Caltrans Stormwater Management Program Annual Report






California Department of Transportation Statewide Stormwater Management Program
Annual Report Fiscal Year 2012-2013
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California Department of Transportation
Stormwater Management Program
Annual Report

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California Department of Transportation
Division of Environmental Analysis
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October 1, 2013

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Certification

STORMWATER MANAGEMENT PROGRAM ANNUAL REPORT

October 1, 2013

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)]

Date: September 19, 2013

G. Scott McGowen, P.E.

Chief Environmental Engineer
Division of Environmental Analysis

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- *Year-End Performance Report, A Summary of Construction Compliance Inspections (July 1, 2012 through June 30, 2013),* September 2013 (CTSW-RT-13-299.01.1), which summarizes the results of construction compliance inspections.
- *Year-End Performance Report – A Summary of Maintenance Activity Storm Water Compliance Reviews,* August 2013 (CTSW-RT-13-299.02.3), which summarizes the stormwater compliance reviews of Maintenance activities.
- *Year-End Performance Report, A Summary of Maintenance Facility Storm Water Compliance Reviews,* August 2013 (CTSW-RT-13-299.02.4), which summarizes the stormwater compliance reviews of Maintenance facilities.
- *Deicer Report, Fiscal Year 2012-2013,* September 1, 2013, which describes the use of abrasive and deicing materials, their chemical and physical analyses, and annual results of the abrasive recovery program activities within the Lake Tahoe Hydrologic Unit (H.U.).
- *Treatment BMP Technology Report,* April 2013 (CTSW-RT-13-999), which discusses the approved and unapproved post-construction technologies Caltrans has evaluated.

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 at http://www.dot.ca.gov/hq/env/stormwater/special/newsetup.

Acronyms

ADL	Aerially Deposited Lead
ASBS	Areas of Special Biological Significance
BMP	Best Management Practice
CASQA	California Stormwater Quality Association
CCEP	Construction Compliance Evaluation Plan
C/EPSWAT	Construction/Encroachment Permit Stormwater Advisory Team
CEE	Chief Environmental Engineer
CGP	Construction General Permit (Statewide)
CPESC	Certified Professional in Erosion and Sediment Control
DCSWC	District Construction Stormwater Coordinator
DEA	Department of Environmental Analysis
DOT	Department of Transportation
DTSC	Department of Toxics Substance Control
DWP	District Work Plan
DWQ	Division of Water Quality
EA	Effectiveness Assessment
HQ	Headquarters (California Department of Transportation or Caltrans)
H.U.	Hydrologic Unit
IC/ID	Illicit Connection/Illegal Discharge
IMMS	Integrated Maintenance Management System
IVM	Integrated Vegetation Management
LAP	Landscape Architecture Program
LID	Low Impact Development
MS4	Municipal Separate Storm Sewer System

MSWAT	Maintenance Stormwater Advisory Team
NEMO	Northern and Eastern Mojave
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NSSP	Nonstandard Special Provisions
OSWMD	Office of Stormwater Management Design
PDSWAT	Project Design Stormwater Advisory Team
PPDG	Project Planning and Design Guide
PS&E	Plans, Specifications and Estimate
PY	Personnel Year
QSD	Qualified SWPPP Developer
QSP	Qualified SWPPP Practitioner
RUSLE2	Revised Universal Soil Loss Equation, Version 2
RWQCB	Regional Water Quality Control Board
SHOPP	State Highway Operation and Protection Program
SMARTS	Storm Water Multiple Application and Report Tracking System
SSP	Standard Special Provision
STBMP	Stormwater Treatment BMP
SWAT	Stormwater Advisory Team
SWDR	Stormwater Data Report
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TDC	Targeted Design Constituent
TMDL	Total Maximum Daily Load
U.S. EPA	United States Environmental Protection Agency

VCP	Vegetation Control Plan
WPCP	Water Pollution Control Program
WQMAT	Water Quality Management Assurance Team
WQSWAT	Water Quality Stormwater Advisory Team

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Executive Summary

The California Department of Transportation (Caltrans) Stormwater Management Program Annual Report describes the stormwater management activities Caltrans performed from July 1, 2012 to June 30, 2013 and complies with the reporting requirements in its Statewide National Pollutant Discharge Elimination System (NPDES) Stormwater Permit (Order No. 99-06-DWQ) (1999 Permit) and 2003 Statewide Stormwater Management Plan (2003 SWMP)[1]. On September 19, 2012, the State Water Resources Control Board (SWRCB) approved a new Permit (Order No. 2012-0011-DWQ, NPDES No. CAS000003) (2012 Permit) that has an effective date of July 1, 2013.

Caltrans strives to maintain and improve water quality through implementation of its stormwater program, while fulfilling its mission to improve mobility across California. Water quality protection is a key component of Caltrans' day-to-day business practices throughout the project development, delivery process and maintenance and operations activities.

This report describes specific measures that Caltrans took during the year to maintain and improve runoff water quality, and assesses the effectiveness of each activity performed. Among the water quality control measures used were best management practices (BMPs), training courses and guidance, continuance of the successful "Don't Trash California" (http://www.donttrashcalifornia.info) and Adopt-A-Highway (http://adopt-a-highway.dot.ca.gov) public education campaigns, and public outreach efforts in all twelve Caltrans Districts statewide. In addition, Caltrans continued its research into pollution control technologies that are compatible with the linear nature of highway infrastructure and effectively remove roadway pollutants.

Caltrans' ability to maintain the Stormwater Management Program's capital needs are fiscally constrained due to limited funding and demands placed on the State Highway Operation and Protection Program (SHOPP). In response, Caltrans prioritized essential stormwater management activities according to water quality benefit and cost. Although this presented challenges, the Stormwater Management Program implementation remained effective overall.

Caltrans has adopted the California Stormwater Quality Association® (CASQA) approach to assessing program effectiveness[2], which has six outcome levels. The effectiveness assessment (EA) outcome levels are used to describe and categorize the desired goals and actual results for each program element. To determine the effectiveness of the overall Stormwater Management Program, Caltrans conducted an effectiveness assessment for each program element. This Annual Report demonstrates that Caltrans implemented the Stormwater Management Program effectively (Level 1) and increased awareness of program requirements among targeted audiences (Level 2), resulting in positive behavior change (Level 3) and decreased pollutant loads (Level 4). A summary of key accomplishments and assessment results for fiscal year 2012-2013 follows.

Key Accomplishments

Program Goals

Caltrans has goals for the Maintenance and Training program elements to quantify the progress of implementing these program elements over time. The goals are annually evaluated to ensure that progress is made toward fulfilling stormwater program objectives. Additional goals will likely be established for other aspects of the program when Caltrans' SWMP is revised. Over the reporting period, Caltrans met three of the goals and made progress towards meeting its other goals.

[1] All references made to the SWMP in this Annual Report pertain to the May 2003 edition of the SWMP.
[2] Per the CASQA Municipal Stormwater Program Effectiveness Assessment Guidance published May 2007.

Maintenance

- The Division of Maintenance has an ongoing program to inspect slopes for erosion. The Division has a self-imposed goal to inspect approximately 20% of the slopes in each District annually depending on weather conditions and work load priorities. Statewide, the program inspected 9,678 miles of 44,971 shoulder miles (21.5%).
- The enhanced storm drain inlet inspection and cleaning program has a goal to inspect 20% of the drain inlets in San Diego, Orange, Los Angeles, and Ventura Counties (Districts 11, 12 and 7, respectively). Overall, the enhanced program resulted in 17% of the storm drain inlets inspected. Of those, about 2% met the threshold for cleaning.
- Caltrans has a self-imposed herbicide reduction goal of 80% by 2012 (baseline 1992-1993). The Maintenance Division continued to track total herbicide use to determine progress towards this goal. The Districts were not able to meet this goal due to an increase in shoulder miles, fire protection and noxious weed control mandates, and requests from local cities and counties. However, the Districts have reduced their historical average use by 41% and reduced their use during fiscal year 2012-2013 by 46% compared to the baseline.
- The goal of the Maintenance Division compliance monitoring is to inspect 10 activities and 20% of the facilities statewide each year as part of its self-audit program. Caltrans met the goal for inspecting activities (an average of 22.5 in each District) and maintenance facilities (35%) during the fiscal year.

Training

- The training program has a goal to train 20% of the Caltrans staff involved in stormwater activities during each fiscal year. During the reporting period, two functional units (Construction, and Maintenance) met this goal. A total 38% of the Construction staff and 39% of the Maintenance staff were trained. Therefore, Caltrans met the training goal.
- The training program also has a goal to train the entire stormwater program staff over a five-year term. Since 2003-2004, all of the staff has been trained, some multiple times; thus, this goal was met.

Outcome Level 1 (Program Implementation)

Caltrans conducted outcome level 1 assessments for each major program element. The assessments showed that Caltrans successfully implemented the components of its 2003 SWMP. Some of the key findings include:

- The Districts implemented their District Work Plans (DWPs).
- Caltrans coordinated with local agencies to effectively and consistently communicate stormwater issues, track key technical issues and implement the SWMP and TMDLs. Caltrans staff participated in at least 250 meetings with local agencies.
- Caltrans evaluates the permanent treatment BMPs for all of its projects. Based on the Stormwater Data Reports (SWDR) developed for each improvement project, Caltrans planned for 571 treatment BMPs during this Fiscal Year. These include the construction of biofiltration swales, biofiltration strips, and other BMPs from 73 separate projects.
- The Districts hold pre-construction meetings for all construction projects that require a Stormwater Pollution Prevention Plan (SWPPP). In total, 345 pre-construction meetings were held this FY.
- Caltrans inspected over 69,911 out of 396,525 drain inlets (18%) throughout the state as part of its baseline drainage facility inspection and cleaning program. Of those inspected, Caltrans cleaned 55,064 (79% of those inspected; 14% of the total drain inlets).

- Caltrans implemented the enhanced storm drain inlet inspection and cleaning program in Districts 7, 11, and 12. Overall, this program resulted in 18% of the storm drain inlets being inspected in these Districts and 2% cleaned.
- Caltrans inspected 33% of its 418 maintenance facilities statewide during the Maintenance Self-Audit.
- Caltrans trained approximately 3,405 employees, providing overall and task-level training for the planning and design, construction, and maintenance functional units.
- Caltrans implemented a focused "Don't Trash California" campaign; the stormwater public education program fostered public participation and used proven strategies for implementation.
- Headquarters and the Districts were involved in 84 total maximum daily loads (TMDLs) statewide by conducting water quality studies and collaborating with other stakeholders. In addition, the Districts implemented compliance measures for 48 TMDLs by conducting monitoring, inspections, and implementing projects.

Outcome Level 2 (Knowledge and Awareness)

Caltrans conducted outcome level 2 assessments for Construction, as well as Training and Public Education. Key findings include:

- Caltrans staff is aware of the requirements of the construction stormwater program and developed the appropriate plans to address them.

Outcome Level 3 (Behavior Change)

Caltrans conducted outcome level 3 assessments for Design, Construction, and Maintenance. The assessments showed that several of the programs prompted significant behavior change (e.g., increased implementation of BMPs, decreased number of problems reported, etc.). Some key findings:

- The overall direction of stormwater management compliance and BMP implementation is increasing on a year over year basis. Caltrans has effectively decreased the number of construction sites with major or critical deficiencies, indicating increased awareness and behavior change.
- The number of facilities and activities for maintenance that are in compliance is high. The Maintenance Self-Audit results indicate that the necessary BMPs have been effectively implemented and maintained.

