction General Permit

The CGP requires dischargers, including third parties under the Caltrans Encroachment Permit, to electronically file Permit Registration Documents (PRDs) with the SWRCB via the SMARTS. Third Party construction projects with one acre or more disturbed soil area, or that were part of a larger common project, under the Caltrans Encroachment Permit implemented the CGP requirements by filing PRDs in SMARTS. Details of each project's CGP compliance is provided on SMARTS including, but not limited to, Stormwater Pollution Prevention Plans, BMP implementation, inspection, annual reporting, monitoring, and other tasks required by the CGP.

Construction Enforcement Actions Response

During fiscal year 2015-2016 there were no known enforcement actions issued for construction activities under the Caltrans Encroachment Permit. Caltrans continuously strives to improve its enforcement action tracking procedures, and closely monitors all Districts and projects for enforcement activity.

Construction Self-Audit Compliance Monitoring

The Encroachment Permit construction projects were not included in the independent contractor evaluation of the CCEP during the fiscal year 2015-2016. Improvements to the Encroachment Permits Database Management System EPMS were under way. After revisions, the EPMS will track and report on stormwater document inventory and known incidents of non-compliance. In addition, the improved EPMS will be able to assist the districts during annual reporting and share a list of third party construction projects for the Caltrans CCEP during future fiscal years.

Airspace Leases

As required by the SWMP, this section summarizes progress on the review and revision of existing air space leases each year. Airspace leases are legal documents defining areas within the state highway right-of-way that can safely accommodate privately managed uses, and they outline terms agreed upon at the time of their

execution. The table below lists the approximate number of leases, including new and renewed leases by District as of June 30, 2016. Only the overall totals are shown, since the Right-of-Way Property Management System does not distinguish between new and renewed leases.

Table 8: Airspace Leases Modified to Include SWMP Requirements 2015-2016

District	Total Number of Leases (New and Existing as of June 30, 2016)	Total Number of Leases with Stormwater Language (New and Renewed as of June 30, 2016)
1	1	1
2	4	3
3	42	33
4	195	166
5	12	12
6	2	1
7	225	157
8	4	4
9	0	0
10	10	3
11	49	26
12	16	14
Total	560	420

There were 560 airspace leases statewide as of June 30, 2016, 420 (75.0%) of which have stormwater compliance language. Those with no stormwater language incorporated are long-term leases that were executed before the Stormwater Management Program was established. Caltrans incorporates stormwater requirements when these leases expire, the tenant vacates, a new tenant and lease are established, or the leases are renewed. All renewed and new leases contain the stormwater management clause, which did not change during the reporting period.

10 Non-Stormwater Activities/Discharges

Exempt and Conditionally Exempt Non-Stormwater Discharges

The State Board and Caltrans reviewed the list of exempt and conditionally exempt non-stormwater discharges and their requirements as part of the SWMP update. No additional exempt and conditionally exempt discharges were proposed by Caltrans during the reporting period.

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Training

A summary of all training sessions and the total personnel trained per division is available in Appendix L. An assessment of all training activities is available in Appendix N.

Encroachment Permits Office

Headquarters (HQ) Construction Stormwater and HQ Traffic Operations Encroachment Permits coordinated delivery of internal construction refresher training using district video teleconferencing to supplement the face-to-face training offered under the State Learning Management System.

Headquarters participated in District informational sessions that focused on the assessment of District roles and responsibilities, storm water assessment, charging practices, and the approved purpose and need for the development of new training for District Permit Engineer, Permit Writer and Inspector.

Headquarters Traffic Operations Encroachment Permits is working through 2017 to enhance the guidance and develop new training catered specifically to the Encroachment Permits staff (Permit Writer, Permit Inspector, Stormwater Coordinator and District Permit Engineer). This new training will be delivered face to face during 2017 by qualified Stormwater expert consultants and online refreshers will be available on demand.

Thirty-five staff, or 26% of all Encroachment Permits staff from Districts and Headquarters, participated in the Caltrans Construction Stormwater Training Modules during the fiscal year 2015-16.

Design

The Design Stormwater Program continued to focus on curriculum development during fiscal year 2015-2016.

Online training is available for the following: PPDG Online, Treatment BMP, Construction Site BMP, SWDR Workshop, Caltrans RUSLE2, and Risk level Determination.

Construction

During the 2015-2016 fiscal year, construction stormwater classes were offered to Construction personnel on stormwater topics.

Construction Contractor Training

During the reporting period, contractor personnel received training on BMP implementation, non-stormwater management, SWPPP development, soil stabilization, and other stormwater management best practices to comply the Conformed NPDES Permit, CGP, and Lake Tahoe CGP. Detailed training activities for construction contractors are provided in Appendix L.

Maintenance

The Maintenance Environmental Conserve California Circular (ME3C) is a conservation and environmental protection training aid published by the Headquarters Maintenance Division. Primarily created for Maintenance field personnel, the ME3C is designed to educate as well as facilitate task management, increase operational efficiency, and stimulate environmental protection and conservation innovation. The ME3C was published every month.

District training totals are summarized in Appendix L.

Landscape Architecture Program

The Landscape Architecture Program (LAP) continued to support Caltrans Landscape Architects in obtaining their Certified Professional in Erosion and Sediment Control certification.

During the reporting period, the LAP:

- Trained Caltrans Contractors on project issues that they find most difficult to bid or build. Topics included effective source control techniques, water conservation, and establishing erosion control materials.
- Provided new statewide training on Selecting Effective Erosion Control Treatments at the January and May 2016 Landscape Architecture Academies. This class taught how to analyze a project site and select the most effective source control and erosion control tools. Used “lessons learned” from recent projects to highlight universally effective methods to control erosion.
- Provided new statewide training on Erosion Control Documentation at the January and May 2016 Landscape Architecture Academies. This class taught how to document erosion control design decisions and specify erosion control materials using the 2015 Standard Specifications and Erosion Control Plans and Tables.
- Provided training to employees on the basics of Highway Irrigation Design at the 2016 Landscape Architecture Academy. This training helps the Districts implement the Model Water Efficient Landscape Ordinance, as required by the Conformed NPDES Permit. It describes the main components, best practices of irrigation design, and the necessary calculations required to design an irrigation system.
- Provided training on Lessons Learned from Contractor Meetings that included the challenges that landscape and erosion control contractors face on Caltrans projects. The training discusses design techniques that reduce Contract Change Orders, potential claims during construction, and information that will enhance project constructability and performance.
- Updated the Erosion Control Toolbox, a one-stop reference to provide Caltrans Landscape Architects with information necessary to design successful, effective and cost efficient erosion control treatments.

New Training Courses (Statewide)

Headquarters Division of Environmental Analysis approved the justification statement for development, implementation and effectiveness evaluation for new training for District Permit Engineers, Writers and Inspectors. The task order was prepared and is in process for implementation during the FY 2016-17.

