



**Right-of-Way Property Management and Airspace
Stormwater Guidance Manual**

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**California Department of Transportation
Division of Environmental Analysis, Storm Water Program
1120 N Street
Sacramento, California 95814**

<http://www.dot.ca.gov/hg/env/stormwater/index.htm>

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Please call or write to:

Storm Water Liaison, Caltrans Division of Environmental Analysis

MS 27, P.O. Box 942874, Sacramento, CA 94274-0001

(916) 653-8896 Voice or dial 711 to use a relay service.

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List of Abbreviations

BAT	Best Available Technology	SARA	Superfund Amendments and Reauthorization Act of 1986
BCT	Best Conventional Pollutant Control Technology	SIC	Standard Industrial Classification
BMP	Best Management Practices	SMARTS	Storm Water Multiple Application and Report Tracking System
Caltrans	State of California Department of Transportation	SWMP	Stormwater Management Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	SWPPP	Stormwater Pollution Prevention Plan
CGP	Construction General Permit	SWRCB	State Water Resources Control Board
CHP	California Highway Patrol	TMDL	Total Maximum Daily Load
CWA	Clean Water Act	TRPA	Tahoe Regional Planning Agency
ERA	Exceedance Response Action	WDID	Waste Discharge Identification Number
HQ DEA	Headquarters Division of Environmental Analysis	WDR	Waste Discharge Requirements
IC/ID	Illicit Connection/Illegal Discharge	WPCD	Water Pollution Control Drawings
IGP	Industrial General Permit	WPCM	Water Pollution Control Manager
LRP	Legally Responsible Person	WPCP	Water Pollution Control Program
LTHUCGP	Lake Tahoe Hydrologic Unit Construction General Permit		
MRP	Municipal Regional Permit		
MS4	Municipal Separate Storm Sewer System		
NEC	No Exposure Condition		
NOI	Notice of Intent		
NONA	Notice of Non-Applicability		
NOT	Notice of Termination		
NPDES	National Pollutant Discharge Elimination System		
NSWD	Non Stormwater Discharge		
PPDG	Project Planning and Design Guide		
PRD	Permit Registration Documents		
QISP	Qualified Industrial Storm Water Practitioner		
QSD	Qualified Storm Water Pollution Prevention Plan Developer		
QSP	Qualified Storm Water Pollution Prevention Plan Practitioner		
REAP	Rain Event Action Plan		
RL	Risk Level		
RQ	Reportable Quantity		
RW	Right-of-Way		
RWQCB	Regional Water Quality Control Board		

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Section 1

Introduction

1.1 Background

The Division of Right-of-Way (RW) acquires, maintains, and leases suitable residential, non-residential and airspace properties to public and private third parties. Airspace property is any property within operating State highway right-of-way limits that is capable of other development and can safely accommodate a secondary use without interference with the operation and foreseeable future expansion of the highway. Examples of such secondary uses include parking lots, self-storage units, and cellular telephone towers. Existing leases are contracts that include language requiring that the lessee comply with all applicable local, state, and federal rules, laws and regulations.

RW inspects these properties to determine compliance with the:

- National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit Waste Discharge Requirements (WDRs) for State of California Department of Transportation (Caltrans) Order No 2012-0011 DWQ NPDES No. CAS000003 (Caltrans NPDES Permit);
- NPDES General Permit for Storm Water Discharges Associated with Industrial Activities Order NPDES No. CAS000001 (Industrial General Permit [IGP]);
- NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009- DWQ NPDES No. CAS000002 (Construction General Permit [CGP]); and
- Order No. R6T-2011-0019 NPDES No. CAG616002 General Waste Discharge Requirements and NPDES Permit for Storm Water Discharges Associated With Construction Activity in the Lake Tahoe Hydrologic Unit, Counties of Alpine, El Dorado, and Placer (Lake Tahoe Hydrologic Unit Construction General Permit [LTHUCGP]).

1.2 Purpose

The purpose of the Right of Way Property Management and Airspace Stormwater Guidance Manual (Manual) is to provide guidance for RW agents and lessees to comply with requirements of the Caltrans NPDES Permit, which then allows for compliance with the IGP, CGP, LTHUCGP, and other applicable requirements. Within this Manual is an explanation of the purpose of stormwater Best Management Practices (BMPs), and the RW Demolition Contract Manager's, RW Agent's and lessee's compliance obligations to implement the BMPs. Additionally, procedure and task specific inspection forms are included so that RW agents may evaluate compliance of demolished sites, existing lessees and to provide direction to potential lessees.

This Manual includes procedures to illustrate compliance requirements of the Caltrans NPDES Permit and the Stormwater Management Plan (SWMP) applicable to lessees. The Caltrans NPDES Permit is provided in Appendix A. The procedures also provide tools to assist with evaluating non-residential activities and determining the need for compliance with the IGP. This Manual should be used in conjunction with the IGP, which is provided as Appendix B and when addressing demolition activities or lease agreements that disturb one acre or more of soil the CGP provided as Appendix C and D (for LTHUCGP). In case of conflict, the requirements of the Caltrans NPDES Permit will prevail over this

Manual for those facilities that require coverage under all noted permits. Sections of the permits are hereby incorporated by reference except as specifically modified in this Manual.

The procedures within this Manual apply to all RW activities undertaken by Caltrans. This Manual does not, nor is it intended to, add to or modify any legal requirements contained in the Caltrans NPDES Permit, IGP, CGP, LTHUCGP, any NPDES Municipal Separate Storm Sewer System (MS4) Phase I or II Permits, or the Tahoe Regional Planning Agency (TRPA) within the Lake Tahoe Basin IGP. Demolition activities and procedures are specifically described in Section 8 and Appendix L.

Section 2

Regulatory Background

2.1 Statewide Stormwater Permits

In California, the State Water Resources Control Board (SWRCB), through the nine Regional Water Quality Control Boards (RWQCBs), administers the NPDES stormwater permit program. The SWRCB and RWQCBs develop and issue general permits to cover multiple facilities within a specific category. These general permits result in more efficient resource allocation for large numbers of facilities in the same category. This Manual covers several types of general permits including the Caltrans NPDES Permit, the IGP, the CGP and the LTHUCGP.

Federal Regulations require that NPDES stormwater permits be issued for discharges from large, medium, and designated small MS4s. The regulations define the term MS4 to mean “a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned or operated by a state, city, town, borough, county.”

2.2 Caltrans NPDES Permit

The SWRCB issued the Caltrans NPDES Permit that regulates all Caltrans properties, industrial/commercial and residential activities and/or land uses including construction. The current Caltrans NPDES Permit was reissued in 2012 and amended as recently as 2014. This Manual is just one portion of a larger Caltrans program to comply with the requirements of the Caltrans NPDES Permit.

Caltrans, as the owner and operator of a MS4, is subject to an NPDES MS4 permit (Caltrans NPDES Permit). Caltrans implements a statewide program for its stormwater compliance activities. The Caltrans NPDES Permit is included in Appendix A of this Manual.

The SWMP describes and identifies how Caltrans will comply with the provisions of the Caltrans NPDES Permit. The statewide SWMP has been prepared by Caltrans as the overarching guidance on how to comply with the Caltrans NPDES Permit. Section 3 of this Manual describes and references portion of the SWMP that are applicable to RW operations and or facilities.

The following flowchart can be used to determine permit applicability and what sections of the Manual to use. More information about the various permits is located in the sections below.

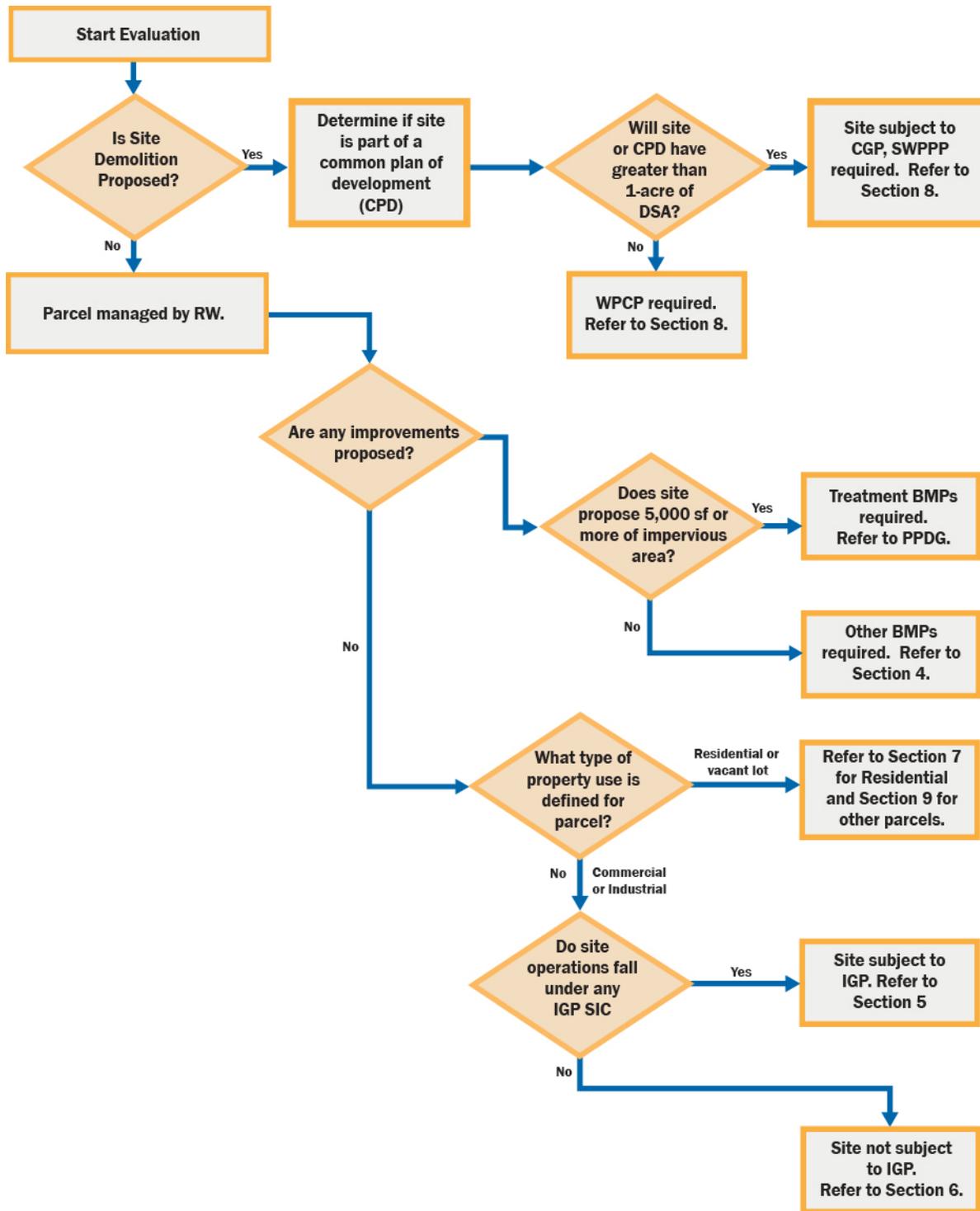


Figure 2-1. Determination of Permit and Section of Manual Applicability

2.3 Industrial General Permit

The SWRCB issued an updated IGP, which applies to all stormwater discharges from categories of industrial facilities in the state requiring coverage under the federal stormwater regulations. The new IGP goes into effect on July 1, 2015. The IGP regulates discharges associated with nine broad categories of industrial activities (see Attachment A of the IGP for information regarding the nine categories and http://www.swrcb.ca.gov/water_issues/programs/stormwater/sic.shtml for all regulated Standard Industrial Classification [SIC] codes). A discharge is defined as a release of flow of stormwater or other substance from a conveyance system or storage container and on a broader scale, includes release to municipal separate storm sewer systems (MS4s), etc.

The IGP requires:

- the implementation of management measures that will achieve the performance standard of best available treatment (BAT) economically achievable and best conventional pollutant control technology (BCT);
- the development of a Stormwater Pollution Prevention Plan (SWPPP) and a Monitoring Implementation Plan; and
- the implementation of BMPs.

2.4 Construction General Permit

The SWRCB issued the CGP in 2009 and amended it in 2012. It applies to dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. Similar to the IGP, the CGP requires:

- the implementation of management measures that will achieve the performance standard of BAT and BCT;
- the development of a SWPPP and a Construction Monitoring Program; and
- the implementation of BMPs.

2.5 Lake Tahoe Hydrologic Unit Construction General Permit

The RWQCB Lahontan Region issued the LTHUCGP in 2011 that applies to dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres within the Lake Tahoe Hydrologic Unit.

Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. Because RW demolition normally includes excavation, clearing, grubbing, and stockpiling, demolition is considered to be construction, and therefore, RW demolition sites require coverage under the LTHUCGP. RW has the responsibility for BMP implementation at demolition sites. Following demolition, all disturbed soil areas of the sites must also be stabilized.

The LTHUCGP requires the development and implementation of a SWPPP and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Additionally, daily inspection of all BMPs is required by the LTHUCGP. Please see Appendix D for all LTHUCGP requirements.

2.6 Stormwater Multiple Application and Report Tracking System

All projects and/or facilities that are covered under the IGP, CGP and LTHUCGP require Permit Registration Documents (PRDs) to be submitted to SWRCB through Stormwater Multiple Application and Report Tracking System (SMARTS; <http://smarts.waterboards.ca.gov>), which consist of:

- A completed Notice of Intent (NOI) and signed certification statement;
- A site map;
- A SWPPP; and
- The Discharger shall pay the appropriate Annual Fee in accordance with California Code of Regulations, title 23, section 2200 et seq.

The CGP requires a Risk Level (RL) Assessment calculation in addition to the documents listed above.

2.7 Certification Requirements

There are specific certification requirements imposed by the SWRCB for the person overseeing SWPPP compliance with either the CGP or the IGP. The CGP requires a person preparing the SWPPP to be a Qualified SWPPP Developer (QSD) and for field implementation to be certified as a Qualified SWPPP Practitioner (QSP). The IGP has several instances where it requires technical reports and other documents to be prepared by a Qualified Industrial Stormwater Practitioner (QISP). Table 2-1 below provides a general list of items where SWRCB certification is required for the IGP and/or CGP. As this list is not exhaustive, the IGP and/or CGP should be consulted for specific requirements.

Table 2-1. IGP and CGP Certification Requirements			
Permit Requirements	IGP	CGP	
		QSD**	QSP
NOI where facility discharges to a 303d impaired water body*	X		
Level 1 status facilities (ERA Technical Reports)	X		
Level 2 status facilities (ERA Technical Reports and Action Plans)	X		
Compliance Group Leader	X		
Provide SWPPP training	X	X	
Annual Report	X	X	
SWPPP preparation and amendments		X	
Water Pollution Control Manager (WPCM)		X	
REAP preparation and implementation		X	
BMP field implementation			X
Responsible for non-stormwater and stormwater visual observations, sampling and analysis			X
Keep current records of weather forecast for project location			X

*See Section 3.2 of Manual (WQPT) for assistance in identifying impaired waterbodies

** A QSD is automatically deemed a QSP and can perform all QSP duties

Section 3

Caltrans Stormwater Program

3.1 Stormwater Management Plan

The SWMP describes a program to reduce the discharge of pollutants associated with the Caltrans extensive drainage system that serve highways and highway-related properties, facilities and activities. It identifies how Caltrans will comply with the provisions of the Caltrans NPDES Permit. The SWMP addresses the primary program elements of all Caltrans' activities, including:

- The Project Delivery Stormwater Management Program, which includes the Design Stormwater Management Program and the Construction Stormwater Management Program;
- The Maintenance Stormwater Management Program; and
- The Training and Public Education Program.

The SWMP also addresses assignment of responsibilities for implementing stormwater management practices as well as monitoring, program evaluation and reporting activities.

This section will describe in more detail the specific portions of the Caltrans NPDES Permit and SWMP that directly pertain to RW activities and or facilities.

3.2 Water Quality Planning Tool

Caltrans has developed a statewide GIS map application that contains important data sets such as Caltrans Districts, Regional Board boundaries, highways, local MS4s, along with information on watersheds, water bodies and their pertinent impairments (303d), and scheduled TMDLs.

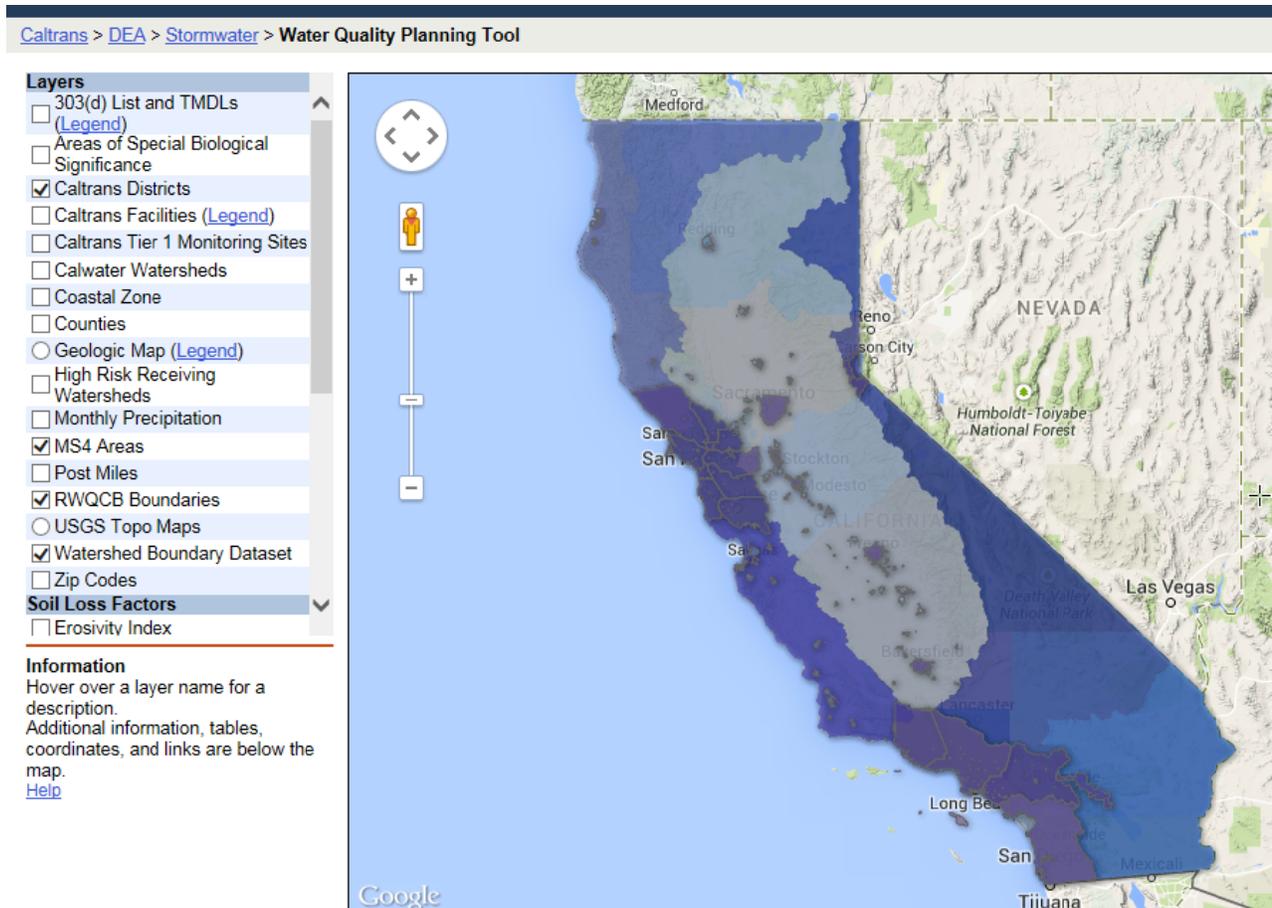


Figure 3-1. Water Quality Planning Tool

This application can be accessed via Caltrans' website (<http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx>). RW agents and lessees can determine if the specific facility or activity necessitates further evaluation and or measures implemented due to proximity to any sensitive water bodies and therefore discussion with the District NPDES Coordinator.

3.3 Non-Stormwater Discharges

Caltrans NPDES Permit specifies three types of authorized non-stormwater discharges:

1. Discharges authorized by a separate NPDES Permit (As these discharges have a separate permit, they are not addressed in this Manual);
2. Conditionally exempt discharges; and
3. Exempted discharges.

Conditionally exempt non-stormwater discharges are specified in the Caltrans NPDES Permit and include: water line and fire hydrant flushing; irrigation water; landscape irrigation; uncontaminated ground water dewatering (check with local RWQCB before dewatering) and other discharges not subject to a separate general NPDES permit adopted by the region. Conditionally exempt discharges are not prohibited if they are identified as not being sources of pollutants to receiving waters or if appropriate control measures (e.g., BMPs) to minimize the adverse impacts of such sources are developed and implemented and defined in the site-specific SWPPP.

Section 10.4 of the SWMP provides a list of permitted non stormwater discharges from Caltrans RW. Authorized non-stormwater discharges (presented in Table 3-1 below) are certain categories of discharges not composed entirely of stormwater but which do not pose a threat to water quality. In some cases, they may require the implementation of BMPs. RW agents must also be aware of the facility's non-stormwater discharges and their sources.

Table 3-1. Authorized Non-Stormwater Discharges

Diverted stream flows	Water line/hydrant flushing ^a
Slope Lateral Drainage	Footing drains
Uncontaminated pumped ground water	Potable water sources ^a
Flows from riparian habitats /wetlands	Air conditioning condensate
Crawl space pumps	Minor, incidental discharges from lawn watering
Swimming pools ^a	Rising ground water
Uncontaminated ground water infiltration to separate storm sewers	Springs
Discharges or flows from emergency firefighting activities	Foundation drains
Irrigation water ^b	Residential car washing
Swimming pools ^a	Rising ground water

a. Discharges must be dechlorinated.

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

These discharges are to be documented if observed during an inspection by the RW Agent. Appendices H through J and L include the inspection forms to be used. All other non-stormwater discharges are considered illicit discharges and should be addressed according to the illegal connections/illicit discharges (IC/ID) protocols in the next section.

3.4 Illegal Connections/Illicit Discharges and Illegal Dumping

Section 10.3 of the SWMP discusses how the IC/ID and Illegal Dumping Response Plan are to be addressed through detection, investigation, reporting and corrective actions. This IC/ID Illegal Dumping Response Plan includes procedures for investigating reports or discoveries of IC/IDs, remediation or elimination of the IC/ID, and procedures for cleanup.

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

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

The RW inspection forms (Appendices H-J and L) include a section for tracking observance of an IC/ID. If an IC/ID is observed or suspected, the RW agent is to complete appropriate information on the inspection form, contact the District NPDES Coordinator who will further investigate and respond appropriately and in conformance with the *Illegal Connection, Illicit Discharge (IC/ID) and Illegal Dumping Response Plan* (CTSW-RT-13-999.02), included as Appendix E to this report.

3.5 Non-Compliance Reporting

Section 16 of the SWMP outlines the procedures adopted to comply with the reporting requirements prescribed in Caltrans MS4 permit. There are three types of non-compliance: Administrative Incidents, Field Incidents and Emergency as listed in Table 3.2 below.

Table 3-2. Notification Schedule for Actual Incidents of Non-Compliance				
Type of Incident	Within 5 Working Days (Verbal Notification)	Within 10 Working Days (Written Notification)	Within 30 Calendar Days (Written Notification)	In Annual Report
Emergency				Chronological summary and status of all incidents
Field	Notify Caltrans HQ DEA-SWP; Notify RWQCB Exec Officer	To RWQCB Exec Officer; Copy HQ DEA-SWP		Chronological summary and status of all incidents
Administrative	Notify HQ DEA-SWP; Notify RWQCB Exec Officer or SWRCB Contact		To RWQCB Exec Officer, SWRCB Exec Director; Copy to Caltrans HQ DEA-SWP	Chronological summary and status of all incidents

Source: Table 16-1 of 2014 SWMP

As noted in the SWMP, anticipated types of non-compliance incidents are field and administrative. Emergency incidents are sudden, unexpected, unpreventable incidents that threaten public health, public safety, property, or the environment that pose a clear and imminent danger requiring immediate action to prevent or mitigate the damage or threat, and that result in a discharge or potential discharge.

The District NPDES Coordinator should be contacted to assist in any non-compliance notification. A list of current NPDES coordinators is included in Appendix F and available via Caltrans' website (<http://www.dot.ca.gov/hq/env/stormwater/contact/index.htm>).

Appendix G includes the Incident Report Form required by the Caltrans NPDES Permit. If deficiencies noted that trigger reporting are determined when conducting an inspection of residential, commercial, industrial or demolition site, the RW agent should notify the District NPDES Coordinator and submits a copy of the relevant inspection report along with photographs to assist in the completion of the Incident Report Form.

Section 4

Best Management Practice Selection and Implementation

4.1 Background

BMPs are operational activities or physical controls that are applied to stormwater and other runoff to reduce the discharge of pollutants. These include both structural and nonstructural controls that have direct effects on release, transport or discharge of pollutants. BMPs can be applied to activities conducted on leased properties, thereby promoting compliance with stormwater regulations. BMPs include a broad class of measures, many of which may already be used for reasons unrelated to stormwater pollution. The purpose of this section is to provide guidance and resources to RW and lessees in evaluating residential, non-residential, demolition and airspace activities with regard to BMP selection and implementation. Following the evaluation, this Manual can be used for the selection of appropriate and specific BMPs for the observed site activities. The selected BMPs are implemented in order to fulfill obligations required by the SWMP, the Caltrans NPDES Permit, and to comply with all other applicable Permits.

Table 4-1 BMP Descriptions list the four main categories of BMPs approved by Caltrans. Each Division has created their own BMP handbook that includes specific installation, maintenance and inspection requirements for each BMP. RW agents should utilize the handbooks when reviewing sites and assessing BMP effectiveness.

Table 4-1. BMP Descriptions		
BMP	Description	Potential Applicability to RW Activity/Operations
Design Pollution Prevention	Preservation of existing vegetation, concentrated flow conveyance, slope/surface protection, etc.	Industrial, Commercial, Residential, Construction / Demolition
Treatment	Permanent treatment devices and facilities	Industrial, Construction
Construction Site	Temporary soil stabilization and sediment control, non-stormwater management, and waste management	Construction/Demolition
Maintenance	Litter pickup, waste management, street sweeping, etc.	Industrial, Commercial, Residential

BMP fact sheets have been developed and are included in this Manual for residential and non-residential leased property. The BMP fact sheets consist of a double-sided single page, individually numbered and suitable for photocopying. These fact sheets detail stormwater pollution prevention methods and concepts that should be taken into consideration when performing described activities. The fact sheets are arranged by land use categories (e.g., agricultural) followed by activities associated the land use type (e.g., irrigation, pesticide use, etc.). These fact sheets have been incorporated into executed lease contracts by RW to promote compliance with leased property stormwater management

objectives. Residential BMP fact sheets are included in Appendix M of this Manual and non-residential fact sheets are provided in Appendix N. There is also another set of fact sheets specifically for demolition activities; these existing Construction Division fact sheets are listed in Appendix O.

Tables 4-2 and 4-3 below lists the BMPs to be used when implementing BMPs by RW category. Reference to the 2010 Standard Plans and each corresponding BMP is for construction/demolition BMPs that can be used by RW Agents to ensure BMP installation and maintenance is adequate.

Table 4-2. BMP fact sheets for Industrial, Residential, Commercial and other Airspace Properties

*BMP Type	Fact Sheet Name	RW Category
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Agricultural	Non-Residential, Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Animal Handling Areas	Non-Residential, Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Auto Body Shop	Industrial, Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Auto Recycling	Industrial, Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Auto Sales & Rentals/Tractor Sales	Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Board Ups	Residential, Commercial, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Christmas Tree & Pumpkin	Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Lots/Flower Stands/Plant	Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Nurseries	Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Food Service Facilities	Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Fumigation/Pest and Rodent Control	Industrial, Residential, Commercial, Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	General Land Use	Industrial, Residential, Commercial, Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	General Maintenance	Industrial, Residential, Commercial, Airspace, Demolition

Table 4-2. BMP fact sheets for Industrial, Residential, Commercial and other Airspace Properties

*BMP Type	Fact Sheet Name	RW Category
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	General Recycling	Industrial , Residential, Commercial, Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Light Industrial	Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Light Manufacturing	Industrial , Residential, Commercial, Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Marinas, Boatyards and Ports	Industrial , Residential, Commercial, Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Office/Retail	Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Outdoor Loading and Unloading	Industrial , Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Parking Lots	Industrial , Residential, Commercial, Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Parks and Recreation	Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Perchlorate Containing Materials	Industrial , Residential, Commercial, Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Sewer or Drain Cleaning and Maintenance/Septic Systems	Industrial , Residential, Commercial, Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Sign Boards/Billboards	Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Storage	Industrial , Residential, Commercial, Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Swimming Pool Maintenance	Residential
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Trash Removal	Industrial, Residential, Commercial, Airspace, Demolition
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Truck Repair and Storage	Commercial, Airspace

Table 4-2. BMP fact sheets for Industrial, Residential, Commercial and other Airspace Properties

*BMP Type	Fact Sheet Name	RW Category
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Vehicle or Equipment Storage	Commercial, Airspace
Good housekeeping, preventative maintenance, spill response, material handling and waste management, employee training program	Yard Service	Industrial, Residential, Commercial, Airspace, Demolition

*Note: These BMPs are also part of the minimum required BMPs as required by the IGP

Table 4-3. Construction BMPs and Corresponding Standard Specifications Section

ID	BMP NAME	Construction Site BMPs Manual (designation and title)	2010 Standard Specifications Section 13 (section and title)	RW Appendix
SS-1	Scheduling	SS-1 Scheduling		
SS-2	Preservation of Property/ Preservation of Existing Vegetation	SS-2 Preservation of Existing Vegetation		
SS-3	Hydraulic Mulch	SS-3 Hydraulic Mulch	13-5.03D Temporary Hydraulic Mulch 13-5.03E Temporary Hydraulic Mulch (Bonded Fiber Matrix) 13-5.03F Temporary Hydraulic Mulch (Polymer-Stabilized Fiber Matrix)	
SS-4	Hydroseeding	SS-4 Hydroseeding	13-5.03I Temporary Hydroseed	
SS-5	Soil Binder	SS- 5 Soil Binders	13-5.02E Soil Binder 13-5.03G Temporary Hydraulic Mulch (Cementitious Binder) 13-5.03J Temporary Soil Binder	
SS-6	Straw Mulch	SS-6 Straw Mulch	13-5.02C Mulch 13-5.03C Temporary Mulch 13-5.03H Temporary Tacked Straw	
SS-7	Geotextiles, Plastic Covers, Erosion Control Blankets/Mats	SS-7 Geotextiles, Mats, Plastic Covers, and Erosion Control Blankets	13-5.02B Erosion Control Blanket 13-5.03B Temporary Erosion Control Blanket 13-5.02F Temporary Covers 13-5.03K Temporary Covers	
SS-8	Wood Mulching	SS-8 Wood Mulching		
SS-9	Earth Dikes / Drainage Swales & Lined Swales	SS-9 Earth Dikes / Drainage Swales and Ditches		
SS-10	Outlet Protection / Velocity Dissipation Devices	SS-10 Outlet Protection/Velocity Dissipation Devices		
SS-11	Slope Drains	SS-11 Slope Drains		

Table 4-3. Construction BMPs and Corresponding Standard Specifications Section

ID	BMP NAME	Construction Site BMPs Manual (designation and title)	2010 Standard Specifications Section 13 (section and title)	RW Appendix
SS-12	Streambank Stabilization	SS-12 Streambank Stabilization		Appendix O
SC-1	Temporary Silt Fence	SC-1 Silt Fence		
SC-2	Temporary Sediment Basin	SC-2 Sediment/Desilting Basin	13-6.03D Temporary Sediment Basin	
SC-3	Temporary Sediment Trap	SC-3 Sediment Trap		
SC-4	Temporary Check Dam	SC-4 Check Dam	13-6.03B Temporary Check Dams	
SC-5	Temporary Fiber Rolls	SC-5 Fiber Rolls	13-10.02B Fiber Roll 13-6.03E Temporary Fiber Rolls 13-10.03B Temporary Fiber Rolls	
SC-6	Temporary Gravel Bag Berm	SC-6 Gravel Bag Berm	13-5.02G Gravel-Filled Bags 13-6.03F Temporary Gravel Bag Berms 13-10.02J Gravel-filled Bag Berms 13-10.03C Temporary Gravel Bag Berms	
SC-7	Street Sweeping	SC-7 Street Sweeping and Vacuuming	13-4.03F Sweeping 13-7.03D Street Sweeping	
SC-8	Temporary Sandbag Barrier	SC-8 Sand Bag Barrier		
SC-9	Temporary Straw Bale Barrier	SC-9 Straw Bale Barrier	13-6.03J Temporary Straw Bale Barrier 13-10.02H Straw Bales 13-10.03G Temporary Straw Bale Barriers	
SC-10	Temporary Drain Inlet Protection	SC-10 Storm Drain Inlet Protection	13-6.03C Temporary Drainage Inlet Protection	
			13-6.03G Temporary Large Sediment Barriers 13-10.03D Temporary Large Sediment Barriers	
TC-1	Temporary Construction Entrance	TC-1 Stabilized Construction Entrance/Exit	13-7.02B Rock 13-7.02C Corrugated Steel Panels 13-7.03B Temporary Construction Entrance	
TC-2	Stabilized Construction Roadway	TC-2 Stabilized Construction Roadway	13-7.03C Temporary Construction Roadway	
TC-3	Temporary Entrance / Outlet Tire Wash	TC-3 Entrance/Outlet Tire Wash		
WE-1	Wind Erosion Control	WE-1 Wind Erosion Control		
NS-1	Water Control and Conservation	NS-1 Water Conservation Practices	13.4.03E(1) Water Control and Conservation	
NS-2	Dewatering	NS-2 Dewatering Operations	13-4.03G Dewatering	