Outcome Level 4 (Load Reduction)

Caltrans conducted outcome level 4 assessments for Maintenance, Training and Public Education, and Location Specific Requirements, revealing a significant decrease in pollutant loadings to the storm drain system. Some of the key findings include:

- Caltrans decreased potential pollutant loadings to the storm drain system and local waterways as part of its landscaping program. Caltrans applied 181,747 pounds of herbicide active ingredient, reducing the total amount of herbicides applied by about 46% during fiscal year 2012-2013 as compared to baseline year 1992-1993. Since 2002-2003, Caltrans has reduced the total amount of herbicides applied historically by an average of 41% relative to the 1992-1993 baseline.
- Adopt-A-Highway program participants removed 133,903 bags of trash yielding 19,129 cubic yards of materials from the environment.

- Caltrans continued its efforts to meet TMDL compliance requirements by implementing various TMDL-specific BMPs, such as source control, structural and non-structural BMPs, water quality monitoring, Public Education/Participation, and other activities to achieve compliance. Caltrans has installed over 1,600 structural BMPs statewide in 30 TMDL watersheds within its jurisdiction, such as Biofiltration Strips, Biofiltration Swales, Detention Basins, Infiltration Basins, Infiltration Trenches, GSRDs, Media Filters, Wet Basins, and Traction Sand Traps, amongst others.
- Caltrans used non-structural BMPs, such as sweeping and cleaning of sand traps and catch basins, to recapture traction sand and deicing salt, decreasing the amount of material that could potentially end up in the storm drain system and/or local waterways.

Potential Program Modifications

Caltrans evaluates the results of the effectiveness assessments, self-audits, and the experience staff has had in implementing the program to determine whether any program modifications are necessary.

The United States Environmental Protection Agency (U.S. EPA) Region 9 audited Caltrans' Stormwater Management Program in October 2009. Although the physical audit was only performed on Headquarters and Districts 1 through 4, U.S. EPA deemed the audit was representative of the statewide program. The Compliance Audit Report noted findings that recognized certain positive examples that may serve as "model" practices and noted where substantial improvements were needed. The U.S. EPA issued the Findings of Violation and Order for Compliance (Administrative Order) to Caltrans requesting substantial changes to its program in October 2010. In response, Caltrans prepared a revised 2003 SWMP (CTSW-RT-11-286.19.1) as required by the Administrative Order and submitted it to U.S. EPA on March 1, 2011 with a subsequent revision submitted in July 2012.

Caltrans received a renewal of its statewide NPDES permit on September 19, 2012. This Permit became effective in July 2013. Caltrans will begin revising its program in the upcoming fiscal year to accommodate the requirements of the new Permit, and will modify the measureable goals and reporting process accordingly.

Caltrans identified potential program modifications by major program element. The identified program modifications are in Section 10 of the Annual Report.

1 Background and Purpose

This document, the *Stormwater Management Program Annual Report* (CTSW-RT-13-286.11.2) (Annual Report) summarizes stormwater management activities conducted by the California Department of Transportation (Caltrans) during fiscal year July 1, 2012 to June 30, 2013 (reporting period). These activities protected stormwater quality while maintaining motorist and worker safety and meeting Caltrans' mission of improving mobility across California. Due to diverse geographic, climatic, population, and regulatory conditions, Caltrans uses a variety of strategies to control the discharge of pollutants from roadways and other transportation facilities, while promoting consistency statewide when possible. The Annual Report describes specific activities completed by Caltrans during the reporting period to implement those strategies.

The Annual Report complies with the reporting requirements described in Caltrans' Statewide National Pollutant Discharge Elimination System (NPDES) Stormwater Permit (Order No. 99-06-DWQ) (1999 Permit) and Caltrans' 2003 Statewide Stormwater Management Plan (2003 SWMP). All references made to the SWMP in this report, unless stated otherwise, pertain to the May 2003 SWMP (CTSW-RT-02-008). On September 19, 2012, the State Water Resources Control Board (SWRCB) approved a new Permit (Order No. 2012-0011-DWQ, NPDES No. CAS000003) (2012 Permit) that has an effective date of July 1, 2013. The U.S. EPA issued the Findings of Violation and Order for Compliance (Administrative Order) to Caltrans requiring substantial changes to its program in October 2010. In response to the Administrative Order, Caltrans prepared a revised 2003 SWMP (CTSW-RT-11-286.19.1) and submitted it to U.S. EPA on March 1, 2011 with a subsequent revision submitted in July 2012. However, this revised SWMP has not been fully implemented because it has not yet been approved by the U.S. EPA.

In general, this Annual Report is organized by functional unit, including Environmental Analysis (Program Management), Design, Construction, and Maintenance. The activities associated with the Monitoring and Research Program, Training and Public Education, and Location-Specific Requirements are discussed in separate 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 attached compact disc (CD).

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2 Status of Permit and SWMP Requirements

Table 1 lists the Permit and SWMP reporting requirements for the 2012-2013 reporting period (1999 Permit and 2003 SWMP), and their status at the conclusion of the reporting year.

Table 1: Annual Reporting Information

Reporting Requirement Description	Fiscal Year Accomplishments	2003 SWMP Section	1999 Permit Provision Number
Environmental Analysis Program Development and Implementation			
Documentation that describes and justifies the proposed SWMP changes (Revised SWMP Status)	Completed	1.4	E.1
Fiscal Analysis and provide fiscal constraints encountered in implementing the SWMP	Completed	2.2	G.3.b
Communication between the Districts and Headquarters functional unit programs; (SWAT Meetings)	15 SWAT meetings held	2.2.7, 4.3.1, 4.5, 5.3, 8.3.1, 8.5	None
Describe and summarize the activities conducted by Headquarters to implement the Municipal Coordination Plan	At least 257 meetings were attended to coordinate with municipal stormwater permittees	2.3	G.1.b
Self-Audit (Program Effectiveness)	Completed	8.0	K.3 (d)
Summary of Caltrans Communications and Plans for Program Improvement	Completed	8.5.2	None
Design			
DTSC lead variance	Twelve Districts reused soil containing lead	4.3.4	H.9
Employee Training	82 employees trained	6.2	J.1.b
Self-Audit (Design Compliance Monitoring)	186 out of 694 SWDRs required a SWPPP, 364 Treatment BMPs were planned for future implementation	8.4.3	None
Construction			
Employee Training	1,150 employees trained	6.2	J.1.b
Contractor Training	Completed	6.3	J.2.b
Self-Audit (Construction)	• 88% of projects statewide were in compliance with the permits or had minor documentation deficiencies • 80% of projects statewide had adequate BMPs or had minor BMP deficiencies • 72% of evaluated BMPs statewide were effective	8.4.1	K.3 (b)
Construction Enforcement Actions Response	• 16 of the 22 enforcement actions issued for construction activities were resolved • 6 are pending resolution	9.4	C.2.3

Table 1: Annual Reporting Information

Reporting Requirement Description	Fiscal Year Accomplishments	2003 SWMP Section	1999 Permit Provision Number
Maintenance			
IC/ ID Program Report	13 of 32 IC/IDs were resolved, and 16 are in the process of being resolved	4.6, 5.3.2.3	I.2.b (4), B.93
Discharge Categories	No changes or revisions were made	4.7.1, 5.4.3	B.4, B.9
Roadside Slope Inspections and Actions Taken	• Inspected over 9,678 shoulder miles • Identified 378 Minor and 55 Major repairs needed • Logged over 1.6 million miles of storm patrol highway inspections • Completed 843 minor slope/erosion control repairs • Completed 77 major storm repairs • Responded to 697 storm related public complaints	5.3.2	I.1.a (3)
Baseline inspection and cleaning activities by section of highway	• Inspected 69,574 drain inlets/culverts statewide • Cleaned 55,064 drain inlets/culverts statewide	5.3.2.1	None
Enhanced Storm drain inlet cleaning activities by Section of Highway – Metropolitan areas of Los Angeles, San Diego, Ventura, and Orange Counties	• Inspected 11,660 drain inlets • Cleaned 1,577 drain inlets	5.3.2.2	None
Annual submittal of Vegetation Control Plan (VCP)	Completed	5.3.4	I.1.b (4)
Herbicide Usage	• Reduced the application of herbicides by 154,988 pounds (46%) compared to the 1992-1993 baseline	5.3.4	None
Chemical use for vegetative control measures on vegetated treatment BMPs	None were applied	5.5.1	None
Employee Training	2,160 employees trained	6.2	J.1.b

[3] List of Exempt Discharges and IC/ID tracking contribute to Provision B.9 (Non-Stormwater Report)

Table 1: Annual Reporting Information

Reporting Requirement Description	Fiscal Year Accomplishments	2003 SWMP Section	1999 Permit Provision Number
Self-Audit (Maintenance)	Facilities • 151 facilities inspected statewide • 14.6% of facilities achieved 1 rating (no deficiencies) and 84.1% of facilities achieved 2 rating (minor deficiencies) • 38.4% of facilities received an A rating (highly effective) and 60.3% of facilities received a B rating (moderately effective) Activities • 252 activities rated statewide • 100% of activities achieved a 1 rating (no deficiencies) and 2 rating (minor deficiencies) • 81% of activities received an A rating (highly effective)	8.4.2	K.3 (c)
Right of Way			
Summarize the review and revision of existing airspace leases	• 252 new and existing airspace leases statewide • 382 new and renewed leases with stormwater language	2.2.10.2	None
Encroachment Permits			
Employee Training	• One training provided to 10employees about drainage law	6.2	J.1.b
Districts 1 – 12			
Regional (now District) Work Plans	Completed	2.2 and 9.2	E.2
Describe and summarize the activities conducted by the Districts to implement the Municipal Coordination Plans	Districts coordinated with local agencies during at least 257 meetings	2.3	G.1.b
Notify Regional Water Quality Control Boards (RWQCBs) of Pre-Construction Meetings	• All Districts notified the RWQCBs of pre-construction meetings • 16 of 345 meetings were attended by RWQCB staff	6.3.1	None
Public Education Progress Report (Including – Results of Partnership Opportunities, List of Informal Brochures, Storm Drain Stenciling)	All Districts educated the public	6.4	J.3.c
TMDL coordination efforts	• Caltrans coordinated with other agencies on 48 approved TMDLs statewide • Caltrans was involved in the development of 84 TMDLs statewide	10.1	None
Deicer Effectiveness Monitoring	Completed	9.3, 10.2	L.10 (b)
Solicit Consultation with RWQCB at 50% Design Review for Lake Tahoe, Mammoth, and Truckee H.U. in Lahontan Region	Completed	9.6, 10	L.8 (a)
Lahontan (Lake Tahoe Unit) – Submit SWPPP or WPCP at least 30 days before Construction	Completed	9.6, 10	L.8 (b)

Table 2 lists the Permit and SWMP reporting requirements effective as of the 2012-2013 reporting period (1999 Permit and 2003 SWMP), and their location in the Annual Report.