12 Public Education and Outreach

Public Education Activities

Caltrans' public education program encompasses the "Protect Every Drop" Campaign, [Adopt-A-Highway](#), and partnerships with local organizations. The "Protect Every Drop" campaign, led by Caltrans' Stormwater Program, seeks to educate Californians about the sources and pathways of stormwater pollution, and to encourage consumer behavior that reduces pollutants in order to improve water quality in our streams, rivers, lakes and coastal waters, keeping them drinkable, swimmable and fishable. The campaign was launched in February 2016 in cooperation with the SWRCB and CASQA, and aims to change public behavior through public education about how individual actions can protect and preserve receiving waters through control of pollutants transported via surface water flow. The campaign addresses key actions the public can take, including:

- Properly disposing of trash and other items containing pollutants
- Covering truckloads that may fall, or blow, off during travel
- Performing routine vehicle and tire maintenance, which reduces pollution from vehicles

The three-year campaign also addresses other pollutants found in highway stormwater that may originate from non-highway sources such as pesticides and bacteria from natural sources. For more additional information, please visit www.protecteverydrop.com. Caltrans collaborated with the State Board on the statewide public education program, and the objectives and scope to be conducted under the public education contract. Appendix K summarizes the public education activities performed statewide.

Caltrans co-sponsors CASQA's Water Quality NewsFlash, a bi-weekly, electronically distributed update of stormwater and related news for CASQA members, as a public education and outreach partnership. The NewsFlash provides the stormwater community with timely and relevant water quality regulatory information from the federal, state, and regional levels.

Adopt-A-Highway Statewide Program

[Adopt-A-Highway](#) is a cooperative program between organizations with volunteers to collect trash along the highways, and be recognized for their contribution to keeping the environment and highways clean. The statewide program's accomplishments during the fiscal year include the collection of 11,834 cubic yards of material along adopted highways.

Public Education Efforts by District

Highlights of achievements by the Districts' public education programs during the fiscal year include the following:

- **District 1** – The District did not participate in public education events during the fiscal year.
- **District 2** – The District attended five career days/fairs and participated in statewide trash collection day on 3/21/2016.
- **District 3** – The District participated in Bring Your Child to Work Day, a Sacramento Earth Day Event and gave a Water Quality Presentation about how trash enters water bodies from highways. A District representative also spoke at the Greenwood Civic Organization monthly meeting about the Adopt-A-Highway program. The District participated in the South Yuba River Clean Up Day, and Adopt-A-Highway groups participated in Coastal Cleanup Day and the Great American Cleanup.
- **District 4** – The District participated in Caltrans/CHP Quarterly Cleanups. On these days, Caltrans Maintenance, Stormwater, and Adopt-A-Highway made a special effort to sweep and pick up trash. The Public Information Officer (PIO) attempted to secure extra media coverage.
- **District 5** – Central Coast Caltrans District 5 Maintenance crews focused on litter and debris removal today for Caltrans Annual Anti-Litter Earth Day (April 21, 2016) along five counties from Santa Cruz to Santa Barbara.

- **District 6** – The District attended Environmental Division Kids Day and gave a stormwater presentation dealing with keeping trash and spills from entering waterways/storm drains.
- **District 7** – The District’s participated in Litter Day Awareness and Earth Day celebration at Leal Elementary School. The District also participated in public outreach through Twitter for the Protect Every Drop Campaign and produced a new release.
- **District 8** – The District hosted “Bring Your Child to Work Day” and presented the “Transportation “AHA” Moments” interactive presentation to the participants. Concepts were reinforced through hands-on activities using an EnviroScape watershed model and samples of BMPs that Caltrans uses during construction and maintenance. The District participated in “Don’t Trash the Mountain,” a multi-agency press conference where speakers urged visitors to the San Bernardino National Forest to help keep it beautiful by properly disposing of litter and debris.
- **District 9** – The District continued the Safety Rest Area “Protect Every Drop” poster campaign at five Safety Rest Areas in conjunction with the “How to Prevent Water Pollution” poster information campaign. The District participated in Caltrans/CHP Quarterly Cleanups. On these days, Caltrans Maintenance, SW, and A-A-H made a special effort to sweep and pick up trash. The Public Information Officer (PIO) attempted to secure extra media coverage.
- **District 10** – The District did not participate in public education events during the fiscal year.
- **District 11** – The District had a station at the National Chili Cook off Day in the City of Ocean Beach and participated in the Annual California Cleanup Day/Caltrans Adopt-A-Highway program.
- **District 12** – The District hosted an activity for the 2016 Children’s Water Education Festival at University of California, Irvine. Over 300 students participated in an activity where the children were taught the effects of litter on our water resources. The students were also informed of various methods Caltrans uses to filter/clean storm water runoff. The kids and teachers were reminded about helping to keep California clean and throwing their litter in the trash.

13 Region-Specific Activities

TMDL Requirements

Caltrans monitored 18 TMDL sites locations throughout the state to comply with the requirement to monitor water quality at a minimum of 100 Tier-1 sites (see Section 3). Monitoring details and results are included in the Monitoring Results Report due on October 1, 2016.

Caltrans submitted the Comprehensive TMDL Monitoring Plan to the State Board on January 1, 2015. State Board staff provided review and comment within the reporting period, and Caltrans submitted a revised plan to State Board staff in June 2016. Caltrans staff is awaiting further comments and/or final approval of the plan.

North Coast Region

Sources of Sediment

Caltrans quantified and prepared an inventory of excess sources of sediment and threatened discharges in the North Coast Region. The inventory was prepared and submitted to the North Coast Regional Board on September 19, 2014. Field verification was completed and the revised inventory was submitted to the SWRCB in December 2015.

Riparian Vegetation Removal

The removal of riparian vegetation may result in a threatened discharge or cause an exceedance of water quality objectives. Caltrans protected and restored riparian vegetation on a project-by-project basis in the North Coast Region. If vegetation removal required a permit from the Regional Board, a permit was obtained and its requirements were implemented.

San Francisco Bay Region

Trash Load Reduction Reporting

The *Caltrans Trash Load Reduction Workplan for the San Francisco Bay Region* was resubmitted to the Regional Board on June 25, 2016. Caltrans and the Regional Board held several meetings in 2015-2016 to discuss the workplan. Caltrans completed a field assessment of over 1,000 miles of highway and approximately 900 ramps identifying very high, high, moderate and low/none trash generation areas. Caltrans has been working with local permittees to identify opportunities for cooperative implementation, including the Ettie Street Pump Station Watershed and San Mateo County regional treatment project. Caltrans has begun a pilot study to investigate the use of netting trash capture devices along the I-880.

Stormwater Pump Stations

Caltrans has started a five-year program to inspect and monitor pump stations in the San Francisco Bay Region pursuant to Conformed NPDES Permit, Attachment V (Region Specific Requirements). The pump stations are all located within District 4. The Conformed NPDES Permit requires monitoring be conducted after a minimum two-week antecedent dry period with no precipitation. Separate communication from the Regional Board clarified that the ideal monitoring period would be during July and August.