Table 4-3. Construction BMPs and Corresponding Standard Specifications Section

ID	BMP NAME	Construction Site BMPs Manual (designation and title)	2010 Standard Specifications Section 13 (section and title)	RW Appendix
NS-3	Paving, Sealing, Sawcutting, and Grinding Operations	NS-3 Paving and Grinding Operations	13.4.03E(6) Paving, Sealing, Sawcutting, Grooving, and Grinding Activities	
NS-4	Temporary Stream Crossing	NS-4 Temporary Stream Crossing		
NS-5	Clear Water Diversion	NS-5 Clear Water Diversion		
NS-6	Illicit Connection and Illegal Discharge Detection Reporting	NS-6 Illicit Connection/Illegal Discharge Detection and Reporting	13.4.03E(2) Illicit Connection/Illegal Discharge Detection and Reporting	
NS-7	Potable Water / Irrigation	NS-7 Potable Water/Irrigation		
NS-8	Vehicle and Equipment Cleaning	NS-8 Vehicle and Equipment Cleaning	13.4.03E(3) Vehicle and Equipment Cleaning	
NS-9	Vehicle and Equipment Fueling	NS-9 Vehicle and Equipment Fueling	13.4.03E(4) Vehicle and Equipment Fueling and Maintenance	
NS-10	Vehicle and Equipment Maintenance	NS-10 Vehicle and Equipment Maintenance		
NS-11	Pile Driving Operations	NS-11 Pile Driving Operations	13-4.03E(9) Pile Driving	
NS-12	Concrete Curing	NS-12 Concrete Curing	13-4.03E(10) Concrete Curing	
NS-13	Material and Equipment Use Over Water	NS-13 Material and Equipment Use Over Water	13.4.03E(5) Material and Equipment Use Over Water	
NS-14	Concrete Finishing	NS-14 Concrete Finishing	13-4.03E(11) Concrete Finishing	
NS-15	Structure Demolition / Removal Over or Adjacent to Water	NS-15 Structure Demolition / Removal Over or Adjacent to Water	13.4.03E(6) Structure Removal Over or Adjacent to Water	
WM-1	Material Delivery and Storage	WM-1 Material Delivery and Storage	13-4.03C(2) Material Storage	
WM-2	Material Use	WM-2 Material Use		
WM-3	Stockpile Management	WM-3 Stockpile Management	13-4.03C(3) Stockpile Management	
WM-4	Spill Prevention and Control	WM-4 Spill Prevention and Control	13-4.03B Spill Prevention and Control	
WM-5	Solid Waste Management	WM-5 Solid Waste Management		
WM-6	Hazardous Waste Management	WM-6 Hazardous Waste Management	13.4.03D(2) Paint Waste	
WM-7	Contaminated Soil Management	WM-7 Contaminated Soil Management		

Table 4-3. Construction BMPs and Corresponding Standard Specifications Section				
ID	BMP NAME	Construction Site BMPs Manual (designation and title)	2010 Standard Specifications Section 13 (section and title)	RW Appendix
WM-8	Concrete Waste Management	WM-8 Concrete Waste Management	13.4.03D(3) Concrete Waste 13-9.02D Temporary Concrete Washout Bin	
	Temporary Concrete Washout Facility		13-9.02B Temporary Concrete Washout Facility	
	Temporary Concrete Washout (Portable)		13-9.02C Portable Temporary Concrete Washout	
WM-9	Sanitary/Septic Waste Management	WM-9 Sanitary/Septic Waste Management	13.4.03D(4) Sanitary Waste	
WM-10	Liquid Waste Maintenance	WM-10 Liquid Waste Management	13.4.03D(5) Liquid Waste	

For a complete list of construction BMPs please see: http://www.dot.ca.gov/hq/construc/stormwater/CSBMPPM_303_Final.pdf

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Section 5

Facility Assessment – Industrial

5.1 Introduction

This section provides guidance to RW agents in evaluating non-residential activities of lessees to determine their need for coverage under the IGP. The RW agents will evaluate the facility's activities to determine if they are included under the nine categories of industrial activity described in the IGP (see Appendix F of this Manual, Attachment A of the IGP for information regarding the nine categories and http://www.swrcb.ca.gov/water_issues/programs/stormwater/sic.shtml for all SIC codes) and to determine if there is a discharge of stormwater or authorized non-stormwater discharge associated with facility activities. Evaluation of non-residential activities typically requires an on-site facility assessment (Stormwater Inspection) and a review of facility information available in RW files.

The decision whether a facility is required to obtain coverage under the IGP is determined by what activities occur onsite. It is the industrial activities at the facility (and subsequent SIC code) that determine whether coverage under the IGP is required, not the primary business of the lessee. For example, a lessee must obtain coverage under the IGP for its vehicle maintenance facility, even though the primary business may be transportation or catering services. Information regarding identification of SIC codes is presented in Section 5.6.

Sections 5.2 and 5.3 provide a discussion regarding facilities and coverage under the IGP.

5.2 Facilities that Require IGP Coverage

The IGP is intended to cover the following general categories of federal, state, municipally owned, and private facilities that discharge stormwater:

1. Facilities subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards
2. Manufacturing facilities
3. Oil and Gas/Mining facilities
4. Hazardous waste treatment, storage, or disposal facilities
5. Landfills, land application sites, and open dumps
6. Recycling facilities
7. Steam electric power generating facilities
8. Transportation facilities
9. Sewage or wastewater treatment works

The IGP is intended to address all facilities described in Appendix B (and Section 5.6 of this Manual), whether the facility is primary or is auxiliary to the facility operator's function. For example, although a marina's primary function is recreation; a facility that it operates for boat maintenance is a transportation facility that is covered by the IGP.

5.3 Facilities that Do Not Require Coverage

There are a number of business categories and associated activities that do not require coverage under the IGP. Information regarding evaluation of these facilities is provided in Section 6 (Commercial Facilities). Nevertheless, these business categories and activities may have the ability to impact stormwater quality. The lessee should implement Source Control BMPs where appropriate to reduce such impacts. Source Control BMP fact sheets are provided in the RW BMP Guidance Manual. These BMP fact sheets will assist the lessee in identifying appropriate Source Control BMPs. As indicated in the IGP, the categories of businesses that are not required to obtain coverage include:

- Construction activities (addressed by CGP);
- Facilities which have other NPDES permits containing stormwater provisions that would override the IGP;
- Facilities determined ineligible by RWQCBs;
- Facilities which do not discharge stormwater to waters of the United States (including facilities that discharge stormwater to municipal sanitary sewers or combined sewer systems and facilities that do not discharge stormwater to surface waters or MS4s;
- Most silvicultural activities;
- Mining and oil and gas facilities that have not released stormwater resulting in a discharge of a reportable quantity (RQ); and
- Facilities on Indian Lands.

5.4 Notice of Non-Applicability

A discharger may claim “No Discharge” through the Notice of Non-Applicability (NONA) (see Appendix B of this Manual, Section XX.C of the IGP). In order to be eligible for a NONA, the following eligibility requirements must be followed:

- The facility is engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency’s website (or other nearby precipitation data available from other government agencies) so that there will be no discharge of industrial stormwater to waters of the United States; or
- The facility is located in basins or other physical locations that are not hydrological connected to waters of the United States.

A No Discharge Technical Report must be developed and signed and stamped by a California licensed professional engineer.

5.5 No Exposure Certification

The SWRCB may grant a No Exposure Certification (NEC) to those facilities where all industrial activities are conducted inside buildings and where all materials stored and handled are not exposed to stormwater. The NEC provides an exemption to requirements to obtain coverage under the IGP. To qualify for a NEC, facility operators must certify that their facilities meet the conditions specified in Appendix 2 of the IGP.

A condition of no exposure exists when exposure of all industrial materials and activities to rain, snow, snowmelt, and/or runoff is prevented by a storm resistant shelter. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Another condition of NEC indicates that there is no exposure of stormwater to significant materials associated with industrial activity through other direct or indirect pathways such as from industrial activities that generate dust and

particulates. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product.

A lessee must maintain a condition of no exposure at its facility or site in order for the NEC to remain applicable. If conditions change resulting in the exposure of materials and activities to stormwater, the facility operator must immediately obtain coverage under the IGP. Facilities must be re-evaluated at least annually to assure that the NEC conditions are continuously met.

5.6 Standard Industrial Classification Code

The SIC system has been used to group establishments into industries. The SIC system developed a series of 2, 3, and 4 digit numeric codes for establishments that produce similar products or provide similar services. For example, all establishments that manufacture automobiles are in the same industry and are classified under numeric code 37. The SIC codes associated with each of the nine categories listed in Attachment 1 of the IGP are presented in Table 1 (alphabetically) and Table 2 (numerically) within Appendix F.

The SIC code associated with the lessee's activity is reviewed during facility inspections. Additionally, light industry facility dischargers excluded from coverage under the previous permit (Order 97-03-DWQ) must obtain the appropriate coverage under the new IGP.

It is always the facility operator, rather than the property owner, that is the legal entity responsible for all IGP related compliance activities at the facility. Lessees that require coverage under the IGP will need to register for coverage under the IGP by certifying and submitting PRDs via SMARTS (<http://smarts.waterboards.ca.gov>), which consist of:

- A completed NOI and signed certification statement;
- A copy of a current Site Map from the SWPPP in Section X.E of the IGP;
- A SWPPP (see Section X of the IGP); and
- The Discharger shall pay the appropriate Annual Fee in accordance with California Code of Regulations, title 23, section 2200 et seq.

Additionally, they must have a Monitoring Implementation Plan. The following guidance will assist lessees that are required to obtain coverage under the IGP.

5.7 Notice of Intent

The application to obtain coverage under the IGP in order to discharge storm water associated with an industrial activity is called a NOI, which is part of the PRD.s The Legally Responsible Person (LRP) submits the PRDs through SMARTS to notify the SWRCB of their intent to operate their facility in a manner consistent with the requirements of the IGP. The following schedule should be followed for IGP coverage:

- Existing Dischargers with coverage under the previous permit should continue coverage under the previous permit until July 1, 2015. All waste discharge requirements and conditions of the previous permit are in effect until July 1, 2015.
- Existing Dischargers with coverage under the previous permit that do not register for NOI coverage by July 1, 2015 may have their permit coverage administratively terminated as soon as July 1, 2015.
- New Dischargers registering for NOI coverage on or after July 1, 2015 need to certify and submit PRDs via SMARTS at least seven (7) days prior to commencement of industrial activities or on July 1, 2015, whichever comes later.

5.8 Site Map

The facility operator must submit a site map as part of the PRDs. According to Section X.E. of the IGP:

1. The Discharger shall prepare a site map that includes notes, legends, a north arrow, and other data as appropriate to ensure the map is clear, legible and understandable.
2. The Discharger may provide the required information on multiple site maps.
3. The Discharger shall include the following information on the site map:
 - The facility boundary, stormwater drainage areas within the facility boundary, and portions of any drainage area impacted by discharges from surrounding areas. Include the flow direction of each drainage area, on-facility surface water bodies, areas of soil erosion, and location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.) or municipal storm drain inlets that may receive the facility's industrial stormwater discharges and authorized NSWDS;
 - Locations of stormwater collection and conveyance systems, associated discharge locations, and direction of flow. Include any sample locations if different than the identified discharge locations;
 - Locations and descriptions of structural control measures that affect industrial stormwater discharges, authorized NSWDS, and/or run-on;
 - Identification of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;
 - Locations where materials are directly exposed to precipitation and the locations where identified significant spills or leaks (Section X.G.1.d) have occurred; and
 - Areas of industrial activity subject to this General Permit. Identify all industrial storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and material reuse areas, and other areas of industrial activity that may have potential pollutant sources.

5.9 Fees

The current annual application fee for coverage under the IGP can be found at http://www.waterboards.ca.gov/water_issues/programs/stormwater/indusfaq.shtml. The check is made payable to the SWRCB. Once the completed PRDs have been uploaded to SMARTS and appropriate fee have been submitted to the SWRCB, the NOI will be processed and the facility operator will be issued a Waste Discharge Identification Number (WDID).

5.10 Stormwater Pollution Prevention Plan

The IGP requires the facility operator to prepare, retain on site, and implement a SWPPP prior to initiation of facility operations. Failure to do so is a direct violation of the IGP. The two major objectives of the SWPPP are: (1) to help identify the sources of pollution that affect the quality of industrial stormwater discharges and authorized non-stormwater discharges; and (2) to describe and ensure the implementation of BMPs to reduce or prevent pollutants in industrial stormwater discharges and authorized non-stormwater discharges. The RW agent may refer the facility operator to Section X of the IGP for additional information regarding the SWPPP and Monitoring Implementation Program or the facility operator may request information from the SWRCB or the RWQCBs.

5.11 Minimum BMPs

The IGP has specific requirements regarding what minimum BMPs must be implemented for all facilities. Section 4.2 of this Manual lists the BMPs that must be implemented for activities or operations performed within the RW. Table 5-1 IGP Minimum BMPs included below ties the BMP factsheets with the minimum BMPs required under the IGP.

The first five categories of minimum BMPs include practices that are to be implemented on the facility. The quality assurance and record keeping requires the facility operator to maintain the BMP implementation records, training records, and records related to any spills and clean-up related response activities for a minimum of five (5) years. Proper documentation should be kept in the SWPPP and be reviewed by the RW agent.

Table 5-1. IGP Minimum BMP requirements	
Minimum BMP with IGP Section	Applicable RW Manual Factsheets
Good Housekeeping (Section X.H.1.A)	Light Industrial/Light Manufacturing, Auto Body Shop, Auto Recycling, Nurseries, Food Service Facilities, General Land Use, General Maintenance, General Recycling, Office, Outdoor Loading And Unloading, Parking Lots, Trash Removal, Storage, Vehicle Or Equipment Storage, Yard Service.
Preventative Maintenance (Section X.H.1.B)	Light Industrial/Light Manufacturing, Auto Body Shop, Auto Recycling, Nurseries, Food Service Facilities, General Land Use, General Maintenance, General Recycling, Office, Outdoor Loading And Unloading, Parking Lots, Trash Removal, Storage, Vehicle Or Equipment Storage, Yard Service.
Spill Response (Section X.H.1.C)	Light Industrial/Light Manufacturing, Auto Body Shop, Auto Recycling, Food Service Facilities, General Land Use, General Maintenance, General Recycling, Outdoor Loading And Unloading, Parking Lots, Trash Removal, Vehicle Or Equipment Storage.
Material Handling And Waste Management (Section X.H.1.D)	Light Industrial/Light Manufacturing, Auto Body Shop, Auto Recycling, Nurseries, Food Service Facilities, General Maintenance, General Recycling, Outdoor Loading And Unloading, Parking Lots, Trash Removal, Storage, Vehicle Or Equipment Storage.
Erosion And Sediment Controls (Section X.H.1.E)	Nurseries, General Land Use, General Maintenance, Parking Lots, Yard Service, Const BMP handbooks soil stabilization and sediment control BMP sections.
Employee Training Program (Section X.H.1.F)	Light Industrial/Light Manufacturing, Auto Body Shop, Auto Recycling, Food Service Facilities, General Land Use, General Maintenance, General Recycling, Outdoor Loading And Unloading, Parking Lots, Trash Removal, Vehicle Or Equipment Storage.
Quality Assurance And Record Keeping (Section X.H.1.G)	Non-Residential Inspection Form sections I- V, SWPPP.

5.12 Progressive Enforcement

The facility operator is responsible for compliance with the requirements of the IGP and it is the responsibility of the RWQCB to enforce these requirements. The RWQCB enforces the provisions of the Permit by reviewing SWPPPs and annual reports, conducting compliance inspections, and taking enforcement actions. The SWRCB recognizes that industrial activities and operating conditions at a facility may change over time. In addition, more effective BMPs are being developed by facility operators and by industrial groups. Facility operators that develop and implement SWPPPs that comply with the IGP are not penalized when discovering minor violations through the SWPPP's self-evaluation process. Moreover, the IGP provides facility operators up to 90 days to implement revisions to their SWPPPs to correct such violations.

The RW agent is responsible for inspecting the non-residential facilities and assessing compliance with the SWMP and lease requirements, including the facility's coverage under the IGP, if applicable. As such, if a RW agent determines that a corrective action is necessary during a stormwater inspection; a follow up inspection will be scheduled based on the degree of deficiency after the initial inspection. If during the follow-up inspection it is determined that corrective actions were not implemented, the RW agent shall submit a Corrective Action Notification letter to the facility operator and notify the District NPDES coordinator for assistance and possible follow up notification to the appropriate RWQCB (Appendix K). Depending on the severity of the violation, enforcement could range from documentation of a deficiency on the stormwater inspection report to lease cancellation. If Caltrans is cited and fined by the RWQCB for a lessee's discharge, said fines will be passed through to the lessee as included in the lease agreement.

5.12.1 Pre-Inspection Preparation

Prior to the stormwater inspection, the purpose and the scope of inspection are to be identified and available pertinent background information (lease, contract language, minimum BMPs) reviewed. Overall, inspections are necessary to identify potential sources of stormwater pollutants and to ensure that BMPs are properly installed per Caltrans specifications and plans, are adequate and effectively implemented to control these sources. Site officers and managers should be contacted to schedule the inspection and to request that relevant documents (e.g., SWPPP, site plans, chemical inventory logs, spill response plan, etc.) are available on site for review.

The RW agent should review available lessee files or information for the facility, including any past complaints, permits, or monitoring data. Lessees whose activities are subject to the IGP are required to provide copies of the NOI, NEC, or NONA filed with the SWRCB, the receipt letter (with the WDID number), the SWPPP and Monitoring Implementation Plan prepared in compliance with the IGP. These documents should be found in the lessee file or requested during the stormwater inspection. The RW agent can review some of these files by logging into SMARTS as described in section 2.6 of this Manual.

5.12.2 Approaching the Site

Observations

Before entering the facility grounds, the following conditions should be noted by the RW agent:

- Nearby conveyances or water bodies;
- Visible discharge points along the perimeter of the site;
- Outdoor areas of intensive industrial activity; and
- Signs of recent additions or remodeling.

5.12.3 Facility Inspection

Entry

The RW agent should arrange to meet with the appropriate facility officials to discuss the inspection scope and objectives of the inspection. RW Agents should refer to existing RW procedures before entering a property for inspections. All RW leases have a Right of Entry clause that specify when and how RW Agents can inspect the lease premises. RW agents should refer to the specific property agreement to confirm specific procedures.

Document Inspection Activities

As appropriate, the RW agent should document outdoor and indoor activities observed at the facility with notes and photos. This documentation should include the locations and types of BMPs that are currently being implemented and assessments of areas where BMPs should be implemented in the future. These facilities are required to control the discharge of pollutants through implementation of source control BMPs. Although monitoring is not required, the RW agent may also arrange for collection of samples when illicit discharges or unauthorized non-stormwater discharges from the facility are suspected.

An inspection form has been provided for use by RW agents in documenting the above information during a site inspection (Appendix H). Use of this form is suggested to maintain consistency in RW inspection efforts. During the inspection, the RW agent must ensure that the SWPPP drawings and or narratives accurately describe the field activities and operations taking place. Moreover, the IGP requires that the facility operator conducts proper inspections and record keeping.

5.12.4 Record Keeping

The RW agent must update the project file and review the completed inspection report upon return to the office. The inspection report should contain at least the following sections:

- Assessment of BMP implementation;
- Documentation of violations and time frame for correction; and
- Signature and confirmation.

Follow-up inspections will be done as needed to confirm BMP implementation and compliance.

Based on the results of the inspection, a standardized letter is provided in Appendix K, which should be sent to each of the lessees whose facilities appear to require coverage under the IGP. This standardized letter requests that the facilities verify the SIC code that has been assigned to their facility, include an attachment providing basic information about the IGP, and request that the facility provide their WDID number if the facility already has coverage under the General Permit or an individual NPDES permit that includes stormwater.

A second standardized letter is also provided in Appendix K which should be sent to each of the lessees whose facilities have an SIC code that would require coverage under the IGP if materials, equipment, or activities were exposed to stormwater. This standardized letter requests that the facilities verify the SIC code that has been assigned to their operation and includes an attachment that provides basic information about the IGP.

Table 5-2 below is included to provide a quick reference to RW agents charged with assessing compliance with applicable permits. The checklist of items is broken into items to be reviewed before, during and after the site inspection.

Table 5-2. Industrial Facility Inspection Reference List	
Pre-site inspection	Source / Reference
1. Does facility fall under 1 of the 9 SIC codes?	See IGP Appendix X for list
2. Does the site qualify for submitting a Notice of Non-Applicability (NONA)?	If no, proceed to 3
3. Does the site have a No Exposure Certification approved?	If no, proceed to 4
4. Is site listed under SMARTS as having IGP coverage and a WDID number?	SMARTS website
5. Does site have an Industrial QSD overseeing stormwater compliance/reporting (QISP)?	SMARTS website and SWPPP
6. Has SWPPP been updated to reflect 2015 Permit requirements?	SMARTS website
7. Review BMP categories – are the required minimum BMPs noted?	SW RW Manual Section 4
8. Review IC/ID protocols	SW RW Manual Appendix E
During Site Inspection	
1. Is there a current SWPPP on site?	SWPPP
2. Do site operations match SWPPP?	SWPPP and site inspection
3. Are existing BMPs included in SWPPP and are the minimum required BMPs in place?	SWPPP and site inspection
4. Is there a need for additional BMPs?	Site inspection
5. Inspection should determine all discharge points and whether they are clean	SWPPP and site inspection
6. Are industrial facilities limited to a specific area of site or throughout the property?	Site inspection
7. Are proper record keeping and documentation kept on site and accurate?	SWPPP and site inspection
Post-Site Inspection	
1. Are SWPPP revisions needed?	Site inspection and review of SWPPP
2. Are deficiencies minor or is a re-inspection required?	Site inspection
3. Is follow-up correspondence listing deficiencies needed?	Site inspection and Appendix K

5.13 Industrial Related Activity Photographs



Photo 1. Material Storage

Areas to look for when conducting a site inspection:

- Ensure areas are stationary and no components can be blown by wind or other means
- No Outdoor storage areas should be allowed since they can create stormwater issues



Photo 2. General Housekeeping

Areas to look for when conducting a site inspection:

- Ensure areas are clean (e.g., no oil spills or litter)
- Ensure materials are kept orderly and wastes are separated for proper disposal



Photo 3. Vehicle Repair and Storage

Areas to look for when conducting a site inspection:

- Ensure there are no spills or stains
- No hazardous waste should be stored on the property
- Drip pans should be used
- Storage and Maintenance of vehicles should be limited to covered areas to minimize potential for contaminants to be carried by stormwater.

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Section 6

Facility Assessment – Commercial

The lessee of a non-residential property will be responsible for selection, implementation and maintenance of BMPs. However, RW may also require certain minimum BMPs as a condition of the lease. Low or modest cost BMPs, many of which may already be in place, will usually provide satisfactory protection to meet the intent of the SWMP.

Caltrans requires that the lessee shall, to the extent feasible, implement and maintain all of the following minimum BMPs:

- Good housekeeping
- Preventive maintenance
- Spill and leak prevention and response
- Material handling and waste management
- Erosion and sediment controls
- Employee training program
- Quality assurance and record keeping

Although these business categories do not require coverage, they may tend to have a potential to pollute stormwater based on the products they use and their activities. Therefore, it is the responsibility of the Caltrans RW to determine type of facility, assess potential pollution source(s) and provide guidance to assist the lessee in identifying appropriate Source Control BMPs. Table 6-1 lists typical business categories, based on land use, for property management and airspace lessees, and potential pollution sources associated with each of these business categories and potential BMPs.

Table 6-1. Potential Sources of Stormwater Pollution Sorted by Land Use		
Land Use	Potential Sources of Pollution	
Residential	Trash/Debris Sewer Stoppage/Overflow Broken Water Pipes Landscape Maintenance Hazardous Household Waste/Disposal	Pet Waste Pet Washing Automotive Maintenance Swimming Pool Maintenance
Parking Lots	Leaking Vehicles Spills Trash/Debris Runoff	
Storage	Trash/Debris Leaking Vehicles Sediment on Construction Equipment	Illegal Discharges Storage of Loose Materials
Animal Handling Areas	Animal Washing Animal Wastes Feed Storage	

Table 6-1. Potential Sources of Stormwater Pollution Sorted by Land Use		
Land Use	Potential Sources of Pollution	
Office	Trash/Debris Leaking Vehicles Window Washing	Building Maintenance Landscape Maintenance
Sign Boards/Billboards	Trash/Debris Solid Waste Poor Housekeeping Conditions	
Outdoor Loading / Unloading of Materials	Spills/Leaks Liquid Waste Debris	Runoff Faulty Equipment
Retail	Trash/Debris Leaking Vehicles Window Washing	Building Maintenance Landscape Maintenance
Food Service Facilities	Trash/Debris Solid Waste Equipment Washdown	Spills/Leaks Grease Handling/Disposal Landscape Maintenance
Light Manufacturing	Trash/Debris Poor Housekeeping Conditions Painting Landscape Maintenance	Solid Waste Chemical Storage Outdoor Storage Leaking Vehicles
Light Industrial	Trash/Debris Tracking Sediment Solid Waste Outdoor Storage	Poor Housekeeping Conditions Landscape Maintenance Chemical Storage Leaking Vehicles
Commercial/Light Industrial	Trash/Debris Leaking Vehicles Window Washing Poor Housekeeping Conditions Solid Waste	Building Maintenance Landscape Maintenance Outdoor Storage Chemical Storage
Auto Body Shop	Vehicle Washing Detailing Spray Painting Outdoor Storage of Chemicals, Solvents, Batteries	Spills/Leaks Poor Housekeeping Conditions Trash/Debris

Table 6-1. Potential Sources of Stormwater Pollution Sorted by Land Use		
Land Use	Potential Sources of Pollution	
Auto Sales & Rentals/Tractor Sales	Vehicle Washing Vehicle Fueling Trash/Debris	Spills/Leaks Poor Housekeeping Conditions
Vehicle Repair and Storage	Leaking Vehicles Spills/Leaks Storage of Chemicals, Solvents, Batteries	Poor Housekeeping Conditions Chemical Storage
Vehicle or Equipment Storage	Leaking Vehicles Sediment on Construction Equipment	Trash/Debris Spills/Leaks
Auto Recycling	Trash/Debris Leaking Vehicles Chemical Storage Outdoor Storage of Chemicals, Solvents, Batteries	Spills/Leaks Poor Housekeeping Conditions
General Recycling	Trash Uncovered Materials	
Christmas Tree/Pumpkin Lots/Flower Stand/Plant Nurseries	Trash/Debris Sediment Tracking Burning Excess Plant Material	Chemical Storage Irrigation Runoff
Parks & Recreation/Tennis Court	Landscape Maintenance Trash/Debris Restroom Service	
Agricultural	Irrigation Runoff Fertilizer Use Herbicide/Pesticide Use Farm Equipment Maintenance	Farm Equipment Fueling Soil Erosion Livestock
Marinas, Boat Yards and Ports	Sand Blasting Painting Trash/Debris Spills/Leaks Storage of Chemicals, Solvents, Batteries	Boat Fueling Septic Waste Trash/Debris Fish Handling
General	Illicit Connections/Illegal Discharge General Maintenance and Repair General Housekeeping	

RW routinely inspects leased properties to verify that tenants are maintaining the premises in a neat and orderly manner, with proper storage of materials, and to ensure that there are no illicit discharges. As part of the facility inspection, the BMP's implementation effectiveness is evaluated. The non-residential facilities will most likely have already implemented BMPs. These may include pavement sweeping; proper disposal of wash water, sweepings and sediments control; covered waste storage bins; and spill prevention and cleanup procedures.

6.1.1 Pre-Inspection Preparation

Prior to the stormwater inspection, the purpose and the scope of inspection are to be identified and available pertinent background information (lease, contract language, minimum BMPs) reviewed. Overall, inspections are necessary to identify potential sources of stormwater pollutants and to ensure that BMPs are properly installed per the BMP factsheets, that they are adequate and effectively implemented to control these sources. Site officers and managers should be contacted to schedule the inspection and to request that relevant documents (e.g., site plans, chemical inventory logs, spill response plan, etc.) are available on site for review.

The RW agent should review available lessee files or information for the facility, including any past complaints, permits, or monitoring data.

6.1.2 Approaching the Site

Observations

Before entering the facility grounds, the following conditions should be noted by the RW agent:

- Nearby conveyances or water bodies;
- Visible discharge points along the perimeter of the site;
- Outdoor activities- storage, parking, etc.; and
- Signs of recent additions or remodeling.

6.1.3 Facility Inspection

Entry

The RW agent should arrange to meet with the appropriate facility officials to discuss the inspection scope and objectives of the inspection. RW Agents should refer to existing RW procedures before entering a property for inspections. All RW leases have a Right of Entry clause that specifies when and how RW Agents can inspect the lease premises. RW agents should refer to the specific property agreement to confirm specific procedures.

Document Inspection Activities

As appropriate, the RW agent should document outdoor and indoor activities observed at the facility with notes and photos. This documentation should include the locations and types of BMPs that are currently being implemented and assessments of areas where BMPs should be implemented in the future. These facilities are required to control the discharge of pollutants through implementation of source control BMPs.

An inspection form has been provided for use by RW agents in documenting the above information during a site inspection (Appendix H). Use of this form is suggested to maintain consistency in RW inspection efforts.

6.1.4 Record Keeping

The RW agent must update the project file and review the completed inspection report upon return to the office. The inspection report should contain at least the following sections:

- Assessment of BMP implementation;
- Documentation of violations and time frame for correction; and
- Signature and confirmation.

Follow-up inspections will be done as needed to confirm BMP implementation and compliance.

A standardized letter is provided in Appendix K which should be sent to each of the lessees whose facilities have an SIC code that would require coverage under the IGP if materials, equipment, or activities were exposed to stormwater. This standardized letter requests that the facilities verify the SIC code that has been assigned to their operation and includes an attachment that provides basic information about the IGP.

Table 6-2 below is included to provide a quick reference to RW agents charged with assessing compliance with applicable permits. The checklist of items is broken into items to be reviewed before, during and after the site inspection.

Table 6-2. Commercial Facility Inspection Reference List	
Pre-site inspection	Source / Reference
1. Review BMP categories	SW RW Manual Section 4
2. Review IC/ID protocols	SW RW Manual Section 3.4
3. Review lease and allowable activities on site	Lease
4. Any activities that could subject site to IGP requirements	Review SIC codes
During Site Inspection	
1. Are existing BMPs in place	Site inspection
2. Does site operations create need for additional BMPs	SWPPP and site inspection
3. Are operations conducted outside that could result in discharge of pollutants	SWPPP and site inspection
4. Inspection should determine all discharge points and whether	Site inspection
Post-Site Inspection	
1. Do site operations require changes to lease/revisions	Site inspection
2. Are deficiencies minor or is a re-inspection required	Site inspection
3. Is follow-up correspondence listing deficiencies needed	Site inspection

Below are some photographs of typical commercial activities/operations that could result in issues if not properly managed. The photos are intended to aid RW agents in identifying potential issues.