Table 2: Caltrans Annual Reporting Requirements in 1999 Permit (From Order 99-06–DWQ)

1999 Permit Section	Requirements	Location in the Annual Report
Fact Sheet, Annual Report Pg. 9	This permit requires Caltrans to submit an Annual Report each April. The Annual Report will contain	This report
	(1) an evaluation of the previous year's program;	• AR Section 10 • AR Appendix G (on CD)
	(2) the results of the program audit, including information about compliance with the construction requirements and maintenance facility requirements;	AR Attachments (on CD): • *Year-End Performance Report, A Summary of Construction Compliance Inspections* • *Year-End Performance Report, A Summary of Maintenance Activity Storm Water Compliance Reviews* • *Year-End Performance Report, A Summary of Maintenance Facility Storm Water Compliance Reviews* • AR Section 5 – Construction Self-Audit Compliance Monitoring section • AR Section 6 – Maintenance Self-Audit Compliance Monitoring section • AR Appendix C (on CD) – Construction Self-Audit Results section • Appendix D (on CD) – Maintenance Self-Audit Results section
	(3) a vegetation management report;	• AR Section 6 – Herbicide Use section • AR Appendix D (on CD) – Herbicide Use section • AR Attachment (on CD) – Statewide Herbicide Use
	(4) an IC/ID report;	• AR Section 6 – Illicit Connections/Illegal Discharges section • AR Appendix D (on CD) – Illicit Connections/Illegal Discharges
	(5) a nonstorm water discharge report;	• AR Section 6 – Illicit Connections/Illegal Discharges, and Exempt and Conditionally Exempt Non-Stormwater Discharges sections • AR Appendix D (on CD) – Illicit Connections/Illegal Discharges section
	(6) an analysis of the legal authority;	AR Section 3
	(7) an analysis of the fiscal resources for the coming year;	• AR Section 3 – Fiscal Analysis section • AR Appendix A (on CD) – Fiscal Analysis section

Table 2: Caltrans Annual Reporting Requirements in 1999 Permit (From Order 99-06–DWQ)

1999 Permit Section	Requirements	Location in the Annual Report
	(8) a report on the training and public education program, (Appendix E); and	• AR Section 8 – Training and Public Education Activities sections • AR Appendix E (on CD) – Training and Public Education Activities sections
	(9) reports on the regional requirements; and	AR Section 9
	The Annual Report must also contain a monitoring report and a monitoring plan for the upcoming year and workplans for each of the regions.	AR Section 7
B.4 Pg. 9	Caltrans shall identify and describe the categories of discharges 3.a through 3.l that are to be exempt from Prohibition B.1 in the Annual Report. For each such category, Caltrans shall identify and describe as necessary and appropriate to the category either documentation that the discharges are not sources of pollutants to receiving waters or circumstances in which they are not found to be sources of pollutants to receiving waters. Otherwise, Caltrans shall describe (a) control measures to reduce pollutants to the maximum extent practicable and minimize the adverse impacts of such sources, (b) procedures and Performance Standards for their implementation, (c) procedures for notifying the SWRCB of these discharges, and (d) procedures for monitoring and record management. Such submissions shall be deemed to be incorporated into the SWMP unless disapproved by the Executive Director. If necessary, on case-by-case basis, Caltrans shall prohibit any individual or class of nonstorm water discharge(s) listed above that is determined by Caltrans to be a significant source of pollutants to waters of the United States.	AR Section 6 – Illicit Connections/Illegal Discharges, and Exempt and Conditionally Exempt Non-Stormwater Discharges sections
B.9 Pg. 10	Caltrans shall submit a ***COMPREHENSIVE NONSTORM WATER REPORT*** each year as part of the Annual Report. This report shall include the analysis of each category of discharge, and the BMPs to be implemented for each category. Caltrans must also periodically evaluate the effectiveness of the modified BMPs by examining illicit discharge/illegal dumping investigation results and take any further action necessary to reduce such pollutant concentrations.	AR Appendix D (on CD) – Tables D-9 and D-10 (in Fiscal Year 2010-2011 AR), and Tables D-7 and D-8 (in Fiscal Year 2011-2012 AR)
E.1 Pg. 13	The SWMP shall be reviewed annually and modified as necessary to maintain an effective program. The SWMP shall reflect the principles that storm water management is to be a year-round proactive program to eliminate or control pollutants at their source or to reduce them from the discharge by either structural or nonstructural means when elimination at the source is not possible. The ***REVISED SWMP*** shall be submitted to the SWRCB's Executive Director by April 1 as part of the Annual Report (40 CFR 122.26 (d)(vi)) each year. In accordance with NPDES Permit regulations, significant changes to the program will be taken to the SWRCB for approval. Caltrans shall change all other appropriate manuals to reflect modifications to the SWMP.	• AR Section 3 – Revised SWMP Status • AR Section 10 – Potential Program Modifications

Table 2: Caltrans Annual Reporting Requirements in 1999 Permit (From Order 99-06–DWQ)

1999 Permit Section	Requirements	Location in the Annual Report
E.2 Pgs. 13-14	In addition to the revised SWMP, Caltrans shall submit ***REGIONAL WORKPLANS*** (workplans) each year for each region by April 1 as part of the Annual Report each year. The workplans will be forwarded to the appropriate RWQCB's Executive Officer for approval. The workplan shall cover all activities to be undertaken by the Districts in the region and shall address the water bodies in the region, the impact of the Caltrans discharge on the water body and the BMPs and monitoring program to be implemented in the region, and changes that are to be made to the previous year's program. The workplan shall also include identification of high-risk areas, such as locations where spills from Caltrans owned rights-of-way, activities or facilities can discharge directly to municipal or domestic water supply reservoirs or ground water percolation facilities, and consideration of appropriate spill containment and spill prevention control measures for these new areas. Because the BMP programs and monitoring program are described in other documents, this workplan shall describe how the various programs will be implemented in the Region.	• AR Section 3 – Regional Work Plans (District Work Plans) section • AR Appendix A (on CD) – Regional (District) Work Plans Activities section
F.3 Pgs. 14-15	The SWMP shall be updated each year as part of the Annual Report and shall contain the following elements: a. A listing of appropriate control measures, including design, operation, and maintenance specifications, referenced by facility type, location, and other suitable factors. (Suitable factors may include prevention and control of erosion and sedimentation, source control of potential pollutants, control of pathogens, control and treatment of runoff, spill containment, and protection of wetlands and water quality resources); b. An effective operation and maintenance program for BMPs; c. Consideration of pollution prevention and pollutant removal factors, including spill containment and corresponding operation and maintenance requirements in the design of facility drainage structures and other features; d. Development and implementation of policies, programs, procedures, and standards to improve pollutant removal and water quality benefits of landscape design after construction is completed; e. A description of how these BMPs will be developed, constructed and maintained by the Environmental Engineering, Project Development. Construction, and Maintenance Branches and other affected functional offices and branches; f. A ***BMP SELECTION REPORT*** which presents the revisions to the BMP programs (including both structural and nonstructural BMP candidates) to be implemented in the coming year along with the process used for evaluating the revised BMPs. The process shall include a mechanism for public input and review during the BMP selection process; and g. g. A mechanism for evaluating new treatment and control technologies and for considering these technologies as part of the BMP programs. ***A NEW TECHNOLOGY REPORT*** is required as part of the Annual Report each year	• AR Section 3 – Revised SWMP Status section • AR Section 10 – Potential Program Modifications section • 2003 SWMP Appendix B – BMP Evaluation and Approval Process

Table 2: Caltrans Annual Reporting Requirements in 1999 Permit (From Order 99-06–DWQ)

1999 Permit Section	Requirements	Location in the Annual Report
G.1.b Pg. 16	Caltrans shall submit a ***MUNICIPAL COORDINATION PLAN*** to the SWRCB Executive Director within 90 days of the adoption of the Permit for approval. Caltrans shall report on the progress of this interagency cooperation in each Annual Report.	• AR Section 3 – Municipal Coordination Plan Activities section • AR Appendix A (on CD) – Municipal Coordination Plan Activities section
I.2.b.(4) Pg. 22	Caltrans shall develop a procedure to track all reports of IC/IDs and the action taken on them. A ***REPORT ON THE IC/ID PROGRAM*** will be required each year as part of the Annual Report.	• AR Section 6 – Illicit Connections/Illegal Discharges section • AR Appendix D (on CD) – Illicit Connections/Illegal Discharges section
J.3.c. Pg. 23	Upon approval of the submitted plan, Caltrans shall implement the plan to develop a Public Education Program. The ***PUBLIC EDUCATION PROGRAM PROGRESS REPORT*** on the progress made on the public education program development will be made as part of the Annual Report each year. A proposed ***PUBLIC EDUCATION PROGRAM*** will be submitted with the Annual Report in 2001. The ***PUBLIC EDUCATION PROGRAM*** shall be submitted with the Annual Report in 2002. Caltrans will begin implementation of the plan in April 2002.	• AR Section 8 – Training, and Public Education Activities sections • AR Appendix E (on CD) – Training, and Public Education Activities sections
K.2. Pg. 24	... The ***MONITORING STRATEGY REPORT UPDATE*** will be updated annually based on the results of previous years' monitoring and in response to the needs of the program and the funding available. The updated Monitoring Strategy Report will be submitted as part of each Annual Report.	AR Section 7
K.2.a. Pg. 24	Caltrans shall submit to the SWRCB by April 1, 2000 and each April 1 thereafter a ***MONITORING AND REPORTING PROGRAM*** acceptable to the Executive Director that shall identify and justify sampling locations, frequencies, and methods, suite of pollutants to be analyzed, analytical methods, and quality assurance procedures.	AR Section 7
K.3.d. Pg. 25	Caltrans shall perform a self-audit of the storm water program each year to determine (1) if the program is being implemented as required by this NPDES Permit, the SWMP, and the guidance documents prepared by Caltrans; and (2) if the program specified by the SWMP and the guidance documents is adequate. The results of this ***SELF-AUDIT*** shall be submitted by April 1, 2000 and as a part of the Annual Report thereafter to the SWRCB Executive Director. Caltrans may use any method to evaluate program effectiveness and shall identify the direct and indirect measurements that will be used to track the long-term effectiveness. An outline of the proposed audit is to be submitted by February 1 of each year so that the SWRCB and RWQCBs can evaluate the measures to be used.	AR Attachments (on CD): • *Year-End Performance Report, A Summary of Construction Compliance Inspections* • *Year-End Performance Report, A Summary of Maintenance Activity Storm Water Compliance Reviews* • *Year-End Performance Report, A Summary of Maintenance Facility Storm Water Compliance Reviews* • AR Section 5 – Construction Self-Audit Compliance Monitoring section • AR Section 6 – Maintenance Self-Audit Compliance Monitoring section • AR Appendix C (on CD) – Construction Self-Audit Results section • AR Appendix D (on CD) – Maintenance Self-Audit Results section

Table 2: Caltrans Annual Reporting Requirements in 1999 Permit (From Order 99-06–DWQ)

1999 Permit Section	Requirements	Location in the Annual Report
L.10.b. Pg. 30	A report shall be submitted, as part of the Annual Report each year describing the results of the abrasives and deicing materials analysis and the annual results of the above-referenced monitoring program involving BMP effectiveness and surface water impacts. The report shall also include a summary of Caltrans CIP activities, including progress on implementing the CIP, and project effectiveness. Project effectiveness has historically been documented with photographs including pre-project photographs, photographs taken during the spring following project completion, and photographs taken two years following project completion. If photographs or project site inspections indicate that the project is not fully meeting project objectives, Caltrans shall include within the report a corrective action plan and a schedule that will meet the project objectives. (***DEICER REPORT***)	• AR Section 9 – Tahoe Basin Deicer Effectiveness Monitoring • AR Attachment (on CD) – Deicer Report

3 Program Management

Revised SWMP Status

All references made to the SWMP in this report, unless stated otherwise, pertain to the May 2003 SWMP (CTSW-RT-02-008). In October 2009, U.S. EPA audited Caltrans' Stormwater Management Program (Districts 1–4) to assess compliance with its 1999 Permit requirements. In October 2010, U.S. EPA issued a letter and Findings of Violation and Order for Compliance (Administrative Order) to Caltrans based on the audit findings. In the Administrative Order, U.S. EPA requested that Caltrans make changes to its Stormwater Management Program, including a revised SWMP. Over the next several months, Caltrans worked with U.S. EPA staff to revise and refine the SWMP to the Administrative Order specifications. Caltrans drafted several revisions to the SWMP, the last of which was submitted to U.S. EPA July 2012. U.S. EPA's response to that submittal will be discussed in the next Annual Report.