During 2015-2016 (the second year of the program), Caltrans monitored additional 18 pump stations within the Region to inspect and collect dissolved oxygen (DO) data. None of the pump stations had a DO level below 3 mg/L in the dry weather discharge. Most pumping activities were due to localized ground water discharge. The table below summarizes the 36 pump stations that were monitored for DO during the 2015-2016 reporting period.

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Table 9: District 4 Pump Station Dissolved Oxygen Monitoring (2015-2016) Results Summary

Inspection Sequence	Pump Station Name	Location	Latitude (north) ¹	Longitude (west) ¹	Receiving Water Body ²	Inspection Date	Monitoring Results ³	Dissolved Oxygen [mg/L]		
								Min.	Max.	Average
1	Larkspur Drive	04-SM-0280-R18.64	37°35'48"N	122°25'18"W	San Mateo Creek	8/3/2015	ND, NCA	NA	NA	NA
2	South Larkspur Drive	04-SM-0280-R18.38	37°35'38"N	122°25'6"W	San Mateo Creek	8/3/2015	ND, NCA	NA	NA	NA
3	Hillsdale Boulevard	04-SM-0082-9.37	37°32'13"N	122°17'49"W	Laurel Creek	8/4/2015	ND, NCA	NA	NA	NA
4	280/92 SEP	04-SM-0092-R7.41	37°30'28"N	122°20'14"W	Laurel Creek	8/3/2015	ND, NCA	NA	NA	NA
5	Cañada Road	04-SM-0280-10.25	37°30'1"N	122°19'52"W	San Mateo Creek	8/3/2015	ND, NCA	NA	NA	NA
6	Rancho Pulgas	04-SM-0280-9.42	37°29'53"N	122°18'59"W	Cañada Road Reservoir	8/4/2015	ND, NCA	NA	NA	NA
7	Henderson UP	04-SM-0101-3.05	37°28'44"N	122°10'20"W	1) Menlo Park MS4 System 2) Canal by salt ponds	8/4/2015	DO+, NCA	6.78	7.35	7.03
8	Ravenswood Slough	04-SM-0084-R27.98	37°29'1"N	122°8'41"W	Ravenswood Slough	8/3/2015	DO+, NCA	7.68	8.19	7.95
9	University Avenue	04-SCL-0082-25.89	37°26'31"N	122°9'56"W	City of Palo Alto MS4 System	7/27/2015	ND, NCA	NA	NA	NA
10	Dana Street OC	04-SCL-0237-RO.60	37°23'9"N	122°3'54"W	Stevens Creek	7/27/2015	ND, NCA	NA	NA	NA
11	Saratoga-Sunnyvale Road	04-SCL-0085-15.7	37°18'4"N	121°1'59"W	Rodeo Creek	7/27/2015	ND, NCA	NA	NA	NA
12	Prospect Road	04-SCL-0085-15.1	37°17'37"N	122°1'30"W	Rodeo Creek	7/27/2015	ND, NCA	NA	NA	NA
13	Pollard Road	04-SCL-0085-11.94	37°15'52"N	121°58'49"W	Los Gatos Creek	7/27/2015	ND, NCA	NA	NA	NA
14	Saratoga Avenue (280)	04-SCL-0280-5.98	37°19'4"N	121°58'29"W	City of San Jose MS4 System	7/27/2015	ND, NCA	NA	NA	NA
15	Winchester (280)	04-SCL-0280-4.59	37°19'2"N	121°57'1"W	San Tomas Aquinas Creek	7/27/2015	ND, NCA	NA	NA	NA

Table 9: District 4 Pump Station Dissolved Oxygen Monitoring (2015-2016) Results Summary

Inspection Sequence	Pump Station Name	Location	Latitude (north) ¹	Longitude (west) ¹	Receiving Water Body ²	Inspection Date	Monitoring Results ³	Dissolved Oxygen [mg/L]		
								Min.	Max.	Average
16	Menker Avenue	04-SCL-280-4.41	37°19'2"N	121°55'20"W	Los Gatos Creek	7/28/2015	ND, NCA	NA	NA	NA
17	Southwest Expressway OC	04-SCL-0280-R3.83	37°18'54"N	121°54'43"W	Los Gatos Creek	7/27/2015	ND, NCA	NA	NA	NA
18	San Jose UP	04-SCL-0082-8.40	37°19'54"N	121°54'11"W	City of San Jose MS4 System	7/27/2015	ND, NCA	NA	NA	NA

NA = Not Applicable

¹ Longitude and latitude were obtained during site reconnaissance and are based on the North American Datum of 1983 (NAD83)

² Receiving Water Body determine during site reconnaissance and through interviews with Caltrans Maintenance staff

³ ND = No discharge, NCA = No corrective action needed, DO+ = Do levels meet or exceed minimum levels [Min=3 mg/L]

Fourteen pump stations were selected for monitoring in the 2016-2017 fiscal year. All 14 pump stations were found to be suitable for monitoring. Pump stations were selected based on their geographic location. The table below summarizes the pump stations proposed to be monitored during the 2016-2017 fiscal year.

Table 10: District 4 Pump Station Dissolved Oxygen Future 2016-2017 Monitoring

Inspection Sequence (Plan)	Site Name	Site Verification Status	Location	Latitude (north) ¹	Longitude (west) ¹	Catchment Area (acre) ²	Receiving Water Body ³
Pump Stations Suitable for Monitoring							
1	Agnew UP	Suitable	04-SCL-0101-41.06	37°22'42"N	121°56'55"W	6.8	City of San Jose MS4 System
2	Tenth Street OC	Suitable	04-SCL-0101-38.05	37°21'48"N	121°55'51"W	25.6	City of San Jose MS4 System
3	Santa Clara Street	Suitable	04-SCL-0101-35.76	37°21'11"N	121°51'41"W	7.78	City of San Jose MS4 System
4	Alum Rock Avenue	Suitable	04-SCL-0680-M1.74	37°21'34"N	121°50'32"W	Unknown	City of San Jose MS4 System
5	East Newark UP	Suitable	04-ALA-0880-8.62	37°32'35"N	122°1'14"W	48	City of Newark MS4 System
6	92/880 Separation	Suitable	04-ALA-0880-16.66	37°38'35"N	122°5'37"W	20	City of Hayward MS4 System
7	Orchard Avenue UP	Suitable	04-ALA-0092-7.27	37°39'22"N	122°5'15"W	5	City of Hayward MS4 System
8	Jackson Street	Suitable	04-ALA-0092-8.01	37°39'59"N	122°4'56"W	3.6	City of Hayward MS4 System
9	Hacienda Avenue	Suitable	04-ALA-0880-19.25	37°40'35"N	122°7'5"W	11.4	City of San Lorenzo MS4 System
10	Washington Avenue	Suitable	04-ALA-0880-20.80	37°41'21"N	122°8'20"W	10.4	City of San Lorenzo MS4 System
11	Fairmont Drive OC	Suitable	04-ALA-0580-R32.678	37°42'28"N	122°7'21"W	8.77	City of San Lorenzo MS4 System
12	Williams Street	Suitable	04-ALA-0880-23.15	37°42'48"N	122°10'10"W	12.3	City of San Lorenzo MS4 System
13	Sather UP	Suitable	04-ALA-0077-0.15	37°46'12"N	122°13'13"W	5	City of Oakland MS4 System
14	38th Avenue OC	Suitable	04-ALA-0580-R40.48	37°47'24"N	122°12'7"W	12.19	City of Oakland MS4 System