6.2 Commercial Related Activity Photographs



Photo 4. Fueling Areas

Areas to look for when conducting a site inspection:

- Should have spill kits available in case of leaks or spills and properly labeled- including where to dispose of spilled-cleaned up material
- Area required to drain to sewer system and be bermed/graded in a manner to prevent run-on
- Area required to be undercover to minimize exposure
- No uncovered containers should be allowed, including trash receptacles



Photo 5. Outdoor Storage Areas

Areas to look for when conducting a site inspection:

- Outdoor storage areas should be limited to materials that will not be blown, create stormwater issues if rain occurs
- Materials must be properly labeled
- Materials should be stored in manner where they cannot be hit by vehicles



Photo 6 and 7. Vehicle Parking Areas

Areas to look for when conducting a site inspection:

- No barrels or materials that could be hazardous should be maintained on premises without proper storage, labeling and containment (if necessary)
- Ensure areas are free of extraneous materials
- General housekeeping should be done frequently to ensure no spills or leaks are occurring
- Spill kits and or spill pans should be available if spills are occurring
- No vehicle maintenance should occur except in designated areas with proper BMPs in place



Section 7

Facility Assessment – Residential

7.1 BMPs for Residential Facilities

The Caltrans NPDES Permit requires implementation of the SWMP and assessment of the effectiveness of the program. Overall, the program prohibits non-exempt non-stormwater discharges into storm drains or other conveyances, and requires controls to reduce the discharge of pollutants to the maximum extent practicable. This section provides information on the necessary elements and steps involved in identifying BMPs for residential activities occurring on the Caltrans RW. In most cases, for residential and non-residential BMP implementation is the responsibility of the lessee (or tenant). Caltrans will be responsible for general building maintenance and landscape upkeep for residential property, whereas the lessee will be responsible for BMP implementation and maintenance for non-residential property leases. Tenants of single-family residences also have responsibility for general yard maintenance.

7.1.1 BMP Identification and Implementation

Caltrans rents residential properties to tenants, and uses maintenance contractors to perform maintenance of those properties. Maintenance contractors may do work such as interior and exterior painting, landscaping, pool and other maintenance and repair. Caltrans contractors also implement appropriate BMPs to reduce the discharge of pollutants associated with these activities. Tenants of single-family residences may also be responsible for yard or pool maintenance on the property they are renting. Potential sources of pollutants associated with tenant activities at residential facilities include:

- Using
 - proper storage and use of pesticides and fertilizer;
 - dry methods to cleanup spills outside the residence whenever possible;
 - proper methods for storage and disposal of hazardous household waste;
- Maintaining landscape irrigation systems and methods so as to avoid excess irrigation runoff;
- Disposing of household waste in covered receptacles; and
- Picking-up pet waste on a regular basis.

Successful implementation of a BMP is dependent on regular stormwater inspections, periodic evaluation of BMP performance, and follow-up action to correct deficiencies in BMP implementation noted during stormwater inspections.

7.2 Residential Stormwater Inspections

Stormwater inspections of residential facilities are typically performed annually to verify that BMPs are implemented, that they are appropriate for the sources and activities present on site, and that they continue to reduce the discharge of pollutants (Section 4). In the event of an observed problem, such as detected non-stormwater discharges, the inspection frequency should be increased as appropriate to facilitate correction of the problem. Residential stormwater inspection reports are used to document inspection findings and compile information for record keeping and annual reporting (Appendix I). The inspection report provides for a general characterization of the facility being inspected, activities that may take place, and BMPs applicable for the facility. The residential stormwater inspection report also

provides documentation of suggested corrective actions that can be implemented should a problem be found.

7.2.1 Pre-Inspection Preparation

Prior to the stormwater inspection, the purpose and the scope of inspection are to be identified and available pertinent background information (lease, contract language, minimum BMPs) reviewed. Inspections are necessary to identify potential sources of stormwater pollutants and to ensure that BMPs are properly installed per the BMP factsheets and effectively implemented.

7.2.2 Approaching the Site

Observations

Before entering the facility grounds, the following conditions should be noted by the RW agent:

- Nearby conveyances or water bodies;
- Visible discharge points along the perimeter of the site;
- Outdoor activities- storage, parking, etc.; and
- Signs of recent additions or remodeling.

7.2.3 Facility Inspection

Entry

The RW agent should arrange to meet with the appropriate facility officials to discuss the inspection scope and objectives of the inspection. RW Agents should refer to existing RW procedures before entering a property for inspections. All RW leases have a Right of Entry clause that specifies when and how RW Agents can inspect the lease premises. RW agents should refer to the specific property agreement to confirm specific procedures.

Document Inspection Activities

As appropriate, the RW agent should document outdoor and indoor activities observed at the property with notes and photos. This documentation should include the locations and types of BMPs that are currently being implemented and assessments of areas where BMPs should be implemented in the future. These facilities are required to control the discharge of pollutants through implementation of source control BMPs.

An inspection form has been provided for use by RW agents in documenting the above information during a site inspection (Appendix I). Use of this form is suggested to maintain consistency in RW inspection efforts.

7.2.4 Record Keeping

The RW agent must update the project file and review the completed inspection report upon return to the office. The inspection report should contain at least the following sections:

- Assessment of BMP implementation;
- Documentation of violations and time frame for correction; and
- Signature and confirmation.

Follow-up inspections will be done as needed to confirm BMP implementation and compliance.

Table 7-1 below is included to provide a quick reference to RW agents charged with assessing compliance with applicable permits. The checklist of items is broken into items to be reviewed before, during and after the site inspection.

Table 7-1. Residential Facility Inspection Reference List	
Pre-site inspection	
1. Review BMP categories	SW RW Manual Section 4
2. Review IC/ID protocols	SW RW Manual Section 3.4
During Site Inspection	
1. Are existing BMPs in place	Site inspection
2. Does residential operations create need for additional BMPs	Site inspection
3. Are activities conducted outside that could result in discharge of pollutants	Site inspection
Post-Site Inspection	
1. Are modifications to lease required	Site inspection
2. Are deficiencies minor or is a re-inspection required	Site inspection
3. Is follow-up correspondence listing deficiencies needed	Site inspection

7.3 Residential Related Activity Photographs



Photo 8. Pervious and Impervious Areas

Areas to look for when conducting a site inspection:

- Ensure areas are kept free of trash and debris
- No pet waste should remain on pavement or grass
- Vegetation/lawn should be maintained



Photo 9. Landscape and Drainage System

Areas to look for when conducting a site inspection:

- Ensure no over-irrigation occurs
- Ensure areas are kept free of trash and debris



Photo 10. Water Overuse

Areas to look for when conducting a site inspection:

- *Ensure water is not over-used*
- *Look for signs of water leakage*



Photo 11. Vehicle Maintenance

Areas to look for when conducting a site inspection:

- *Ensure areas are free of spill and leaks*
- *Implement drip pans*

Section 8

Facility Assessment – Demolition

8.1 Introduction

This section provides guidance to RW agents in evaluating construction related activities (mainly demolition contracts) to determine their need for permit coverage. Demolition projects typically require the excavation of pavements, rubble, building materials, and landscape vegetation that involve soil disturbance. If demolition projects disturb one or more acres of soil, it will be regulated under the CGP or the LTHUCGP within the Lake Tahoe Basin.

The CGP and LTHUCGP recognize four distinct phases of construction activities; Grading and Land Development Phase, Streets and Utilities Phase, Vertical Construction Phase, and Final Landscaping and Site Stabilization Phase. Moreover, the permits also recognize inactive construction as a category of construction site type.

Sections 8.2 and 8.3 provide a discussion on requirements under the Caltrans NPDES Permit for demolition and or construction activities that do and do not require coverage under the CGP.

8.2 Activities that Require CGP Coverage

The CGP Section I.B lists activities that are covered under the CGP. For this Manual, the main two activities that are pertinent are:

- Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in disturbed soil area of equal to or greater than one acre.
- Construction activity that results in disturbed soil area of less than one acre if the construction activity is part of a larger common plan of development or the sale of one or more acres of disturbed soil area.

8.2.1 Risk Level Calculation

The CGP requires a Risk Level Determination for every project. The CGP is a risk-based permit that establishes three levels of environmental risk possible for a construction site.

The Risk Level (RL) is calculated in two parts: 1) Project Sediment Risk; and 2) Receiving Water Risk. Caltrans has developed a Risk Level guidance document (available at <http://www.dot.ca.gov/hq/oppd/stormwtr/risk-guidance.htm>) to assist in the determination of a project's a Risk Level.

The CGP requires inspections and sample collection based on RL, as presented below in Table 8-1. Additional information is found in the CGP. Monitoring and reporting requirements increase as the RL goes from 1 to 3. Specific requirements for Risk Level 1 projects are presented in CGP's Attachment C. Risk level 2 requirements are in CGP's attachment D and Risk Level 3 are presented in CGP's Attachment E.

Table 8-1. Required Visual Inspections and Sample Collection Per Risk Level

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-stormwater Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Stormwater Discharge	Receiving Water
		Baseline	REAP				
1	X	X		X	X		
2	X	X	X	X	X	X	
3	X	X	X	X	X	X	X

8.3 Activities that Do Not Require CGP Coverage

The CGP Section I.C lists activities that are not covered under the CGP. For this Manual the main activities that are not under CGP purview are:

- Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.
- Disturbed soil area solely related to agricultural operations
- Discharges of stormwater from areas on tribal lands
- Construction activity and land disturbance involving discharges of stormwater within the Lake Tahoe Hydrologic Unit.
- Construction activities that disturbs less than one acre of disturbed soil area and that is not part of a larger common plan of development or the sale of one or more acres of disturbed soil area.
- Construction activity covered by an individual NPDES Permit for stormwater discharges.
- Discharges from small (1 to 5 acres) construction activities with an approved Rainfall Erosivity Waiver authorized by United States Environmental Protection Agency Phase II regulations certifying to the State Board that small construction activity will occur only when the Rainfall Erosivity Factor is less than 5 ("R" in the Revised Universal Soil Loss Equation).

Any demolition or construction activity that is not subject to CGP or LTHUCGP will be required to prepare and implement a WPCP as described in Section 8.10.

8.4 Notice of Intent

The application to obtain coverage under the CGP or the LTHUCGP in order to discharge storm water associated with a construction activity is called a NOI, which is part of the PRDs. The LRP submits the PRDs through SMARTS to notify the SWRCB of their intent to operate seek coverage under either the CGP or the LTHUCGP.

8.5 Site Map

The facility operator must submit a site map as part of the PRDs to include:

- a. The project's surrounding area (vicinity);
- b. Site layout;
- c. Construction site boundaries;
- d. Drainage areas;
- e. Discharge locations;

- f. Sampling locations;
- g. Areas of soil disturbance (temporary or permanent);
- h. Active areas of soil disturbance (cut or fill);
- i. Locations of all runoff BMPs;
- j. Locations of all erosion control BMPs;
- k. Locations of all sediment control BMPs;
- l. ATS location (if applicable);
- m. Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
- n. Locations of all post-construction BMPs; and
- o. Locations of storage areas for waste, vehicles, service, loading/unloading of materials, access (entrance/exits) points to construction site, fueling, and water storage, water transfer for dust control and compaction practices.

8.6 Fees

The current annual application fee for coverage under the IGP can be found at

http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/sw_feeschedules.pdf.

The check is made payable to the SWRCB. Once the completed PRDs have been uploaded to SMARTS and appropriate fee have been submitted to the SWRCB, the NOI will be processed and the facility operator will be issued a WDID.

8.7 Stormwater Pollution Prevention Plan

The CGP requires the discharger to prepare, retain on site, and implement a SWPPP prior to initiation of demolition activities. Failure to do so is a direct violation of the CGP.

The SWPPP shall be designed to address the following objectives:

1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion, and all other activities associated with construction activity, are controlled.
2. Where not otherwise required to be under a California RWQCB permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated.
3. Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from the construction activity to BAT/BCT standard.
4. Calculations and design details for site run-on, as well as BMP controls, are complete and correct.
5. Stabilization BMPs designed to eliminate or reduce pollutants after construction is complete have been installed.

Caltrans has developed a SWPPP template to aid the contractor in the preparation of the SWPPP and ensure that Caltrans and CGP requirements are included in all approved SWPPPs. The template is available at http://www.dot.ca.gov/hq/construc/stormwater/ms_access/SWPPP/SWPPP.zip

A QSD with a current certification is required to be the site-specific WPCM per Caltrans specifications that will prepare, revise and implement the SWPPP once it is approved by Caltrans. Work on the demolition site cannot begin until the site specific SWPPP is approved by Caltrans.

8.8 Inspection

Inspections on demolition projects within the LTHUCGP are to be done daily during daylight hours. If rain is forecasted on the weekends, inspections and sampling of stormwater runoff is to be performed during daylight hours as stated in the site-specific SWPPP (Appendix D, Attachment C, IV.C.1.a). Any rain event that produces stormwater run-off in the Lake Tahoe Hydrologic Unit must be sampled for turbidity (Appendix D).

When performing routine site inspections, weather monitoring must be done daily for forecasted rain events. For example, a typical pre storm inspection on demolition or construction projects includes;

- Inspecting the entire project site, run on and run-off discharge locations, and all of the temporary BMPs listed in the SWPPP or WPCP and shown on the Water Pollution Control Drawings (WPCDs).
- Prior to a forecasted rain event, proper installation of stockpile management BMPs, erosion control BMPs, materials storage and waste management BMPs must be installed in active areas.
- Inspect for proper installation of tracking control BMPs, storm drain inlet protection, run-on BMPs and all listed non-stormwater and waste management BMPs listed in the approved SWPPP.

8.8.1 CEM Forms

Caltrans has standardized forms to aid contractors in reviewing the six categories of construction site BMPs. All inspections must be documented on the Stormwater Site Inspection Report form (CEM 2030) located in Appendix L. All corrective actions identified in CEM 2030 must also be recorded on the Stormwater Corrective Actions Summary form (CEM 2035) located in Appendix L. The inspector must identify locations on the Stormwater Corrective Actions Summary form that require repairs or design changes within 72 hours of being identified. The identified locations must complete BMP repairs or other changes as soon as possible or prior to the next forecasted rain event, whichever comes first.

8.9 Notice of Termination

Caltrans is required to ensure that a project subject to the CGP complies with all the requirements until a Notice of Termination (NOT) is applied for and approved by the appropriate RWQCB. An NOT can be filed when a project meets all of the following criteria:

1. For purposes of “final stabilization,” the site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity;
2. There is no potential for construction-related stormwater pollutants to be discharged into site runoff;
3. Final stabilization has been reached;
4. Construction materials and wastes have been disposed of properly; and
5. Compliance with the Post-Construction Standards in Section XIII of the CGP has been demonstrated;

The NOT can be filed under SMARTS once all the above criteria has been met. Site photographs and SWPPP sections showing Post-construction (Operations and Maintenance) and other requirements can be submitted as attachments to the NOT. Inspections, maintenance and all other requirements of the SWPPP and CGP must be followed until the NOT is approved by the appropriate RWQCB.

8.10 Water Pollution Control Program

Caltrans requires a contractor who is doing any work within Caltrans RW to prepare either a SWPPP or a WPCP. A WPCP is required when demolition work disturbs less than an acre of soil and if the construction activity is not part of a larger common plan of development. The contractor must have a QSP who is responsible to prepare, revise and implement the WPCP. Caltrans has developed a template, available at http://www.dot.ca.gov/hq/construc/stormwater/ms_access/WPCP/WPCP.zip.

While the construction activity is not subject to CGP or LTHUCGP, it must still implement an effective WPCP to install and maintain appropriate BMPs as required by the Caltrans NPDES Permit.

The inspection forms listed in Section 8.8.1 are also required to be completed and submitted to Caltrans when implementing a WPCP. Weather forecast tracking and corrective actions response are the same as SWPPP requirements.

8.11 Pre-Inspection Preparation

Prior to the stormwater inspection, the purpose and the scope of inspection are to be identified and available pertinent background information (demolition contract language, minimum BMPs) reviewed. Overall, inspections are necessary to identify potential sources of stormwater pollutants and to ensure that BMPs are properly installed per the BMP factsheets, that they are adequate and effectively implemented to control these sources. Site officers and managers should be contacted to schedule the inspection and to request that relevant documents (e.g., site plans, chemical inventory logs, spill response plan, etc.) are available on site for review.

The RW agent should review available lessee files or information for the facility, including any past complaints, permits, or monitoring data.

8.11.1 Approaching the Site

Observations

Before entering the facility grounds, the following conditions should be noted by the RW agent:

- Nearby conveyances or water bodies;
- Visible discharge points along the perimeter of the site;
- Outdoor activities- storage, parking, etc.; and
- Tracking onto public roadways.

8.11.2 Facility Inspection

Entry

The RW agent should arrange to meet with the appropriate demolition property officials to discuss the scope and objectives of the inspection. RW Agents should refer to existing RW procedures before entering a property for inspections. All RW leases have a Right of Entry clause that specifies when and how RW Agents can inspect the lease premises. RW agents should refer to the specific property agreement to confirm specific procedures.

Document Inspection Activities

As appropriate, the RW agent should document outdoor and indoor activities observed at the facility with notes and photos. This documentation should include the locations and types of BMPs that are currently being implemented and assessments of areas where BMPs should be implemented in the future. These facilities are required to control the discharge of pollutants through implementation of source control BMPs. Moreover, CGP has specific minimum requirements based on the project's risk level (1, 2 or 3).

An inspection form has been provided for use by RW agents in documenting the above information during a site inspection (Appendix L). Use of this form is suggested to maintain consistency in RW inspection efforts.

8.11.3 Record Keeping

The RW agent must update the project file and review the completed inspection report upon return to the office. The inspection report should contain at least the following sections:

- Assessment of BMP implementation;
- Need for SWPPP and WPCP amendments;
- Documentation of violations and time frame for correction; and
- Signature and confirmation.

Follow-up inspections will be done as needed to confirm BMP implementation and compliance.

Table 8-2 below is included to provide a quick reference to RW agents charged with assessing compliance with applicable permits. The checklist of items is broken into items to be reviewed before, during and after the site inspection.

Table 8-2. Demolition Facility Inspection Reference List

Pre-site inspection	Source / Reference
1. Is demolition in excess of 1 acre and therefore subject to CGP	Contract Plans
2. Does demolition project been uploaded to SMARTS	SMARTS website
3. Has the SWPPP/WPCP approved by Caltrans	Contract Files
4. Review Caltrans Specifications, Plans and BMP Guidance Manual	Caltrans websites, SW RW Manual Section 4
5. Site activities to ascertain if changes have occurred, and if so, whether new or modified BMPs are needed	Contract Plans
During Site Inspection	
1. Check to see that the temporary BMPs are installed and maintained per Caltrans specifications and plans	Site Inspection
2. Does site operations create need for additional BMPs	Site Inspection and SWPPP review
3. Check to see that all of the listed temporary BMPs in the approved SWPPP or WPCP and WPCDs are properly implemented in the field	Site Inspection and SWPPP review
4. Make sure that entrance/exits are properly stabilized and tracked sediment is swept and vacuumed daily when observed	Site Inspection
5. Check the drainage areas within the project site for indications of unauthorized non-stormwater discharges	Site Inspection
6. Make sure that non-stormwater management BMPs are properly implemented (i.e., Vehicle and equipment fueling, dewatering operations, etc.)	Site Inspection

Table 8-2. Demolition Facility Inspection Reference List	
Pre-site inspection	Source / Reference
7. Make sure that all waste management BMPs are properly implemented and maintained (i.e., Solid waste receptacles are water tight and covered, materials are staged and stored in in water tight conditions, spill response BMPs are properly implemented, stockpile BMPs are properly implemented)	Site Inspection
Post-Site Inspection	
1. Are SWPPP revisions needed (Amendments)	SWPPP
2. Are deficiencies minor or is a re-inspection required (CEM 2030)	Site Inspection and SWPPP review, including previous CEM 2030s
3. Is follow-up correspondence listing deficiencies needed (CEM 2035)	Site Inspection and SWPPP review, including previous CEM 2035s

8.12 Demolition Related Activity Photographs



Photo 12. Tracking controls and Hauling operations

Areas to look for when conducting a site inspection:

- Install perimeter sediment control BMPs, stabilize pervious areas after demolition.
- Implement tracking control and dust control BMPs.
- Requires review and approval of site specific WPCP or SWPPP.
- Assess downgradient drainage inlet protection to determine if it is required.



Photo 13. Proper Tracking Controls/Sweeping

Areas to look for when conducting a site inspection:

- Sweep/vacuum tracked sediment on paved surfaces when tracking occurs.
- Inspect entrance/exits daily.
- Properly stabilize all entrance/exits and channel vehicle and equipment traffic onto the BMP.
- When sweeping/vacuuming tracked sediment from pavement, ensure the equipment uses light water application to the sweeper/brooms to keep dust suppressed.



Photo 14. Proper Tracking Controls

Areas to look for when conducting a site inspection:

- Properly stabilize entrance/exits from soil areas to paved roadways per Caltrans Standard Specifications and Plans.
- Guide/channel vehicle and equipment traffic to use the temporary BMP.
- Visually inspect entrance/exits daily for tracking of sediment onto paved surfaces.
- Maintain temporary BMP to ensure effectiveness.
- Sweep/vacuum tracked sediment from paved surface/roadway when observed.
- Do not use kick brooms to sweep tracked sediment from paved surfaces.



Photo 15. Preservation of Vegetation

Areas to look for when conducting a site inspection:

- Ensure preservation of vegetation is maximized to reduce need for other BMPs.
- Implement other sediment control/soil stabilization BMPs as needed.



Photo 16. Proper Preservation of Vegetation

Areas to look for when conducting a site inspection:

- Preserve existing vegetation as much as possible on the site prior to commencement of clearing and grubbing/soil disturbing operations.
- Delineate areas to be preserved by marking boundaries (orange Environmental Sensitive Area - ESA fencing is shown).
- Educate all project field staff not to remove, relocate, or work behind orange ESA fencing.
- Maintain delineation markers.
- Install and maintain preservation of existing vegetation per current Caltrans Standard Specifications



Photo 17. Waste Management

Areas to look for when conducting a site inspection:

- Ensure areas where waste/materials are stockpile have no potential to discharge offsite.
- Wastes are to be removed/protected prior to forecasted rain events.



Photo 18. Proper Waste Management

- Make sure solid waste receptacles are water tight
- Cover solid waste receptacles at the end of every shift and prior to forecasted rain events.
- Do not over fill solid waste receptacles and routinely haul off when full.
- Separate potentially hazardous waste from non-hazardous waste.
- Recycle materials whenever possible.



Photo 19. Linear Perimeter Control

Areas to look for when conducting a site inspection:

- Ensure site meets minimum required BMPs.
- Implement stockpile BMPs prior to forecasted high winds and rain events.



Photo 20. Proper Linear Perimeter Controls

Areas to look for when conducting a site inspection:

- Properly install perimeter sediment control BMPs prior to soil disturbing activities per the current Caltrans Standard Specifications and Plans.
- Perimeter Sediment Control BMPs can be silt fence (SC-1), fiber rolls (SC-5) or gravel bag berms (SC-6) to name a few.
- Inspect and maintain perimeter sediment control BMPs per the approved SWPPP.



Photo 21. Proper Wind Erosion/Dust Control

Areas to look for when conducting a site inspection:

- Wind Erosion/Dust suppression must be implemented on the project site.
- Do not let fugitive dust become nuisance dust.
- Do not use excessive amounts of water that could cause erosion, discharge or sediment to be tracked off site.



Photo 22. Proper Spill Prevention and Control

- *Clean up minor spills and leaks of fuels, oils, grease, solvents (all chemicals) immediately when they occur or are found.*
- *Place impacted soils and spent absorbent materials in a properly labeled container for staging until final proper disposal.*
- *Educate personnel on the clean-up procedures for semi-significant and significant spills.*
- *Significant/Hazardous Spills need to be cleaned up by a licensed Hazmat team/contractor.*
- *Notify all of the required personnel and agencies listed in the Caltrans current Standard Specifications.*

Section 9

Facility Assessment – Other

There might be other leases that fall outside of industrial, commercial, residential or demolition activities.

Airspace Leases vary throughout the State. Sections 4, 5 and 6 of this Manual should be reviewed for specifics on BMPs implementation and selection.

Table 9-1 below is included to provide a quick reference to RW agents charged with assessing compliance with applicable permits. The checklist of items is broken into items to be reviewed before, during and after the site inspection.

Table 9-1. Other Facility Inspection Reference List	
Pre-site inspection	
1. Review BMP categories	SW RW Manual Section 4
2. Review IC/ID protocols	SW RW Manual Section 3.4
During Site Inspection	
1. Are existing BMPs in place	Site inspection
2. Does site operations create need for additional BMPs	Site inspection
3. Are operations conducted outside that could result in discharge of pollutants	Site inspection
4. Inspection should determine all discharge points	Site inspection
Post-Site Inspection	
1. Are BMP placement revisions needed	Site inspection
2. Are deficiencies minor or is a re-inspection required	
3. Is follow-up correspondence listing deficiencies needed	



Photo 23. Parking Areas

Areas to look for when conducting a site inspection:

- Look for excessively leaking vehicles and solid waste.
- Maintain Drainage Inlets.
- Note if street sweeping is needed.



Photo 24. Storage of Materials and Wastes

Areas to look for when conducting a site inspection:

- Is particular activity allowed.
- Housekeeping, Waste Management, and Spill Response BMPs needed.
- Investigate what is on pallets and in containers (should be labeled and stored properly).



Photo 25. Material Storage

Areas to look for when conducting a site inspection:

- Ensure proper labeling and containment.
- If Materials are illegal dumping, have them removed and disposed of properly to reduce potential for more dumping from others.



Photo 26. Drainage Conveyance and Landscaped Areas

Areas to look for when conducting a site inspection:

- Ensure no over-irrigation occurs.
- Keep drainage inlets clean of trash/debris.



Photo 27. Water Usage

Areas to look for when conducting a site inspection:

- Ensure no car washing takes place.
- Water usage should be limited to permitted uses.



Photo 28. Telecommunication and other stationary objects

Areas to look for when conducting a site inspection:

- Ensure stationary tower/billboard will have no component that can be blown by wind or other means.
- No outdoor storage areas should be allowed since they can create stormwater issues.
- Use of facility should be limited to its primary purpose per the lease agreement.



Photo 29. Billboards

Areas to look for when conducting a site inspection:

- Ensure stationary tower/billboard will have no component that can be blown by wind or other means.
- No outdoor storage areas should be allowed since they can create stormwater issues.
- Use of facility should be limited to primary purpose per the lease agreement.



Photo 30. Board-ups

Areas to look for when conducting a site inspection:

- Ensure no IC/IDs are taking place.
- No outdoor storage areas should be allowed.
- Vegetation should be maintained.

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Section 10

Property Maintenance Activities Category Guidance

Non-residential lessees and RW maintenance contractors also perform maintenance on Caltrans property. Therefore, it is the responsibility of the RW agent to provide guidance to assist Caltrans' lessees and maintenance contractors in identifying appropriate source control BMPs. Table 10-1 displays typical property maintenance categories, for RW maintenance contractors, as well as property management and airspace lessees. Table 10-1 also identifies potential pollution sources associated with each of these maintenance categories and applicable Source Control BMP fact sheet. The objective of implementing source control BMPs is to ensure that property maintenance activities conducted by the State's lessees and maintenance contractors are implemented in a manner that reduces or eliminates the potential for pollutants to be discharged to surface waters via the MS4.

The Source Control BMP fact sheets for maintenance activities that are referenced in Table 10-1 are also available in Appendices M and N of this Manual. These fact sheets address a collection of activities typically associated with a certain type of maintenance. The BMP fact sheets are individually page numbered and are suitable for photocopying. The RW agent may wish to provide these fact sheets to lessees and maintenance contractors in an effort to provide a single source of information regarding stormwater pollution prevention.

Table 10-1. Potential Sources of Stormwater Pollution Sorted by Maintenance Activity and Recommended BMPs

Property Maintenance Activities	Potential Sources of Pollution	Recommended BMP Fact Sheet(s)
Weed Abatement, Mowing, Discing	Pesticide Soil Erosion Vegetation Stockpile/Disposal	Yard Service Trash Removal
Tree Trimming	Vegetation Stockpile/Disposal	Yard Service
Fence Repair	Solid Waste/Debris Soil Erosion	General Maintenance
Graffiti Removal/Painting	Sand Blasting Sand Blasting Waste Equipment Cleaning	Paint Paint Waste Spills/Leaks
Trash Removal	Solid Waste/Debris Improper Waste Storage Waste Mixing Poor Housekeeping Conditions	Trash Removal
Landscape/Yard Service	Irrigation Runoff Fertilizer Use Pesticide Soil Erosion Vegetation Stockpile/Disposal	Yard Service
Roof Repair or Replacement	Solid Waste/Debris Liquid Waste Improper Waste Storage Chemical Use Poor Housekeeping Conditions	General Maintenance
Chimney Maintenance	Solid Waste/Debris Liquid Waste Improper Waste Storage Chemical Use Poor Housekeeping Conditions	General Maintenance
Plumbing	Solid Waste/Debris Liquid Waste Chemical Use Poor Housekeeping Conditions	General Maintenance

Table 10-1. Potential Sources of Stormwater Pollution Sorted by Maintenance Activity and Recommended BMPs

Property Maintenance Activities	Potential Sources of Pollution	Recommended BMP Fact Sheet(s)
Carpenter	Solid Waste/Debris Chemical Use Poor Housekeeping Conditions	General Maintenance
Fumigation/Pest and Rodent Control	Pesticide Use Chemical Use Spills/Leaks Over spray/Excessive Application	General Maintenance
Sewer or Drain Cleaning/Septic Systems	Solid Waste/Debris Liquid Waste Soil Erosion Poor Housekeeping Conditions Illegal Discharges/Illicit Connections	Sewer or Drain Cleaning and Maintenance/Septic Systems
Board-ups	Solid Waste/Debris Liquid Waste Chemical Use Poor Housekeeping Conditions	Board-ups

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References

Caltrans, *Storm Water Quality Handbooks, Caltrans Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual*
http://www.dot.ca.gov/hq/construc/stormwater/SWPPP_Prep_ManualJune2011.pdf

Caltrans, *Storm Water Quality Handbook, Project Planning and Design Guide, Construction Site BMPs Guide*, Revised 2010; <http://www.dot.ca.gov/hq/oppd/stormwtr/ppdg/swdr2010/PPDG-July-2010-r2.pdf>

Caltrans, *Storm Water Quality Handbook, Construction Site BMPs Manual*, March 2003;
<http://www.dot.ca.gov/hq/oppd/stormwtr/constssp.htm>

Caltrans, *Storm Water Quality Handbook, Maintenance Staff Guide*, May 2003 with November 2007, October 2009, and September 2012 revisions.

Caltrans, *Division of Construction Storm Water Management Enforcement Guidance Manual*, December 2003.
<http://www.dot.ca.gov/hq/construc/stormwater/appendices.htm>

Caltrans, *Construction Site Monitoring Program Guidance Manual*, January 2012, CTSW-RT-11-255.11.01-F

Caltrans, *Field Guide to Construction Site Dewatering*, June 2014, CTSW-OT-14-314.08.1

Caltrans, *Illegal Connection, Illicit Discharge (IC/ID) and Illegal Dumping Response Plan*, December 2013, CTSW-RT-13-999.43.03

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Appendix A: Caltrans NPDES Permit

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CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

**ORDER NO. 2012-0011-DWQ
NPDES NO. CAS000003
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
STATEWIDE STORM WATER PERMIT
WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Effective Date: July 1, 2013

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APPENDIX: FACT SHEET FOR NPDES PERMIT AND WASTE DISCHARGE REQUIREMENTS
FOR STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION

- ATTACHMENT I: INCIDENT REPORT FORM
- ATTACHMENT II: MONITORING CONSTITUENT LIST
- ATTACHMENT III: ASBS PRIORITY DISCHARGE LOCATIONS
- ATTACHMENT IV: TMDL IMPLEMENTATION REQUIREMENTS
- ATTACHMENT V: REGIONAL WATER BOARD SPECIFIC REQUIREMENTS
- ATTACHMENT VI: STANDARD PROVISIONS
- ATTACHMENT VII: ACRONYMS & ABBREVIATIONS
- ATTACHMENT VIII: GLOSSARY
- ATTACHMENT IX: REPORTING REQUIREMENTS
- ATTACHMENT X: References

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STATE WATER RESOURCES CONTROL BOARD

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

NPDES Permit No. CAS000003

ORDER NO. 2012-0011-DWQ

STATEWIDE STORM WATER PERMIT

WASTE DISCHARGE REQUIREMENTS (WDRs)

FOR

THE STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

FINDINGS

The State Water Resources Control Board (State Water Board) finds that:

Permit Application

1. The State of California, Department of Transportation (hereafter the Department) has applied to the State Water Board for reissuance of its statewide storm water permit and waste discharge requirements to discharge storm water and permitted non-storm water to waters of the United States under the National Pollutant Discharge Elimination System (NPDES) permit program.

Background and Authority

Permit Background

2. Prior to issuance of the Department's first statewide storm water permit (Order No. 99-06-DWQ), the Regional Water Boards regulated storm water discharges from the Department's storm drain systems with individual permits. On July 15, 1999, the State Water Board adopted a statewide permit to consolidate storm water permits previously adopted by the Regional Water Boards. This statewide permit regulates storm water and non-storm water discharges from the Department's properties and facilities, and discharges associated with operation and maintenance of the State highway system. The Department's properties include all Right-of-Way (ROW) owned by the Department. The Department's facilities include, but are not limited to, maintenance stations/yards, equipment storage areas, storage facilities, fleet vehicle parking and maintenance areas and warehouses with material storage areas.