Municipal Coordination Plan Activities

The Districts participated in municipal coordination activities by attending meetings, taking part in special studies, and collaborating with local agencies (current Permit Provision G.1.b and SWMP Section 2.3). District staff attended at least 257 meetings statewide with municipal stormwater permittees to coordinate the implementation of Total Maximum Daily Loads (TMDLs), public education and outreach, regional planning, and other related activities.

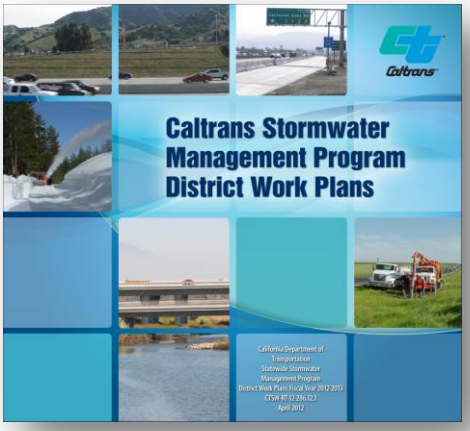
Fiscal Analysis

Total expenditures for stormwater activities were $84,544,951, with $30,717,092 in Personal Services and $53,827,859 in Operating Expenses, and 521.04 Personnel Years (PYs) logged during the reporting period. The number of best management practices (BMPs) installed and BMPs requiring maintenance is increasing. Caltrans is currently reevaluating the required resources for BMP O&M, and will adjust the budget accordingly for the upcoming fiscal year. Table A-14 in Appendix A summarizes the statewide Stormwater District and Division Expenditures during fiscal year 2012-2013.

Regional Work Plans (District Work Plans)

In April 2012, the Districts submitted DWPs describing the activities for the reporting period. During fiscal year 2012-2013, the Districts completed and worked on the activities they had planned for the fiscal year. See Appendix A on the CD for a summary of DWP activities.

The District Work Plans (DWPs), published in October 2013, summarize the activities that each of the 12 Caltrans Districts plan to perform during the following reporting period (fiscal year 2014-2015) to comply with the 2012 Permit. At the time these DWPs were prepared, Caltrans was in the early development phase of a draft SWMP to comply with the 2012 Permit; as such, the DWPs were developed based on Caltrans' approved 2003 SWMP.



District Work Plans Cover

Communication between Headquarters and the Districts

Caltrans Headquarters communicates and collaborates with the Districts on activities to improve the process of managing stormwater through its Stormwater Advisory Teams (SWATs). The HQ Stormwater Management Team, led by the Chief Environmental Engineer (CEE), communicates directly with each SWAT (Water Quality, Project Design, Construction/Encroachment Permits, and Maintenance). Regularly scheduled SWAT meetings were facilitated across all functional units. The meeting facilitator summarized meeting proceedings, distributed meeting notes, and tracked the status and completion of assigned action items.

Following is a brief list of significant issues discussed and resolved in the 15 SWAT meetings held during the fiscal year.

Maintenance SWAT (MSWAT)

- Assisted with Northern and Eastern Mojave (NEMO) Planning Effort training delivery, update and review
- Resolved errors in the Facility Pollution Prevention Plan (FPPP) template and in prepared FPPPs
- Updated the Maintenance Staff Guide to reflect approval of weighted fiber rolls as a BMP
- Posted the Interim Maintenance Staff Guide to the Caltrans Division of Maintenance Stormwater website
- Developed a list of materials that could be stored outdoors without requiring a cover
- Distributed a draft California Highway Patrol (CHP) facility stormwater training module to the District Coordinators for review
- Reviewed the Integrated Maintenance Management System (IMMS) special designation for CHP facilities (i.e., MSWCVEF) to determine whether there was a corresponding special code for Enterprise Financial Infrastructure (EFIS)
- Reviewed IMMS information on drain cleaning to determine what additional information is needed for Annual Report tracking
- Reviewed the Construction Stormwater Coordinator's Guidance Manual and prepared a draft outline for a Maintenance Stormwater Coordinator's (MSWC) Manual
- Developed guidance for purchasing stormwater items for Equipment Shops, e.g., secondary containment, absorbents, and clarifier replacement materials
- Reported to the MSWAT the status of the 90% Construction/Maintenance Stormwater Treatment BMP walkthrough form and distributed the District 5 draft copy to the District MSWCs

Construction/Encroachment Permits SWAT (C/EPSWAT)

- Resolved inconsistencies between the *Project Planning and Design Guide* (PPDG) and the 07-346 Standard Special Provision (SSP) on Hazardous Waste handling
- Reviewed the Construction General Permit (CGP) amendment
- Developed a team of volunteers to develop language for the Concrete Washout SSP
- Reviewed a list of recommendations for combining, modifying, or eliminating stormwater reporting forms
- Discussed with Encroachment Permits Stormwater Coordinators applicability and review method for a CASQA template SWPPP for Encroachment Permits projects
- Modified the Water Pollution Control Plan (WPCP) template to allow for the reference of 401 Water Quality Certifications

- Modify language on the Caltrans Division of Construction Stormwater website to clarify that, at this time, the Water Pollution Control Managers (WPCMs) training requirements are satisfied by being a state certified Qualified SWPPP Developer (QSD) for SWPPP projects and a certified Qualified SWPPP Practitioner (QSP) for WPCP projects
- Prepared a cost breakdown for various options to conduct Construction Compliance Evaluation Plan (CCEP) workshops with the District Construction Stormwater Coordinators (DCSWCs)
- Compiled and distributed a list of all of the possible questions that may be asked in a CCEP review.
- Formed a group to discuss and make recommendations as to whether there is a need for a Caltrans Linear Utility Projects (LUP) SWPPP Template
- Distributed the Maintenance Spill Response protocol to the DCSWCs
- Modified the Incident Reporting Form
- Commented on the proposed e-Permits online application form
- Researched whether the Regional Boards have the authority to hold up issuing a Water Discharger Identification (WDID) for 30 days while they review the project SWPPP
- Forward CCEP v2012 "Release Notes" for review and distribution to the DCSWCs
- Developed proposed Standard Specification language and SWPPP/WPCP Manual language that would require the contractor to make regular updates to their BMP implementation schedule in the SWPPP

Project Design SWAT (PDSWAT)

- Discussed with Design and Construction the Notice of Termination (NOT) Guidance
- Clarified with the Division of Environmental Analysis (DEA) and the Headquarters Legal Division whether the Regional Boards can hold up construction starts for SWPPP review
- Shared the Infiltration Tool, the T-1 Checklist tool and the Users Manuals with the Districts
- Discussed the process of insuring that Post Construction treatment BMPs are installed as designed
- Distributed instructions for how to delete, or not print "Instructions" in the SWPPP/WPCP templates
- Reviewed the CSMP Guidance Manual for consistency with the PPDG
- Developed an example of how incorporating compost will be shown in the plans/specs and how this would be used for incorporation into the infiltration tool
- Developed and posted a new version of the Design Guidance for Final Soil Stabilization to assist Construction with NOTs.

Water Quality SWAT (WQSWAT)

- Distributed an updated schedule for QSD training
- Prepared a Statewide Policy on how Demolition Projects and Utility relocation projects will be administered when they fall under a "Common Plan of Development" with a construction project, Specific issues addressed included:
    - Who will file the Notice of Intent (NOI)?
    - Who will do the RLA and prepare the SWPPP, the QSD?
    - Who will be the Legally Responsible Person (LRP)?
    - Who will be designated as the QSP?
    - Will the NOTs need to be filed when each segment is completed?
- Reviewed and revised the boilerplate contract language for Permit compliance
- Discussed stormwater compliance/Stormwater Multiple Application and Report Tracking System (SMARTS) training
- DEA has been working with Right of Way to improve the boilerplate language on the demolition contracts. HQ Design has been asked to assist with the estimating costs
- Revised Right of Way demolition contract language
- Prepared a Landscape Architecture Issue paper on seed testing options

- Distributed a list of acronyms for the Enforcement Action Charts
- Researched 401 application issues regarding construction manager signatures on applications and the inconsistencies between applications and 401 Certifications
- Resolved issues in District 4 with Construction Engineers signing the 401 Certifications
- Requested copies of recent audit reports from U.S. EPA
- Distributed "SWMP Update" PowerPoint presentation delivered at a WQSWAT to the meeting participants
- Followed up with the HQ Hazardous Waste Management Program regarding the Asphalt Concrete Grinding study

Airspace Leases

Airspace leases are legal documents defining areas within operating state highway right-of-way that can safely accommodate privately managed uses, and they outline terms agreed upon at the time of their execution. As required by the SWMP, Caltrans summarized its progress on the review and revision of existing airspace leases. There were approximately 252 new and renewed leases with stormwater language as of June 30, 2012 out of 382 airspace leases statewide.

Coordination with Statewide and National Associations

Caltrans actively participated as a member of the California Stormwater Quality Association® (CASQA) by serving on its Board of Directors, discussing 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 a public education and outreach effort.

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, Scott McGowen, chaired the AASHTO Stormwater Working Group and participated in a webinar held on October 12, 2012 that discussed the highlights of discussions from the 2012 AASHTO National Stormwater Practitioners Meeting (June 18-21, 2012 in Raleigh, North Carolina). Topics from the Practitioner's Meeting included:

- NPDES permitting trends and new permit activities;
- Audits conducted by the states or U.S. EPA, and how to prepare for a Department of Transportation (DOT) audit;
- Stormwater asset management programs;
- Contemporary post-construction stormwater controls;
- Effectively focused construction stormwater management; and
- Using the watershed-based approach to stormwater management.

Caltrans also participated in a monthly AASHTO Stormwater Community of Practice nation-wide discussion with other departments of transportation on relevant topics, such as water quality monitoring and watershed-based stormwater management.

Legal Authority

The 1999 Permit requires Caltrans to revisit any changes in its legal authority to ensure compliance with its provisions and with the 2003 SWMP. The California Streets and Highway Code grants Caltrans this authority. There have been no changes in Caltrans' legal authority regarding the protection of stormwater.

4 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 was reused in accordance with a variance issued by the DTSC (SWMP Section 4.3.4, Re-use of Lead Contaminated Soils) during the fiscal year. If suitable locations for reuse 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 RWQCB at each instance invoking the variance and kept records for each variance in a statewide database.

Design Consultation in the Lahontan Region

Caltrans participated in the early project design consultation process for all Lahontan Region projects per Provision L.8.a of the 1999 Permit within the Lake Tahoe and Truckee River Hydrologic Units (H.U.). Caltrans solicited RWQCB staff reviews when projects were at the 50 percent design level and collaborated during the remainder of the design development and environmental review process.