¹ Longitude and latitude were obtained during site reconnaissance and are based on the North American Datum of 1983 (NAD83)

² Unless otherwise noted, catchment areas were obtained from Bridge Inspection Records Information System (BIRIS) Reports

³ Receiving Water Body determined during site reconnaissance, BIRIS Reports, and or through interviews with Caltrans Maintenance staff

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Lahontan Region

For projects that met the criteria specified in Provision E.2.d. of the Conformed NPDES Permit (Project Planning and Design), the Lahontan Region numeric sizing criteria for stormwater treatment control BMPs in the Truckee River, East Fork Carson River, West Fork Carson River, and Mammoth Creek Hydrologic Units were applicable. This information is discussed in the Stormwater Data Report prepared for the project.

ASBS Compliance Plan

Caltrans continued the ASBS monitoring effort during the 2015–2016 season to collect the minimum number of storm events (6) required under the ASBS Special Protections. At the end of the 2015–2016 season, Caltrans collected the minimum number of storm events at three of the seven ASBS that Caltrans discharges to:

- ASBS 5 (Saunders)
- ASBS 9 (Fitzgerald)
- ASBS 33 (Irvine Coast)

Caltrans will continue the ASBS monitoring effort in the 2016–2017 season to collect the remaining required storm events at:

- ASBS 8 (Redwood), 3 storm events needed
- ASBS 15 (Año Nuevo), 1 storm event needed
- ASBS 24 (Mugu to Latigo), 5 storm events needed
- ASBS 34 (Carmel Bay, 2 storm events needed)

A sand berm is preventing the monitoring effort at ASBS 24. Caltrans and State Water Board are working to identify and approve an alternate location at ASBS 24. Caltrans will also continue monitoring at ASBS 33 at the request of State Water Board staff.

The Natural Water Quality (NWQ) values, also referred to as the 85th percentile values, were finalized for the dischargers in the Northern California Regional Monitoring Group (RMG) and Central Coast RMG in June 2016. With these values, Caltrans can compare its ocean receiving water data with the NWQ values to identify if exceedances have occurred. As noted in Table 5, selenium was identified as an exceedance in ASBS 5, and copper and selenium were identified as exceedances in ASBS 33.

Caltrans believes the ASBS 5 selenium exceedance is due to elevated background concentrations. Caltrans has proposed to discontinue monitoring and initiate a source identification study to verify the assumption. Caltrans also believes the ASBS 33 selenium exceedance is due to elevated background concentrations. Caltrans conducted a study to investigate the selenium source. The study was submitted to the SWRCB, and the SWRCB confirmed at a September 2 meeting that it agreed with Caltrans regarding the selenium exceedance. However, the SWRCB expressed concern over other metals and Polynuclear Aromatic Hydrocarbons.

Caltrans intends to submit an updated ASBS Compliance Plan once the monitoring is complete.

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14 Overall Program Effectiveness Evaluation

Caltrans' approach to its program effectiveness evaluation is comparable to the *Approach to Planning for and Assessing the Effectiveness of Stormwater Programs* (CASQA 2015)⁴. The CASQA effectiveness evaluation approach, as described in the 2015 CASQA Guidance Manual, uses a series of six categories of Outcome Levels representing a comprehensive assessment of conditions. The Outcome Levels identified in the 2015 CASQA Guidance Manual are as follows:

- **Outcome Level 6 (Receiving Water Conditions):** Level 6 Outcomes describe receiving water conditions. They can apply either to existing conditions or to improvements that will be sought over time through program implementation.
- **Outcome Level 5 (MS4 Contributions):** Level 5 Outcomes may be measured within the MS4, or as discharges from it. Evaluation typically focuses on pollutant concentrations and/or loads. Level 5 Outcomes provide a direct linkage between upstream sources and receiving waters and are a critical expression of program success.
- **Outcome Level 4 (Source Contributions):** Level 4 Outcomes measure reductions in the discharge of pollutants from sources.
- **Outcome Level 3 (Target Audience Actions):** Level 3 Outcomes address the actions of target audiences and whether or not changes are occurring over time. The major categories of target audience actions are pollutant-generating activities (PGAs), BMPs, and supporting behaviors.
- **Outcome Level 2 (Barriers and Bridges to Action):** Level 2 Outcomes provide a means of gauging whether activities are producing changes in the awareness, knowledge, or attitudes of target audiences. Level 2 Outcomes are often used to gauge progress in, or to refine approaches for, achieving Level 3 Outcomes.
- **Outcome Level 1 (Stormwater Management Program Activities):** Level 1 Outcomes, which are often defined by specific stormwater permit requirements, address a variety of stormwater management program activities. This outcome level measures the *implementation* of the program, not the *impact* that the stormwater management program is having.

The Outcome Levels help to categorize and describe the desired results or goals of the program. The Outcome Levels represent ways in which the effectiveness of the program can be determined using a broad array of metrics. The ultimate goal of the Stormwater Management Program is improving runoff quality (Level 5) and improving receiving water conditions (Level 6). In general, Levels 1, 2, 3, and 4 may be considered Implementation Outcomes, and Levels 5 and 6 may be considered Water Quality Outcomes.

The components required by the Conformed NPDES Permit for an Overall Program Effectiveness Evaluation include the following:

- Assessment of program effectiveness in achieving permit requirements and measurable objectives.
- Assessment of program effectiveness in protecting and restoring water quality and beneficial uses.
- Identification of quantifiable effectiveness measurements for each BMP, including measurements that link BMP implementation with improvement of water quality and beneficial use conditions.
- Identification of how Caltrans will propose revisions to the SWMP to optimize BMP effectiveness when effectiveness assessments identify BMPs or programs that are ineffective or need improvement.

In future Annual Reports, Caltrans will functionally update its program effectiveness evaluation approach for consistency with the Conformed NPDES Permit requirements, the approved SWMP, and the 2015 CASQA Guidance Manual.

The results of the 2015-2016 effectiveness evaluation are reported in Appendix N.

⁴ California Stormwater Quality Association. *A Strategic Approach to Planning for and Assessing the Effectiveness of Stormwater Programs*. February 2015

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15 Measurable Objectives

Caltrans developed its Draft SWMP during the reporting period to comply with the Conformed NPDES Permit requirements, including Measurable Objectives. The revised Draft SWMP was still pending approval during the 2015-2016 reporting period, as described in Section 2. The State Water Board approved the revised Draft SWMP on July 20, 2016.