Federal Authority

3. In 1987, the United States Congress amended the federal Clean Water Act (C.W.A.) and added section 402(p), which established a framework for regulating municipal and industrial storm water discharges under the NPDES Permit Program. On November 16, 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated federal regulations for controlling pollutants in storm water runoff discharges (known as Phase I storm water regulations). Phase I storm water regulations require permit coverage for storm water discharges from large and medium Municipal Separate Storm Sewer Systems (MS4s), certain categories of industrial facilities, and construction activities disturbing five or more

acres of land. On December 8, 1999, U.S. EPA promulgated regulations, known as Phase II storm water regulations, which require NPDES permit coverage for storm water discharges from small MS4s and construction sites which disturb one to five acres of land.

State Authority

4. California Water Code (Wat. Code) section 13376 provides that any person discharging or proposing to discharge pollutants to waters of the United States within the jurisdiction of the state shall apply for and obtain Waste Discharge Requirements (WDRs). (For this permit, the State term "WDRs" is equivalent to the federal term "NPDES permits" as used in the Clean Water Act). The State Water Board issues this Order pursuant to section 402 of the Clean Water Act and implementing regulations adopted by U.S. EPA and chapter 5.5, division 7 of the California Water Code (commencing with § 13370 et seq.). It shall serve as an NPDES permit for point source discharges to surface waters. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with § 13260 et seq.). Applicable State regulations on discharges of waste are contained in the California Code of Regulations (Cal. Code Regs.), tit. 23, Division 3, Chapter 9.

Storm Water Definition

Storm Water Discharge

5. Storm water discharges consist only of those discharges that originate from precipitation events. Storm water is defined in the Code of Federal Regulations (40 C.F.R. § 122.26(b)(13)) as storm water runoff, snowmelt runoff, and surface runoff and drainage. During precipitation events, storm water picks up and transports pollutants into and through MS4s and ultimately to waters of the United States.

Non-Storm Water Discharge

6. Non-storm water discharges consist of all discharges from an MS4 that do not originate from precipitation events.

Generally, non-storm water discharges to an MS4 are prohibited, conditionally exempt from prohibition, or regulated separately by an NPDES permit. The categories of conditionally exempt non-storm water discharge are specified at 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(1). Non-storm water discharges that are regulated by a separate NPDES permit are not subject to the discharge prohibition. Prohibited non-storm water discharges include conditionally exempt discharges that are found to be a source of pollutants to waters of the United States. Illicit discharges must also be prohibited. An illicit discharge is defined in 40 Code of Federal Regulations section 122.26(b)(2) as "any discharge to a municipal storm sewer that is not composed entirely of storm water except discharges pursuant to an NPDES permit (other than the NPDES Permit for discharges from the Municipal Separate Storm Sewer System) and discharges resulting from fire fighting activities." Provision B of this Order addresses non-storm water discharge.

Non-storm water discharges to an MS4 with a discharge to an ASBS are subject to a different set of conditions as stated in Finding 22.a.

Performance Standards

Performance Standard for Discharges from MS4s

7. Clean Water Act section 402(p) establishes performance standards for discharges from MS4s. Clean Water Act section 402(p)(3)(B) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." This Order prohibits storm water discharges that do not comply with the maximum extent practicable (MEP) standard.
8. Compliance with the MEP standard involves applying Best Management Practices (BMPs) that are effective in reducing or eliminating the discharge of pollutants to the waters of the United States. MEP emphasizes pollutant reduction and source control BMPs to prevent pollutants from entering storm water runoff. MEP may require treatment of the storm water runoff if it contains pollutants. BMP development is a dynamic process, and the menu of BMPs contained in a SWMP may require changes over time as experience is gained and/or the state of the science and art progresses. MEP is the cumulative effect of implementing, evaluating, and making corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate controls are implemented in the most effective manner. The State Water Board has held that "MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the costs would be prohibitive." (SWRCB, 2000b).

Permit Coverage and Scope

Discharges Regulated by this Permit

9. This Order regulates the following discharges:
 - a. Storm water discharges from all Department-owned MS4s;
 - b. Storm water discharges from the Department's vehicle maintenance, equipment cleaning operations facilities and any other non-industrial facilities with activities that have the potential of generating significant quantities of pollutants; and
 - c. Certain categories of non-storm water discharges as listed under provision B. of this Order.

This Order does not regulate storm water discharges from leased office spaces, Department owned batch plants or any other industrial facilities, as industrial facilities defined in the Statewide Industrial General Permit. The Department will obtain coverage for storm water discharges associated with industrial activities under the Statewide Industrial General Permit for each batch plant and industrial facility, and shall comply with applicable requirements. While this Order does not regulate storm water discharges associated with industrial activities, it does impose contractor requirements for certain industrial facilities.

This Order does not regulate discharges from the Department's construction activities, including dewatering effluent discharges from construction projects. Instead, the Department will obtain coverage for storm water discharges associated with construction

activities under Order No. 2009-0009-DWQ Statewide Construction General Permit. While this Order does not regulate storm water discharges associated with construction activities, it does impose electronic filing, notification, reporting and contractor requirements for certain construction projects, and imposes limitations on types of materials that may be used during construction which may have an impact on post-construction discharges. Any discharges from a site occurring after completion of construction are fully subject to the requirements of this Order.

Some Regional Water Boards have issued specific requirements for dewatering effluent discharges in their regions. The Department will consult with the appropriate Regional Water Board and comply with the applicable dewatering requirements in each region.

Department Activities and Discharges

Department Activities

10. The Department is primarily responsible for the design, construction, management, and maintenance of the State highway system including; freeways, bridges, tunnels, and facilities such as corporation yards, maintenance facilities, rest areas, weigh stations, park and ride lots, toll plazas and related properties. The Department is also responsible for initial emergency spill response and cleanup for unauthorized discharges of waste within the Department's ROW.

Department Discharges

11. The Department's discharges include storm water and non-storm water discharges generated from:
 - a. Maintenance and operation of State-owned ROW;
 - b. Department storage and disposal areas;
 - c. Department facilities;
 - d. Department Airspaces; and
 - e. Other properties and facilities owned and operated by the Department.

The Department discharges either directly to surface waters or indirectly through municipal storm water conveyance systems. These surface waters include creeks, rivers, reservoirs, wetlands, saline sinks, lagoons, estuaries, bays, and the Pacific Ocean and tributaries thereto, some or all of which are waters of the United States as defined in 40 Code of Federal Regulations section 122.2. As specified, this Order regulates the Department's municipal storm water and non-storm water discharges.

Potential Pollutants

12. Discharges of storm water and non-storm water from Department properties, facilities, and activities have been shown to contribute pollutants to waters of the United States. As such, these discharges may be causing or threatening to cause violations of water quality objectives and can have damaging effects on human health and aquatic ecosystems. The quality and quantity of these discharges vary considerably and are affected by many environmental factors including hydrology, geology, land use, climatology and chemistry, and by controllable management factors including maintenance practices, spill prevention

and response activities, public education (i.e., concerning trash and other storm water pollutants) and pollution prevention.

Pollutant sources from the Department properties, facilities, and activities include motor vehicles, highway surface materials such as fine particles of asphalt and concrete, highway maintenance products, construction activities, erodible shoulder materials, eroding cut and filled slopes, abrasive sand and deicing salts used in winter operations, abraded tire rubber, maintenance facilities, illegal connections, illegal dumping, fluids from accidents and spills, and landscape care products.

Pollutant categories include, but are not limited to, metals (such as copper, lead, and zinc), synthetic organic compounds (pesticides), Polycyclic Aromatic Hydrocarbons (PAHs) from vehicle emissions, oil and grease, Total Petroleum Hydrocarbons (TPH), sediment, nutrients (nitrogen and phosphorus fertilizers), debris (trash and litter), pathogens, and oxygen demanding substances (decaying vegetation, animal waste, and other organic matter).

Characterization Monitoring

13. Under the previous permit (Order No. 99-06-DWQ), the Department conducted a comprehensive, multi-component storm water monitoring program. The Department monitored and collected pollutant characterization information at more than 180 sites statewide, yielding more than 60,000 data points. The Department used the data to evaluate the effectiveness of the Department's maintenance facility pollution prevention plans and highway operation control measures. This information is also used to identify pollutants of concern in the Department's discharges.

Department Discharge Characterization Studies

14. The Department compared the monitoring results from the 2002 and 2003 Runoff Characterization Studies (California Department of Transportation, 2003)¹ to California Toxics Rule (CTR) objectives and to several surface water quality objectives considered potentially relevant to storm water runoff quality. The Department prioritized constituents as high, medium, and low, according to a percentage estimate by which the most stringent water quality objective was exceeded. The Department identified lead, copper, zinc, aluminum, diazinon, chlorpyrifos, and iron as high priority constituents in the Department's runoff. The sources of other water quality objectives considered were:
 - a. National Primary Drinking Water Maximum Contaminant Levels (40 C.F.R., § 141.1);
 - b. U.S. EPA Action Plan for Beaches and Recreational Waters;
 - c. U.S. EPA Aquatic Life Criteria;
 - d. California Department of Public Health Maximum Contaminant Levels; and California Department of Fish and Game Recommended Criteria for Diazinon and Chlorpyrifos.

Department Discharges that are Subject to MS4 Permit Regulations

15. An MS4 is a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm

¹ References are found in Attachment X of this Order.

drains. An MS4 is designed or used for collecting or conveying storm water. It is not a combined sanitary sewer and is not part of a Publicly Owned Treatment Works (POTW). Clean Water Act section 402(p) and 40 Code of Federal Regulations section 122.26 (a)(v) give the State authority to regulate discharges from an MS4 on a system-wide or jurisdiction-wide basis. All MS4s under the Department's jurisdiction are considered one system, and are regulated by this Order. Therefore, all storm water and exempted and conditionally exempted non-storm water discharges from the Department owned MS4 are subject to the requirements in this Order.

Maintenance and Construction Activities not Subject to the Construction General Permit

16. Some maintenance and construction activities such as roadway and parking lot repaving and resurfacing may not be subject to the Construction General Permit. Such activities may involve grinding and repaving the existing surface and have the potential to mobilize pollutants, even though it may not involve grading or land disturbance. The Department's Maintenance Staff Guide (Department, 2007b), Project Planning and Design Guide (Department, 2010) and the California Stormwater Quality Association (CASQA) California Construction Stormwater BMP Handbook (CASQA, 2009) specify BMPs for paving and grinding operations. The Department is required to implement BMPs for such operations to control the discharge of pollutants to the MEP.

Department Construction Projects Involving Lead Contaminated Soils

17. Department construction projects may involve soils that contain lead in quantities that meet the State definition of hazardous waste but not the federal definition. The Department of Toxic Substances Control (DTSC) has issued a variance (V09HQSCD006) effective July 1, 2009, allowing the Department to place soil containing specific concentrations of aerially deposited lead under pavement or clean soil. In addition to complying with the terms of the variance, the Department also needs to notify the appropriate Regional Water Boards to determine the appropriate regulation of these soils.
18. Past monitoring data show that storm water runoff from the Department's facilities contains pollutants that may adversely affect the beneficial uses of receiving waters. Facilities not subject to the Industrial General Permit are required to implement BMPs to reduce the discharge of pollutants from these facilities to the MEP.

Provisions of This Order

19. Storm water discharges from MS4s are highly variable in frequency, intensity, and duration, and it is difficult to characterize the amount of pollutants in the discharges. In accordance with 40 Code of Federal Regulations section 122.44(k)(2), the inclusion of BMPs in lieu of numeric effluent limitations is appropriate in storm water permits. This Order requires implementation of BMPs to control and abate the discharge of pollutants in storm water to the MEP. To assist in determining if the BMPs are effectively achieving MEP standards, this Order requires effluent and receiving water monitoring. The monitoring data will be used to determine the effectiveness of the applied BMPs and to make appropriate adjustments or revisions to BMPs that are not effective.

Receiving Water Limitations

20. The effect of the Department's storm water discharges on receiving water quality is highly variable. For this reason, this Order requires the Department to implement a storm water program designed to achieve compliance with water quality standards, over time through an iterative approach. If discharges are found to be causing or contributing to an exceedance of an applicable Water Quality Standard, the Department is required to revise its BMPs (including use of additional and more effective BMPs).

Discharges to Areas of Special Biological Significance

21. The State Water Board has designated 34 coastal marine waters as Areas of Special Biological Significance (ASBS) in the California Ocean Plan. An ASBS is a coastal area requiring protection of species or biological communities. The Department discharges storm water into the following ASBS:
 - a. Redwoods National Park ASBS
 - b. Saunders Reef ASBS
 - c. James V. Fitzgerald ASBS
 - d. Año Nuevo ASBS
 - e. Carmel Bay ASBS
 - f. Point Lobos ASBS
 - g. Julia Pfeiffer Burns ASBS
 - h. Salmon Creek Coast ASBS
 - i. Laguna Point to Latigo Point ASBS
 - j. Irvine Coast ASBS
22. The Ocean Plan prohibits waste discharges into ASBS. The Ocean Plan allows the State Water Board to grant exceptions to this prohibition, provided that: (1) the exception will not compromise protection of ocean waters for beneficial uses, and (2) the public interest will be served. The Department has applied for and been granted an exception under the General Exception for Storm Water and Non-Point Source Discharges to ASBS. The exception allows the continued discharge into ASBS provided the Department complies with the special protections specified in the General Exception.
- 22a. Non-storm water discharges to ASBS are prohibited except as specified in the General Exception. Certain enumerated non-storm water discharges are allowed under the General Exception if essential for emergency response purposes, structural stability, slope stability, or if occur naturally. In addition, an NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS. This Order allows utility vault discharges to segments of the Department MS4 with a direct discharge to an ASBS, provided the discharge is authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. The State Water Board is in the process of reissuing the General NPDES Permit for Utility Vaults. As part of the renewal, the State Water Board will require a study to characterize representative utility vault discharges to an MS4 with a direct discharge to an ASBS and will impose conditions on such discharges to ensure the

discharges do not alter natural ocean water quality in the ASBS. Given the limited number of utility vault discharges to MS4s that discharge directly to an ASBS, the State Water Board finds that discharges from utility vaults and underground structures to a segment of the Department's MS4 with a direct discharge to an ASBS are not expected to result in the MS4 discharge causing a substantial alteration of natural ocean water quality in the ASBS in the interim period while the General NPDES Permit for Discharges from Utility Vaults is renewed and the study is completed. However, if a Regional Water Board determines a specific discharge from a utility vault or underground structure does alter the natural ocean water quality in an ASBS, the Regional Water Board may prohibit the discharge as specified in this Order.

New Development and Re-development Design Standards

23. 40 Code of Federal Regulations section 122.26(d)(2)(iv)(A)(2) requires municipal storm water permittees to implement a new development and redevelopment program to reduce the post-construction generation and transport of pollutants. Development can involve grading and soil compaction, an increase in impervious surfaces (roadways, roofs, sidewalks, parking lots, etc.), and a reduction of vegetative cover, all of which increase the amount of rainfall that ends up as runoff, and decrease the particle size and the load of watershed sediment. The increase in runoff generally leads to increased pollutant loading from watersheds, even if post-construction pollutant concentrations are similar to pre-construction concentrations. The accelerated erosion and deposition resulting from an increase in runoff and a decrease in the size and load of watershed sediment generally causes a stream channel to respond by deepening and widening and detaching from the historic floodplain. The magnitude of response depends on geology, land use, and channel stability at the time of the watershed disturbance. Increased pollutant loads and alteration of the runoff/sediment balance have the potential to negatively impact the beneficial uses of receiving waters including streams, lakes, wetlands, ground water, oceans, bays and estuaries, and the biological habitats supported by these aquatic systems.
24. Department projects have the potential to negatively impact stream channels and downstream receiving waters through modification of the existing runoff hydrograph. The hydromodification requirements in this Order are "effluent limitations," which are defined by the Clean Water Act to include any restriction on the quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources (C.W.A., § 502(11)).
25. Waters of the United States supporting the beneficial use of fish migration could be adversely impacted by improperly designed or maintained stream crossings, or through natural channel evolution processes affected by Department activities. This Order requires the Department to submit to the State Water Board the annual report required under Article 3.5 of the Streets and Highways Code reporting on the Department's progress in locating, assessing, and remediating barriers to fish passage.
26. Low Impact Development (LID) is a sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional storm water management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances

to a centralized storm water facility, LID uses site design and storm water management to maintain the site's pre-project runoff rates and volumes by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source.

27. On October 5, 2000, the State Water Board adopted a precedential decision concerning the use of Standard Urban Storm Water Mitigation Plans (SUSMPs) (Order WQ 2000-11). The SUSMP in that case required sizing design standards for post-construction BMPs for specific categories of new development and redevelopment projects. Order WQ 2000-11 found that provisions in the SUSMPs, as revised in the order, reflected MEP. The LID requirements, post-construction requirements for impervious surface and the design standards in this Order are consistent with Order WQ 2000-11 and meet the requirement for development of a SUSMP.

Self-Monitoring Program

28. Effluent and receiving water monitoring are necessary to evaluate the effectiveness of BMP measures and to track compliance with water quality standards. This Order requires the Department to conduct effluent and receiving water monitoring.

Storm Water Management Plan (SWMP)

29. The SWMP describes the procedures and practices that the Department proposes to reduce or eliminate the discharge of pollutants to storm drainage systems and receiving waters. On May 17, 2001, the State Water Board approved a Storm Water Management Plan submitted by the Department. That SWMP was updated in 2003 (Department, 2003c) and the updates were approved by the Executive Director of the State Water Board on February 13, 2003. On January 15, 2004, the Department submitted a proposed Storm Water Management Plan as part of its NPDES permit application to renew its previous statewide storm water permit (Order No. 99-06-DWQ). The State Water Board and Regional Water Board staff and the Department discussed and revised Best Management Practices (BMP) controls and many other components proposed in each section of the SWMP during numerous meetings from January 2004 to 2006. The Department submitted a revised SWMP in June 2007. The 2004 and 2007 SWMPs have not been approved by the State Water Board and the Department has continued to implement the 2003 SWMP. The Department is in the process of revising aspects of the 2003 SWMP to address the Findings of Violation and Order for Compliance issued by U.S. EPA in 2011 (U.S. EPA Docket No. CWA-09-2011-0001).
30. The SWMP and any future modifications or revisions are integral to and enforceable components of this Order. Any documents incorporated into the SWMP by reference that specify the manner in which the Department will implement the SWMP shall be consistent with the requirements of this Order.
31. This Order requires the Department to submit an Annual Report each year to the State Water Board. The Annual Report serves the purpose of evaluating, assessing, and reporting on each relevant element of the storm water program, and revising activities, control measures, BMPs, and measurable objectives, as necessary, to meet the applicable standards.

32. Revisions to the SWMP requiring approval by the State Water Board's Executive Director are subject to public notice and the opportunity for a public hearing.

Total Maximum Daily Load (TMDL) Requirements

33. TMDLs are calculations of the maximum amount of a pollutant that a water body can receive and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations or WLAs) and non-point sources (load allocations or LAs), plus the contribution from background sources and a margin of safety (40 C.F.R., § 130.2, subd.(i)). Discharges from the Department's MS4 are considered point source discharges.
34. This Order implements U.S. EPA-approved or U.S. EPA-established TMDLs applicable to the Department. This Order requires the Department to comply with all TMDLs listed in Attachment IV. Attachment IV identifies TMDLs adopted by the Regional Water Boards and approved by the State Water Board and U.S. EPA that assign the Department a Waste Load Allocation (WLA) or that specify the Department as a responsible party in the implementation plan. In addition, Attachment IV identifies TMDLs established by U.S. EPA that specify the Department as a responsible party or that identify NPDES permitted storm water sources or point sources generally, or identify roads generally, as subject to the TMDL. In accordance with 40 Code of Federal Regulations section 122.44, subdivision (d)(1)(vii)(B), NPDES water quality-based effluent limitations (WQBELs) must be consistent with the assumptions and requirements of available TMDL WLAs. In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement any relevant water quality control plans. The TMDL requirements in this Order are consistent with the assumptions and requirements of the TMDLs applicable to the Department.
35. TMDL WLAs in this Order are not limited by the MEP standard. Implementation requirements for many TMDLs are partially or fully specified in Regional Water Board Water Quality Control Plans (Basin Plans) and are an enforceable part of this Order. Applicable Basin Plan amendments and resolutions are identified in Attachment IV for each TMDL listed. Compliance may include, but is not limited to, implementation of BMPs and control measures contained in TMDL implementation plans sufficient to achieve the WLA, or a demonstration that the numeric WLA has been achieved. Due to the nature of storm water discharges, and the typical lack of information on which to base numeric WQBELs, federal regulations (40 C.F.R., § 122.44, subd. (k)(2)) allow for the implementation of BMPs to control or abate the discharge of pollutants from storm water.
36. The Department reported in its 2008-09 Annual Report to the State Water Board that it is subject to over 50 TMDLs and is in the implementation phase of over 30 TMDLs. WLAs and LAs for some TMDLs are shared jointly among several dischargers, with no specific mass loads assigned to individual dischargers. In some of these cases, multiple dischargers are assigned a grouped or aggregate waste load allocation, and each discharger is jointly responsible for complying with the aggregate waste load allocation.
37. The high variance in the level of detail and specificity in the TMDLs developed by the Regional Water Boards and U.S. EPA necessitates the development of more specific permit

requirements in many cases, including deliverables and required actions, derived from each TMDL's WLA and implementation requirements. These requirements will provide clarity to the Department regarding its responsibilities for compliance with applicable TMDLs. The development of TMDL-specific permit requirements is subject to notice and a public comment period. Given the number of TMDLs that apply to the Department, it is not possible to develop TMDL-specific permit requirements for every TMDL listed in Attachment IV without severely delaying the issuance of this Order. Because most of the TMDLs were developed by the Regional Water Boards, and because some of the WLAs are shared by multiple dischargers, the development of TMDL-specific permit requirements is best coordinated initially at the Regional Water Board level.

38. Attachment IV specifies TMDL-specific permit requirements, including deliverables, actions, and compliance due dates, for the Lake Tahoe sediment and nutrients TMDL. These requirements are consistent with the assumptions and requirements of applicable WLAs assigned to the Department, and with the adopted and approved TMDL, Basin Plan, and related Lahontan Regional Water Board Orders and Resolutions.
39. For all remaining TMDLs, the Regional Water Boards, in consultation with the State Water Board and the Department, will develop TMDL-specific permit requirements where necessary within one year of the adoption date of this Order. Regional Water Board staff will also prepare supporting analyses explaining how the proposed TMDL-specific permit requirements will implement the TMDL and are consistent with the assumptions and requirements of any applicable WLA and, where a BMP-based approach to permit limitations is selected, how the BMPs will be sufficient to implement applicable WLAs. Following a notice and comment period, Attachment IV of this Order and the Fact Sheet will be reopened consistent with provision E.11.c. for incorporation of these requirements and supporting analysis into the Order.
40. This Order does not specify the requirements to be followed for TMDL-specific monitoring. TMDL monitoring requirements are found in some of the adopted and approved TMDLs. The Regional Water Boards may include specific TMDL monitoring requirements in the permit requirements developed and incorporated into this Order through the reopener as described in Finding 39, and/or may require monitoring through Regional Water Board orders pursuant to Water Code section 13383.
41. Attachment IV may additionally be reopened consistent with provision E.11.b. of this Order for incorporation of newly adopted TMDLs or amendments to existing TMDLs into the Permit.

Non-Compliance

42. NPDES regulations require the Department to notify the Regional Water Board and/or State Water Board of anticipated non-compliance with this Order (40 C.F.R., § 122.41(l)(2)); or of instances of non-compliance that endanger human health or the environment (40 C.F.R., § 122.41(l)(6)).

Regional Water Board and State Water Board Enforcement

43. The Regional Water Boards and the State Water Board will enforce the provisions and requirements of this Order.

Region Specific Requirements

Basin Plans

44. Each Regional Water Board has adopted a Basin Plan for the watersheds within its jurisdiction. Basin Plans identify the beneficial uses for each water body and the water quality objectives necessary to protect them. The Department is subject to the prohibitions and requirements of each Basin Plan.

Region Specific Requirements

45. Regional Water Boards have identified Region-specific water quality issues and concerns pertaining to discharges from the Department's properties. Region-specific requirements to address these issues are included in this Order.

Local Municipalities and Preemption

46. Storm water and non-storm water from MS4s that are owned and managed by other NPDES permitted municipalities may discharge to storm water conveyance systems owned and managed by the Department. This Order does not supersede the authority of the Department to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within its jurisdiction as allowed by State and federal law.

Storm water and non-storm water from the Department's ROW, properties, facilities, and activities may discharge to storm water conveyance systems managed by other NPDES permitted municipalities. This Order does not preempt or supersede the authority of the permitted municipalities to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within their jurisdiction as allowed by State and federal law.

Anti-Degradation Policy

47. 40 Code of Federal Regulations section 131.12 requires that state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's anti-degradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal anti-degradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plans implement, and incorporate by reference, both the State and federal anti-degradation policies. This Order is consistent with the anti-degradation provision of 40 Code of Federal Regulations section 131.12 and State Water Board Resolution No. 68-16.

Endangered Species Act

48. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2115.5) or the Federal Endangered Species Act (16 U.S.C.A., §§ 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the United States. The Department is responsible for meeting all requirements of the applicable Endangered Species Act.

California Environmental Quality Act (CEQA)

49. The action to adopt an NPDES Permit is exempt from the provisions of CEQA (Public Resources Code, § 21100, et. seq.), pursuant to section 13389 of the California Water Code (County of Los Angeles et al., v. California Water Boards et al., (2006), 143 Cal.App.4th 985).

Public Notification

50. The Department, interested agencies, and persons have been notified of the State Water Board's intent to reissue requirements for storm water discharges and have been provided an opportunity to submit their written comments and recommendations. State Water Board staff prepared a Fact Sheet and Response to Comments, which are incorporated by reference as part of this Order.

Public Hearing

51. The State Water Board, through public testimony in public meetings and in written form, has received and considered all comments pertaining to this Order.

Cost of Compliance

52. The State Water Board has considered the costs of complying with this Order and whether the required BMPs meet the minimum "maximum extent practicable" standard required by federal law. The MEP approach is an evolving, flexible, and advancing concept, which considers technical and economic feasibility. Because of the numerous advances in storm water regulation and management and the size of the Department's MS4, the Order does not require the Department to fully incorporate and implement all advances in a single permit term, but takes an incremental approach that allows for prioritization of efforts for the most effective use of the increased, but nevertheless limited, Department funds. This Order will have an effect on costs to the Department above and beyond the costs from the Department's prior permit. Such costs will be incurred in complying with the post-construction, hydrograph modification, Low Impact Development, and monitoring and reporting requirements of this Order. Additional costs will also be incurred in correcting non-compliant discharges.² These incremental costs are necessary to advance the controls and management of storm water by the Department and to facilitate reduction of the discharge of pollutants to the MEP.

53. This Order supersedes Order No. 99-06-DWQ.

² Although the cost of compliance with TMDL waste load allocations was considered, compliance with TMDLs is not subject to the MEP standard.

54. This Order serves as an NPDES permit pursuant to Clean Water Act section 402 or amendments thereto, and shall become effective on July 1, 2013, provided that the Regional Administrator, U.S. EPA, Region IX, expresses no objections.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code, regulations, and plans and policies adopted thereafter, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereafter, that the Department shall comply with the following:

A. GENERAL DISCHARGE PROHIBITIONS

1. Storm water discharges from the Department's Municipal Separate Storm Sewer System (MS4) containing pollutants that have not been reduced to the Maximum Extent Practicable (MEP), are prohibited. The Department shall achieve the pollutant reductions described in this Prohibition through implementation of the provisions in this Order and the approved SWMP.
2. Discharges to Areas of Special Biological Significance (ASBS)
 - a. Existing storm water discharges into an ASBS are allowed only if the discharges:
 - 1) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
 - 2) Are designed to prevent soil erosion;
 - 3) Occur only during wet weather; and
 - 4) Are composed of only storm water runoff, except as provided at B.6.
 - b. Discharges composed of storm water runoff shall not alter natural water quality in an ASBS.
 - c. The discharge of trash is prohibited.
 - d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no additional pollutant loading). "Existing storm water outfalls" are those that were constructed or under construction prior to January 1, 2005. "New contribution of waste" is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.
 - e. The discharges comply with all terms, prohibitions, and special conditions contained in sections E.2.c.2)a)i) and E.5. of this Order.

3. Discharge of material other than storm water, or discharge that is not composed entirely of storm water, to waters of the United States or another permitted MS4 is prohibited, except as conditionally exempted under Section B.2 of this Order or authorized by a separate National Pollutant Discharge Elimination System (NPDES) permit.
4. The discharge of storm water or conditionally exempt non-storm water that causes or contributes to the violation of water quality standards or water quality objectives (collectively WQSs), the California Toxics Rule (CTR), or impairs the beneficial uses established in a Water Quality Control Plan, or a promulgated policy of the State or Regional Water Boards, is prohibited. The Department shall comply with all discharge prohibitions contained in Regional Water Board Basin Plans.
5. The discharge of storm water to surface waters of the United States in a manner causing or threatening to cause a condition of pollution or nuisance as defined in Water Code section 13050 is prohibited.
6. Discharge of wastes or wastewater from road-sweeping vehicles or from other maintenance activities to any waters of the United States or to any storm drain leading to waters of the United States is prohibited unless in compliance with section E.2.h.3)c)ii) of this Order or authorized by another NPDES permit.
7. The dumping, deposition, or discharge of waste by the Department directly into waters of the United States or adjacent to such waters in any manner that may allow its being transported into the waters is prohibited unless authorized by the Regional Water Board.
8. The discharge of sand, silt, clay, or other earthen materials from any activity in quantities which cause deleterious bottom deposits, turbidity, or discoloration in waters of the United States or which unreasonably affect or threaten to affect beneficial uses of such waters, is prohibited.

B. NON-STORM WATER DISCHARGE PROHIBITIONS

Non-storm water discharges, other than those to ASBS, must comply with the following provisions:

1. The Department shall effectively prohibit non-storm water discharges into its storm water conveyance system unless such discharges are either:
 - a. Authorized by a separate NPDES permit; or
 - b. Conditionally exempt in accordance with provision B.2. of this NPDES permit

2. Conditionally Exempt Non-storm Water Discharges

The following non-storm water discharges are conditionally exempt from Prohibition B.1 unless the Department or the State Water Board Executive Director identifies them as sources of pollutants to receiving waters. For discharges identified as sources of pollutants, the Department shall either eliminate the discharge or otherwise effectively prohibit the discharge.

- a. Diverted stream flows;
- b. Rising ground waters;
- c. Uncontaminated ground water infiltration (as defined at 40 C.F.R., § 35.2005(20)) to MS4s;
- d. Uncontaminated pumped ground water;
- e. Foundation drains, including slope lateral drains;
- f. Springs;
- g. Water from crawl space pumps;
- h. Footing drains;
- i. Air conditioning condensation;
- j. Flows from riparian habitats and wetlands;
- k. Water line flushing³;
- l. Minor, incidental discharges of landscape irrigation water⁴;
- m. Discharges from potable water sources³;
- n. Irrigation water⁵;
- o. Minor incidental discharges from lawn watering;
- p. Individual residential car washing; and
- q. Dechlorinated swimming pool discharges.

3. Some Regional Water Boards have separate dewatering and/or “de minimus” NPDES discharge permits or Basin Plan requirements for some or all of these listed non-storm water discharges. The Department shall check with the appropriate Regional Water Board to determine if a specific non-storm water discharge requires coverage under a separate NPDES permit.

4. The Department is not required to prohibit emergency fire fighting flows (i.e., flows necessary for the protection of life or property). Discharges associated with emergency firefighting do not require BMPs, but they are recommended if feasible. As part of the SWMP, the Department shall develop and implement a program to reduce pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) as specified in the SWMP.

³ In order to remain conditionally exempt, discharges shall be dechlorinated prior to discharge.

⁴ In order to remain conditionally exempt, landscape irrigation systems must be designed, operated and maintained to control non-incidental runoff. See definition of incidental runoff in Attachment VIII.

⁵ Return flows from irrigated agriculture are not point-source discharges and are not prohibited from entering the Department’s MS4.

5. If the State Water Board Executive Director determines that any category of conditionally exempt non-storm water discharge is a source of pollutants, the State Water Board Executive Director may require the Department to conduct additional monitoring and submit a report on the discharges. The State Water Board Executive Director may also order the Department to cease a non-storm water discharge if it is found to be a source of pollutants.

Non-storm water discharges to ASBS must comply with the following provisions:

6. Non-storm water discharges to ASBS are prohibited except as stated in this Section.

The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability, or occur naturally:

- a. Discharges associated with emergency fire fighting operations.
- b. Foundation and footing drains.
- c. Water from crawl space or basement pumps.
- d. Hillside dewatering.
- e. Naturally occurring groundwater seepage via a storm drain.
- f. Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

Discharges from utility vaults and underground structures to a segment of the Department's MS4 with a direct discharge to an ASBS are permitted if such discharges are authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. A Regional Water Board may nonetheless prohibit a specific discharge from a utility vault or underground structure if it determines that the discharge is causing the MS4 discharge to the ASBS to alter natural ocean water quality in the ASBS.