Design Best Management Practices

During the reporting period, the Office of Stormwater Management Design (OSWMD) developed, evaluated, and enhanced guidance documents and tools. The Design Stormwater Program achieved the following during the fiscal year:

- Updated the stand-alone estimating guidance to address the new CGP requirements and assist project engineers developing stormwater estimates. This guidance includes revisions to existing stormwater elements and information for the new stormwater separate bid line items.
- Continued to finalize an infiltration tool to assist project engineers with the evaluation of earthen type BMPs commonly referred to as Low Impact Development or LID BMPs. This tool will be used as the basis for determining how much infiltration can be accounted for within a permanent BMP strategy and will be used for documenting Caltrans NPDES permit requirements.
- Reviewed Nonstandard Special Provisions (NSSPs) for Permanent and Temporary stormwater BMPs on at least 50 projects.
- Continued to develop Design Guidance for Final Soil Stabilization to ensure and document that final soil stabilization occurs on a per-project basis.

These items can be reviewed at http://www.dot.ca.gov/hq/oppd/stormwtr/index.htm. The PPDG (CTSW-RT-10-254.03) and SWDR templates were also updated in May 2012 to clarify treatment BMP options and to better document infiltration feasibility criteria on a project site. The OSWMD has continued to maintain an interactive website with information about Caltrans-approved treatment BMPs and design specifications. An animated depiction with narration is provided for each type of treatment BMP to illustrate how it functions.

Landscape Architecture Program

The Landscape Architecture Program (LAP) provides technical assistance to project delivery on new and ongoing research related to permanent erosion control and permanent BMPs. Permanent erosion control techniques, are used throughout the state highway system and are critical to long term erosion control and the reduction of sediment losses from the highway. In addition, the LAP developed methods to enhance roadside vegetation, which protects slopes from erosion and sediment loss, and may remove pollutants from stormwater runoff.

The LAP accomplishments during the reporting period included:

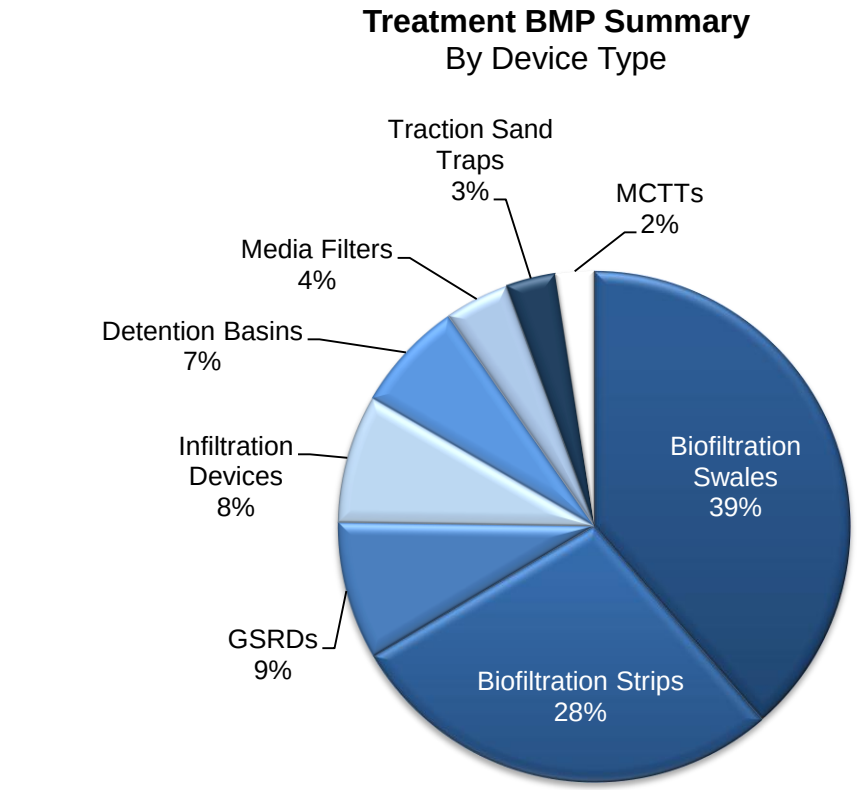
- Collaborated with the Landscape Construction industry by meeting with Erosion Control Contractors for evaluation and recommendations to improve erosion control contract documents.
- Developed draft Revised Standard Specifications and Standard Plans to increase irrigation efficiency and to ensure standards support the objectives of the California Model Water Efficiency Landscape Ordinance.
- Reviewed and processed 18 new product submittals for potential use in landscape and erosion control applications for transportation projects.
- Updated the Landscape Architecture Program website with new tools and guidance, including the Erosion Control Toolbox and the Manuals, Policies, and Procedures sections.
- Managed ongoing research contracts that address stormwater treatment performance of vegetation and slope stabilization.
- The "Ornamental Roadside Vegetated Treatment Sites (ORVTS) Study Final Report" (CTSW-RT-13-290.02.1), June 2013, was completed, which documents the findings of three years of stormwater monitoring. Stormwater treatment performance was studied for ornamental vegetation, including biofiltration strips and biofiltration swales designed in accordance with the Caltrans Highway Design Manual (HDM) and the Project Planning and Design Guide (PPDG).
    - Key findings included:
        - Strips and swales planted with ornamental vegetation performed similar to or better than grasses and forbs.
        - Similar treatment performance was observed for all ornamental vegetation types. Differences in concentration reductions appear to depend on the constituent of interest as well as the location.
- Developed a specification that requires weed free straw on construction projects for erosion control. This specification implements a Memorandum of Understanding (MOU) signed by the Director that indicates Caltrans will use "Certified Weed Free Straw" when cost effective and commercially available.
- Collaborated with Division of Maintenance to report on Caltrans' Integrated Vegetation Management accomplishments over the last twenty years to meet its programmatic Environmental Impact Statement commitment. This report documents the reduction of pesticide and herbicide use along highways.

Standard Specifications and Standard Special Provisions

Caltrans continues to revise and improve the major update of the Construction Contract Standards called the "2010 Standards." The 2010 Standards include new sections for Water Pollution Control (Section 13), Environmental Stewardship (Section 14), Landscape (Section 20), and Erosion Control (Section 21). All projects started using the 2010 Standards during the fiscal year.

Treatment BMPs Planned for Projects

Figure 1 below summarizes the percentage of treatment BMP types evaluated for projects during the Design phase for the reporting period. For more information about the numbers of Treatment BMPs by District, see Table B-1 in Appendix B. This information is based on completion end dates documented in the PS&E SWDR. Treatment BMPs are included as appropriate to comply with the Caltrans NPDES Permit project development requirements and to implement Total Maximum Daily Load waste load allocations, location specific requirements, and the requirements in the PPDG using the Targeted Design Constituent (TDC) approach.



GSRDs – Gross Solids Removal Devices
MCTTs – Multi-Chambered Treatment Trains

Figure 1: Treatment BMP Summary by Device Type

Vegetation Treatment BMPs

Caltrans continued to implement its treatment BMP consideration process during the reporting period. The process favors infiltration of stormwater and directs staff to evaluate Low Impact Development strategies first, such as biofiltration strips, biofiltration swales, infiltration devices and other earthen-type/soil-based BMPs, with and without vegetation. Caltrans' TDC approach was revised to incorporate this evaluation process when selecting treatment BMPs. BMP performance data was used to statistically evaluate and rank the approved treatment BMPs. The details related to this revision are included in checklist T-1, Part 1 of Appendix E in the PPDG. These revisions will allow for appropriate credit calculations related to infiltration and storage throughout the entire project.

Design Self-Audit Program

The Design Compliance Monitoring Program uses the SWDR as a tool for documenting compliance with the design pollution prevention and treatment BMP requirements of the 1999 Permit and Caltrans' 2003 Statewide SWMP. The SWDR and its checklists are reviewed by District staff to ensure that BMPs are being considered and appropriately incorporated into Caltrans' projects. This review also ensures stormwater compliance throughout the project planning and design phases. 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 if improvements are needed in the design guidance and training classes. Table B-2 and Table B-3 in

Appendix B present the compiled SWDR data from the previous fiscal year and the current fiscal year, respectively for the District SWDR submittals and reviews.

In addition, an independent quality assurance/quality control evaluation of SWDRs was conducted and a report was prepared for fiscal year 2012-2013 in March 2013 (CTSW-RT-13-254.16.1). The evaluation was conducted to determine whether the SWDRs prepared during each fiscal year were consistent with the current PPDG, Permit, and 2003 SWMP requirements. It found that 98% of the 51 SWDRs reviewed during the evaluation that were prepared by or for Caltrans comply with the requirements of the Stormwater Quality Handbooks, PPDG, Permit, and SWMP.

5 Construction

Implementation of Construction General Permit

The Statewide Construction General Permit (CGP) requires dischargers, including Caltrans, to electronically file Permit Registration Documents (PRDs) with the SWRCB via the Storm Water Multiple Application and Report Tracking System (SMARTS). Caltrans' 1999 NPDES Permit does not require the use of SMARTS. In the interim and until Caltrans' new NPDES Permit was approved, construction projects were encouraged to start filing PRDs in SMARTS. Caltrans complied with its NPDES Permit and the Regional Water Quality Control Board requirements during the fiscal year. However, Caltrans' new NPDES permit defers to the CGP's reporting requirements, and full implementation will occur in the next fiscal year.

Pre-Construction Meetings

The Districts held pre-construction meetings for all projects that require a SWPPP. During the reporting period, Caltrans held 345 pre-construction meetings, 251 (73%) of which included District Construction Stormwater Coordinators (DCSWCs). RWQCB staff are invited to all pre-construction meetings and they attended 16 (5%) of the pre-construction meetings during the fiscal year.

Construction Enforcement Actions Response

Caltrans evaluated its process for addressing enforcement actions statewide. During fiscal year 2012-2013, 16 of the 22 enforcement actions issued for construction activities were resolved, and six are pending resolution. Caltrans continuously strives to improve its enforcement action tracking procedures, and closely monitors all Districts and projects for enforcement activity. Additional enforcement elements are added to the tracking database each year. Headquarters provides the Districts with a consultant contract to assist them, when needed, for response to enforcement actions.

Construction Self-Audit Compliance Monitoring

The Construction Compliance Evaluation Plan (CCEP) provides for the DCSWC's evaluation of the contractor's SWPPP or WPCP implementation, a process for evaluating the potential threat to water quality from a project, and rates a site for overall preparedness based on forecast storm events and contractor history. The plan also separates water quality compliance from stormwater contract administration. The system assesses compliance with water quality requirements, evaluates stormwater contract administration, and incorporates quality control, quality assurance, and independent assurance elements. The DCSWC visited projects, reviewed the contractors' SWPPPs and WPCPs, and acted as technical advisor to the Resident Engineers. The Resident Engineers worked with the DCSWCs to ensure that the contractors complied with the applicable requirements.

The CCEP numeric rating system represents the water quality compliance rating, which is an evaluation of Best Management Practice (BMP) adequacy and potential threat to water quality. The numeric compliance scale ranges from 1 representing compliance to 4 representing noncompliance. Stormwater contract administration is represented by an alphabetic rating, which assesses the project's compliance with the permits and the quality of stormwater contract administrative activities in accordance with contract specifications and guidance documents. The alphabetic compliance scale ranges from A for compliance to D for noncompliance. For example, a combined rating of 1A indicates that the construction project implemented construction site BMPs in accordance with the project's SWPPP or WPCP (1 rating), and that there are no project document deficiencies (A rating). For more specific information on the numeric and alphabetic ratings, consult the *Year-End Performance Report*, September 2013 (July 1, 2012 – June 30, 2013) A Summary of Construction Compliance Reviews (CTSW-RT-13-299.01.1), which is included as an attachment on the CD.