Although the Measurable Objectives were not required to be implemented during the reporting period, Caltrans made progress in implementing and/or completing many of the Measurable Objectives. A summary of implementation is provided in Table 11 and Appendix N.

During the next reporting period, Caltrans will proceed with implementing the necessary tasks and activities to achieve the Measurable Objectives and will report on the status of the Measurable Objectives during each reporting period within this section.

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Table 11: Status of Measurable Objectives

Program Effectiveness Evaluation (a-d)	Measurable Objective	Goal	Task	Conformed NPDES Permit Section/Page #	Frequency	Status
a	"Fish Passage Design for Road Crossings" (CT, 2009)	A. Develop Program	Review/revise guidance	E.2.d.4), p. 40	Year 1	Complete
a	"Fish Passage Design for Road Crossings" (CT, 2009)	B. Implement Program	Report on review of document	E.2.d.4), p. 40	Year 2	Complete
b	"Fish Passage Design for Road Crossings" (CT, 2009)	C. Evaluate Program	Evaluate guidance and guidance implementation	E.2.d.4), p. 40	Year 2	Complete
b	Adequacy of CT Legal authority	C. Evaluate Program	Evaluate legal authority	E.2.b.2)a)-b), p. 21	Annually	Complete
b	Agricultural Return Flows	C. Evaluate Program	Evaluate guidance implementation	E.2.j.2), p. 49	Annually	Complete
d	Annual Report	B. Implement Program	Prepare report	E.3.a, p. 51	Annually	Complete
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	E.2.d.4), p. 40	Annually	Complete
a	ASBS Compliance Plan	A. Develop Program	Prepare plan	E.5.d.2), p. 55	Year 1	Complete
a	ASBS Compliance Plan	B. Implement Program	Implement plan	E.5.c.2), p. 54	Year 2	In Progress
a	Comprehensive TMDL Monitoring Plan	A. Develop Program	Develop plan	ATT IV, Section III.A.1, p. IV-24	Year 2	Complete
d	Construction guidance	C. Evaluate Program	Evaluate guidance	E.2.f.2)-6), p. 42	Annually	Complete
c	Control Measures Planned for TMDL Implementation in the upcoming reporting period (January 1, 2015 – October 1, 2015)	C. Evaluate Program	Evaluate/prepare report	ATT IV, I.B.1 p. IV-3 and III.A.3.a., p. IV-25	Year 2	Complete
a	District Work Plans	B. Implement Program	Prepare plan	E.3.b., p. 52	Annually	Complete
d	District Work Plans	C. Evaluate Program	Evaluate plan	E.3.b., p. 52	Annually	Complete
a	Documentation and reporting procedure (using Incident Report Form and filed electronically through SMARTS) that facilitates reporting of all known non-compliance incidents to SWRCB or RWQCB	B. Implement Program	Document and report	E.2.b.6), p. 23; ATT I, p. I-1	Annually	Under Development

Table 11: Status of Measurable Objectives

Program Effectiveness Evaluation (a-d)	Measurable Objective	Goal	Task	Conformed NPDES Permit Section/Page #	Frequency	Status
d	Documentation and reporting procedure (using Incident Report Form and filed electronically through SMARTS) that facilitates reporting of all known non-compliance incidents to SWRCB or RWQCB.	C. Evaluate Program	Evaluate documentation and reporting procedure	E.2.b.6), p. 23; ATT I, p. I-1	Annually	Under Development
a	Effective Stormwater Management Plan (SWMP) that describes how NPDES Permit will be implemented.	A. Develop Program	Develop plan	E.1.a.-h., p. 19; E.2.a.-e., h.-o., p.21; E.3.a., p. 51; E.4.a.-b., p. 53; E.5., p. 53; E.6., p. 58; ATT III, p. III-1; ATT IV, p. IV-1; ATT V, p. V-1	Year 1	In Progress
a	Fiscal Analysis	C. Evaluate Program	Evaluate fiscal analysis	E.2.b.3)a-c), p. 22	Annually	Complete
a	Fiscal Analysis	C. Evaluate Program	Prepare budget	E.2.b.3)c), p. 22	Year 4	In Progress
a	FPPP Template and Guidance	C. Evaluate Program	Evaluate plan implementation	E.2.h.2), p. 43	Annually	In Progress
b	Guidance to ensure industrial activities and facilities are covered by Industrial General Permit	C. Evaluate Program	Evaluate guidance	E.2.g., p. 43	Annually	Complete
b	Highway maintenance activities as required	C. Evaluate Program	Evaluate implementation	E.2.h.3)a-d), p. 44; E.2.h.4)a-d), p. 47; E.2.h.6), p. 48	Annually	In Progress
a	IC/ID & Illegal Dumping Response Plan	A. Develop Program	Develop plan	E.2.h.4)b)ii), p. 47	Year 1	Completed
b	IC/ID & Illegal Dumping Response Plan	C. Evaluate Program	Evaluate plan implementation	E.2.h.4)b)ii), p. 47	Annually	Completed

Table 11: Status of Measurable Objectives

Program Effectiveness Evaluation (a-d)	Measurable Objective	Goal	Task	Conformed NPDES Permit Section/Page #	Frequency	Status
b	Implementation of SWMP, including practices and policies, and propose revisions in Annual Report	C. Evaluate Program	Evaluate plan implementation	E.2.a.-e., p. 21; E.2.h.-o., p. 43; E.3.a., p. 51; E.4.a.-b., p. 53; E.5., p. 53; E.6., p. 58; ATT III, p. III-1; ATT IV, p. IV-1; ATT V, p. V-1	Annually	In Progress
a	Inspect and collect dissolved oxygen (DO) data from 20% of pump stations; apply corrective actions (San Fran Bay Region)	B. Implement Program	Maintain inventories	ATT V, Part 2, 7.b, p. V-3	Annually	In Progress
c	Inspection and maintenance records to ensure treatment BMPs that retain stormwater are operated and maintained to minimize mosquito production and drain within 96 hours of rain event (except per NPDES Permit)	C. Evaluate Program	Evaluate records	E.2.e.1)a), p. 40	Ongoing	Complete
d	Inspection Program	C. Evaluate Program	Evaluate facilities and activities	E.2.b.5), p. 22; E.2.e.2)a)-d), p. 41; E.2.h.5)a)-c), p. 48;	Annually	Complete
a	Lake Tahoe Pollutant Load Reduction Plan	A. Develop Program	Develop plan	ATT IV, Table IV.2, p. IV-20	Year 2	Complete
b	Lake Tahoe Pollutant Load Reduction Plan	C. Evaluate Program	Evaluate plan implementation	ATT IV, Table IV.2, p. IV-19	Year 2	Complete
a	Lake Tahoe Stormwater Monitoring Plan	C. Evaluate Program	Develop plan	ATT IV, Table IV.2, p. IV-21	Year 1	Complete
a	Landslide Management Plan	A. Develop Program	Develop plan	E.2.h.3)d), p. 46	Year 1	Complete
b	Landslide Management Plan	C. Evaluate Program	Evaluate plan implementation	E.2.h.3)d), p. 46	Annually	In Progress
a	Monitoring Program – Tier 1/Tier 2 and ASBS Monitoring Requirements	A. Develop Program	Prepare program	E.2.c.1)-6), p. 23	Year 1	In Progress