Additional non-storm water discharges to a segment of the Department's MS4 with a direct discharge to an ASBS are allowed only to the extent the relevant Regional Water Board finds that the discharge does not alter natural ocean water quality in the ASBS.

Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan or alter natural ocean water quality in an ASBS.

C. EFFLUENT LIMITATIONS

The Department shall reduce the discharge of pollutants from its MS4 to waters of the United States to the MEP, as necessary to achieve TMDL WLAs established for discharges by the Department, and to comply with the Special Protections for discharges to ASBS.

D. RECEIVING WATER LIMITATIONS

1. Receiving water quality objectives, as specified in the Water Quality Control Plans and promulgated policies and regulations of the State and Regional Water Boards, are applicable to discharges from the Department's facilities and properties.
2. The discharge of storm water from a facility or activity shall not cause or contribute to an exceedance of any applicable water quality standard.
3. Storm water discharges shall not cause the following conditions to create a condition of nuisance or to adversely affect beneficial uses of waters of the United States:
 - a. Floating or suspended solids, deposited macroscopic particulate matter, or foam;
 - b. Bottom deposits or aquatic growth;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin, and/or;
 - e. Toxic or deleterious substances present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
4. The Department shall comply with Sections A.4, D.2 and D.3 of this Order through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SWMP and other requirements of this Order including any modifications. The SWMP shall be designed to achieve compliance with Sections A.4, D.2 and D.3 of this Order. If exceedance(s) of WQS persist notwithstanding implementation of the SWMP and other requirements of this Order, the Department shall assure compliance with Sections A.4, D.2 and D.3 of this Order by complying with the procedure specified at Section E.2.c.6)c) of this Order.
5. Provided the Department has complied with the procedure set forth in provision E.2.c.6)c) of this Order and is implementing the revised SWMP required by provision E.1., the Department is not required to repeat the procedure called for in provision E.2.c.6)c) for continuing or recurring exceedances of the same receiving water limitations unless directed by the State Water Board's Executive Director or Regional Water Board Executive Officer to develop additional BMPs.
6. Where the Department discharges waste to a water of the State that is not a water of the United States, compliance with the prohibitions, limitations, and provisions of this Order when followed for that water of the State will constitute compliance with the requirements of the Porter-Cologne Water Quality Control Act, unless the Department is notified otherwise in writing by the State Water Board Executive Director or a Regional Water Board Executive Officer.

E. PROVISIONS

1. Storm Water Management Plan (SWMP)

- a. The Department shall update, maintain and implement an effective SWMP that describes how the Department will meet requirements of this Order as outlined in E.1.b below. The Department shall submit for Executive Director approval an updated SWMP consistent with the provisions and requirements of this Order within one year of the effective date of this Order. The SWMP shall identify and describe the BMPs that shall be used. The SWMP shall be reviewed annually and modified as necessary to maintain an effective program in accordance with the procedures of this Order. 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.
- b. The SWMP shall contain the following elements:
 - 1) Overview
 - 2) Management And Organization
 - 3) Monitoring And Discharge Characterization Program
 - 4) Project Planning And Design
 - 5) BMP Development and Implementation
 - 6) Construction
 - 7) Compliance with the Industrial General Permit
 - 8) Maintenance Program Activities, including facilities operations
 - 9) Non-Departmental Activities
 - 10) Non-Storm Water Activities/ Discharges
 - 11) Training
 - 12) Public Education and Outreach
 - 13) Region Specific Activities (See provision E.6 and Attachment V)
 - 14) Program Evaluation
 - 15) Measurable Objectives
 - 16) Reporting
 - 17) References

The Department shall implement all requirements of this Order regardless of whether those requirements are addressed by an element of the SWMP.

- c. The SWMP shall include all provisions and commitments in the 2003 SWMP (Department, 2003c), as revised in response to U.S. EPA's Findings of Violation and Order for Compliance (U.S. EPA Docket No. C.W.A.-09-2011-0001). The Department shall continue to implement the 2003 SWMP to the extent that it does not conflict with the requirements of this Order and until a new SWMP is approved pursuant to this Order.

- d. All policies, guidelines, and manuals referenced by the SWMP and related to storm water are intended to facilitate implementation of the SWMP, and shall be consistent with the requirements of this Order.
- e. The SWMP shall define terms in a manner that is consistent with the definitions in 40 Code of Federal Regulations section 122.2. This includes, but is not limited to, the definitions for pollutant, waters of the United States, and point source. Where there is a conflict between the SWMP and the language of this Order, the language of this Order shall govern.
- f. Unless otherwise specified in this Order, proposed revisions to the SWMP shall be submitted to the State Water Board Executive Director as part of the Annual Report. The Department shall revise all other appropriate manuals to reflect modifications to the SWMP.
- g. Revisions to the SWMP requiring Executive Director approval will be publicly noticed for thirty days on the State Water Board's website and via the storm water electronic notification list. During the public notice period, members of the public may submit written comments or request a public hearing. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised at the hearing. Upon review of the request or requests for a public hearing, the Executive Director may, in his or her discretion, schedule a public hearing prior to approval of the SWMP revision. The Executive Director shall schedule a hearing if there is a significant degree of public interest in the proposed revision. If no public hearing is conducted, the Executive Director shall consider all public comments received and may approve the SWMP revision if it meets the conditions set forth in this Order. Any SWMP revision approved by the Executive Director will be posted on the State Water Board's website.
- h. The Department shall maintain for public access on its website the latest approved version of the SWMP. The Department shall update the SWMP on its website within 30 days of approval of revisions by the State Water Board.

2. Storm Water Program Implementation Requirements

- a. Overview
The Department shall provide an overview of the storm water program in the SWMP. The overview will include:
 - 1) A statement of the SWMP purpose;
 - 2) A description of the regulatory background;
 - 3) A description of the SWMP applicability;
 - 4) A description of the relationship of the Permit, SWMP, and related Department documents; and
 - 5) A description of the permits addressed by the SWMP.

b. Management and Organization

The Department shall provide in the SWMP an overview of its management and organizational structure, roles and responsibilities of storm water personnel, a description of the role and focal point of the Department's storm water program, and a description of the Storm Water Advisory Teams. The Department shall implement the program specified in the SWMP. The Department shall also implement any additional requirements contained in this Order.

1) *Coordination with Local Municipalities*

- a) The Department is expected to comply with the lawful requirements of municipalities and other local, regional, and/or other State agencies regarding discharges of storm water to separate storm sewer systems or other watercourses under the agencies' jurisdictions.
- b) The Department shall include a **MUNICIPAL COORDINATION PLAN** in the SWMP. The plan shall describe the specific steps that the Department will take in establishing communication, coordination, cooperation, and collaboration with other MS4 storm water management agencies and their programs including establishing agreements with municipalities, flood control departments, or districts as necessary or appropriate. The Department shall report on the status and progress of interagency coordination activities in each Annual Report.

2) *Legal Authority*

- a) The Department shall establish, maintain, and certify that it has adequate legal authority through statute, permit, contract or other means to control discharges to and from the Department's properties, facilities and activities.
- b) The Department has provided a statement certified by its chief legal counsel that the Department has adequate legal authority to implement and enforce each of the key regulatory requirements contained in 40 Code of Federal Regulations sections 122.26(d)(2)(i)(A-F). The Department shall submit annually, as part of the Annual Report, a **CERTIFICATION OF THE ADEQUACY OF LEGAL AUTHORITY**.

3) *Fiscal Resources*

- a) The Department shall seek to maintain adequate fiscal resources to comply with this NPDES Permit. This includes but is not limited to:
 - i) Implementing and maintaining all BMPs;
 - ii) Implementing an effective storm water monitoring program; and
 - iii) Retaining qualified personnel to manage the storm water program.
- b) The Department shall submit a **FISCAL ANALYSIS** of the storm water program annually. At a minimum, the fiscal analysis shall show:

- i) The allocation of funds to the Districts for compliance with this Order;
 - ii) The funding for each program element;
 - iii) A comparison of actual past year expenditures with the current year's expenditures and next year's proposed expenditures;
 - iv) How the funding has met the goals specified in the SWMP and District workplans; and
 - v) Description of any cost sharing agreements with other responsible parties in implementing the storm water management program.
- c) The fourth year report shall contain a **BUDGET ANALYSIS** for the next permit cycle.

4) *Practices and Policies*

The Department shall identify in the SWMP any of the Department's practices and policies that conflict with implementation of the storm water program. The Department shall annually propose changes, including changes to implementation schedules, needed to resolve these conflicts and otherwise effectively implement the SWMP and the requirements of this Order.

5) *Inspection Program*

The Department shall have an inspection program to ensure that this Order and the SWMP are implemented, and that facilities are constructed, operated, and maintained in accordance with this Order and the SWMP. The program shall include training for inspection personnel, documentation of field activities, a reporting system that can be used to track effectiveness of control measures, enforcement procedures (or referral for enforcement) for non-compliance, procedures for taking corrective action, and responsibilities and responsible personnel of all affected functional offices and branches.

The inspection program shall also include standard operating procedures for documenting inspection findings, a system of escalating enforcement response to non-compliance (including procedures for addressing third party (i.e., contractor) non-compliance), and a system to ensure the timely resolution of all violations of this Order or the SWMP. The Department shall delegate adequate authority to appropriate personnel within all affected functional offices and branches to require corrective actions (including stop work orders).

6) *Incident Reporting - Non-Compliance and Potential/Threatened Non-Compliance*

The Department shall report all known incidents of non-compliance with this Order. Non-compliance may be emergency, field, or administrative. The Department shall electronically file a complete **INCIDENT REPORT FORM** (Attachment I) in the Storm Water Multiple Application Report and Tracking System (SMARTS)⁶ and provide verbal notifications as soon as practicable, but no later than the time frames specified in Attachment I. Submission of an Incident Report Form is not an admission by the Department of a violation of this Order.

⁶ <https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp>

The types of incidents requiring non-compliance reporting are discussed in Attachment I. The State Water Board or Regional Water Board may require additional information. The Department shall include in the Annual Report a summary of all incidents by type and District, and report on the status of each.

The Department shall report all potential or threatened non-compliance to the State Water Board and appropriate Regional Water Board in accordance with the "Anticipated non-compliance" provisions described in Attachment VI (Standard Provisions). The report shall describe the timing, nature and extent of the anticipated non-compliance. An Incident Report Form is not required for anticipated non-compliance. Anticipated non-compliance may be for field or administrative incidents only.

c. Monitoring and Discharge Characterization Requirements

The Department shall revise and implement the SWMP consistent with the requirements specified below.

1) *Monitoring Site Selection*

Monitoring shall be conducted in two tiers. Tier 1 consists of all sites for which monitoring is required pursuant to the requirements of the General Exception, including Special Protections, to the California Ocean Plan waste discharge prohibitions for storm water and non-point source discharges to ASBS, and sites in impaired watersheds for which the Department has been assigned a WLA and monitoring requirements pursuant to an approved TMDL. Tier 2 consists of all sites where the Department has existing monitoring data, including both storm water and non-storm water. Tier 2 sites may include locations where the Department has conducted characterization monitoring or where monitoring has been conducted for other purposes.

The Department shall conduct without limitation all Tier 1 monitoring as required under the ASBS Special Protections and under the adopted and approved TMDLs. The Department may satisfy Tier 1 monitoring requirements by participating in stakeholder groups. Retrofitting and verification monitoring under Tier 2 need not be initiated until there are less than 100 sites actively monitored under Tier 1. There shall be a minimum of 100 active monitoring sites at any one time, consisting of Tier 1, Tiers 1 and 2, or Tier 2.

Sites from Tier 2 shall be prioritized by the Department in consideration of the threat to water quality, including the pollutant and its concentration or load, the distance to receiving water, water quality objectives, and any existing impairments in the receiving waters. The prioritized list shall be submitted to the State Water Board within eight (8) months of the effective date of this Order. The State Water Board will review the prioritized list and may revise it to reflect Regional or State Water Board priorities. The revised list will be approved by the Executive Director and will become effective upon notice to the Department.

2) *Water Quality Monitoring*

a) Tier 1 Monitoring Requirements

i) Areas of Special Biological Significance

The Department's ASBS monitoring program shall include both core discharge monitoring and ocean receiving water and reference site monitoring. The State and Regional Water Boards must approve receiving water and reference site sampling locations and any adjustments to the monitoring program. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions exist.

(1) Core Discharge Monitoring Program

(a) General Sampling Requirements for Timing and Storm Size

Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples (see section E.2.c.2)a)i)(2)) as described below.

(b) Runoff Flow Measurements

For storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width, including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State Water Board. Report measurements annually for each precipitation season to the State and Regional Water Boards.

(c) Runoff samples – storm events

(i) Outfalls equal to or greater than 18 inches (0.46m) in diameter or width

Samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination. Samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS. If the

Department has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B (shown in Attachment II) metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).

- (ii) Outfalls equal to or greater than 36 inches (0.91m) in diameter or width

Samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination. Samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates). Samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

- (d) If the Department does not participate in a regional monitoring program as described in provision E.2.c.2)a)i)(2)(b) in addition to (i) and (ii) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A (shown in Attachment II) constituents, Table B constituents for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For discharges to ASBS in more than one Regional Water Board, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

- (e) The Executive Director of the State Water Board may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

(2) Ocean Receiving Water and Reference Area Monitoring Program
In addition to performing the Core Discharge Monitoring Program in provision E.2.c.2)a)i)(1) above, the Department must perform ocean receiving water monitoring. The Department may either implement an individual monitoring program or participate in a regional integrated monitoring program.

(a) Individual Monitoring Program

If the Department elects to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS, in addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:

(i) Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in provision E.2.c.2)a)i)(1)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm) and during (or immediately after) the same storm (post storm). Post storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

(ii) Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.

- (iii) A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.
- (iv) Once during each permit term and in each subsequent five year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.
- (v) Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.
- (vi) The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

(b) Regional Integrated Monitoring Program

The Department may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within an ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the prescribed individual monitoring approach described in provision E.2.c.2)a)i)(2)(a) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.

- (i) Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non-storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled by the Department. Because the Department discharges to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.
- (ii) ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the

largest drain greater than 18 inches). Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS by the Department. At a minimum, one reference station and one receiving water station shall be sampled in each applicable Regional Water Board.

- (iii) Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons.
 - (iv) Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.
 - (v) Determinations of compliance with Special Protections requirements for ASBS discharges (State Water Board resolution DWQ 2012-0012) shall be made by the Executive Director of the State Water Board or his designee. When a determination is made that a site or discharge is in compliance with the Special Protections, the site will no longer be considered an active monitoring site pursuant to provision E.2.c.1). This provision applies regardless of any continued monitoring that may be required at the site pursuant to the Special Protections.
- ii) Total Maximum Daily Load Watersheds
The Department shall comply with the TMDL monitoring requirements as expressed in the approved TMDL, in the TMDL-specific permit requirements of Attachment IV, or in orders of the Regional Water Boards pursuant to Water Code section 13383 that require TMDL-related

monitoring. TMDL monitoring shall also include the constituents listed in Attachment II. If there is a conflict between this Order and the requirements of the TMDL, the TMDL requirements will apply, except that the constituents listed in Attachment II shall be monitored even if not required by the TMDL.

Determinations of compliance with the TMDL shall be made by the Executive Officer of the Regional Water Board or his designee. When a determination is made that a site or discharge is in compliance with the TMDL, the site will no longer be considered an active monitoring site pursuant to provision E.2.c.1) and monitoring of Attachment II constituents will be discontinued. This provision applies regardless of any continued monitoring that may be required at the site pursuant to the TMDL.

- b) **Tier 2 Retrofit and Verification Monitoring Requirements**
Corrective actions shall be implemented at the top 15 percent of sites (rounded up) on the Tier 2 priority list, subject to the number of sites per year specified in provision E.2.c.1). Follow up monitoring shall be conducted to confirm the effectiveness of the measures implemented, as determined by the Executive Officer of the Regional Water Board or his designee. Follow up monitoring is not required where the discharge has been eliminated, or where the implemented BMP provides full retention of the 85th percentile, 24-hour rain event.

Determinations of compliance at the Tier 2 sites shall be made by the Executive Officer of the Regional Water Board or his designee. When a determination is made that a site or discharge is in compliance, the site will no longer be considered an active monitoring site pursuant to provision E.2.c.1).

- 3) ***Corrective Actions***
Corrective actions may include structural or non-structural BMPs. All structural BMPs must be designed according to the requirements in provisions E.2.d. and E.2.e.
- 4) ***Field and Laboratory Data Requirements***
The Department shall prepare, maintain, and implement a Quality Assurance Project Plan (QAPP) in accordance with the Surface Water Ambient Monitoring Program. All monitoring samples shall be collected and analyzed according to the Department's QAPP developed for the purpose of compliance with this Order. SWAMP Quality Assurance Program Plan (2008) is available at:

http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml

All samples shall be analyzed by a certified or accredited laboratory as required by Water Code section 13176. Global Positioning System (GPS) coordinates shall be recorded for all monitoring sites, including sites selected for the final Tier 2 priority list (top 15%) according to existing data.

Water quality data (receiving water and effluent) shall be uploaded to the Storm Water Multi-Application Reporting and Tracking System (SMARTS) and must conform to "CEDEN Minimum Data Templates" format. CEDEN Minimum Data Templates are available at <http://ceden.org/>.

Analytical results shall be filed electronically in SMARTS within 30 days of receipt by the Department.

5) *Monitoring Results Report*

The Department shall submit, separate from the Annual Report, a **MONITORING RESULTS REPORT (MRR)** by October 1 of each year.

- a) The MRR shall include a list of all sites in Tier 1 and Tier 2 being actively monitored, and the results of the past fiscal year's monitoring activities including effluent and receiving water quality monitoring.
- b) The Department shall specifically highlight sample values that exceed applicable WQs, including toxicity objectives. Complete sample results or lab data need not be included, but must be retained and filed electronically, and must be provided to the Regional Water Board or State Water Board as provided in provision E.2.c.4).
- c) The MRR shall include a summary of sites requiring corrective actions needed to achieve compliance with this Order, and a review of any iterative procedures (where applicable) at sites needing corrective actions.
- d) The reporting period for the MRR shall be July 1 of the prior year through June 30 of the current year.

6) *Compliance Monitoring and Reporting*

- a) The Department shall review and propose any updates, as needed, to the Non-compliance Reporting Plan for Municipal and Construction Activities in section 9.4.1 of the SWMP. The plan shall identify the staff in each District Office and Regional Water Board to send and receive **INCIDENT REPORT FORMS** (Attachment I). The Department shall continue to implement the July 2008 Construction Compliance Evaluation Plan or any updated plan as approved by the Executive Director.
- b) The Department shall summarize, by District, all non-compliance incidents, including construction, in the Annual Report. The summary shall include incident dates, types, locations, and the status of the non-compliance incidents.

- c) Receiving Water Limitations Compliance
 - i) Upon a determination by the Department or the Regional Water Board Executive Officer that a discharge is causing or contributing to an exceedance of an applicable WQS, the Department shall provide verbal notification within 5 days, and within 30 days thereafter submit a report to the appropriate Regional Water Board with a copy to the State Water Board. Verbal notification is not required where the determination is made by the Regional Water Board. An Incident Report is not required. Where the pollutant causing the exceedance is subject to a waste load allocation listed in Attachment IV of this Order, the Department shall comply with the requirements of the relevant TMDL in lieu of this provision.
 - ii) The report shall describe BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance. The report shall include an implementation schedule. The Regional Water Board Executive Officer may require modifications to the report.
 - iii) The Department shall submit any modifications to the report required by the Regional Water Board within 30 days of notification.
 - iv) The Department shall implement the revised BMPs and conduct any additional monitoring required according to the implementation schedule.

- d) Toxicity
 - i) Tests for chronic toxicity, where required, shall be estimated as specified in Short-term Method for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002; Table IA, 40 Code of Federal Regulations section 136 and its subsequent amendments or revisions.
 - ii) For the Department's discharges, the In-stream Waste Concentration (IWC) is 100 percent (i.e., either is 100 percent storm water or 100% non-storm water). To calculate either a Pass or Fail of the effluent concentration chronic toxicity test at the IWC, the instructions in Appendix A in the National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA/833-R-10-003) shall be used. A Pass result indicates no toxicity at the IWC, and a Fail result indicates toxicity at the IWC. Results shall be reported as provided in provision E.2.c.5).

- e) Toxicity Reduction Evaluations (TREs)
 - i) The Department shall include in the SWMP a TRE workplan (1-2 pages) specifying the steps that will be taken in preparing a TRE, when a TRE is required pursuant to provision E.2.c.6)e)ii). The workplan shall include, at a minimum:
 - (a) A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and BMP efficiencies.

- (b) A description of the steps that will be taken to identify effective pollutant/toxicity reduction opportunities.
- (c) If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., a Department laboratory or outside contractor).

- ii) Upon a determination that a discharge is causing or contributing to an exceedance of an applicable toxicity standard, a TRE may be required by the appropriate Regional Water Board Executive Officer on a site specific basis. The TRE shall be conducted according to the workplan in the SWMP.

d. Project Planning and Design

The Department shall describe in the SWMP how storm water management is incorporated into the project planning and design process, and how the procedures and methodologies used in the selection of Design and Construction BMPs will be used in Department projects. The Department shall implement the program specified in the SWMP, any documents incorporated into the SWMP by reference, and any additional requirements contained in this Order.

Department and Non-Department projects within the Department's ROW that are new development or redevelopment shall comply with the standard project planning and design requirements for new development and redevelopment specified below. These requirements shall apply to all new and redevelopment projects that have not completed the project initiation phase on the effective date of this Order.

1) *Design Pollution Prevention Best Management Practices*

The following design pollution prevention best management practices shall be incorporated into all projects that create disturbed soil area (DSA), including projects designed to meet the post-construction treatment requirements (Section E.2.d.2)). The SWMP shall be updated to reflect these principles.

- a) Conserve natural areas, to the extent feasible, including existing trees, stream buffer areas, vegetation and soils;
- b) Minimize the impervious footprint of the project;
- c) Minimize disturbances to natural drainages;
- d) Design and construct pervious areas to effectively receive runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope and other pertinent factors;
- e) Implement landscape and soil-based BMPs such as compost-amended soils and vegetated strips and swales;
- f) Use climate-appropriate landscaping that minimizes irrigation and runoff, promotes surface infiltration, and minimizes the use of pesticides and fertilizers; and

- g) Design all landscapes to comply with the California Department of Water Resources Water Efficient Landscape Ordinance.

<http://www.water.ca.gov/wateruseefficiency/landscapeordinance/technical.cfm>

Where the California Department of Water Resources Water Efficient Landscape Ordinance conflicts with a local water conservation ordinance, the Department shall comply with the local ordinance.

2) *Post-Construction Storm Water Treatment Controls*

a) Projects Subject to Post-Construction Treatment Requirements

i) Department Projects

The Department shall implement post construction treatment control BMPs for the following new development or redevelopment projects:

- (1) Highway Facility projects that create 1 acre or more of new impervious surface.
- (2) Non-Highway Facility projects that create 5,000 square feet or more of new impervious surface.

ii) Non-Department Projects within Department ROW

- (1) The Department shall exercise control or oversight over Non-Department projects through encroachment permits or other means.
- (2) Non-Department development or redevelopment projects shall be subject to the same post-construction treatment control requirements as Department projects.
- (3) For all Non-Department Projects that trigger post-construction treatment control requirements, the Department shall review and approve the design of post-construction treatment controls and BMPs prior to implementation.

iii) Waiver

Where a Regional Water Board Executive Officer finds that a project will have a minimal impact on water quality, the Executive Officer may waive the treatment control requirements, or lessen the stringency of the requirements, for a project. Waivers may not be granted for projects subject to treatment control requirements based on a waste load allocation assigned to the Department.

b) Numeric Sizing Criteria for Storm Water Treatment Control BMPs:

Treatment control BMPs constructed for Department and Non-Department projects shall be designed according to the following priorities (in order of preference):

- i) Infiltrate, harvest and re-use, and/or evapotranspire the storm water runoff;
- ii) Capture and treat the storm water runoff.

The storm water runoff volumes and rates used to size BMPs shall be based on the 85th percentile 24-hour storm event. This sizing criterion shall apply to the entire treatment train within Project Limits. Design Pollution Prevention BMPs can be used to comply with this requirement.

In the event the entire runoff volume from an 85th percentile 24-hour storm event cannot be infiltrated, harvested and re-used, or evapotranspired, the excess volume may be treated by Low Impact Development (LID)-based flow-through treatment devices. Where LID-based flow-through treatment devices are not feasible, the excess volume may be treated through conventional volume-based or flow-based storm water treatment devices.

The Department shall always prioritize the use of landscape and soil-based BMPs to treat storm water runoff. Other BMPs may be used only after landscape and soil-based BMPs are determined to be infeasible. The Department shall also consider other effective storm water treatment control methods or devices for Department approval.

c) Scope of Design Criteria Applicability for Redevelopment Projects

i) For Highway Facilities:

- (1) Where redevelopment results in an increase in impervious area that is less than or equal to 50 percent of the total post-project impervious area within Project Limits, the numeric sizing criteria shall only apply to the new impervious area and not to the entire project.

If the redeveloped impervious area cannot be hydraulically separated from the existing impervious area, the Department shall either: provide treatment for redeveloped areas and as much of the hydraulically inseparable flow as feasible, based on site conditions and constraints; or identify treatment opportunities equivalent to the redeveloped area (see Alternative Compliance, below).

If it is not possible to separate the flows from redeveloped areas from the existing impervious area, the treatment system shall be designed to treat as much of the hydraulically inseparable flow as feasible, and shall bypass or divert any excess around the treatment device. The purpose of this requirement is to prevent overloading the treatment device and impairing its performance.

- (2) Where redevelopment results in an increase in impervious area that is greater than 50 percent of the total post-project impervious area within Project Limits, the numeric sizing criteria apply to the entire project.

ii) For Non-Highway Facilities, where redevelopment results in an increase in impervious area that is less than or equal to 50 percent of the total post-project impervious area of an existing development, the numeric sizing criteria shall only apply to the new impervious area and not to the entire project.

(1) If the redeveloped impervious area cannot be hydraulically separated from the existing impervious area, the Department shall either provide treatment for existing and redeveloped areas, or identify treatment opportunities equivalent to the redeveloped area (See Alternative Compliance, below).

(2) Where redevelopment results in an increase in impervious area that is greater than 50 percent of the total post-project impervious area of an existing development, the numeric sizing criteria apply to the entire project.

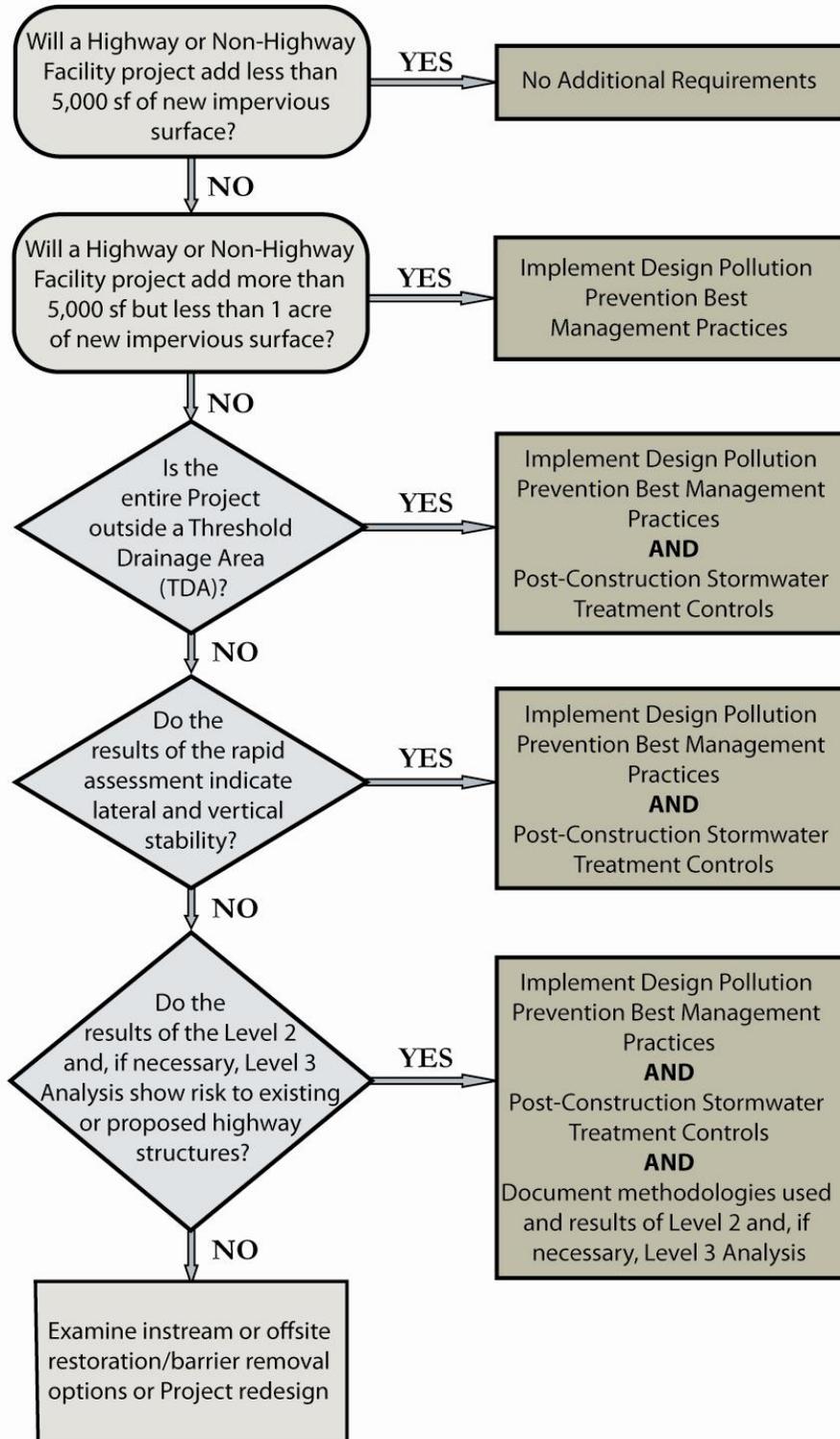
d) Alternative Compliance

If the Department determines that all or any portion of on-site treatment for a project is infeasible on-site, the Department shall prepare a proposal for alternative compliance for approval by the Regional Water Board Executive Officer or his designee until such time as a statewide process is approved by the Executive Director of the State Water Board. The proposal shall include documentation supporting the determination of infeasibility. Alternative compliance may be achieved outside Project Limits within the Department's ROW, including within another Department project. Alternative compliance to be achieved outside Project Limits shall include provisions for the long-term maintenance of such treatment facilities.

3) *Hydromodification Requirements*

The Department shall ensure that all new development and redevelopment projects do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. Unstable stream channels negatively impact water quality by yielding much greater quantities of sediment than stable channels. The Department shall employ the risk-based approach detailed in this permit to assess lateral and vertical stability. The approach assists the Department in assessing pre-project channel stability and implementing mitigation measures that are appropriate to protect structures and minimize stream channel bank and bed erosion. The approach is depicted in Figure 1 and described below.

FIGURE 1: Hydromodification Flowchart



- a) Highway or Non-Highway Facility projects that add between 5,000 square feet and 1 acre of new impervious surface must implement the Design Pollution Prevention Best Management Practices in Section E.2.d.1).
- b) Highway or Non-Highway Facility projects that add 1 acre or more of new impervious surface completely outside of a Threshold Drainage Area⁷ must implement the Design Pollution Prevention Best Management Practices and the Post-Construction Storm Water Treatment Controls in Section E.2.d.
- c) Highway or Non-Highway Facility projects that add 1 acre or more of new impervious surface with any impervious portion of the project located within a Threshold Drainage Area must conduct a rapid assessment of stream stability⁸ at each stream crossing (e.g., pipe, culvert, swale or bridge) within that Threshold Drainage Area. If the stream crossing is a bridge, a follow up rapid assessment of stream stability is also required and can be coordinated with the federally-mandated bridge inspection process. The assessment will be conducted within a representative channel reach to assess lateral and vertical stability. A representative reach is a length of stream channel that extends at least 20 channel widths upstream and downstream of a stream crossing. For example, a 20 foot-wide channel would require analyzing a 400 foot distance upstream and downstream of the discharge point or bridge. If sections of the channel within the 20 channel width distance are immediately upstream or downstream of steps, culverts, grade controls, tributary junctions, or other features and structures that significantly affect the shape and behavior of the channel, more than 20 channel widths should be analyzed.
- d) If the results of the rapid assessment indicate that the representative reach is laterally and vertically stable (i.e., a rating of excellent or good) the Department does not have to conduct further analyses and must implement the Design Pollution Prevention Best Management Practices and the Post-Construction Storm Water Treatment Controls in Section E.2.d.
- e) If the results of the rapid assessment indicate that the representative reach will not be laterally and vertically stable (i.e., a rating of excellent or good), the Department must determine whether the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures by conducting appropriate Level 2 (and, if necessary, Level 3) analyses. The Department shall follow the Level 2 and 3 analysis guidelines contained in HEC-20 (FHWA, 2001) or a suitable equivalent within an accessible portion of the reach. If the results of the appropriate Level 2 (and, if necessary Level 3) analyses indicate that there is no risk to existing or proposed highway

⁷ Threshold Drainage Area is defined as the area draining to a location at least 20 channel widths downstream of a stream crossing (pipe, swale, culvert, or bridge) within Project Limits. Delineating the Threshold Drainage Area is not necessary if there is/ are no stream crossing(s) within the Project Limits.