During fiscal year 2012-2013, 98 reviews were conducted as a part of the CCEP. Of these,

- 40 reviews (41%) resulted in a 1 rating (less than 10% inadequate BMPs and less than 30% chance of precipitation within 48 hours);
- 33 reviews (34%) resulted in a 2 rating (between 20% to 50% inadequate BMPs);
- 13 reviews (13%) resulted in a 3 rating (50% inadequate BMPs);
- 12 reviews (12%) resulted in a 4 rating (50% or more of all BMPs are deficient);
- 35 reviews (36%) resulted in an A rating (20% or less of *Standard Specifications* and special provisions are not met);
- 25 reviews (26%) resulted in a B rating (between 20% to 50% of contract specification requirements are not met);
- 27 reviews (28%) resulted in a C rating (between 50% and 80% of contract specification requirements are not met);
- 11 reviews (11%) resulted in a D rating (80% or more of the contract specification requirements are not met); and
- 72% of the BMPs evaluated during the reviews were determined to be adequate.

A detailed description of the rating system for construction projects is described in the CCEP document posted on the Construction Stormwater Program's website: http://www.dot.ca.gov/hq/construc/stormwater/ccep.pdf.

Construction Best Management Practices

Division of Construction developed a new SWPPP Template for use in the Lake Tahoe Hydrologic Unit in compliance with the NPDES Permit (CAG616002, Order No. R6T-2011-0019). In addition, work was started on streamlining the stormwater compliance monitoring and inspection process.

6 Maintenance

Illicit Connections/Illegal Discharges

During the reporting period, 13 of 32 reported IC/IDs were resolved. Of the 32 IC/IDs, 16 were in progress at the end of the fiscal year because they required permits, construction was necessary to reroute the existing drainage pattern, follow-up was necessary to ensure the IC/ID was eliminated, or monitoring was ongoing. For detailed information concerning IC/IDs, see Tables D-7 and D-8 in Appendix D.

Exempt and Conditionally Exempt Non-Stormwater Discharges

No changes were made to non-stormwater BMPs used for conditionally exempt discharges (SWMP Section 5.4.3, Exempt and Conditionally Exempt Non-Stormwater Discharges).

Slope Inspections

Caltrans' Division of Maintenance has an ongoing program to inspect slopes for erosion. This effort is led by District Maintenance Stormwater Coordinators. The inspections are conducted on a five-year cycle. During the reporting period, 9,678 highway shoulder miles were inspected, and 378 minor and 55 major stormwater related repair needs were identified. In addition to the SWMP mandated program, the division also has a storm patrol program. Selected highways are patrolled during or immediately after storms, wildfires, or earthquakes. Maintenance Supervisors and delegated staff patrol the state's highway system to inspect for 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. In addition, it will normally conduct minor slope damage repair, which includes light slope grading, installation of erosion control BMPs, backfilling erosion, and highway clearing when the cost does not exceed $1,000 per site or $15,000 per mile. Tables D-5 and D-6 in Appendix D summarize slope inspections and erosion control activities conducted by the Division of Maintenance. The Slope Inspection Data Attachment with detailed information on slope inspection activities is on the attached CD. During the reporting period, District Maintenance staff logged over 1.6 million storm patrol inspection miles, completed 843 minor storm repair projects and 77 major storm repair projects, and responded to 697 storm-related public complaints.

Drain Inlet Cleaning (Baseline and Enhanced)

Caltrans' stormwater drainage system includes culvert openings, culverts, overside drains, slotted drains, drain inlets, horizontal drains, underdrains, tunnel drains, ditches and channels. Maintenance Supervisors reviewed the routes near environmentally sensitive areas, Areas of Special Biological Significance (ASBS), and 303(d) listed water bodies in their respective maintenance areas, and prioritized those drain inlets for inspection and cleaning activities. During the reporting period, 69,574 drainage system baseline inspections and 55,064 drainage system baseline cleanings were completed not including ditches and channels.

During the same period, 728 miles of ditches and channels were inspected and cleaned. Tables D-1 and D-2 in Appendix D summarize the baseline stormwater drainage system inspection and cleaning data by district. Route specific information is available in the Drain Inlet Inspection and Cleaning Data Attachment.

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. During the reporting period, 11,660 drain inlets were inspected and 1,577 drain inlets were cleaned. Table D-3 in Appendix D (on the attached CD) summarizes the enhanced drain inlet inspection and cleaning program activities completed by Districts 7, 11 and 12.

Vegetation Control Plans

The Division of Maintenance prepared Vegetation Control Plans (VCPs) for each District to designate which Integrated Vegetation Management (IVM) methods are to be used in specific right-of-way areas (SWMP Section 5.3.4, E Family - Landscaping). The VCP information was tracked in the Division of Maintenance Integrated Maintenance Management System (IMMS) database and submitted to the SWRCB and the RWQCBs before the annual May 15 deadline.

Herbicide Use

Caltrans is required to report its use of pesticides to the California Department of Pesticide Regulation. This information is included in the Herbicide Use Data Attachment to this report. 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 herbicide resistance in vegetation, chemical products with slightly different modes of action are used every 2-3 years, which can result in minor but noticeable fluctuations in active ingredient. Table D-4 and Figure D-1 are a summary of the reporting period's herbicide use and comparison to the ten previous years' usage. Approximately 181,748 pounds of active ingredient were used to treat an estimated 162,324 acres in Caltrans' Integrated Vegetation Management program during fiscal year 2012-2013. Monthly chemical usage by type is summarized in the Herbicide Use Data Attachment (on the CD). All Districts had a decrease in the use of herbicides during the reporting period, except for District 3. District 3 had an increase in usage between 2011-2012 and 2012-2013 because new roadway areas were acquired, fire strip widths were increased along SR-99 in Sutter County, and an increase in the treatment of noxious weeds occurred.

Chemical Use on Vegetated Treatment BMPs

No chemical use was reported on any vegetated treatment BMP.

Maintenance Best Management Practices

No new BMPs were developed during fiscal year 2012-2013.

Maintenance Self-Audit Compliance Monitoring

Caltrans contracted with a third party (consultant) to conduct a compliance review of maintenance activities and facilities, with a goal of inspecting 10 maintenance activities per district and 20% of statewide maintenance facilities per year (SWMP Section 8.4.2, Maintenance Compliance Monitoring). Each facility requires inspection at least once within each 5-year period. The Division of Maintenance participated in these reviews. During the reporting period, 270 activities and 151 out of 418 maintenance facilities statewide (33%) were inspected. The results showed that 100% of maintenance activities had no major deficiencies, and 98.7% of facilities had no major deficiencies or had only minor deficiencies.

7 Monitoring and Research Program

Caltrans conducted monitoring to address stormwater management needs in the transportation environment (SWMP Section 7.4, Reporting). Caltrans regularly evaluated monitoring needs to assist in improving the Stormwater Management Program.

Ongoing efforts for receiving water monitoring included independently funded projects, as well as collaborative efforts with other stakeholders, such as municipalities, the SWRCB and RWQCBs, and stormwater quality researchers.

Table 3 summarizes monitoring and applied studies completed or in progress and reports prepared during the reporting period.

Table 3: Fiscal Year Studies and Associated Reports

Study or Event	Description	Report No.	Report Type
Filtration: Tahoe Delaware Sand Filter (DSF)	Cold-Climate Region study to evaluate the effectiveness of a DSF in removing region-specific constituents of concern from highway stormwater runoff	Pending (due winter 2014)	Monitoring Report
Monitoring at the Irvine Coast Marine Life Refuge (ASBS 33)	ASBS Core Discharge, Ocean Receiving Water and Reference Area Monitoring Program	Pending	Monitoring Report
Roadway, Sweeper and Decanting Material Sampling and Analysis	Characterization of roadway, sweeper and decanting materials. Samples from throughout the State were analyzed.	CTSW-RT-13-305.01.1	Monitoring Report
Sampling of Wash Rack Systems at selected Sites	Select existing Caltrans wash and prewash pilot facilities were sampled to evaluate treatment effectiveness.	CTSW-RT-12-233.1	Summary Report
Stormwater Monitoring and Research Program Annual Data Summary Report, December 2011	This report summarizes all data generated from the stormwater monitoring and research program during the 2012-2013 storm season.	CTSW-RT-13-239-15.01	Summary Report
Ornamental Roadside Vegetated Treatment Sites Study	Results of study to evaluate the ability of ornamental/groundcover vegetative species to treat runoff from highways.	CTSW-RT-13-290.02.1	Monitoring Report
Caltrans District 4 San Francisco-Oakland Bay Bridge Bioretention Pilot Project	Ongoing water quality, maintenance and flow monitoring for six pilot bioretention basins located near the Oakland mole area of the San Francisco-Oakland Bay Bridge	CTSW-RT-286.05.01 July 2012	Project Annual Interim Report for 2012-2013 Wet Season Monitoring

Evaluation of Best Management Practices

Caltrans continued to track new or emerging post-construction stormwater treatment technologies. Three-post construction BMPs were evaluated during the period July 1 2011 to June 30 2013. Two of these were resubmittals of upgraded products that had been of previously evaluated. The Treatment BMP Technology report has been updated and is attached to this Annual Report (2012-2013).

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8 Training and Public Education Program

Training

Headquarters

No Headquarters Division of Environmental Analysis training was conducted during fiscal year 2012-2013.

Encroachment Permits Office

Headquarters provides guidelines and training documents to assist the Districts with overseeing third-party activities through the issuance Encroachment Permits. Headquarters conducted CGP and Caltrans NPDES Permit outreach to District Permit Engineers and coordinators. New staff received knowledge and awareness training.

The Storm Water Management Section of the Encroachment Permits Manual was revised to include new guidelines for the Permittee/LRP in order to comply with new Permit requirements. The new guidelines include appropriate storm water document selection, Independent Quality Assurance (IQA) reviewer, and construction inspection expectations.

The SWMP was revised to clarify Headquarters, Districts, and permittee's roles and responsibilities. Guidance was provided to the districts to enable the issuance of an encroachment permit for pre-construction activities prior to the permittee obtaining a WDID number. Proposed SWMP language will allow the issuance of an encroachment permit for project development activities prior to the construction phase.

The following storm water forms are provided to the Districts to assist in complying with storm water requirements:

- Storm Water Inspection Form (TR-0135) for minor projects with minimum disturbed soil area (DSA < 1/4 acre) and with no water quality impacts
- Storm Water Assessment Form (TR-0132) and an instruction guide for the District Permit Writer and Engineer
- Incident Report Form from Attachment I of the Caltrans NPDES Permit (Form TR-0134) for use the Independent Quality Assurance (IQA) reviewer during implementation of the Permittee's Enforcement Response Program.
- Caltrans Construction Form CEM-2006 for the Permittee/LRP to authorize an IQA reviewer to upload reports into SMARTS for the reporting of incidents of non-compliance

Design

The Design Stormwater Program focused on curriculum development during fiscal year 2012-2013. During the 2012-2013 fiscal year, eight training courses were provided to 85 employees.

Construction

The Division of Construction updated six of seven stormwater training courses to reflect the latest Construction General Permit requirements. During the 2012-2013 fiscal year, 48 construction stormwater classes were offered throughout the Caltrans districts. Approximately 1,150 Caltrans Construction personnel were trained in stormwater topics.

Maintenance

The Division of Maintenance has formal stormwater management training sessions for new employees and refresher training for existing staff. Both types of courses are scheduled from one to 15 hours in length. The total number of employees within the Division of Maintenance statewide is approximately 5,600. During this reporting period, 2,160 employees, or 39%, received formal training. In addition to formal training, Division of Maintenance policy is that Supervisors conduct stormwater BMP tailgate meetings a minimum of every 10 working days or when there is a change in the type of work activity. These meetings are to review BMPs prior to conducting roadside maintenance activities. District training totals are summarized in Table E-3 in Appendix E.