Table 11: Status of Measurable Objectives

Program Effectiveness Evaluation (a-d)	Measurable Objective	Goal	Task	Conformed NPDES Permit Section/Page #	Frequency	Status
a	Monitoring Program – Proposed Tier 2 prioritized monitoring locations	A. Develop Program	Develop/submit	E.2.c.1)-4), p. 23	Year 1	Complete
a	Monitoring Program – Quality Assurance Project Plan	A. Develop Program	Develop plan	E.2.c.4), p. 31	Year 1	Complete
b	Monitoring Program	B. Implement Program	Conduct monitoring	E.2.c.1)-4), p. 23	Annually	In Progress
a	Monitoring Program – Monitoring Results Report	B. Implement Program	Prepare and submit report	E.2.c.5)a)-d), p. 31	Annually	In Progress
c	Monitoring Program	C. Evaluate Program	Assess and evaluate results	E.2.c.1)-4), p. 23; E.2.c.5)a)-d), p. 31	Annually	In Progress
a	Monitoring Tier 1	B. Implement Program	Conduct monitoring	ATT III, p. III-1; E.2.c.2)a)i)(1)(b), p. 25	Ongoing	In Progress
a	Municipal Coordination Plan	A. Develop Program	Develop plan	E.2.b.1)a)-b), p. 21	Year 1	Complete
c	Municipal Coordination Plan	C. Evaluate Program	Evaluate plan implementation	E.2.b.1)a)-b), p. 21	Annually	Complete
d	New construction guidance as needed to comply with new Statewide Construction General Permit (CGP) and new Lake Tahoe Construction General Permit (TCGP) requirements	C. Evaluate Program	Evaluate guidance	E.2.f.1), p. 42	As needed	In Progress
c	Overall Program Effectiveness	C. Evaluate Program	Evaluate effectiveness	E.2.m.3), p. 50	Annually	Complete
a	Policies and procedures that address General Discharge Prohibitions, Non-Stormwater Discharges, Effluent Limitations, and Receiving Water Limitations requirements	C. Evaluate Program	Evaluate policies and procedures	A, B, C, D, p. 14	Annually	Complete
c	Public Education Program	C. Evaluate Program	Evaluate Public Education Program	E.2.l.2), p. 50	Annually	In Progress
a	Pump station inspection and monitoring results (San Fran Bay Region)	C. Evaluate Program	Report results	ATT V, Part 2, 7, p. V-3	Annually	In Progress
b	Self-Audit	C. Evaluate Program	Evaluate/prepare report	E.2.m.2), p. 50	Annually	Complete
a	Sources of Sediment Discharge in (North Coast Region) inventory	A. Develop Program	Develop inventory	ATT V, Part 1.a., p. V-1	Year 2	Complete

Table 11: Status of Measurable Objectives

Program Effectiveness Evaluation (a-d)	Measurable Objective	Goal	Task	Conformed NPDES Permit Section/Page #	Frequency	Status
a	Sources of Sediment Discharge in North Coast Region inventory	B. Implement Program	Maintain inventories	ATT V, Part 1.a., p. V-1	Annually	In Progress
a	Stormwater Pump Stations (San Fran Bay Region) inventory	A. Develop Program	Develop inventory	ATT V, Part 2, 7.a, p. V-3	Year 3	In Progress
c	Stormwater Treatment BMP Technology Report and Stormwater Monitoring and BMP Development Status Report in Annual Report	C. Evaluate Program	Prepare and submit updates	E.2.e., p. 40	Annually	Complete
a	Structural BMP inventory (which retain water for more than 96 hours) to California Department of Public Health electronically	C. Evaluate Program	Submit inventory	E.2.e.1)b), p. 41	Biennially	Complete
a	Structural BMPs (which retain water for more than 96 hours) inventory	A. Develop Program	Develop inventory	E.2.e.1)b), p. 41	Year 2	Complete
a	Structural BMPs (which retain water for more than 96 hours) inventory	B. Implement Program	Maintain inventories	E.2.e.1)b), p. 41	Biennially	Complete
a	TMDL – Reach Prioritization	A. Develop Program	Develop inventory	ATT IV, Section I.A.4, p. IV-2	Year 1	Complete
c	TMDL – Implementation Plan (Jan 1 to Oct 2015)	C. Evaluate Program	Evaluate/prepare report	ATT IV, Section III.A.3, p. IV-25	Year 2	Complete
c	TMDL – Progress Report	C. Evaluate Program	Evaluate/prepare report	ATT IV, III.A.3.c, p. IV-25	Year 5	In Progress
c	TMDL – TMDL Status Review Report	C. Evaluate Program	Evaluate/prepare report	E.4.b., p. 53; ATT IV, Section I.B.1-2., p. IV-3; ATT V, Part 2, 1.-6., p. V-2	Annually	Complete
c	Training	C. Evaluate Program	Review/assess training	E.2.k.3), p. 49	Annually	Complete
c	Trash and litter activities (report and evaluate)	C. Evaluate Program	Evaluate activities	E.2.h.4)c), p. 47	Annually	Complete
c	Trash Reduction Reporting	C. Evaluate Program	Evaluate reporting	ATT V, Part 2, 4 and 6., p. V-2	Annually	Complete

Table 11: Status of Measurable Objectives

Program Effectiveness Evaluation (a-d)	Measurable Objective	Goal	Task	Conformed NPDES Permit Section/Page #	Frequency	Status
a	Update Lake Tahoe Pollutant Load Reduction Plan on strategy to achieve pollutant load reduction requirements for second five-year TMDL implementation period (ten-year load reduction milestone)	C. Evaluate Program	Develop plan	ATT IV, Table IV.2, p. IV-20	Year 5	In Progress
c	Vegetation controls (applications of pesticides, herbicides, and fertilizers) program	C. Evaluate Program	Evaluate controls	E.2.h.3)b), p. 44	Annually	Complete
a	Waste Management Plan	A. Develop Program	Develop plan, inventory	E.2.h.3)c)iii), p. 46	Year 1	Complete
d	Waste Management Plan	C. Evaluate Program	Evaluate plan implementation	E.2.h.3)c)iii), p. 46	Annually	Complete
a	Watershed-based treatment BMPs and Maintenance inventory	B. Implement Program	Maintain inventories	E.2.e.2)d), p. 41	Ongoing	Complete
a	Watershed-based Treatment BMPs inventory	A. Develop Program	Develop inventory	E.2.e.2)d), p. 41	Annually	In Progress

Annual Report

On October 1, 2015, Caltrans submitted the Annual Report for the 2014-2015 reporting period. It addressed the Conformed NPDES Permit reporting requirements and Draft SWMP.