⁸ Guidance and worksheets used for the rapid assessment of stream stability are in the Federal Highway Administration publication "Assessing Stream Channel Stability at Bridges in Physiographic Regions" (FHWA, 2006).

structures, the Department must implement the Design Pollution Prevention Best Management Practices and the Post-Construction Storm Water Treatment Controls in Section E.2.d. and document the methodologies used, the results, and the mitigation measures suggested as part of the appropriate Level 2 and, if necessary, Level 3 analyses.

- f) If the results of the Level 2 and 3 analysis indicate that the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures, other options must be implemented, including, but not limited to, in-stream and floodplain enhancement/restoration, fish barrier removal as identified in the report required under Article 3.5 of the Streets and Highways Code (see below), regional flow control, off-site BMPs, and, if necessary, project re-design.

4) *Stream Crossing Design Guidelines to Maintain Natural Stream Processes*

The Department shall review and revise as necessary the guidance document "Fish Passage Design for Road Crossings" (Department, 2009). In reviewing and revising the guidance document, the Department shall be consistent with the latest stream crossing design, construction, and rehabilitation criteria contained in the California Salmonid Stream Habitat Restoration Manual (California Department of Fish & Game, 2010) and National Marine Fisheries Service guidance (NMFS, 2001). The review shall be completed no later than one year after the effective date of this Order. The Department shall submit in the Year 2 Annual Report a report detailing the review of the guidance document. The Year 2 Annual Report shall also report on the implementation of the road crossing guidelines.

If it is infeasible to meet any of the guidelines specified above, the Department shall prepare written documentation justifying the determination of infeasibility. Documentation shall be provided to the Regional Water Board for approval.

The Department shall submit to the State Water Board by October 1 of each year the same report required under Article 3.5 of the Streets and Highways Code requiring the Department to report on the status of its efforts in locating, assessing, and remediating barriers to fish passage.

e. BMP Development & Implementation

In the SWMP, the Department shall include a description of how BMPs will be developed, constructed and maintained. The Department shall continue to evaluate and investigate new BMPs through pilot studies. The Department shall submit updates to the **STORM WATER TREATMENT BMP TECHNOLOGY REPORT** and the **STORM WATER MONITORING AND BMP DEVELOPMENT STATUS REPORT** in the Annual Report.

1) *Vector Control*

- a) All storm water BMPs that retain storm water shall be designed, operated and maintained to minimize mosquito production, and to drain within 96 hours of the end of a rain event, unless designed to control vectors. BMPs shall be maintained at the frequency specified by the manufacturer. This limitation does not apply in the Lake Tahoe Basin and in other high-elevation regions of the Sierra Nevada above 5000 feet elevation with similar alpine climates. The Department shall operate and maintain all BMPs to prevent the propagation of vectors, including complying with applicable provisions of the California Health and Safety Code relating to vector control.
- b) The Department shall cooperate and coordinate with the California Department of Public Health (CDPH) and with local mosquito and vector control agencies on issues related to vector production in the Department's structural BMPs. The Department shall prepare and maintain an inventory of structural BMPs that retain water for more than 96 hours. The inventory need not include BMPs in the Lake Tahoe Basin or other regions of the Sierra Nevada above 5000 feet. The inventory shall be provided to CDPH in electronic format for distribution to local mosquito and vector control agencies. The inventory shall be provided in Year 2 of the permit and updated every two years.

2) *Storm Water Treatment BMPs*

- a) The Department shall inspect all newly installed storm water treatment BMPs within 45 days of installation to ensure they have been installed and constructed in accordance with approved plans. If approved plans have not been followed, the Department shall take appropriate remedial actions to bring the BMP or control into conformance with its approved design.
- b) The Department shall inspect all installed storm water treatment BMPs at least once every year, beginning one year after the effective date of this Order.
- c) The Department may drain storm water treatment BMPs to the MS4 if the discharge does not cause or contribute to exceedances of water quality standards. Retained sediments shall be disposed of properly, in compliance with all applicable local, State, and federal acts, laws, regulations, ordinances, and statutes.
- d) The Department shall develop and utilize a watershed-based database to track and inventory treatment BMPs and treatment BMP maintenance within its jurisdiction. At a minimum, the database shall include:
 - i) Name and location of BMP;
 - ii) Watershed, Regional Water Board and District where project is located;
 - iii) Size and capacity;
 - iv) Treatment BMP type and description;
 - v) Date of installation;
 - vi) Maintenance certifications or verifications;
 - vii) Inspection dates and findings;

- viii) Compliance status;
- ix) Corrective actions, if any; and
- x) Follow-up inspections to ensure compliance.

Electronic reports for each BMP inspected during the reporting period shall be submitted to each associated Regional Water Board in tabular form. A summary of the tracking system data shall be included in the Annual Report along with a report on maintenance activities for post construction BMPs. The tracking system database shall be made available to the State Water Board or any Regional Water Board upon request.

3) BMPs shall not constitute a hazard to wildlife.

4) *Biodegradable Materials.*

The Department shall utilize wildlife-friendly 100% biodegradable⁹ erosion control products wherever feasible. At any site where erosion control products containing non-biodegradable materials have been used for temporary site stabilization, the Department shall remove such materials when they are no longer needed. If the Department finds that erosion control netting or products have entrapped or harmed wildlife at any site or facility, the Department shall remove the netting or product and replace it with wildlife-friendly biodegradable products.

f. Construction

1) *Compliance with the Statewide Construction Storm Water General Permit (CGP) and Lake Tahoe Construction General Permit (TCGP)*

Construction activities that may receive coverage under the CGP or the TCGP are not covered under this MS4 Permit. The Department shall electronically file Permit Registration Documents (PRD) for coverage under the CGP or TCGP for all projects subject to the CGP or TCGP.

2) *Construction Activities not Requiring Coverage Under the CGP*

For construction activities that are not subject to the CGP or the TCGP, the Department shall implement BMPs to reduce the discharge of pollutants to the MEP in storm water discharges associated with land disturbance activities including clearing, grading and excavation activities that result in the disturbance of less than one acre of total land area. The Department shall also implement BMPs to reduce the discharge of pollutants to the MEP for construction and maintenance activities that do not involve land disturbance such as roadway and parking lot repaving and resurfacing. The Department must comply with any region-specific waste discharge requirements, including any requirements applicable to activities involving less than one acre land disturbance.

⁹ For purposes of this Order, photodegradable synthetic products are not considered biodegradable.

- 3) *Construction Projects Involving Lead Contaminated Soils*
The Department has applied for and received variances from the California Department of Toxic Substances Control (DTSC) for the reuse of some soils that contain lead. For construction projects that have received a DTSC variance, the Department shall notify the appropriate Regional Water Board in writing 30 days prior to advertisement for bids to allow a determination by the Regional Water Board of the need for development of Waste Discharge Requirements (WDRs).
 - 4) *Pavement Grindings*
The Department shall comply with the requirements of the Regional Water Boards for the management of pavement grindings as well as with all local and State regulations, including Titles 22 and 27 of the California Code of Regulations.
 - 5) *Contractor Compliance*
The Department shall require its contractors to comply with this Order and with all applicable requirements of the CGP.
 - 6) *Construction Non-Compliance Reporting*
Incidents of non-compliance with the CGP shall be reported pursuant to the provisions of the CGP. The Department shall provide in the Annual Report a summary of all construction project non-compliance (Section E.2.c.6)b)).
- g. Compliance with Statewide Industrial Storm Water General Permit (IGP)
Industrial activities are not covered under this MS4 permit. The Department shall electronically file PRDs for coverage under the IGP for all facilities subject to coverage under the IGP. The categories of industrial facilities are provided in Attachment 1 of the Industrial General Permit (NPDES Permit No. CAS000001; the current Order No. 97-03-DWQ). The Department shall require its industrial facility contractors to comply with all requirements of the IGP. The discharge of pollutants from facilities not covered by the Industrial General Permit will be reduced to the MEP through the appropriate implementation of BMPs.
- h. Maintenance Program Activities and Facilities Operations
- 1) *Implement SWMP Requirements*
The Department shall implement the program specified in the SWMP to reduce or eliminate pollutants in storm water discharges from Department maintenance facilities and maintenance activities. The Department shall also implement any additional requirements contained in this Order.
 - 2) A **FACILITY POLLUTION PREVENTION PLAN (FPPP)** describes the activities conducted at a facility and the BMPs to be implemented to reduce or eliminate the discharge of pollutants in storm water runoff from the facility.

The Department shall prepare, revise and/or update the FPPPs for all maintenance facilities by October 1 of the first year. Each facility shall be evaluated separately and assigned appropriate site specific BMPs. The FPPP shall describe the activities conducted at the facility and the BMPs to be implemented to reduce or eliminate the discharge of pollutants in storm water runoff from the facility. The FPPP shall describe the inspection program used to ensure that maintenance BMPs are implemented and maintained. The Department shall identify in each Annual Report the status of the FPPP for each Maintenance Facility by District and Region, including the date of the last update or revision and the nature of any revisions.

The Department shall evaluate all non-maintenance Facilities, excluding leased properties, for water quality problems. If the Department identifies a water quality problem at a non-maintenance facility, it shall prepare an FPPP for that facility. If Regional Water Board staff determines that a non-maintenance facility may discharge pollutants to the storm water drainage system or directly to surface waters, the Department shall prepare an FPPP for that facility.

Regional Water Board staff has the authority to require the submittal of an FPPP at any time, to require changes to a FPPP, and to require changes in the implementation of the provisions of a FPPP.

3) *Highway Maintenance Activities*

- a) The Department shall develop and implement runoff management programs and systems for existing roads, highways, and bridges to reduce runoff pollutant concentrations and volumes entering surface waters. The Department shall:
 - i) Identify priority and watershed pollutant reduction opportunities (e.g., improvements to existing urban runoff control structures). Priority shall be given to sites in sensitive watersheds or where there is an existing or potential threat to water quality;
 - ii) Establish schedules for implementing appropriate controls; and
 - iii) Identify road segments with slopes that are prone to erosion and sediment discharge and stabilize these slopes to control the discharge of pollutants to the MEP. An inventory of vulnerable road segments shall be maintained in the District Work Plans. Stabilization activities shall be reported in the Annual Report. This section does not apply to landslides and other forms of mass wasting which are covered under section E.2.h.3)d).

b) Vegetation Control

The Department shall control its handling and application of chemicals including pesticides, herbicides, and fertilizers to reduce or eliminate the discharge of pollutants to the MEP. The Department shall incorporate integrated pest management and integrated vegetation management practices into its vegetation control program¹⁰. At a minimum, the Department shall:

- i) Apply herbicides and pesticides in compliance with federal, state and local use regulations and product label directions.
 - (1) Violations of regulations shall be reported to the County Agricultural Commissioners within 10 business days.
 - (2) The Annual Report shall include a summary of violations and follow-up actions to correct them.
- ii) Minimize the application of chemicals by using integrated pest management and integrated vegetation management. For example, the Department may reduce the need for application of fertilizers and herbicides by using native species and using mechanical and biological methods for control of exotic species.
- iii) Prior to chemical applications, assess site-specific and application-specific conditions to prevent discharge. The assessment shall include the following variables:
 - (1) Expected precipitation events, especially those with the potential for high intensity;
 - (2) Proximity to water bodies;
 - (3) Intrinsic mobility of the chemical;
 - (4) Application method, including any tendency for aerial dispersion;
 - (5) Fate and transport of the chemical after application;
 - (6) Effects of using combinations of chemicals; and
 - (7) Other conditions as identified by the applicator.
- iv) Apply nutrients at rates and by means necessary to establish and maintain vegetation without causing significant nutrient runoff to surface water.
- v) Ensure that all employees or contractors who, within the scope of their duties, prescribe or apply herbicides, pesticides, or fertilizers (including over-the-counter products) are appropriately trained and licensed to comply with these provisions.
- vi) Propose SWMP provisions as appropriate.
- vii) Include the following items in the Annual Report:

¹⁰ <http://www.epa.gov/opp00001/factsheets/ipm.htm>
<http://www.ipm.ucdavis.edu/>

- (1) A summary of the Department's chemical use. Report the quantity of chemicals used during the previous reporting period by name and type of chemical, by District, and by month.
- (2) An assessment of long-term trends in herbicide usage. Include a table presenting yearly District herbicide totals by chemical type;
- (3) A comparison of the statewide herbicide use with the Department's herbicide reduction goals;
- (4) An analysis of the effectiveness of implementation of vegetation control BMPs. Improvements to BMP implementation either being used or proposed for usage shall be discussed. If no improvements are proposed, explain why;
- (5) Justification for any increases in use of herbicides, pesticides, and fertilizers;
- (6) A report on the number and percentage of employees who apply pesticides and have been trained and licensed in the Department's Pesticide and Fertilizer Pollution Control Program policies; and
- (7) Training materials, if requested by the State Water Board.

c) Storm Water Drainage System Facilities Maintenance

- i) The Department shall inspect all urban¹¹ drainage inlets and catch basins a minimum of once per year and shall remove all waste and debris from drainage inlets and catch basins when waste and debris have accumulated to a depth of 50 percent of the inlet or catch basin capacity.
- ii) Waste and debris, including sweeper and vacuum truck waste, shall be managed and reported in accordance with all applicable laws and regulations, including the Cal. Code Regs. Title 27, Division 2, Subdivision 1.
- iii) The Department shall develop a **WASTE MANAGEMENT PLAN** that includes a comprehensive inventory of waste storage, transfer, and disposal sites; the source(s) of waste and the physical and chemical characterization of the waste retained at each site; estimated annual volumes of material and existing or planned waste management practices for each waste and facility type. Waste characterization need not be conducted on a site-by-site basis but may be evaluated programmatically based upon the highway environment and associated land uses contributing to the sites, climate, and ecoregion. The Waste Management Plan shall be submitted for State Water Board review and approval within one year of the effective date of this Order.

¹¹ For purposes of this requirement, the term "urban" shall mean located within an "urbanized area" as determined by the latest Decennial Census by the Bureau of the Census (Urbanized Area).

d) **Landslide Management Activities**
The Department shall develop a **LANDSLIDE MANAGEMENT PLAN** that includes BMPs for Department construction and maintenance work landslide-related activities (e.g., prevention, containment, clean-up). The *Landslide Management Plan* shall address all forms of mass wasting such as slumps, mud flows, and rockfalls, and shall include BMPs specifically for burn site management activities. The Department shall submit the *Landslide Management Plan* with the Year 1 Annual Report and implement the *Landslide Management Plan* for the remainder of the Permit term.

4) **Surveillance Activities**

a) **Spill Response**

The Department will follow the applicable Emergency Management Agency (EMA) procedures and timelines specified in Water Code sections 13271 and 13272 for reporting spills.

b) **Illegal Connection/Illicit Discharge (IC/ID) and Illegal Dumping Response**

i) The Department shall implement the BMPs and other requirements of the SWMP and this Order to reduce and eliminate IC/IDs and illegal dumping.

ii) The Department shall develop an **IC/ID AND ILLEGAL DUMPING RESPONSE PLAN** that includes, at a minimum, the following:

(a) Procedures for investigating reports or discoveries of IC/IDs or incidents of illegal dumping, for remediating or eliminating the IC/IDs, and for clean-up of illegal dump sites.

(b) Procedures for prevention of illegal dumping at sites subject to repeat or chronic incidents of illegal dumping.

(c) Procedures for educating the public, raising awareness and changing behaviors regarding illegal dumping, and encouraging the public to contact the appropriate local authorities if they witness illegal dumping.

Within 6 months of the effective date of this Order, the Department shall submit the **IC/ID AND ILLEGAL DUMPING RESPONSE PLAN** to the State Water Board Executive Director for approval.

iii) The Department shall report all suspected IC/IDs to the Regional Water Board.

c) **Reporting Requirements for Trash and Litter**

The Department shall report on the trash and litter removal activities that are currently underway or are initiated after adoption of this Order. Activities include, but are not limited to, storm drain maintenance, road sweeping, public education and the Adopt-A-Highway program. Reporting and assessment of these or future activities shall follow protocols established by the Department

and shall include estimated annual volumes of the trash and litter removed. Results shall be submitted as part of the Annual Report in a summary format by District. Prior year's data shall be included to facilitate an analysis of trends.

- d) **Department Activities Outside the Department's Right-of-Way**
The Department shall include provisions in its contracts that require the contractor to obtain and comply with applicable permits for project-related facilities and operations outside the Department's ROW. Facilities may include concrete or asphalt batch plants, staging areas, concrete slurry processing or other material recycling operations, equipment and material storage yards, material borrow areas, and access roads.

5) *Maintenance Facility Compliance Inspections*

- a) District staff shall inspect all maintenance facilities at least twice annually. Follow up inspections shall be conducted when deficiencies are noted. The inspections are to identify areas contributing to a discharge of pollutants associated with maintenance facility activities, to determine if control practices to reduce pollutant loadings identified in the Facility Pollution Prevention Plans (FPPP) are adequate and properly implemented, and to determine whether additional control practices are needed. The District shall keep a record of inspections. The record of the inspections shall include the date of the inspection, the individual(s) who performed the inspection, a report of the observations, recommendations for any corrective actions identified or needed, and a description of any corrective actions undertaken.
- b) The Regional Water Board may require the Department to conduct additional site inspections, to submit reports and certifications, or to perform additional sampling and analysis to the extent authorized by the Water Code.
- c) Records of all inspections, compliance certifications, and non-compliance reporting shall be retained for a period of at least three years. With the exception of non-compliance reporting, the Department is not required to submit these records unless requested.

6) *Operation and Maintenance of Post-Construction BMPs*

The Department shall prepare and implement long-term operation and maintenance plans for every site subject to the post-construction storm water treatment design standards. The plans must ensure the following: a) Long-term structural LID BMPs are maintained as necessary to ensure they continue to work effectively; b) Proprietary devices are maintained according to the manufacturer's directions; and c) Post-construction BMPs are replaced if they lose their effectiveness.

i. Non-Departmental Activities

The Department shall summarize its control over all non-departmental (third party) activities performed on Department ROW in the SWMP. The summary shall describe how the Department shall ensure compliance with this Order in all non-departmental activities.

The Department shall not grant or renew encroachment permits or easements benefitting any third party required to obtain coverage under the Statewide Construction and/or Industrial Storm Water General Permits unless the party has obtained coverage. In all leases, rental agreements, and all other contracts with third parties conducting activities within the ROW, the Department shall require the third party to comply with applicable requirements of the Construction General Permit, the Industrial General Permit, and this Order.

j. Non-Storm Water Activities/ Discharges

- 1) The Department shall describe the management activities for all non-storm water discharges in the SWMP. Management activities shall include the procedures for prohibiting illicit discharges and illegal connections, and procedures for spill response, cleanup, reporting, and follow-up.
- 2) *Agricultural Return Flows*
The Department shall provide reasonable support to the monitoring activities of agricultural dischargers whose runoff enters the MS4. Reasonable support includes facilitating monitoring activities, providing necessary access to monitoring sites, and cooperating with monitoring efforts as needed. It does not include actively conducting monitoring or providing funding. The Department may require agricultural dischargers to follow established Department access and encroachment procedures in establishing sites and conducting monitoring activities, and may deny access at sites that may restrict traffic flow or pose a danger to any party.
- 3) See Section B of this Order for the complete list of conditionally exempt non-storm water discharges and compliance requirements.

k. Training

- 1) The Department shall implement a training program for Department employees and construction contractors. The training program shall be described in the SWMP.

- 2) The training program shall cover:
 - a) Causes and effects of storm water pollution;
 - b) Regulatory requirements;
 - c) Best Management Practices;
 - d) Penalties for non-compliance with this Order; and
 - e) Lessons learned.

- 3) The Department shall provide a review and assessment of all training activities in the Annual Report.

I. Public Education and Outreach

The Department shall implement a Statewide Public Education Program and describe it in the SWMP. The Department shall continue to seek opportunities to participate in public outreach and education activities with other MS4 permittees.

- 1) The Statewide Public Education Program shall include the following elements:
 - a) Research: A plan for conducting research on public behavior that affects the quality of the Department's runoff. The information gathered will form the foundation for all the public education conducted.
 - b) Education: Education of the general public to modify behavior and communicate with commercial and industrial entities whose actions may add pollutants to the Department's storm water.
 - c) Mass Media Advertising: Continue the advertising campaign as a focal point of the public education strategy. The campaign should focus on the behaviors of concern and should be designed to motivate the public to change those behaviors. The public education campaign should be revised and updated according to the results of the research. The Department may cooperate with other organizations to implement the public education campaign.

- 2) A **PUBLIC EDUCATION PROGRAM PROGRESS REPORT** shall be submitted as part of the Annual Report.

m. Program Evaluation

- 1) The Department shall implement the program specified in the SWMP and any additional requirements contained in this Order.
- 2) *Field Activities* **SELF-AUDIT**
The Department will perform compliance evaluations for field activities including construction, highway maintenance, facility maintenance, and selected targeted program components. The results of the field compliance evaluations for each fiscal year will be provided in the Annual Report.

3) **OVERALL PROGRAM EFFECTIVENESS EVALUATION:**

Each year, the Department shall submit an **OVERALL PROGRAM EFFECTIVENESS EVALUATION** together with the Annual Report. The Department shall increase the scope of the evaluation each year in response to the environmental monitoring data it collects. The effectiveness evaluation shall be comparable to that outlined in CASQA's *Municipal Stormwater Program Effectiveness Assessment Guidance*¹² and shall emphasize assessment of BMPs specifically targeting primary pollutants of concern. The effectiveness evaluation shall include, but is not limited to, the following components:

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

n. Measurable Objectives

The Department shall implement the program specified in the SWMP and any additional requirements contained in this Order. In the SWMP, the Department shall identify measurable objectives to meet the SWMP's goals, proposed activities and tasks to meet the objectives, and a time schedule for the proposed activities and tasks. In the Annual Report, the Department shall report on its progress in meeting the measurable objectives.

o. References

The Department shall provide references for all information, documents, and studies used in the development of the SWMP.

3. Annual Report

- a. The Department shall submit 13 copies of an **ANNUAL REPORT** to the State Water Board Executive Director by October 1 of each year. An electronic copy shall also be uploaded into SMARTS in the portable document format (PDF). The reporting period for the Annual Report shall be July 1 through June 30. The Annual Report shall contain all information and submittals required by this Order including, but not limited to:
 - 1) A District-by-District description of storm water pollution control activities conducted during the reporting period;
 - 2) A progress report on meeting the SWMP's measurable objectives;

¹² <https://www.casqa.org/store/products/tabid/154/p-7-effectiveness-assessment-guide.aspx>

- 3) An Overall Program Effectiveness Evaluation as described in section E.2.m.3);
- 4) Proposed revisions to the SWMP, including revisions to existing BMPs, along with corresponding justifications;
- 5) A report on post-construction BMP maintenance activities;
- 6) A list of non-approved BMPs that were implemented in each District during the reporting period including the type of BMP, reason for use, physical location, and description of any monitoring;
- 7) An evaluation of project planning and design activities conducted during the year;
- 8) A summary of non-compliance with this Order and the SWMP as specified in Section E.2.c.6)b). The summary shall include an assessment of the effectiveness of any Department enforcement and penalties, and as appropriate, proposed solutions to improve compliance;
- 9) An evaluation of the Monitoring Results Report, including a summary of the monitoring results;
- 10) Proposed revisions to the Department's Vegetation Control Program;
- 11) Proposals for monitoring and control of non-storm water discharges that are found to be sources of pollutants as described in Section B. of this Order;
- 12) District Workplans (See below); and
- 13) Measures implemented to meet region-specific requirements.

A partial summary of reporting requirements is contained in Attachment IX of this Order.

b. ***DISTRICT WORKPLANS***

The Department shall submit ***DISTRICT WORKPLANS*** (workplans) for each District by October 1 of each year, as part of the Annual Report. The workplans will be forwarded to the appropriate Regional Water Board Executive Officer for acceptance. Workplans are deemed accepted after 60 days after receipt by the Regional Water Board unless rejected in writing. District staff shall meet with Regional Water Board staff on an annual basis prior to submittal of the workplans to discuss alternatives and ensure that appropriate post construction controls are included in the project development process through review of the workplan and early consultation and coordination between District and Regional Water Board staff. Workplans shall conform with the requirements of applicable Regional Water Board Basin Plans and shall include, at a minimum:

- 1) A description of all activities and projects, including maintenance projects, to be undertaken by the Districts. For all projects with soil disturbing activities, this shall include a description of the construction and post construction controls to be implemented;
- 2) The area of new impervious surface and the percentage of new impervious surface to existing impervious surface for each project;
- 3) The area of disturbed soil associated with each project or activity;
- 4) A description of other permits needed from the Regional Water Boards for each project or activity;

- 5) Potential and actual impacts of the discharge(s) from each project or activity;
- 6) The proposed BMPs to be implemented in coordination with other MS4 permittees to comply with WLAs and LAs assigned to the Department for specific pollutants in specific watersheds or sub watersheds;
- 7) The elements of the statewide monitoring program to be implemented in the District;
- 8) Identification of high-risk areas (such as locations where spills or other releases may discharge directly to municipal or domestic water supply reservoirs or ground water percolation facilities);
- 9) Spill containment, spill prevention and spill response and control measures for high-risk areas; and
- 10) Proposed measures to be taken to meet Region-specific requirements included in Attachment V.
- 11) An inventory of vulnerable road segments having slopes that are prone to erosion and sediment discharge.

4. TMDL Compliance Requirements

a. Implementation

The Department shall comply with all TMDLs listed in Attachment IV.

Waste Load Allocations, Load Allocations, effluent limitations, implementation requirements, and monitoring requirements for the TMDLs listed in Attachment IV are specified in the adopted and approved Regional Water Board Basin Plans or in U.S. EPA-established TMDLs, which are incorporated herein by reference as enforceable parts of this Order. Applicable Basin Plan Amendments and resolutions are identified in Attachment IV for Regional Water Board-established TMDLs that the Department is subject to.

TMDL-specific permit requirements, including deliverables and actions with their associated due dates, are also specified in Attachment IV for the Lake Tahoe sediment and nutrients TMDL. TMDL-specific permit requirements for all other TMDLs in Attachment IV will be incorporated into Attachment IV through a reopener as described in provisions E.4.b and E.11.c. below. In addition, consistent with provision E.11.b of this Order, the State Water Board may reopen this Order to incorporate any modifications or revisions to the TMDLs in Attachment IV, or to incorporate any new TMDLs adopted during the term of this Order that assign a WLA to the Department or that identify the Department as a responsible party in the TMDL implementation plan.

b. TMDL-Specific Permit Requirements

Within six months of the adoption date of this Order, the Department shall consult with each Regional Water Board, and the State Water Board to identify the WLAs, deliverables and actions to be implemented by the Department in meeting the TMDLs identified in Attachment IV. The Regional Water Boards have been directed to propose and submit, within one year of the adoption date of this Order, specific requirements for incorporation into Attachment IV through a reopener under provision E.11.c. The submission will include:

- 1) Proposed TMDL-specific permit requirements, including deliverables, actions, and compliance due dates consistent with the TMDLs,
- 2) An explanation of how the proposed TMDL-specific permit requirements, including deliverables, actions, and compliance due dates, are consistent with the assumptions and requirements of any applicable WLA and how these will achieve the goal of the TMDL, and
- 3) Where a BMP-based approach is proposed, an explanation of how the proposed BMPs will be sufficient to implement applicable WLAs.

The State Water Board will reopen this Order consistent with provision E.11.c to incorporate into Attachment IV, the Fact Sheet, and any other Permit provisions as necessary, TMDL-specific permit requirements. Once the TMDL-specific permit requirements are adopted, the Department shall comply with the incorporated requirements in accordance with the specified compliance due dates.

Compliance due dates that have already passed are enforceable as of the effective date of the approval of the TMDL-specific permit requirements. TMDL-specific compliance due dates that exceed the term of this Order may be included for reference, and will become enforceable in the event that the Order is administratively extended.

c. Status Review Report

The Department shall prepare a **TMDL STATUS REVIEW REPORT** to be submitted with each Annual Report. The TMDL Status Review Report shall include the following information for all TMDLs listed in Attachment IV.

- 1) An analysis of the effectiveness of existing BMPs and activities in meeting existing TMDLs;
- 2) A summary update of monitoring activities for each TMDL and any monitoring needed to demonstrate compliance with an approved TMDL;
- 3) A summary of measures implemented to comply with existing TMDLs;
- 4) A summary of measures and a time schedule to meet existing TMDLs;
- 5) An update of the Department Statewide TMDLs table;

- 6) A summary of TMDLs adopted during the past year where the Department is assigned a WLA or the Department is identified as a responsible party in the implementation plan.

5. ASBS Compliance Requirements

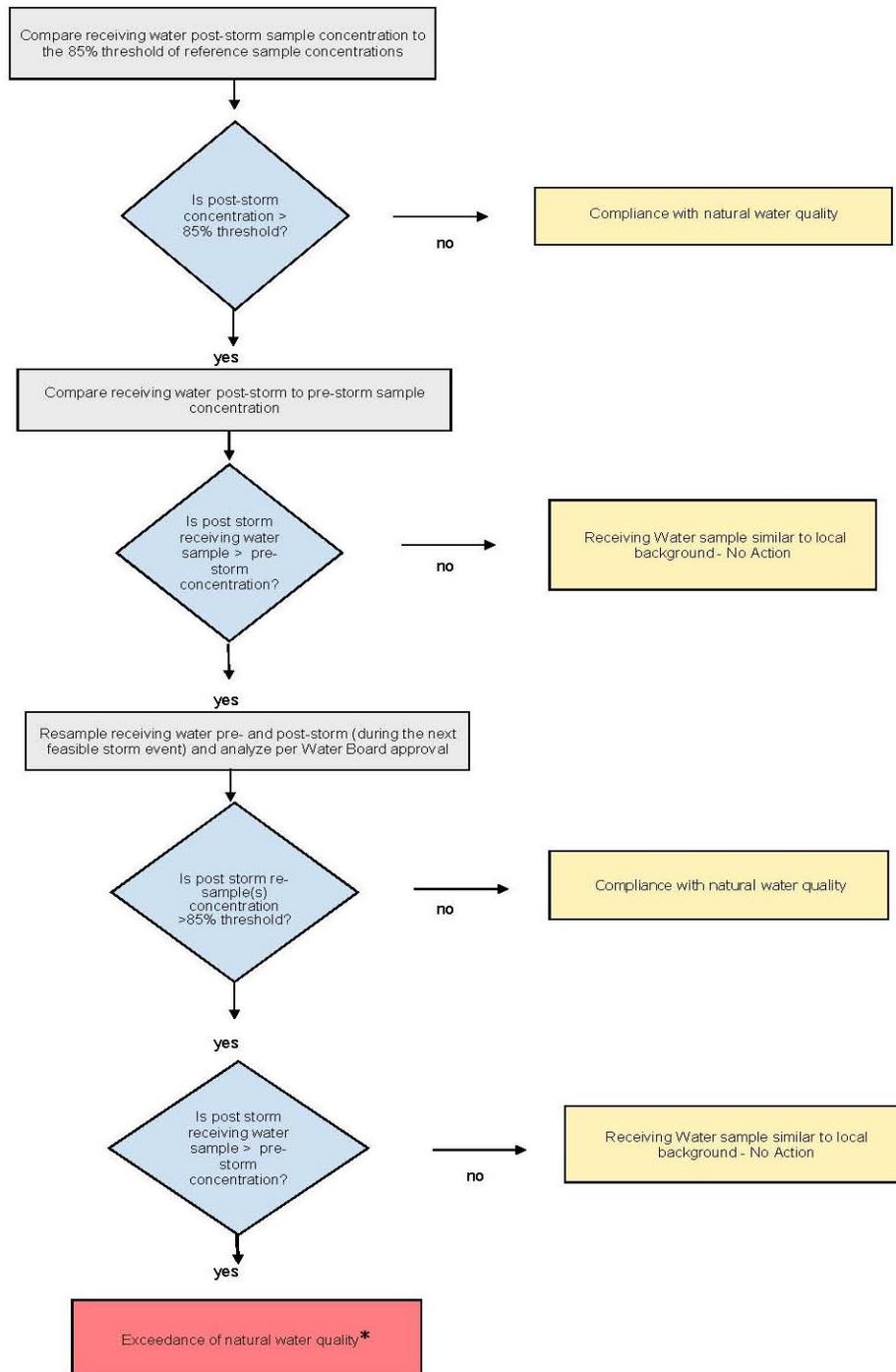
a. Priority Discharges

Attachment III identifies locations where the Department discharges to ASBS that the State Water Board has determined to have priority discharges. Priority discharges are those that pose the greatest threat to water quality in the ASBS and which the State Water Board identifies to require monitoring and installation of structural or non-structural controls.

b. Compliance Schedule

- 1) On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) to ASBS shall be effectively prohibited.
- 2) No later than September 20, 2013, the Department shall submit a draft written ASBS Compliance Plan to the State Water Board Executive Director that describes its strategy to comply with these provisions, including the requirement to maintain natural water quality in the affected ASBS (see provision E.5.c.). The final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, shall be submitted no later than September 20, 2014 and shall be included in the SWMP.
- 3) Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these provisions shall be implemented.
- 4) Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these provisions shall be operational.
- 5) Within six (6) years of the effective date of the Exception, the Department must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the Department must re-sample the receiving water, pre- and post-storm. If after re-sampling, the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See Figure 2.