Landscape Architecture Program

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

Video segments were developed for eight "Advanced Sustainable Erosion Control" videos placed on the web-based LAP Erosion Control Toolbox, an online erosion control resource for designers. These videos convey a significant amount of technical information, and they will serve as a permanent training tool for Caltrans and its partners.

The LAP developed and conducted online training for Landscape Architecture staff to support implementation of the 2010 Standard Specifications, including the updated Erosion Control specifications, and included several webinars, video teleconference classes, and informational sessions.

Public Education Activities

Caltrans' public education program encompasses the "Don't Trash California" (http://www.donttrashcalifornia.info) Campaign, Adopt-A-Highway (http://adopt-a-highway.dot.ca.gov), and partnerships with local organizations. The primary goal of the "Don't Trash California" campaign is to raise public awareness of stormwater pollution and its prevention on California's freeways and highways.

Caltrans co-sponsors CASQA's Water Quality NewsFlash, a bi-weekly 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.

On April 25, 2013, Headquarters released an "On the Job with Caltrans Litter Removal" video in honor of Earth Day that focused on Caltrans' statewide litter removal efforts. The video features information about litter removal activities, interviews with program managers and staff that pick up trash along the highways, and the Adopt-A-Highway Program.

Adopt-A-Highway Statewide Program

The Adopt-A-Highway program is a key part of the public education program. It is a cooperative program between organizations with volunteers to collect trash along the highways, and Caltrans to advertise for the organizations. The Districts continue to coordinate with local organizations and maintain strong partnerships. Table E-5 in Appendix E summarizes the statewide program's accomplishments during the fiscal year, including 19,129 cubic yards of material collected by 3,020 groups along 9,938 miles of adopted highways.

Storm Drain Stenciling Statewide Program

Caltrans stencils educational messages at highway facility storm drain inlets, including park-and-ride lots, rest stops, and vista points. The messages are intended to educate the public about pollution caused by stormwater runoff. Storm drain stenciling has become a routine part of the project delivery process statewide.

Public Education Efforts by District

In a coordinated effort with Headquarters, the District offices have hosted and/or collaborated in a series of stormwater pollution prevention events at the local level throughout the state. Detailed information about each of these events is summarized below.

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

- **District 1** – The District had 325 groups volunteer in their Adopt-A-Highway Program to collect 369 cubic yards of material from 918 miles of highway, and staff participated in "Litter Day" activities.
- **District 2** – The District had 226 groups that actively participated in its Adopt-A-Highway program, which removed 289 cubic yards of litter. A district-wide trash pick-up event was held in late spring.
- **District 3** – The District had 244 groups that collected 1,699 cubic yards of litter along 859 shoulder miles of highway during the fiscal year. Its Public Information Office and Chico construction office created informational posters about the Highway 99 auxiliary lanes project. In addition, Adopt-A-Highway volunteers participated in the "Great American Cleanup California" and the "California Cleanup Day" activities in the District.
- **District 4** – Two "Don't Trash California" campaign public service announcements were broadcasted on local cities' Local Cable Access channels, and the District's staff participated in the Statewide Cleanup Day and the District's Quarterly Cleanups.
- **District 5** – The District's Shandon Maintenance Station hosted their local elementary school's students to educate them about Caltrans' activities, including stormwater, and distributed "Don't Trash California" coloring books and cones to the participants. The District also hosted a Cleanup Day effort within the District, and had 265 groups actively participate in the Adopt-A-Highway Program.
- **District 6** – The District coordinated their public education activities with the Partners for a Clean Community, participated in the Caltrans Litter Removal and Enforcement Day within the District, and the Kids Day event.
- **District 7** – The District participated in the Great American Cleanup California and California Cleanup Day events.
- **District 8** – On August 15, 2012, the District's Maintenance Public Information Officer, the Adopt-A-Highway Coordinator, and the United States Forest Service Public Information Officer were all interviewed by a KMIR-TV reporter about the litter removal along Interstate 10. In addition, it hosted "Bring Your Child to Work Day" and presented the "Keeping Water Clean Downstream" interactive presentation to the participants.
- **District 9** – The District distributed a media release about its "Don't Trash California" campaign events and its Public Information Officer conducted an on-air interview about the Annual Trash Pickup Day. Printed items were distributed to local schoolchildren and "Don't Trash California" posters were hung at the District's Safety Roadside Rest Areas (SRRAs).
- **District 10** – The District facilitated the active participation of 230 groups in its Adopt-A-Highway program that collected 2,775 cubic yards of litter, and participated in the California Litter Pickup Day within the District.
- **District 11** – The District had 304 groups volunteer in their Adopt-A-Highway Program, and they collected 1,759 cubic yards of litter.

- **District 12** – The District educated participants about the effects of litter on waterbodies at the City of San Juan Capistrano's Earth Day event, the Children's Water Education Festival, and the Earth Day event hosted by the District 12 office's property management company.

9 Location-Specific Requirements

Total Maximum Daily Load Implementation Activities

Caltrans participated with local and state agencies on specific TMDL elements in the nine RWQCB jurisdictions. Caltrans participated by conducting stakeholder coordination meetings and workshops, developing and implementing monitoring programs, implementing BMPs, and developing and implementing the TMDL Implementation Plan. Caltrans addressed 48 TMDLs during fiscal year 2012-2013 and anticipates addressing over 80 TMDLs during the next permit term. Collaboration with the State Board and the Regional Boards will be necessary to develop model practices for implementation of a statewide consistent and sustainable approach specific to the highway land use. Implementation activities completed to address effective TMDLs during the fiscal year are described in Appendix F.

Tahoe Basin Deicer Effectiveness Monitoring

Caltrans prepared the annual Deicer Report during the fiscal year for submittal in October 2013. Provision L.10.b of the NPDES Permit, Order No. 99-06-DWQ, requires the submittal of an annual Deicer Report for the Tahoe Basin that describes the results of the abrasive and deicing materials analyses. A study was conducted in October 2012 to identify the abrasives that meet Caltrans' requirements and evaluate the potential to reduce the load of ultrafine particles (<16 µm) in highway runoff. Caltrans obtained samples of 22 abrasive products that were available within an estimated 100-mile radius of Truckee and South Lake Tahoe. No relationship was observed between the particle size and nutrient concentrations. During the reporting period, Caltrans continued to analyze the chemical and physical properties of the abrasives used on highways in the Tahoe Basin. The 1999 Permit requires that the Deicer Report be submitted with the Annual Report and it is included as an attachment on the CD. Table 4 is a summary of the sand application activities in the Tahoe Basin.

Table 4: Sand Application Activities in the Tahoe Basin

Snow Season	Sand Applied (Tons)	Sand and Sediment Recovered (Tons)	Percentage of Sand and Sediment Recovered*
2012-2013	2,953	4,855	164%
2011-2012	2,343	4,511	193%
2010-2011	3,865	4,761	123%
2009-2010	4,986	6,197	124%
2008-2009	3,423	4,788	140%
2007-2008	5,261	5,124	97%
2006-2007	4,256	6,214	146%
2005-2006	9,502	5,053	53%
2004-2005	4,896	3,983	81%
2003-2004	7,232	6,623	92%
2002-2003	6,407	7,564	118%
2001-2002	7,954	6,821	86%
2000-2001	8,712	6,708	77%
1999-2000	12,666	7,741	61%
1998-1999	15,465	8,568	55%
1997-1998	19,815	8,604	43%
1996-1997	12,796	5,542	43%
1995-1996	16,759	4,535	27%

*Sand and sediment in the Tahoe Basin has been recaptured since approximately 1990; however, records were not kept before 1995

Table 5 shows the amount of salt applied during snow seasons from 1997-1998 through 2013-2013.

Table 5: Salt Use in the Tahoe Basin

Snow Season	Total Salt Applied (Tons)
2012-2013	1,704
2011-2012	1,122
2010-2011	1,555
2009-2010	1,315
2008-2009	979
2007-2008	1,101
2006-2007	821
2005-2006	1,497
2004-2005	1,600[4]
2003-2004	1,109
2002-2003	731
2001-2002	1,190
2000-2001	1,020
1999-2000	863
1998-1999	1,541
1997-1998	2,257
1996-1997	1,365
1995-1996	1,406
1994-1995	1,634
1993-1994	1,072

[4] This number includes 596 tons of the alternative deicing salt used in the test area along SR-50 from the intersection of SR-89 to the State Line in South Lake Tahoe in 2004-2005.

10 Effectiveness Assessment Summary

Caltrans has adopted the California Stormwater Quality Association® (CASQA) approach to assess effectiveness[4] of the Stormwater Management Program. As illustrated in Figure 2, there are six outcome levels for the effectiveness assessment (EA). The outcome levels help to categorize and describe the desired results or goals of the program. The ultimate goal of the Stormwater Management Program is improving water quality (Level 5) and improving runoff (Level 6). In general, Levels 1, 2, 3, and 4 can be considered Implementation Outcomes, and Levels 5 and 6 can be considered Water Quality Outcomes.

To determine the effectiveness of the overall Stormwater Management Program, each component of the program was evaluated for its contribution towards improving Permit compliance (Level 1), increasing knowledge and awareness (Level 2), improving behavior (Level 3), pollutant load reductions (Level 4), improving runoff quality (Level 5) and improving receiving water quality (Level 6). Table 6 summarizes the results of the Effectiveness Assessment.

Figure 2: Classification of Outcome Levels

Table 6: Effectiveness Assessment Summary for the Stormwater Management Program

Annual Report Section	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	Implement Program	Increase Awareness	Behavior Change	Pollutant Loads	Runoff Quality	Receiving Water Quality
Program Management	C	N	N/A	N/A	N/A	N/A
Design	C	N/A	C	N/A	N/A	N/A
Construction	C	C	C	N/A	N/A	N/A
Maintenance	C	N	C	C	N/A	N/A
Monitoring and Research	C	N	N/A	A	A	N/A
Training and Public Education	C	A	A	C	N/A	N/A
Location Specific Requirements	C	N	N	C	N/A	A

Outcome Level Key:

C – An effectiveness assessment was conducted during the reporting period.

A – It is anticipated that an effectiveness assessment may be conducted in future Annual Reports.

N – An effectiveness assessment is not anticipated.

N/A – This outcome level is not applicable to this program element.

[4] Per the CASQA Municipal Stormwater Program Effectiveness Assessment Guidance document, May 2007.

This Annual Report demonstrates that Caltrans has implemented the Stormwater Program effectively (Level 1), increased awareness among targeted audiences regarding the program requirements (Level 2), which has resulted in positive behavior change (Level 3) and decreased pollutant loads due to implementation of the Stormwater Program (Level 4).

Caltrans evaluated the results of the EAs and reports from staff regarding program implementation to determine whether program modifications were necessary. Table 7 summarizes the status of the identified modifications by each major Program element (Program Management, Design, Construction, Maintenance, and Training and Public Education).