This 2015-2016 Annual Report was prepared to meet the Conformed NPDES Permit reporting requirements. Table 1 (on Page 1) briefly summarizes the annual reporting requirements and the Annual Report section in which they are discussed. The Annual Report, and its corresponding appendices and attachments (on the enclosed CD), describes the activities completed by Caltrans and contains the supporting data to meet the annual reporting requirements.

District Work Plans

In October 2014, the Districts submitted District Work Plans (DWPs) describing the stormwater-related activities for the reporting period. During fiscal year 2015-2016, the Districts completed and worked on the activities they had planned for the fiscal year. See Appendix M on the CD for a summary of DWP activities.

The DWPs, published in October 2015, summarize the activities that each of the 12 Caltrans Districts plan to perform during the next reporting period (fiscal year 2016-2017) to comply with the Conformed NPDES Permit and the Draft SWMP.

Total Maximum Daily Load Status Review Report

Caltrans continued its efforts to reduce pollutant discharges to receiving waters through ongoing compliance activities and by implementing a consistent statewide approach to address the Conformed NPDES Permit Attachment IV (TMDL) requirements for the named pollutants. Each year, Caltrans is required to achieve a minimum of 1,650 compliance units (CUs) to meet the TMDL and special requirements identified within Attachment IV. To achieve this, Caltrans has implemented a combination of strategies, including capital construction, improvement of current institutional practices, and participation in regional control efforts. In addition, Caltrans maximized opportunities to incorporate treatment control devices as part of capital roadway improvement projects, or standalone retrofit projects. The TMDL Status Review Report provides the details and accounting of achieving the 1,650 compliance units per year requirement. More information is located on the CD as an attachment.

Non-Approved BMP Implementation

Installation of non-approved BMPs did not occur in the Districts during the reporting period.

Monitoring Results Report

The evaluation of monitoring results is ongoing for the 2015–16 season and will be presented in the Monitoring Results Report. As mentioned in Section 3, Caltrans conducted monitoring at 104 Tier-1 sites, including 86 ASBS sites, and 18 TMDL sites.

ASBS Monitoring

As mentioned in Section 3, Caltrans conducted monitoring at 104 Tier 1 sites—86 ASBS sites and 18 TMDL sites. The purpose of the ASBS monitoring is to assess if Caltrans discharges are maintaining natural ocean water quality. Comparisons between (1) the natural water quality values (also referred to as the 85th percentile threshold values) and Caltrans ocean receiving water values and (2) pre-storm and during-storm ocean receiving water values are used to assess compliance.

The natural water quality values are assigned on a regional basis: Northern California, Central Coast, and Southern California regions. The natural water quality values for the Northern California and Central Coast regions were finalized during the 2015–2016 season. The natural water quality values for the Southern California region had previously been finalized. The table below lists the exceedances identified to date at each ASBS:

Table 12: ASBS Exceedances Identified To Date

ASBS	Constituents that Exceed Natural Water Quality
ASBS 5 (Saunders)	Selenium
ASBS 8 (Redwood)	None
ASBS 9 (Fitzgerald)	TBD ¹
ASBS 15 (Año Nuevo)	TBD ¹
ASBS 34 (Carmel Bay)	TBD ¹
ASBS 24 (Mugu to Latigo)	None
ASBS 33 (Irvine Coast)	Copper, Selenium

Notes:

¹ Caltrans is working with the other Central Coast RMG dischargers on a consistent approach to apply the NWQ values for the determination of exceedances.

Caltrans staff is in discussions with State Water Board staff on the next steps for the ASBS monitoring. Caltrans believes the selenium exceedances are due to elevated, background concentrations.

TMDL Monitoring

Caltrans has prepared a prioritized list of the reaches within the 84 TMDL watersheds where Caltrans is a responsible party. The TMDL Reach Prioritization List is intended to establish the order of BMP implementation in Caltrans’ TMDL watersheds. The Caltrans TMDL Monitoring Program consists of multiple monitoring projects. For the 2015–16 season, there were four projects:

- District 8 Coachella Valley TMDL Monitoring Project
- District 11 Chollas Creek TMDL Monitoring Project
- District 11 Rainbow Creek TMDL Monitoring Project
- Conformed NPDES Permit TMDL Monitoring Project for Tier 1 Sites

The District 11 Chollas Creek TMDL Monitoring Project consists of three sites. Water quality samples were successfully captured at two of the three sites. Diazinon results were non-detect for all monitored events at the two sites. However, the analytical laboratory reporting limits were above acute and chronic TMDL numeric thresholds for several samples. None of the sites had results that were greater than acute and chronic TMDL numeric targets for dissolved copper, dissolved lead, and dissolved zinc during all monitored events. Toxicity was not observed at any site.

The District 11 Rainbow Creek TMDL Monitoring Project consists of one (1) site. Samples from this site did not meet the numeric water quality objectives for total nitrogen and total phosphorus.

Two additional sites were monitored for the Coachella Valley TMDL Project.

The Conformed NPDES Permit TMDL Monitoring Project for Tier 1 Sites consists of 12 sites located in the following TMDLs:

- Chollas Creek Diazinon TMDL
- Chollas Creek Dissolved Metals TMDL
- Coachella Valley Stormwater Channel Bacterial Indicator Monitoring TMDL
- Los Angeles River Metals TMDL
- Los Angeles River Watershed Bacteria TMDL
- Malibu Creek and Lagoon Bacteria TMDL
- Malibu Creek and Lagoon Sedimentation and Nutrients TMDL
- Rainbow Creek Total Nitrogen and Total Phosphorus TMDL
- Sacramento-San Joaquin River Delta Estuary Methyl Mercury TMDL
- San Diego Creek and Newport Bay, including Rhine Channel (Metals (Cu, Pb, and Zn))
- San Diego Creek and Upper Newport Bay (Cadmium)
- San Diego Creek Watershed (Organochlorine Compounds (DDT, Chlordane, PCBs, and Toxaphene))
- San Francisco Bay Mercury TMDL
- San Francisco Bay Polychlorinated Biphenyls (PCBs) TMDL
- San Francisco Bay Area Urban Creeks Diazinon and Pesticides TMDL

The evaluation of TMDL monitoring results for the 2015-2016 season was conducted in Districts 3, 4, 7 and 12.

Caltrans also entered, and continues to enter, into TMDL cooperative agreements throughout the State. For the 2015–2016 season, Caltrans participated in 14 cooperative agreements covering activities in approximately a dozen TMDL watersheds. Some of these cooperative agreements include provisions to perform monitoring activities related to adopted TMDLs. Monitoring under cooperative agreements occurred within at least four TMDL watersheds and within multiple ASBS.