Figure 2
ASBS Special Protections
Flowchart to Determine Compliance with Natural Water Quality



*** When an exceedance of natural water quality occurs, the Department must comply with section I.A.2.h of the Special Protections as well as the requirements of this Order. Note, when sampling data is available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.**

- 6) The Executive Director of the State Water Board may only authorize additional time to comply with provisions E.5.b.4) and E.5.b.5) above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If the Department claims physical impossibility, it shall notify the Executive Director of the State Water Board in writing within thirty (30) days of the date that the discharger Department first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in provisions E.5.b.4) or E.5.b.5). The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Permit provision. The Department shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Department to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Department shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The Department may request an extension of time for compliance based on lack of funding. The request for an extension shall require a demonstration and documentation of a good faith effort to acquire funding through the Department's budgetary process, and a demonstration that funding was unavailable or inadequate.

c. ASBS Compliance Plan

The Department shall develop and submit to the Executive Director of the State Water Board a draft ASBS Compliance Plan not later than September 20, 2013. The ASBS Compliance Plan shall address all locations listed in Attachment III as follows:

- 1) Include a map of surface drainage of storm water runoff, showing areas of sheet runoff, priority discharge locations, and any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable.
- 2) Describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.
- 3) Require minimum inspection frequencies as follows:
 - a) The minimum inspection frequency for construction sites shall be weekly during the rainy season;
 - b) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season; and

- c) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season, and maintained to remove trash and other anthropogenic debris.
- 4) Address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:
 - a) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
 - b) A 90% reduction in pollutant loading during storm events, for the Department's total discharges.

The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of the Special Protections.

- 5) Address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.
- 6) Describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures currently employed and planned for higher threat discharges, and shall include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, the Department must first consider, and use where feasible, LID practices to infiltrate, use, or evapotranspire storm water runoff on-site, if LID practices would be the most effective at reducing pollutants from entering the ASBS.
- 7) The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.

d. Reporting

If the results of the receiving water monitoring described in provision E.2.c.2)a)i) indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.

1. The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.
2. The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWMP for future implementation, and any additional BMPs that may be added to the SWMP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.
3. Within 30 days of the approval of the report by the State Water Board Executive Director, the discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.
4. As long as the discharger has complied with the procedures described above and is implementing the revised SWMP, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

6. Region Specific Requirements

- a. The Department shall implement the region-specific requirements specified in this Order.
- b. In the SWMP, the Department shall describe how individual Districts will address region-specific requirements in each Regional Water Board.
- c. Region specific requirements are specified in Attachment V of this Order.

7. Regional Water Board Authorities

- a. Upon the effective date of this Order, the Regional Water Boards shall enforce the requirements of this Order. Enforcement may include, but is not limited to, reviewing FPPPs, reviewing workplans and monitoring reports, conducting compliance inspections, conducting monitoring, reviewing Annual Reports and other information, and issuing enforcement orders.
- b. Regional Water Boards may require submittal of FPPPs.
- c. Regional Water Boards may require retention of records for more than three years.
- d. To the extent authorized by the Water Code, Regional Water Boards may impose additional monitoring and reporting requirements and may provide guidance on monitoring plan implementation (Water Code, § 13383).
- e. Regional Water Board staff may inspect the Department's facilities, roads, highways, bridges, and construction sites.

- f. Regional Water Boards may issue other individual storm water NPDES permits or WDRs to the Department, particularly for discharges beyond the scope of this Order.

8. Requirements of Other Agencies

This Order does not preempt or supersede the authority of other State or local agencies (such as the Department of Toxic Substances Control or the California Coastal Commission) and local municipalities to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within their jurisdictions as allowed by State and federal law.

9. Standard Provisions

The Department shall comply with the Standard Provisions (Attachment VI) and any amendments thereto.

10. Permit Compliance and Rescission of Previous Waste Discharge Requirements

This Order shall serve and become effective as an NPDES permit and the Department shall comply with all its requirements on July 1, 2013. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 99-06-DWQ, except for compliance purposes for violations occurring before the effective date of this Order.

11. Permit Re-Opener

This Order may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations 122.62, 122.63, 122.64, and 124.5. The State Water Board may reopen and modify this Order at any time prior to its expiration under any of the following circumstances:

- a. Present or future investigations demonstrate that the discharge(s) regulated by this Order may have the potential to cause or contribute to adverse impacts on water quality and/or beneficial uses.
- b. New or revised Water Quality Objectives come into effect, or any new TMDL is adopted or revised that assigns a WLA to the Department or that identifies the Department as a responsible party in the TMDL implementation plan. In such cases, effluent limitations and other requirements in this Order may be modified as necessary to reflect the new TMDLs or the new or revised Water Quality Objectives; or
- c. TMDL-specific permit requirements for adopted TMDLs are developed by a Regional Water Board for incorporation into this Order.

- d. The State Water Board determines, after opportunity for public comment and a public workshop, that revisions are warranted to those provisions of the Order addressing compliance with water quality standards in the receiving water and/or those provisions of the Order establishing an iterative process for implementation of management practices to assure compliance with water quality standards in the receiving water.

12. Dispute Resolution

In the event of a disagreement between the Department and a Regional Water Board over the interpretation of any provision of this Order, the Department shall first attempt to resolve the issue with the Executive Officer of the Regional Water Board. If a satisfactory resolution is not obtained at the Regional Water Board level, the Department may submit the issue in writing to the Executive Director of the State Water Board or his designee for resolution, with a copy to the Executive Officer of the Regional Water Board. The issue must be submitted to the Executive Director within ten days of any final determination by the Executive Officer of the Regional Water Board. The Executive Officer of the Regional Water Board will be provided an opportunity to respond.

13. Order Expiration and Reapplication

- a. This Order expires on June 30, 2018.
- b. If a new order is not adopted by June 30, 2018, then the Department shall continue to implement the requirements of this Order until a new one is adopted.

- c. In accordance with Title 23, Division 3, Chapter 9 of the California Code of Regulations, the Department shall file a report of waste discharge no later than 180 days before the expiration date of this Order as application for reissuance of this permit and waste discharge requirements. The application shall be accompanied by a SWMP, and a summary of all available water quality data for the discharge and receiving waters, including conventional pollutant data from at least the most recent three years, and toxic pollutant data from at least the most recent five years, in the discharge and receiving water. Additionally, the Discharger shall include the final results of any studies that may have a bearing on the limits and requirements of the next permit.

CERTIFICATION

The undersigned, Clerk to the State Water Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on September 19, 2012.

AYE: Chairman Charles R. Hoppin
Vice Chair Frances Spivy-Weber
Board Member Tam M. Doduc
Board Member Steven Moore
Board Member Felicia Marcus

NAY: None

ABSENT: None

ABSTAIN: None



Jeanine Townsend
Clerk to the Board

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
1001 I STREET
SACRAMENTO, CA 95814

FACT SHEET
FOR
NPDES PERMIT and WASTE DISCHARGE REQUIREMENTS for
State of California
Department of Transportation
NPDES Permit No. CAS000003

ORDER No. 2012-0011-DWQ

This Fact Sheet contains information regarding the waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit for the California State Department of Transportation (Department) for discharges of storm water and certain types of non-storm water. This Fact Sheet describes the factual, legal, and methodological basis for the permit conditions, provides supporting documentation, and explains the rationale and assumptions used in deriving the limits and requirements.

BACKGROUND

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act (C.W.A.)) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful, unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the Clean Water Act added section 402(p). Section 402(p) establishes that storm water discharges are point source discharges and lays out a framework for regulating municipal and industrial storm water discharges under the NPDES program. On November 16, 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated final regulations that establish the storm water permit requirements.

Pursuant to the 1990 regulations, storm water permits are required for discharges from a municipal separate storm sewer system (MS4) serving a population of 100,000 or more. U.S. EPA defines an MS4 as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned or operated by a State (40 Code of Federal Regulations (C.F.R.), § 122.26(b)(8)). The regulations also require storm water permits for 11 categories of industry, including construction activities where the construction activity: (1) disturbs more than 1 acre of land; (2) is part of a larger common plan of development; and/or (3) is found to be a significant threat to water quality.

Before July 1999, storm water discharges from Department storm water systems were regulated by individual NPDES permits issued by the Regional Water Quality Control Boards (Regional Water Boards). On July 15, 1999, the State Water Resources Control Board (State Water Board) issued a statewide permit (Order No. 99-06-DWQ), which

regulated all storm water discharges from Department owned MS4s, maintenance facilities and construction activities. The existing permit (Order No. 99-06-DWQ) will be superseded by adoption of a new permit.

Industrial activities are covered by two General Permits that have been adopted by the State Water Board. The Department's construction activities are subject to the requirements under the NPDES General Permit for Construction Activities (CGP, NPDES Permit No. CAS000002) for construction activities that are equal to or greater than 1 acre. The exception to this is in the Lake Tahoe area, where the Lahontan Regional Water Board adopted its own construction general permit (NPDES Permit No. CAG616002). The Department's industrial facility activities are subject to the requirements of the NPDES General Permit for Industrial Activities (IGP, NPDES Permit No. CAS000001).

The Department is responsible for the design, construction, management, and maintenance of the State highway system, including freeways, bridges, tunnels, the Department's facilities, and related properties. The Department's discharges consist of storm water and non-storm water discharges from State owned right-of-way (ROW).

Clean Water Act section 402(p) and 40 Code of Federal Regulations section 122.26 (a)(v) give the State authority to regulate discharges from an MS4 on a system-wide or jurisdiction-wide basis. The State Water Board considers all storm water discharges from all MS4s and activities under the Department's jurisdiction as one system. Therefore, this Order is intended to cover all of the Department's municipal storm water activities.

This Order will be implemented by the Department and enforced by the State Water Board and nine Regional Water Boards.

The Department operates highways and highway-related properties and facilities that cross through local jurisdictions. Some storm water discharges from the Department's MS4 enter the MS4s owned and managed by these local jurisdictions. This Order does not supersede the authority of local agencies to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within their jurisdiction as allowed by State and federal law. The Department is expected to comply with the lawful requirements of municipalities and other local, regional, and/or state agencies regarding discharges of storm water to separate storm sewer systems or other watercourses under the agencies' jurisdictions.

GENERAL DISCHARGE PROHIBITIONS

This Order authorizes storm water and conditionally exempt non-storm water discharges from the Department's properties, facilities and activities. This Order prohibits the discharge of material other than storm water, unless specifically authorized in this Order.

The Department owns and operates highway systems that are located adjacent to and discharge into many ASBS. This Order specifies that Department discharges to an ASBS are prohibited except in compliance with the conditions and special protections contained in the General Exception for Storm Water and Non-Point Source Discharges to ASBS, State Water Board Resolution 2012-0012. This State Water Board resolution is hereby incorporated by reference and the Department is required to comply with applicable requirements. Attachment III identifies 77 priority Department ASBS discharge locations. These locations represent sites having significant potential to impact the ASBS that are feasible to retrofit. The following locations are not included in the list:

1. Inland sites discharging indirectly to the ASBS,
2. Sites where the discharge is attenuated through vegetation,
3. Sites where it is infeasible to install a BMP, e.g. an overhanging outfall or where there is insufficient space to install a treatment control, and
4. Sites that would pose a safety hazard to motorists, or that would be unsafe to install or maintain.

Provision E.5 of the Order requires the Department to ensure that structural controls at these locations are operational within six years of the effective date of the General Exception.

NON-STORM WATER

Non-storm water discharges are subject to different requirements under the Order depending on whether they are discharged to ASBS.

Non-storm water discharges outside ASBS:

Non-storm water discharges must be effectively prohibited unless they are authorized by a separate NPDES permit or are conditionally exempt under provisions of the Order consistent with 40 CFR, §122.26 (d)(2) (iv)(B). Non-storm water discharges that are not specifically or conditionally exempted by this Order are subject to the existing regulations for point source discharges. Conditionally exempt non-storm water discharges that are found to be significant sources of pollution are to be effectively prohibited.

Discussion of Agricultural Return Flows:

The Department (2007a) indicated in its Non-Storm Water Report that agricultural irrigation water return flows carrying pollutants pass under the Department's ROW in many locations and enter its MS4. Agricultural return flows are not prohibited or conditionally exempted non-storm water discharges and are not subject to the non-storm water requirements of the Order.

The regulations conditionally exempt MS4s from the requirement to effectively prohibit "irrigation water" discharges to the MS4. The regulations also completely exempt MS4s from addressing non-storm water discharges (also called "illicit discharges") if they are regulated by an NPDES permit (40 C.F.R., §§ 122.26(b)(2); 122.26(d)(2)(iv)(B)). The

term “irrigation water” is not defined and the regulations do not clarify whether that term is intended to encompass agricultural return flows that may run on to the Department’s rights of way.

Because agricultural return flows cannot be regulated by an NPDES permit, it is unlikely that they were intended to be treated as “illicit discharges” under the federal MS4 regulations. In discussing illicit non-storm water discharges and the requirement to effectively prohibit such discharges, the preamble of the Phase I final regulations states: “The CWA prohibits the *point source* discharge of non-storm water not subject to an NPDES permit through municipal separate storm sewers to waters of the United States. Thus, classifying such discharges as illicit properly identifies such discharges as being illegal” (55 FR 47996) (emphasis added). Implicit in this statement is that illicit discharges do not include non-point source discharges, including agricultural return flows, which are statutorily excluded from the definition of a point-source discharge (C.W.A., § 502(14)).¹

Clean Water Act Section 402(l)(1) states that an NPDES permitting agency “shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture.” Accordingly, agricultural return flows co-mingling with an illicit discharge would be treated as a point source discharge. This fact, however, does not lead the State Water Board to find that agricultural return flows should be subject to the conditional prohibition on non-storm water discharges.

First, the illicit discharge prohibition acts to prevent non-storm water discharges “into the storm sewers” (C.W.A., § 402(p)(3)(B)(ii)) (emphasis added). Based on a plain reading of the statutory language,² a determination of what constitutes an illicit discharge should be made with reference to the nature of the discharge as it enters the MS4. Unless the agricultural return flow has co-mingled with a point source discharge prior to entering the MS4, it is not subject to the discharge prohibition. Further, since certain point source discharges are conditionally exempted from the requirement for effective prohibition under 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(1), the fact that the agricultural return flow may have co-mingled with such an exempted dry weather point source discharge prior to entering the MS4 does not render it an illicit discharge subject to the effective prohibition.³ See *Fishermen Against the Destruction of the Environment, Inc. v. Closter Farms, Inc.* (11th Cir. 2002) 300 F.3d 1294.

¹ Elsewhere in the preamble, EPA refers to the conditionally exempted non-storm water discharges as “seemingly innocent flows that are characteristic of human existence *in urban environments* and which discharge to municipal separate storm sewers” (55 F.R.48037) (emphasis added). This language further suggests that the term “irrigation water” was not intended to encompass irrigation return flows characteristic of a rural area.

² 40 C.F.R. §122.26(d)(2)(iv)(B)(1) similarly states that the MS4 is to “prevent illicit discharges *to* the municipal separate storm sewer system.” (emphasis added).

³ The Federal Register discussion clarifies that “irrigation return flows are excluded from regulation under the NPDES program,” but that “joint discharges,” i.e. discharges with a component “from activities unrelated to crop production” may be regulated (55 FR 47996).

Second, even assuming that the agricultural return flow mingling with a point source discharge *after* entering the MS4 would trigger the requirements related to non-storm water discharges, agricultural return flows are not expected to require an effective prohibition. Irrigation of agricultural fields typically occurs in dry weather, not wet weather, and therefore the State Water Board anticipates that irrigation return flows into the Department's MS4 would generally not co-mingle with discharges other than exempt non-storm water discharges.

Further, agricultural return flows entering an MS4, while not regulated by an NPDES permit, are through much of the State regulated under WDRs, waivers, and Basin Plan prohibitions. The regulations exempt MS4s from addressing non-storm water discharges that are regulated by an NPDES permit. Flows to the Department's MS4 regulated through state-law based permits are subject to regulatory oversight analogous to being subject to an NPDES permit. The appropriate regulatory mechanism for these discharges is the non-point source regulatory programs and not a municipal storm water permit.⁴

Non-Storm Water Discharges to ASBS:

Non-storm water discharges to ASBS are prohibited except as specified in the General Exception. Certain enumerated non-storm water discharges are allowed under the General Exception if essential for emergency response purposes, structural stability, slope stability, or if occur naturally.

Discussion of Utility Vault Discharges:

In addition, an NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS. This Order allows utility vault discharges to segments of the Department MS4 with a direct discharge to an ASBS, provided the discharge is authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. The State Water Board is in the process of reissuing the General NPDES Permit for Utility Vaults. As part of the renewal, the State Water Board will require a study to characterize representative utility vault discharges to an MS4 with a direct discharge to an ASBS and will impose conditions on such discharges to ensure the discharges do not alter natural ocean water quality in the ASBS. Given the limited number of utility vault discharges to MS4s that discharge directly to an ASBS, the State Water Board finds that discharges from utility vaults and underground structures to MS4s with a direct discharge to an ASBS are not expected to result in the MS4 discharge causing a substantial alteration of natural ocean water quality in the ASBS in the interim period while the General NPDES Permit for Discharges from Utility Vaults is renewed and

⁴ It should also be noted that the Department has limited control options since up gradient flows such as agricultural runoff must in many cases be allowed to flow under or alongside the roadway so as to not threaten roadway integrity.

the study is completed. However, if a Regional Water Board determines a specific discharge from a utility vault or underground structure does alter the natural ocean water quality in an ASBS, the Regional Water Board may prohibit the discharge as specified in this Order. It should also be noted that, under the California Ocean Plan Section III.E.2 (Implementation Provisions for ASBS), limited-term activities that result in temporary and short-term changes in existing water quality in the ASBS may be permitted.

EFFLUENT LIMITS

The State of California Nonpoint Source Program Five-Year Implementation Plan (SWRCB, 2003) (the Plan) describes a variety of pollutants in urban storm water and non-storm water that are carried in MS4 discharges to receiving waters. These include oil, sand, de-icing chemicals, litter, bacteria, nutrients, toxic materials and general debris from urban and suburban areas. The Plan identifies construction as a major source of sediment erosion and automobiles as primary sources of petroleum hydrocarbons.

The Natural Resources Defense Council (NRDC) also identified two main causes of storm water pollution in urban areas (NRDC, 1999). Both identified causes are directly related to development in urban and urbanizing areas:

1. Increased volume and velocity of surface runoff. There are three types of human-made impervious cover that increase the volume and velocity of runoff: (i) rooftops, (ii) transportation imperviousness, and (iii) non-porous (impervious) surfaces. As these impervious surfaces increase, infiltration will decrease, forcing more water to run off the surface, picking up speed and pollutants.
2. The concentration of pollutants in the runoff. Certain industrial, commercial, residential and construction activities are large contributors of pollutant concentrations in urban runoff. As human population density increases, it brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc.

As a result of these two causes, runoff leaving developed urban areas is significantly greater in volume, velocity, and pollutant load than pre-development runoff from the same area.

NPDES storm water permits must meet applicable provisions of sections 301 and 402 of the Clean Water Act. For discharges from an MS4, Clean Water Act section 402(p)(3)(B)(iii) requires control of pollutants to the maximum extent practicable (MEP). A permitting agency also has the discretion to require dischargers to implement more stringent controls, if necessary, to meet water quality standards (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1166.), (discussed below under Receiving Water Limitations).

MEP is the technology-based standard established by Congress in Clean Water Act section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve. MEP is generally achieved by emphasizing pollution prevention and source control BMPs as the first lines of defense in combination with structural and treatment methods where appropriate. The MEP approach is an ever evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP.

In a precedential order (State Water Board Order WQ 2000-11 (In the Matter of the petitions of the Cities of Bellflower et al.)), the State Water Board has stated as follows:

While the standard of MEP is not defined in the storm water regulations or the Clean Water Act, the term has been defined in other federal rules. Probably the most comparable law that uses the term is the Superfund legislation, or CERCLA, at section 121(b). The legislative history of CERCLA indicates that the relevant factors, to determine whether MEP is met in choosing solutions and treatment technologies, include technical feasibility, cost, and state and public acceptance. Another example of a definition of MEP is found in a regulation adopted by the Department of Transportation for onshore oil pipelines. MEP is defined as to “the limits of available technology and the practical and technical limits on a pipeline operator”

These definitions focus mostly on technical feasibility, but cost is also a relevant factor. There must be a serious attempt to comply, and practical solutions may not be lightly rejected. If, from the list of BMPs, a permittee chooses only a few of the least expensive methods, it is likely that MEP has not been met. On the other hand, if a permittee employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. Thus while cost is a factor, the Regional Water Board is not required to perform a cost-benefit analysis.

The final determination of whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the permitting agency, and not by the discharger.

Because of the numerous advances in storm water regulation and management and the size of the Department’s MS4, this Order does not require the Department to fully incorporate and implement all advances in a single permit term. The Order allows for prioritization of efforts to ensure the most effective use of available funds.

This Order will have an impact on costs to the Department above and beyond the costs from the Department's prior permit. Such costs will be incurred in complying with the post-construction, hydrograph modification, Low Impact Development, and monitoring and reporting requirements of this Order. Additional costs will also be incurred in correcting non-compliant discharges. Recognizing that there are cost increases associated with the Order, the State Water Board has prepared a cost analysis to approximate the anticipated cost associated with implementing this permit. The resulting cost analysis is discussed later in this Fact Sheet under the section on "Cost of Compliance and Other MEP Considerations." The cost analysis has been prepared based on available data and is not a cost-benefit analysis.

The individual and collective activities required by this Order and contained in the Department's Storm Water Management Plan (SWMP) meet the MEP standard.

RECEIVING WATER LIMITATIONS

Under federal law, an MS4 permit must include "controls to reduce the discharge of pollutants to the maximum extent practicable . . . and such other provisions as . . . the State determines appropriate for the control of such pollutants." (Clean Water Act §402(p)(3)(B)(iii).) The State Water Board has previously determined that limitations necessary to meet water quality standards are appropriate for the control of pollutants discharged by MS4s and must be included in MS4 permits. (State Water Board Orders WQ 91-03, 98-01, 99-05, 2001-15; see also *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F3d 1159.). The Proposed Order accordingly prohibits discharges that cause or contribute to violations of water quality standards.

The Proposed Order further sets out that, upon determination that a Permittee is causing or contributing to an exceedance of applicable water quality standards, the Permittee must engage in an iterative process of proposing and implementing additional control measures to prevent or reduce the pollutants causing or contributing to the exceedance. This iterative process is modeled on receiving water limitations set out in State Water Board precedential Order WQ 99-05 and required by that Order to be included in all municipal storm water permits.

The Ninth Circuit held in *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2011) 673 F.3d 880 that engagement in the iterative process does not provide a safe harbor from liability for violations of permit terms prohibiting exceedances of water quality standards. The Ninth Circuit holding is consistent with the position of the State Water Board and Regional Water Boards that exceedances of water quality standards in an MS4 permit constitute violations of permit terms subject to enforcement by the Boards or through a citizen suit. While the Boards have generally directed dischargers to achieve compliance by improving control measures through the iterative process, the Board retains the discretion to take other appropriate enforcement and the iterative process does not shield dischargers from citizen suits.

The State Water Board has received multiple comments, from the Department and from other interested parties, expressing confusion and concern about the Order provisions regarding receiving water limitations and the iterative process. The Department has commented that the provisions as currently written do not provide the Department with a viable path to compliance with the proposed Order. Other commenters, including environmental parties, support the current language.

As stated above, the provisions in this Order regarding receiving water limitations and the iterative process are based on precedential Board orders. Accordingly, substantially identical provisions are found in the proposed statewide Phase II MS4 NPDES permit, as well as the Phase I NPDES permits issued by the Regional Water Boards. In the context of the proposed Phase II MS4 permit, similar comments have been received. Because of the broad applicability of any policy decisions regarding the receiving water limitations and iterative process provisions, the State Water Board has proposed a public workshop to consider this issue and seek public input.

Rather than delay consideration of adoption of the tentative Order in anticipation of any future changes to the receiving water limitations and iterative process provisions that may result from the public workshop and deliberation, the Board has added a specific reopener clause at Section 11.d. to facilitate any future revisions as necessary.

NUMERIC EFFLUENT LIMITATIONS AND BLUE RIBBON PANEL OF EXPERTS

Under 40 Code of Federal Regulations section 122.44(k)(2)&(3); the State Water Board may impose BMPs for control of storm water discharges in lieu of numeric effluent limitations.⁵

In 2005, the State Water Board assembled a blue ribbon panel to address the feasibility of including numeric effluent limits as part of NPDES municipal, industrial, and construction storm water permits. The panel issued a report dated June 19, 2006, which included recommendations as to the feasibility of including numeric limitations in storm water permits, how such limitations should be established, and what data should be required (SWRCB, 2006).

⁵ On November 12, 2010, U.S. EPA issued a revision to a November 22, 2002 memorandum in which it had “affirm[ed] the appropriateness of an iterative, adaptive management best management practices (BMP) approach” for improving storm water management over time. In the revisions, U.S. EPA recommended that, in the case the permitting authority determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality excursion, the permitting authority, where feasible, include numeric effluent limitations as necessary to meet water quality standards. However, the revisions recognized that the permitting authority’s decision as to how to express water quality based effluent limitations (WQBELs), i.e. as numeric effluent limitations or BMPs, would be based on an analysis of the specific facts and circumstances surrounding the permit. U.S. EPA has since invited comment on the revisions to the memorandum and will be making a determination as to whether to “either retain the memorandum without change, to reissue it with revisions, or to withdraw it.” http://www.epa.gov/npdes/pubs/sw_tmdlwla_comments_pdf

The report concluded that “It is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges. However, it is possible to select and design them much more rigorously with respect to the physical, chemical and/or biological processes that take place within them, providing more confidence that the estimated mean concentrations of constituents in the effluents will be close to the design target.”

Consistent with the findings of the Blue Ribbon Panel and precedential State Water Board orders (State Water Board Orders Nos. WQ 91-03 and WQ 91-04), this Order allows the Department to implement BMPs to comply with the requirements of the Order.

In 1980, the State Water Resources Control Board adopted concentration-based numeric effluent limitations for total nitrogen, total phosphate, total iron, turbidity, and grease and oil for storm water discharges in the Lake Tahoe Basin. The Lahontan Regional Water Board included revised versions of those limitations in Table 5.6-1 of the Water Quality Control Plan for the Lahontan Region (Basin Plan). The numeric effluent limitations in Table 5.6-1 were included in previous iterations of the Department's MS4 permit. This Order does not include these referenced numeric effluent limitations. The TMDL for sediment and nutrients in Lake Tahoe, approved by U.S. EPA on August 16, 2011, removed statements from the Basin Plan requiring the effluent limitations in Table 5.6-1 to apply to municipal jurisdictions and the Department. The Lake Tahoe TMDL would constitute cause for permit revocation and reissuance in accordance with 40 Code of Federal Regulations section 122.62(a)(3), so the removal of the referenced numeric effluent limitations is consistent with 40 Code of Federal Regulations section 122.44(l)(1). Further, any water quality based effluent limitations in MS4 permits are imposed under section 402(p)(3)(B) of the Clean Water Act rather than under section 301(b)(1)(C), and are accordingly not subject to the antibacksliding requirements of section 402(o). The Order requires compliance with pollutant load reduction requirements established by the Lake Tahoe TMDL for total nitrogen, total phosphorus, and fine sediment particles.

OTHER PROVISIONS OF THIS ORDER

Storm Water Management Plan (SWMP)

The SWMP describes the procedures and practices that the Department proposes to reduce or eliminate the discharge of pollutants to storm drainage systems and receiving waters. On May 17, 2001, the State Water Board approved a Storm Water Management Plan submitted by the Department. That SWMP was updated in 2003 (Department, 2003c) and the updates were approved by the Executive Director of the State Water Board on February 13, 2003. On January 15, 2004, the Department submitted a proposed Storm Water Management Plan as part of its NPDES permit application to renew its previous statewide storm water permit (Order No. 99-06-DWQ). The State Water Board and Regional Water Board staff and the Department discussed and revised Best Management Practices (BMP) controls and many other components proposed in each section of the SWMP during numerous meetings from January 2004 to 2006. The Department submitted a revised SWMP in June 2007 (Department, 2007c). The 2004

and 2007 SWMPs have not been approved by the State Water Board and the Department has continued to implement the 2003 SWMP. The Department is in the process of revising aspects of the 2003 SWMP to address the Findings of Violation and Order for Compliance issued by U.S. EPA in 2011 (U.S. EPA Docket No. CWA-09-2011-0001).

This Order requires the Department to update, maintain and implement an effective SWMP that describes how the Department will meet requirements of this Order. Within one year of the effective date of the Order, the Department shall submit for Executive Director approval a SWMP consistent with the provisions and requirement of the Order. The SWMP is an integral and enforceable component of this Order and is required to be updated on an annual basis.

In ruling upon the adequacy of federal regulations for discharges from small municipal storm sewer systems, the court in *Environmental Defense Center v. United States EPA* (9th Cir. 2003) 344 F.3d 832 held that NPDES “notices of intent” that required the inclusion of a proposed storm water management program (SWMP) are subject to the public participation requirements of the federal Clean Water Act because they are functionally equivalent to NPDES permit applications and because they contain “substantive information” about how the operator will reduce its discharges to the maximum extent practicable. By implication, the public participation requirements of the Clean Water Act may also apply to proposals to revise the Department’s SWMP. Although the Proposed Order contains significantly more detailed and prescriptive requirements for achievement of MEP than previously adopted orders for the Department, some of the substantive information about how MEP will be achieved is arguably still set out in the SWMP. This Order accordingly provides for public participation in the SWMP revision process. However, because there may be a need for numerous revisions to the SWMP during the term of this Order, a more streamlined approach to SWMP revisions is needed to provide opportunities for public hearings while preserving the State Water Board’s ability to effectively administer its NPDES storm water permitting program. (See *Costle v. Pacific Legal Foundation* (1980) 445 U.S. 198, 216-221, *Natural Resources Defense Council v. Costle* (9th Cir. 1977) 568 F.2d 1369, 1382.)

This Order establishes that revisions to the SWMP requiring Executive Director approval will be publicly noticed for thirty days on the State Water Board’s website (except as otherwise specified). During the public notice period, a member of the public may submit a written comment or request that a public hearing be conducted. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. Upon review of the request or requests for a public hearing, the Executive Director may, in his or her discretion, schedule a public hearing to take place before approval of the SWMP revision. The Executive Director shall schedule a hearing if there is a significant degree of public interest in the proposed revision. If no public hearing is conducted, the Executive Director may approve the SWMP revision if it meets the conditions set forth in this Order. Any SWMP revision approved by the Executive Director will be posted on the State Water Board’s website.

The Department references various policies, manuals, and other guidance related to storm water in the SWMP. These documents are intended to facilitate implementation of the SWMP and must be consistent with all requirements of the Order.

In addition to the annual submittal of the proposed SWMP revisions, this Order also requires the Department to submit workplans that explain how the program will be implemented in each District. The purpose of the workplans is to bring the proposed statewide program of the SWMP to the practical and implementable level at the District, watershed, and water body level.

Legal Authority

The Department has submitted a certification of adequate legal authority to implement the program. Through implementation of the storm water program, the Department may find that the legal authority is, in fact, not adequate. This Order requires the Department to reevaluate the legal authority each year and recertify that it is adequate. The Department is required to submit the Certification of the Adequacy of Legal Authority as part of the Annual Report each year. If it becomes clear that the legal authority is not adequate to fully implement the SWMP and the requirements of this Order, the Department must seek the authority necessary for implementation of the program.