Table 7: Status of Program Modifications

Potential Modifications Identified in Previous Fiscal Year (2011-2012)	Status (Activities Completed as of June 30, 2013)
Program Management	
Continue to review the draft permit language and coordinate with the State Water Board on the renewal of the Caltrans Statewide permit.	Caltrans met and coordinated with the State Board on the draft permit text in the 2012 Permit adopted September 19, 2012.
Identify the SWMP improvements in anticipation of the adoption of the Caltrans 2012 permit.	Caltrans began developing its new SWMP during the reporting period, and anticipates submitting it in July 2014 to the State Board.
Continue discussions of programmatic improvements at the WQMAT meetings to receive direction on implementation of the Stormwater Program including specific tasks associated with Maintenance and Construction stormwater program to ensure permit compliance and response to the EPA program audit.	Procedures are being developed to ensure compliance with the EPA Administrative Order, Caltrans Statewide NPDES Permit, and Construction General Permit.
Evaluate resource needs to comply with new permit and SWMP.	Caltrans began development of its new SWMP and evaluated its resource needs to comply with the 2012 Permit adopted September 19, 2012.
Design	
Continue to implement additional policy and training and increase upper management involvement.	Continue to maintain and update on-line guidance and training materials for Caltrans RUSLE2, the Infiltration Tool, Construction Site BMP Training for Design, and PPDG Training.
Continue to participate in BMP evaluation of existing and new structural and non-structural BMP. Evaluate the sufficiency of the existing BMP toolbox for temporary and permanent BMPs.	Participated in the review of studies related to vegetated BMPs, evaluated multiple soil amendments, alternative materials for screens in GSRDs, alternative high void space materials for infiltration trenches, revised specifications for sand, permeable material, and filter fabric.
Continue to develop training for staff to emphasize the appropriate implementation of BMPs.	Developed and presented web-based discussions to enhance the use of soil-based BMPs using the Infiltration Tool.
Continue to emphasize the importance of infiltration and Low Impact Development BMPs to help meet the new NPDES Permit requirements.	Existing guidance directs staff towards the use of infiltration and LID (soil based BMPs). Also developed and conducted web-based presentations to enhance the use of soil-based BMPs facilitated by the Infiltration Tool, compost and soil amendment specifications.
Continue to develop tools to effectively and efficiently evaluate stormwater compliance throughout app phase of project delivery.	Continue to maintain and refine guidance for the preparation of Storm Water Data Reports (SWDRs) for all projects.

Table 7: Status of Program Modifications

Potential Modifications Identified in Previous Fiscal Year (2011-2012)	Status (Activities Completed as of June 30, 2013)
Maintenance Stormwater Management Program	
Continue to improve maintenance activities and facilities management as required by the new permit.	Maintenance is continuously conferring with the districts and other divisions to arrive at a consistent approach in tackling new permit requirements.
Continue to meet with MSWAT to improve policies and procedures for waste management, slope erosion management, treatment BMP tracking and maintenance, and other permit needs.	The MSWAT has met and teleconferenced multiple times to address new and additional requirements stipulated in the new permit. Any policy or BMP proposals shall be referred to the appropriate approving authority.
Implement Caltrans Enforcement Response Program for maintenance practices and activities.	In collaboration with DEA, Maintenance inspection staff has drafted the ERP concurrent with the interim SWMP revisions.
Monitoring and Research Program	
Develop monitoring and research plan in anticipation of the new Permit.	Caltrans began identifying monitoring locations and anticipates submitting the Monitoring Results Report on October 1, 2014 to the State Board.
Evaluate monitoring program participation or Caltrans characterization to support the requirements in accordance with Areas of Special Biological Significance Special Protections and Caltrans new permit requirements.	Caltrans is participating in the Northern, Central and Southern Integrated Regional Monitoring Groups. The State Board allowed Caltrans to extend ASBS monitoring to the 2013-14 and 2015 monitoring seasons. A Tier 2 monitoring sites prioritization list is being prepared for submittal to the State Board.
Training and Public Education Program	
Conduct pre- and post-training surveys to measure the effectiveness of trainings.	Caltrans began development of its new SWMP and will address this modification as the Training element is developed.
Identify training needs for all elements of the Caltrans stormwater program.	Caltrans began development of its new SWMP and will address this modification as the Training element is developed.
Continue to develop training material and conduct training as required by the new permit.	Caltrans began development of its new SWMP and will address this modification as the Training element is developed.

Below is a summary of new potential modifications identified for each program element for the next fiscal year (2013-2014).

Program Management, Design, and Training and Public Education Program

- The program modifications to address the 2012 Permit will be identified and incorporated into the new SWMP (anticipated submittal in July 2014).

Maintenance

- The maintenance program element will focus on monitoring and updating its database of stormwater treatment BMPs (STBMPs), erosion sites, storm drain systems, IC/ID, inspections, and FPPPs using online mapping as aid. New BMPs shall be proposed and existing ones revised to better reduce or avoid discharge of pollutants from various maintenance activities. The program seeks to improve existing maintenance stormwater practices with permit compliance and prioritizing activities to extract optimal results from available funds.

Monitoring and Research Program

- Caltrans will perform ASBS core and receiving water analytical and toxicity sampling. Regional Monitoring Group Consultants will perform biological sampling. The State Board is expected to complete the reference water sampling under its grant program. A letter dated June 25, 2013 Caltrans requested the State Board to extend submittal date of the final ASBS Compliance Plan to September 20, 2015. The extension will allow the final ASBS Compliance Plan to be based on 2 years of sampling. In a letter dated August 14, 2013 to the Central California Regional Monitoring Program, the State Board extended the submittal date of the draft ASBS Compliance Plan to September 20, 2014.
- Results of Drain Cleaning/Sweeper Material characterization will be used to develop the Waste Management Plan required by 2012 Permit section E.2.h.c)iii).
- Caltrans will continue work with Regions 1 and 2 to address programmatic handling asphalt concrete grindings. A tentative agreement with Region 1 and 2 was reached to allow synthetic precipitation as a suitable fluid for extraction of leachate for testing these materials.

11 Status of New 2012 NPDES Permit Program Elements

During fiscal year 2012-2013, Caltrans' 2012 Permit was approved with an effective date of July 1, 2013. In anticipation of implementing the 2012 Permit, Caltrans began developing its Draft SWMP to comply with the requirements of the 2012 Permit and its major elements. Following is a brief synopsis of activities Caltrans performed to prepare for implementing the 2012 Permit.

Incident Report Form

All non-compliance incidents will be reported by Caltrans staff to the District NPDES Coordinators who will file an Incident Report Form via SMARTS and provide notification to the appropriate RWQCB. Maintenance staff will also follow the Maintenance Service Request (MSR) procedures for IC/IDs reported by the public.

Stream Crossing Design Guidelines to Maintain Natural Stream Processes

Caltrans continues to use the "Fish Passage Design for Road Crossings" (Caltrans, August 2009) guidance to address the concerns of the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries), the California Department of Fish and Game (DFG), and the United States Fish and Wildlife Service to ensure conformance with state and federal fish passage standards and regulations. Caltrans relies upon the Highway Design Manual, Section 800, "Highway Drainage Design", with its goals to perpetuate natural drainage and consideration of environmental sensitivity such as fish passage. Neither of these two guides was revised within the reporting period.

Post-Construction Treatment BMPs Tracking System and Maintenance

Construction will coordinate with maintenance personnel to facilitate transfer of treatment BMPs to the Division of Maintenance using a handoff form. The Division of Maintenance's Integrated Maintenance Management System (IMMS) will track maintenance records for treatment BMPs as provided by the Districts. Long-term operation and maintenance activities are maintained according to Caltrans maintenance guidance.

Facility Pollution Prevention Plans

All maintenance facilities have FPPPs that are updated or revised as needed. Presently, there are 908 completed FPPPs for maintenance yards, storage and material sites, CHP and BPS stations, rest areas, and equipment shops. However, the number may vary as sites open or close in future operations.

Stabilization Activities

Slides and slip-outs encountered during routine surveillance and inspections are evaluated for repair with priority going to eroding slopes in ESAs. Recommendations were developed for site-specific remedial measures such as minor grading or seeding to installation of major slope stabilization systems to maintain slope and soil stability.

Non-Approved BMP Implementation

Installation of non-approved BMPs has not occurred in the Districts during the reporting period. Caltrans promotes the development and deployment of approved BMPs that include modifications allowing the BMPs better feasibility and effectiveness for their installed locations. At this time, there are no monitoring results for the modified BMPs.

Herbicide, Pesticide, and Fertilizer Applications

As required by the California Code of Regulations (Title 3. Food and Agriculture), the District's report any violations within ten business days and submit monthly pesticide use reports to the Department of Pesticide Regulations (DPR). The data includes information about the quantity of pesticides used for vegetation management during the reporting period by District, type of pesticides, and month of application. These reports are compiled by the DPR and are available online through the California Pesticide Information Portal (CalPIP). All employees and contractors responsible for pesticide application take part in a comprehensive training program to ensure a proper understanding of integrated management principles, including proper application of chemicals.

Waste Management Plan

The wastes generated from storm drain system maintenance are disposed of in accordance with applicable federal and state waste management and disposal regulations. The details of Caltrans waste handling procedures for storm drain system maintenance will be documented in Caltrans' Waste Management Plan. This Plan will be submitted to the SWRCB within one year of the effective date of the Order. The Plan will include an inventory of waste storage, transfer, and disposal sites; the source of waste and the physical/chemical characterization of the waste; estimated annual volumes of materials; and existing or planned waste management practices for each waste and facility type. Waste characterization is not required on a site-by-site basis, but may be evaluated programmatically based on the highway environment, land uses, climate, and eco-region.

Landslide Management Plan

The Landslide Management Plan will include BMPs applicable to construction and maintenance work associated with landslide related activities including burn sites. The Plan will address all forms of mass wasting such as slumps, mudflows, and rock falls and will be submitted with the Year 1 Annual Report.

IC/ID and Illegal Dumping Response Plan

The IC/ID and Illegal Dumping Response Plan will be submitted to the SWRCB within six months of the effective date of the Order. This Plan will include procedures for investigating reports or discoveries of IC/IDs, remediation or elimination of the IC/ID, and procedures for cleanup. Caltrans will also provide annual training sessions for appropriate District staff on how to implement the IC/ID and Illegal Dumping Response Plan.

Trash and Litter Removal Activities

There was $52.5 million spent on the litter and debris removed during the fiscal year. The Adopt-A-Highway program achieved a 2.6% increase in permitting during the fiscal year, partnered with Keep California Beautiful and the American Chemistry Council in promoting litter abatement in California, participated in the Annual Caltrans Litter Day, and performed various outreach efforts statewide.

Monitoring Activities

The Monitoring Results Report is under development. The report is due for submittal to the State Board on October 1, 2013. The Tier 2 Monitoring Site Prioritization work is in progress.

Region-Specific Activities

The Draft ASBS Compliance Plan is under development. The plan is due for submittal to the State Board on September 20, 2013. Caltrans coordinated with State Board staff on the selection of ASBS monitoring locations and all locations are expected be monitored in the 2013-14 wet season.

Districts 1, 2, and 4 will be developing their plans to address the requirements of North Coast Regional Water Board Resolution R1-2004-0087 in fiscal year 2013-2014. District 4 and Headquarters developed the San Francisco Bay Area Short-term Trash Load Reduction Plan, which was submitted to the Regional Board on on July 1, 2013.

Effectiveness Assessment Enhancements

During fiscal year 2012-2013, Caltrans began developing its Draft SWMP to comply with the requirements of the 2012 Permit. The Draft SWMP includes a Program Evaluation section that discusses how Caltrans will evaluate its program to determine its effectiveness. This section will include the required program effectiveness requirements identified in the 2012 Permit.

Proposed Revisions to the Stormwater Program

The proposed revisions to the stormwater program will be addressed in the SWMP that will be submitted by July 1, 2014, as required by the 2012 Permit.

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