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Abbreviations and Acronyms

A. Catchment Area	EB. Eastbound
A-A-H. Adopt-A-Highway	ED. El Dorado
AASHTO. American Association of State Highway and Transportation Officials	EPA. Environmental Protection Agency
AC. Asphalt Concrete	EXT/OTH. Extended/Other
ACL. Administrative Civil Liability	FPPP. Facility Pollution Prevention Plan
ACOE. Army Corps of Engineers	FRE. Fresno
ADA. Americans with Disabilities Act	FY. Fiscal Year
ALA. Alameda	GLE. Glenn
ALP. Alpine	GP. General Purpose
AMA. Amador	GSRD. Gross Solids Removal Device
APS. Accessible Pedestrian Signals	HA. Hydrologic Area
ASBS. Areas of Special Biological Significance	HMA. Hot Mix Asphalt
ATS. Active Treatment System	HOV. High-Occupancy Vehicle
AWS. Automated Warning System	HQ. Headquarters
BMP. Best Management Practice	HSA. Hydrologic Sub-Area
BR. Bridge	HST. High Speed Train
BUT. Butte	HU. Hydrologic Unit
CAL. Calaveras	HUM. Humboldt
CASQA. California Stormwater Quality Association	I. Percent Imperviousness
CBSM. Community Based Social Marketing	IC. Interchange
CC. Contra Costa	IC/ID. Illegal Connection/Illicit Discharge
CCC. California Conservation Corps	IGP. Industrial General Permit
CCEP. Construction Compliance Evaluation Plan	IMMS. Integrated Maintenance Management System
CD. Compact Disc	IMP. Imperial
CDFW. California Department of Fish and Wildlife	INY. Inyo
CGP. Construction General Permit (Statewide)	IQA. Independent Quality Assurance
CHP. California Highway Patrol	IVM. Integrated Vegetation Management
CIMP. Coordinated Integrated Monitoring Plan	KER. Kern
CIWQS. California Integrated Water Quality System	KIN. Kings
CMS. Changeable Message Sign	KM. Kilometer(s)
CNCRT. Concrete	KP. Kilometer Post
COL. Colusa	LA. Los Angeles
CPS. Countdown Pedestrian Signal	LAK. Lake
CVEF. Commercial Vehicle Enforcement Facility	LAP. Landscape Architecture Program
CVRWQCB. Central Valley Regional Water Quality Control Board	LAS. Lassen
CVWAC. Central Valley Water Awareness Committee	LMS. Learning Management System
DCSWC. District Construction Stormwater Coordinator	LN. Lane
DD. Deputy Director	MAD. Madera
DEA. Caltrans Headquarters Stormwater Division of Environmental Analysis	MBGR. Metal Beam Guard Rail
DI. Drainage Inlet	ME3C. Maintenance Environmental Conserve California Circular
DN. Del Norte	MEN. Mendocino
DNC. District NPDES Coordinator	MER. Merced
DO. Dissolved Oxygen	MNO. Mono
DR. Drive	MOA. Memorandum of Agreement
Drainfall. Seasonal Precipitation	MOD. Modoc
DS. Design Standard	MON. Monterey
DTSC. Department of Toxic Substances Control	MPA. Mariposa
DWP. District Work Plans	MPRO. Maintenance Probation
DWQ. Division of Water Quality	MRN. Marin
EA. Expenditure Authorization	MRP. Monitoring and Reporting Program
	MS4. Municipal Separate Storm Sewer System
	NAL. Numeric Action Level

NAP. Napa
NB. Northbound
NEAT. Natural Environment as Treatment
NEL. Numeric Effluent Limit
NEV. Nevada
NMFS. National Marine Fisheries Service
NNC. Notice of Non-Compliance
NOAA. National Oceanic and Atmospheric Administration
NOD. Notice of Determination
NOV. Notice of Violation
NPDES. National Pollutant Discharge Elimination System
NR. Not Recorded
NSSP. Non-Standard Special Provision
NTU. Nephelometric Turbidity Unit
OAL. Office of Administrative Law
OC. Oral Communication
OCFA. Orange County Fire Authority
OGAC. Open Grade Asphalt Concrete
OH. Overhead
ORA. Orange
ORW. Ocean Receiving Water
OSWMD. Office of Stormwater Management Design
PA/ED. Project Approval/Environmental Document
PCB. Polychlorinated Biphenyl
PCC. Portland Concrete Cement
PEAIP. Program Effectiveness Assessment and Improvement Plan
PID. Project Initiation Document
PLA. Placer
PLU. Plumas
PM. Post Mile
PPDG. Project Planning and Design Guide
PRD. Permit Registration Document
PS&E. Plans, Specifications, and Estimate
PVC. Polyvinyl Chloride
PY. Personnel Years
R_v. Dimensionless Volumetric Runoff Coefficient
RB. Regional Board
RE. Resident Engineer
RHMA. Rubberized Hot Mix Asphalt
RIV. Riverside
RMG. Regional Monitoring Group
ROW. Right of Way
RSP. Rock Slope Protection
RTE. Route
RUSLE2. Revised Universal Soil Loss Equation 2
RWQCB. Regional Water Quality Control Board
SAC. Sacramento
SB. Southbound
SBCAMM. Santa Barbara County Association of MS4 Managers
SBD. San Bernardino
SBR. Santa Barbara
SBT. San Benito
SCEHD. Siskiyou County Environmental Health Department
SCL. Santa Clara

SCR. Santa Cruz
SCRN. Screen
SD. San Diego
SE. Southeast
SEL. Staff Enforcement Letter
SF. San Francisco
SFOBB. San Francisco–Oakland Bay Bridge
SHA. Shasta
SIE. Sierra
SIS. Siskiyou
SJ. San Joaquin
SLO. San Luis Obispo
SM. San Mateo
SMARTS. Storm Water Multiple Application and Report Tracking System
SMR. Self-Monitoring Report
SOL. Solano
SON. Sonoma
SR. State Route
SRRA. Safety Roadside Rest Area
SS. Sanitary Sewer
STA. Station
STAN. Stanislaus
STBMP. Structural Treatment Best Management Practice
SUT. Sutter
SW. Southwest
SWDR. Stormwater Data Report
SWMP. Stormwater Management Plan
SWPPP. Stormwater Pollution Prevention Plan
SWQIC. Storm Water Quality Improvement Committee
SWRCB. State Water Resources Control Board
TDC. Targeted Design Constituent
TEH. Tehama
TELR. Tool to Estimate Load Reductions
TM. Technical Memorandum
TMDL. Total Maximum Daily Load
TMS. Transportation Management System
TRI. Trinity
TRPA. Tahoe Regional Planning Agency
TSS. Total Suspended Solids
TUL. Tulare
TUO. Tuolumne
UNK. Unknown
USACE. US Army Corps of Engineers
USFS. US Forest Service
VC. Verbal Communication
VEN. Ventura
V_{runoff}. Runoff Volume
WB. Westbound
WDR. Waste Discharge Requirement
WMP. Watershed Management Plan
WPC. Water Pollution Control
WPCC. Water Pollution Control Coordinator
WPCP. Water Pollution Control Program
YOL. Yolo
YUB. Yuba