SWMP Implementation Requirements

Management and Organization

The Department must maintain adequate funding to implement an effective storm water program and must submit an analysis of the funding each year. This includes a report on the funding that is dedicated to storm water as well as an estimate of the funding that has been allocated to various program elements that are not included in the storm water program funding. An example of this would be to estimate the funding that has been made available to the Maintenance Program to implement the development of Maintenance Facility Pollution Prevention Plans (FPPP) and to implement the Best Management Practices (BMPs) that are necessary for water quality.

The Department's facilities and rights-of-way may cross or overlap other MS4s. The Department is required to coordinate their activities with other municipalities and local governments that have responsibility for storm water runoff. This Order requires the Department to prepare a Municipal Coordination Plan describing the approach that the Department will take in establishing communication, coordination, cooperation and collaboration with other storm water management programs.

Discharge Monitoring and Reporting Program

Since 1998, the Department has conducted monitoring of runoff from representative transportation facilities throughout California. The key objectives of the characterization monitoring were to produce scientifically credible data on runoff from the Department's facilities, and to provide useful information in designing effective storm water management strategies. Between 2000 and 2003, the Department conducted a three-year characterization monitoring study (Department, 2003b). The study generated over

60,000 data points from over 180 monitoring sites. Results were compared with California Toxics Rule (CTR) objectives and other relevant receiving water quality objectives (U.S. EPA, 2000b). Copper, lead, and zinc were estimated to exceed the CTR objectives for dissolved and total fractions in greater than 50% of samples. Diazinon and chlorpyrifos were also found to exceed the California Department of Fish and Game recommended chronic criteria in a majority of samples.

The discharge monitoring program has been structured to focus on the highest priority water quality problems in order to ensure the most effective use of limited funds. A tiered approach is established that gives first priority to monitoring in ASBS and TMDL watersheds. Monitoring in these locations must be conducted pursuant to the applicable requirements of the ASBS Special Protections or TMDL, without limitation as to the number of sites. The second monitoring tier requires the Department to examine and prioritize existing monitoring locations where existing data show elevated levels of pollutants. Fifteen percent of the highest priority sites must be scheduled for retrofit, with a maximum of 100 sites per year.

Monitoring constituents were chosen by the State Water Board from the results of the Department's comprehensive, multi-component storm water characterization monitoring program conducted in 2002 and 2003 and various other characterization studies.

Toxicity in storm water discharges from the Department's rights-of-way has been reported in a number of studies. A 2005 report prepared for the Department by the University of California at Davis "Toxicity of Storm Water from Caltrans Facilities" reported significant occurrences of acute and chronic toxicity (Department, 2005). Toxicity Identification Evaluations showed toxicity from a number of compounds, including heavy metals, organic compounds, pesticides and surfactants. Toxicity testing is required under the Order, and a workplan for conducting Toxicity Reduction Evaluations is required to be included in the SWMP.

Monitoring data must be filed electronically in the Storm Water Multiple Application Report and Tracking System (SMARTS). Receiving water monitoring data must be comparable⁶ with the Surface Water Ambient Monitoring Program (SWAMP), (SWAMP, 2010), and must be uploaded to the California Data Exchange Network (CEDEN).

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

The Department may at times be out of compliance with the requirements of this Order. Incidents of non-compliance and potential or threatened non-compliance must be reported to the State and Regional Water Boards. This Order identifies the conditions under which non-compliance reporting will be required. This Order distinguishes between emergency, field, and administrative (procedural) incidents that require notification to the

⁶ U.S. EPA defines comparability as the measure of confidence with which one data set, element, or method can be considered as similar to another. Functionally, SWAMP comparability is defined as adherence to the SWAMP Quality Assurance Program Plan and the Surface Water Ambient Monitoring Program Information Management Plan.

State and Regional Water Boards, and requires that a summary of non-compliance incidents and the subsequent actions taken by the Department to reduce, eliminate and prevent the reoccurrence of the non-compliance be included in the Annual Report.

Emergency, field and administrative incidents are defined in Attachment I and have separate reporting requirements. Generally, failure to meet any permit requirement that is local or regional in nature will be reported to the Regional Water Boards. Attachment I outlines the reporting timelines for the three categories. This reporting will be conducted through the Storm Water Multiple Application Report and Tracking System (SMARTS)⁷. Distribution of this report internally between the State Water Board and any Regional Water Boards will be conducted through this system.

Project Planning and Design

In Order WQ 2000-11, the State Water Board considered Standard Urban Storm Water Mitigation Plans (SUSMPs) related to new development and redevelopment. The SUSMPs include a list of BMPs for specific development categories, and a numeric design standard for structural or treatment control BMPs. The numeric design standard created objective and measurable criteria for the amount of runoff that must be treated or infiltrated by BMPs. While this Order does not regulate construction activities, it does regulate the post-construction storm water runoff pursuant to municipal storm water regulations. SUSMPs are addressed in this Order through the numeric sizing criteria that apply to treatment BMPs at specified new and redevelopment projects and through requirements to implement Low Impact Development through principles of source control, site design, and storm water treatment and infiltration.

The Order provides the Department with an alternative compliance method for complying with the Treatment Control BMP numeric sizing criteria for projects where on-site treatment is infeasible. Under that method, the Department may propose complying with the requirements by installing and maintaining equivalent treatment BMPs at an offsite location (meaning outside of Project Limits) within the watershed, or by contributing funds to achieve the same amount of treatment at a regional project within the watershed. This compliance method will provide some flexibility to the Department in meeting the treatment control requirements.

Hydromodification and Channel Protection

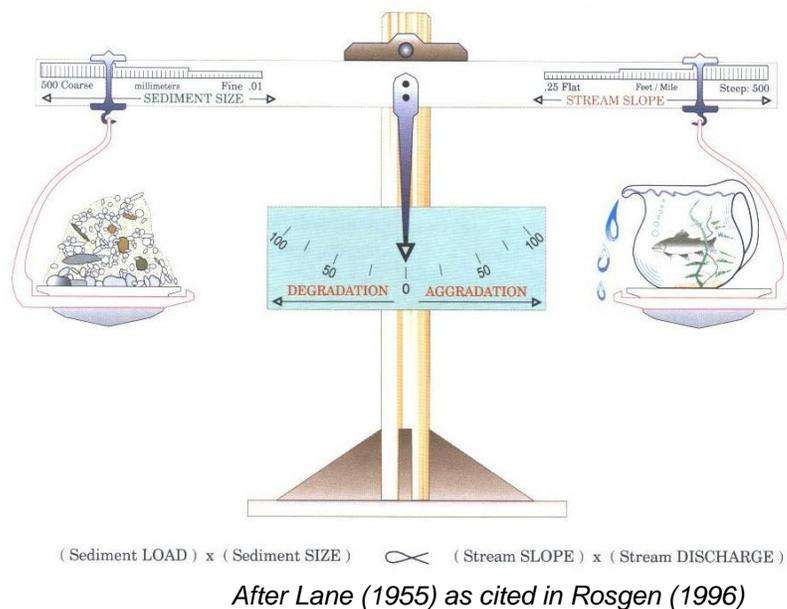
Department development and redevelopment projects have the potential to negatively impact stream channels and downstream receiving waters. The potential impacts of hydromodification by Department projects must be assessed in the project planning and design stage, and measures taken to mitigate them. This section describes the rationale and approach for the hydromodification and channel protection requirements.

A dominant paradigm in fluvial geomorphology holds that streams adjust their channel dimensions (width and depth) in response to long-term changes in sediment supply and

<https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp>

bankfull discharge. The bankfull stage corresponds to the discharge at which channel maintenance is the most effective, that is, the discharge at which the moving sediment, forming or removing bars, and forming or changing bends and meanders, are doing work that results in the average morphologic characteristics of channels (Finkenbine, 2000). A.W. Lane showed the generalized relationship between sediment load, sediment size, stream discharge and stream slope, as shown in Figure 1, (Rosgen, 1996). A change in any one of these variables sets up a series of mutual adjustments in the companion variables resulting in a direct change in the physical characteristics of the stream channel.

Figure 1 - Schematic of the Lane Relationship

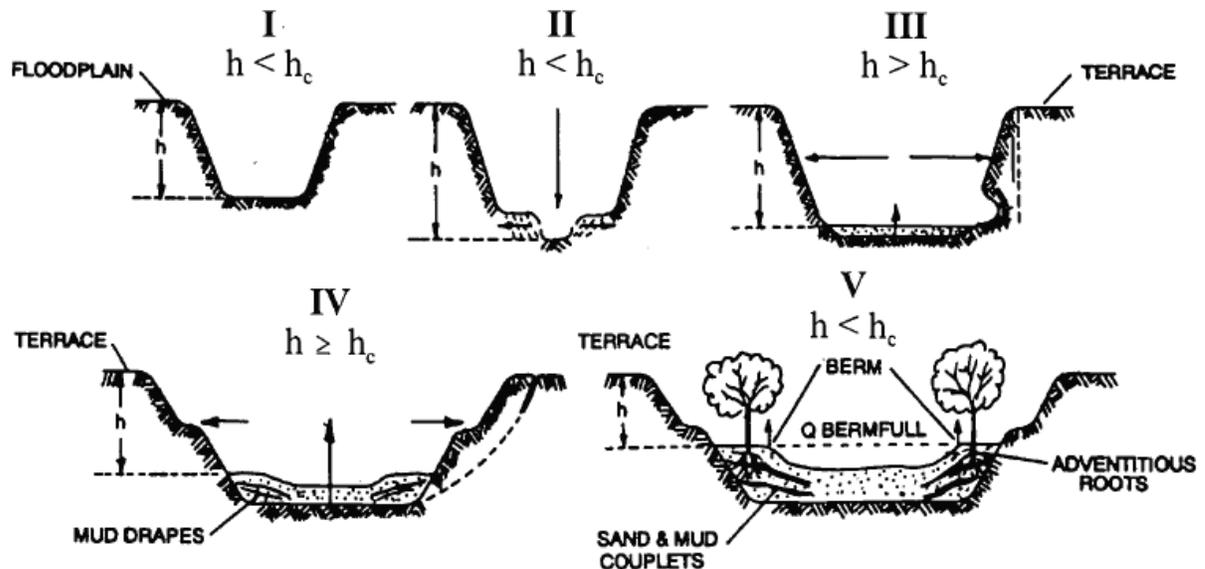


Stream slope times stream discharge (the right side of the scale) is an approximation of stream power, a unifying concept in fluvial geomorphology (Bledsoe, 1999). Urbanization generally increases stream power and affects the resisting forces in a channel (represented as sediment load and sediment size on the left side of the scale).

During construction, sediment loads can increase from 2 to 40,000 times over pre-construction levels (Goldman, 1986). Most of this sediment is delivered to stream channels during large, episodic rain events (Wolman, 2001). This increased sediment load leads to an initial aggradation phase where stream depths may decrease as sediment fills the channel, leading to a decrease in channel capacity and an increase in flooding and overbank deposition. A degradation phase initiates after construction is completed.

Schumm et al (Schumm, 1984) developed a channel evolution model that describes the series of adjustments from initial downcutting, to widening, to establishing new floodplains at lower elevations (Figure 2).

Figure 2 - Channel Changes Associated with Urbanization



h = bank height

h_c = critical bank height (the bank is susceptible to failure when bank heights are greater than critical bank height. Stable banks have low angles and heights)

After Incised Channel Evolution Sequence in Schumm et al. 1984

Channel incision (Stage II) and widening (Stages III and to a lesser degree, Stage IV) are due to a number of fundamental changes on the landscape. Connected impervious area and compaction of pervious surfaces increase the frequency and volume of bankfull discharges (Stein, 2005; Booth, 1997), resulting in an increase in stream power. Increased drainage density (miles of stream length per square mile of watershed) also affects receiving channels (May, 1998; SCVURPPP, 2002). Increased drainage density and hydraulic efficiency leads to an increase in the frequency and volume of bankfull discharges because the time of concentration is shortened. Flows from engineered pipes and channels are also often “sediment starved” and seek to replenish their sediment supply from the channel.

Encroachment of stream channels can also lead to an increase in stream slope, which leads to an increase in stream power. In addition, watershed sediment loads and sediment size (with size generally represented as the median bed and bank particle size,

or d_{50}) decrease during urbanization (Finkenbine, 2000; Pizzuto, 2000). This means that even if pre- and post- development stream power are the same, more erosion will occur in the post-development stage because the smaller particles are less resistant.

As shown in Stages II and III, the channel deepens and widens to accommodate the increased stream power (Hammer, 1973; Booth, 1990) and decrease in sediment load and sediment size. Channels may actually narrow as entrained sediment from incision is deposited laterally in the channel (Trimble, 1997). After incised channels begin to migrate laterally (Stage III), bank erosion begins, which leads to general channel widening (Trimble, 1997). At this point, a majority of the sediment that leaves a drainage area comes from within the channel, as opposed to the background and construction related hillslope contribution (Trimble, 1997). Stage IV is characterized by more aggradation and localized bank instability. Stage V represents a new quasi-equilibrium channel morphology in balance with the new flow and sediment supply regime. In other words, stream power is in balance with sediment load and sediment size.

The magnitude of the channel morphology changes discussed above varies along a stream network as well as with the age of development, slope, geology (sand-bedded channels may cycle through the evolution sequence in a matter of decades whereas clay-dominated channels may take much longer), watershed sediment load and size, type of urbanization, and land use history. It is also dependent on a channel's stage in the channel evolution sequence when urbanization occurs. Management strategies must take into account a channel's stage of adjustment and account for future changes in the evolution of channel form (Stein, 2005).

The hydromodification requirements in this Order are based on established Federal Highway Administration procedures for assessing stream stability at highway crossings. These procedures are geomorphically based and have historically been used to inform bridge and culvert design and to ensure that these structures are not impacted by decreased lateral and vertical stability (FHWA, 2001; FHWA, 2006). Maintaining lateral and vertical stability will not only protect highway structures but will serve the broader interest of maintaining stable stream form and function.

These hydromodification requirements are risk based and reflect the concept that stable channels (as determined from a Level 1 rapid analysis) do not have to undergo any further analysis and that hydrology-based design standards are protective.

If stream channels are determined to be laterally and or vertically unstable, the analysis procedures are much more rigorous and the mitigation measures are potentially more extensive. There is support in the literature for the type of tiered, risk-based approach taken in this Order (Booth, 1990; Watson, 2002; Bledsoe, 2002; Bledsoe et al., 2008).

California Senate Bill 857 (2006) amended Article 3.5 of the Streets and Highways Code to require the Department to assess and remediate barriers to passage of anadromous fish at stream crossings along the State Highway System. The bill also requires the Department to, among other things, prepare an annual report to the legislature on the

status of the Department's efforts in locating, assessing, and remediating barriers to fish passage. Waters of the State supporting the beneficial use of fish migration could be adversely impacted by improperly designed or maintained stream crossings, or through natural channel evolution processes. Accordingly, this Order requires the Department to also submit the annual report required under SB 857 to the State Water Board.

Low Impact Development (LID)

On January 20, 2005, the State Water Board adopted sustainability as a core value for all California Water Boards' activities and programs, and directed State Water Board staff to consider sustainability in all future policies, guidelines, and regulatory actions.

Sustainability can be achieved through appropriate implementation of the LID techniques required by this Order.

The proper implementation of LID techniques not only results in water quality protection benefits and a reduction of land development and construction costs, but also enhances property values, and improves habitat, aesthetic amenities, and quality of life (U.S. EPA, 2007). Further, properly implemented LID techniques reduce the volume of runoff leaving a newly developed or re-developed area thereby lowering the peak rate of runoff, and thus minimizing the adverse effects of hydromodification on stream habitat (SWRCB, 2007). The requirements of this Order facilitate the implementation of LID strategies to protect water quality, reduce runoff volume, and to promote sustainability.

Unlike traditional storm water management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID takes a different approach by using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's pre-development hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall. LID has been a proven approach in other parts of the country and is seen in California as an alternative to conventional storm water management.

LID is a tool that can be used to better manage natural resources and limit the pollution delivered to waterways. To achieve optimal benefits, LID needs to be integrated with watershed planning and appropriate land use programs. LID by itself will not deliver all the water quality outcomes desired; however, it does provide enhanced storm water treatment and mitigates increased volume and flow rates (SWRCB, 2007).

This Order approaches LID through source control design principles, site design principles and storm water treatment and infiltration principles. Source control and site design principles are required as applicable to provide enough flexibility such that projects are not forced to include inappropriate or impractical measures. Not all of the storm water treatment and infiltration principles identified in the Order are required to be implemented but are listed in order of preference with the most environmentally protective and effective alternatives listed first.

BMP Development and Implementation

The Department has developed a BMP program for control of pollutants from existing facilities and for new and reconstructed facilities. This BMP program includes development, construction, maintenance and evaluation of BMPs, and investigation of new BMPs. The goal of BMP implementation is to control the discharge of pollutants to the applicable standards.

While erosion control BMPs are typically used on construction sites, some are used as permanent, post-construction BMPs. Typical erosion control BMPs involve use of straw or fiber rolls and mats. These rolls and mats are often held together by synthetic mesh or netting. Synthetic materials are persistent in the environment and have been found to be a source of pollutants, trash (Brzozowski, 2009), and hazard to wildlife through entrapment (Brzozowski, 2009; Barton and Kinkead, 2005; Walley et al, 2005; Stuart et al, 2001). For erosion control products used as permanent, post-construction BMPs, this Order requires the use of biodegradable materials, and the removal of any temporary erosion control products containing synthetic materials when they are no longer needed. Biodegradable materials are required in erosion control products used by the Departments of Transportation in the states of Delaware and Iowa (Brzozowski, 2009). Use of synthetic (plastic) materials is also prohibited through a Standard Condition in Streambed Alteration Agreements by the California Department of Fish and Game, Region 1 (Van Hattem, personal communication, 2009).

Potential Unintended Public Health Concerns Associated with Structural BMPs

The Department worked collaboratively with the California Department of Public Health (CDPH) on a comprehensive, multi-component monitoring program of more than 120 structural BMPs for mosquito production (Department, 2004). The data revealed that certain BMPs may unintentionally create habitat suitable for mosquitoes and other vectors. The California Health and Safety Code prohibits landowners from knowingly providing habitat for or allowing the production of mosquitoes and other vectors, and gives local vector control agencies broad inspection and abatement powers. This Order requires the Department to comply with applicable provisions of the Health and Safety Code and to cooperate and coordinate with CDPH and local mosquito and vector control agencies on vector control issues in the Department's MS4.

Construction

The Department's construction activities were previously regulated under the MS4 permit (Order 99-06-DWQ), which required the Department to comply with the substantive provisions of the CGP but not the requirement to file separate notices of intent for each construction project. Some Regional Water Boards have had difficulty enforcing the provisions of the CGP when enrollment under that permit is not required. This Order requires the Department to file for separate coverage for each construction project under the CGP. This change is expected to increase the Department's accountability for discharges from construction sites and improve the ability of the Regional Water Boards to take enforcement actions as necessary.

Though discharges from construction activities are not regulated under this Order, any discharges from a site occurring after completion of construction (i.e. post-construction discharges) are fully subject to the requirements of this Order.

Some Department construction-related activities such as roadway and parking lot repaving and resurfacing may mobilize pollutants, even though they may not trigger coverage under the CGP. Such activity may discharge pollutants to the environment, however. BMPs for the control of such discharges are specified in the Department's Project Planning and Design Guide and Construction Site BMP Field Manual and Trouble Shooting Guide, and in the California Stormwater Quality Association (CASQA) California Stormwater BMP Handbook (Department, 2010; Department, 2003a); (CASQA, 2009). The Department is required to implement BMPs to control such discharges.

Because some Department construction projects may not involve grading or land disturbance of one acre or more, these smaller projects do not trigger requirements to enroll under the Construction General Permit. This Order requires the Department to implement BMPs to control discharges from such projects to the MEP. Failure to implement appropriate BMPs is a violation of this Order.

Maintenance Program Activities

Preservation of vegetation is an effective method for the control of pollutants in runoff; however the Department must control vegetation in its rights-of-way for purposes of traffic safety and nuisance. The Department currently implements a vegetation control program with a stated purpose of minimizing the use of agricultural chemicals and maximizing the use of appropriate native and adapted vegetation for erosion control, filtering of runoff, and velocity control.

Notwithstanding the Department's commitment to reduce the use of agricultural chemicals, the Department reported a total amount of 208,549 pounds of herbicide used in the 2008-2009 Storm Water Management Program Annual Report (Department (2010a); CTSW-RT-10-182-32.1). Reported reasons for increased herbicide usage included:

1. Local weather conditions, such as increased rainfall, leading to increased weed production.
2. The need to address new mandates for fire suppression (fuel abatement) adjacent to roadways.
3. Requests from local cities and counties.
4. Increase in or outbreaks of noxious weeds in areas adjacent to farmland.

This Order contains detailed requirements for the control of vegetation and reporting requirements for the use of agricultural chemicals.

The Department's maintenance facilities discharge pollutants to the MS4. This Order requires the Department to prepare Facility Pollution Prevention Plans (FPPPs) for all maintenance facilities. The Department is also required to implement BMP programs at each facility as necessary and periodically inspect each facility.

Spill cleanup is part of the Department's maintenance program. This Order requires the Department to ensure that spills on its rights-of-way are fully and appropriately cleaned up, and to provide appropriate notifications to local municipalities which may be affected by the spill. The Department is also required to notify the appropriate Regional Water Board of any spill with the potential to impact receiving waters.

This Order requires the Department to monitor and clean storm drain inlets when they have reached 50 percent capacity. The Department must initiate procedures contained in an Illegal Connection/Illicit Discharge (IC/ID) and Illegal Dumping Response Plan where storm water structures are found to contain excessive material resulting from illegal dumping, and it must determine if enhanced BMPs are needed at the site.

This Order requires the Department to implement the BMPs and other requirements of the SWMP and this Order to reduce and eliminate IC/IDs. It also requires the Department to prepare a Storm Drain System Survey Plan and an Illegal Dumping Response Plan.

Facilities Operations

There is potential for the discharge of pollutants from Department facilities during rain events. The discharge of pollutants from facilities not covered by the IGP will be reduced to the MEP through the appropriate implementation of BMPs.

This Order requires the Department to file an NOI for coverage under the IGP for industrial facilities as specified in Attachment 1 of the IGP. This requirement is expected to increase the Department's accountability for discharges from industrial facilities and improve the ability of the Regional Water Boards to take enforcement actions as necessary.

Department Activities Outside the Department's Right-of-Way

Facilities and operations outside the Department's ROW may support various Department activities. Facilities may include concrete or asphalt batch plants, staging areas, concrete slurry processing or other material recycling operations, equipment and material storage yards, material borrow areas, and access roads. Facilities may be operated by the Department or by a third party. The Department is required to include provisions in its contracts that require the contractor to obtain and comply with applicable permits for facilities and operations outside the Department's ROW when these facilities are active for the primary purpose of accommodating Department activities.

Non-Department Projects and Activities

Non-Department projects and activities include construction projects or other activities conducted by a third party within the Department's ROW. The Department is responsible for runoff from all non-Department projects and activities in its rights-of-way unless a separate permit is issued to the other entity. At times, local municipalities or private developers may undertake construction projects or other activities within the Department's ROW. The Department may exercise control or oversight over these third party projects or activities through encroachment permits or other means. This Order sets project planning and design requirements for non-Department projects.

Management Activities for Non-Storm Water Discharges

Non-storm water discharges are dry weather flows that do not originate from precipitation events. Non-storm water discharges are illicit discharges and are prohibited by the federal regulations (40 C.F.R., § 122.26 (d)(2)(iv)(B)(1)) unless exempted or separately permitted. Procedures for prohibiting illicit discharges and illegal connections, and for responding to illegal dumping and spills are needed to prevent environmental damage and must be described in the SWMP.

Training and Public Education

Education is an important element of municipal storm water runoff management programs. U.S. EPA (2005) finds that "An informed and knowledgeable community is crucial to the success of a storm water management program since it helps ensure the following: Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important, [and] greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters."

U.S. EPA also states "The public education program should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children."

This Order requires the Department to implement a Training and Public Education program. The Training and Public Education program focuses on three audiences: Department employees, Department contractors, and the general public. The Department must implement programs for all three audiences. The Training and Public Education program is considered a BMP and an analysis of its effectiveness is needed.

Program Evaluation

This Order requires the Department to evaluate the effectiveness and adequacy of the storm water program on an annual basis. This includes both water quality monitoring and a self-audit of the program. The audit is intended to determine the effectiveness of the storm water and non-storm water programs through the evaluation of factors and program components such as:

1. Storm water and non-storm water discharges, including pollutant concentrations from locations representative of the Department's properties, facilities, and activities;
2. Maintenance activity control measures;
3. Facility pollution prevention plans;
4. Permanent control measures; and
5. Highway operation control measures.

In addition to water quality monitoring and the self-audit, the Department must perform an Overall Program Effectiveness Evaluation each year to determine the effectiveness of the program in achieving environmental and water quality objectives. The scope of the evaluation is expected to increase each year in response to the continuing collection of environmental monitoring data.

Reporting

Comprehensive reporting is needed to determine compliance with this Order and to track the effectiveness of the Department's storm water program over time. A summary of the reports required from the Department is presented in Attachment IX of the Order. The State Water Board and Regional Water Boards have the authority under various sections of the California Water Code to request additional information as needed.

The Department must track, assess and report on program implementation to ensure its effectiveness. In addition to the individual reports referenced above, the Department is required to submit an annual report to the State Water Board by October 01 of each year. The Annual Report must evaluate compliance with permit conditions, evaluate and assess the effectiveness of BMPs, summarize the results of the monitoring program, summarize the activities planned for the next reporting cycle, and, if necessary, propose changes to the SWMP.

Total Maximum Daily Load (TMDL)

Section 303(d) of the Clean Water Act requires States to identify waters ("impaired" water bodies) that do not meet water quality standards after applying certain required technology-based effluent limits. States are required to compile this information in a list and submit the list to the U.S. EPA for review and approval. This list is known as the Section 303(d) list of impaired waters.

As part of the listing process, States are required to prioritize waters/watersheds for future development of TMDLs. A TMDL is defined as the sum of the individual waste load allocations (WLAs) for point sources of pollution, plus the load allocations (LAs) for nonpoint sources of pollution, plus the contribution from background sources of pollution and a margin of safety. The State Water Board and Regional Water Boards have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to subsequently develop TMDLs.

TMDLs are developed by either the Regional Water Boards or U.S. EPA in response to Section 303(d) listings. TMDLs developed by Regional Water Boards include implementation provisions and can be incorporated as Basin Plan amendments. TMDLs developed by U.S. EPA typically contain the total load and load allocations required by Section 303(d), but do not contain comprehensive implementation provisions. Subsequent steps after Regional Water Board TMDL development are: approval by the State Water Board, approval by the Office of Administrative Law, and ultimately, approval by U.S. EPA.

The Department has been assigned mass based and concentration based WLAs for constituents contributing to a TMDL in specific regions. The Department is subject to TMDLs in the North Coast, San Francisco Bay, Central Coast, Los Angeles, Central Valley, Lahontan, Colorado River, Santa Ana, and San Diego Regions. These TMDLs are summarized in Table 1.

Table 1. Department Statewide TMDLs

Water Body	Pollutant	U.S. EPA Approved/Established
North Coast Region		
Albion River	Sediment	December 2001
Big River	Sediment	December 2001
Eel River, Lower HA	Temperature & Sediment	December 18, 2007
Eel River, Middle Fork, Eden Valley and Round Valley HSAs	Temperature & Sediment	December 2003
Eel River, Middle Main HA	Temperature & Sediment	December 2005
Eel River, North Fork HA	Sediment & Temperature	December 30, 2002
Eel River, South Fork HA	Sediment & Temperature	December 16, 1999
Eel River, Upper Main HA	Sediment & Temperature	December 29, 2004
Garcia River	Sediment	March 16, 1998
Gualala River	Sediment	November 29, 2004
Klamath River	Temperature, Dissolved Oxygen, Nutrient, & Microcystin	December 28, 2010
Lost River	Nitrogen and Biochemical Oxygen Demand	December 30, 2008
Mad River	Sediment & Turbidity	December 21, 2007
Mattole River	Sediment & Temperature	December 21, 2003
Navarro River	Temperature & Sediment	December 27, 2000
Noyo River	Sediment	December 16, 1999
Redwood Creek	Sediment	December 30, 1998
Scott River	Sediment	August 11, 2006
Shasta River	Dissolved Oxygen & Temperature	January 26, 2007
Ten Mile River	Sediment	December 2000
Trinity River	Sediment	December 20, 2001
Trinity River, South Fork HA	Sediment	December 1998
Van Duzen River & Yager Creek	Sediment	December 16, 1999
San Francisco Bay Region		
Napa River	Sediment	January 20, 2011
Richardson Bay	Pathogens	December 18, 2009
San Francisco Bay	PCBs	March 29, 2010
San Francisco Bay	Mercury	February 12, 2008
Sonoma Creek	Sediment	September 8, 2010
Urban Creek	Diazinon & Pesticide Toxicity	May 16, 2007
Central Coast Region		
San Lorenzo River (<i>includes Carbonera Lompico, Shingle Mill Creeks</i>)	Sediment	February 19, 2004
Morro Bay (<i>includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary</i>)	Sediment	January 20, 2004

Water Body	Pollutant	U.S. EPA Approved/Established
Los Angeles Region		
Ballona Creek	Trash	August 1, 2002 & February 8, 2005
Legg Lake	Trash	February 27, 2008
Los Angeles River	Trash	July 24, 2008
Machado Lake	Trash	February 27, 2008
Malibu Creek Watershed	Trash	June 26, 2009
Revolon Slough and Beardsley Wash	Trash	August 1, 2002 & February 8, 2005
Ventura River Estuary	Trash	February 27, 2008
Ballona Creek, Ballona Estuary, and Sepulveda Channel	Bacteria	March 26, 2007
Harbor Beaches of Ventura County (Kiddie Beach and Hobie Beach)	Bacteria	December 18, 2008
Malibu Creek and Lagoon	Bacteria	January 10, 2006
Marina del Rey, Harbor Back Basins, Mother's Beach	Bacteria	March 18, 2004
Santa Monica Bay Beaches during Dry & Wet Weather	Bacteria	June 19, 2003
Ballona Creek	Metals	December 22, 2005 and reaffirmed on October 29, 2008
Calleguas Creek and its Tributaries and Mugu Lagoon	Metals and Selenium	March 26, 2007
Los Cerritos	Metals	March 17, 2010
Los Angeles River	Metals	December 22, 2005 and October 29, 2008
San Gabriel River	Metals	March 26, 2007
Machado Lake	Eutrophic, Algae, Ammonia, and Odors (Nutrient)	March 11, 2009
Santa Clara River Reach 3	Chloride	June 18, 2003
Ballona Creek Estuary	Toxic Pollutants	December 22, 2005
Colorado Lagoon	Organochlorine Pesticides, Polychlorinated Biphenyls, Sediment Toxicity, Polycyclic Aromatic Hydrocarbons, and Metals	June 14, 2011
Machado Lake	Pesticides and Polychlorinated Biphenyls	March 20, 2012
Marina del Rey Harbor	Toxic Pollutants	March 16, 2006
Calleguas Creek its Tributaries and Mugu Lagoon	Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation	March 14, 2006
Central Valley Region		
Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch	Mercury	February 7, 2007
Clear Lake	Nutrients	September 21, 2007

Water Body	Pollutant	U.S. EPA Approved/Established
Sacramento – San Joaquin Delta	Methylmercury	October 20, 2011
<i>Lahontan Region</i>		
Lake Tahoe	Sediment and Nutrients	August 16, 2011
Truckee River	Sediment	September 16, 2009
<i>Colorado River Region</i>		
Coachella Valley Storm Water Channel	Bacterial Indicators	April 27, 2012
<i>Santa Ana Region</i>		
Big Bear Lake	Nutrients for Hydrological Conditions	September 25, 2007
Lake Elsinore and Canyon Lake	Nutrients	September 30, 2005
Rhine Channel Area of the Lower Newport Bay	Chromium and Mercury	June 14, 2002
San Diego Creek and New Port Bay	Metals (Cadmium, Copper, Lead, & Zinc)	June 14, 2002
San Diego Creek Watershed	Selenium	June 14, 2002
San Diego Creek Watershed and the Upper & Lower Newport Bay	Organochlorine (DDT, Chlordane, Dieldrin, PCBs, and Toxaphene)	June 14, 2002
<i>San Diego Region</i>		
Chollas Creek	Diazinon	November 3, 2003
Chollas Creek	Dissolved Copper, Lead, and Zinc	December 18, 2008
Rainbow Creek	Total Nitrogen and Total Phosphorus	March 22, 2006
Project 1 – Revised Twenty Beaches and Creek in the San Diego Region (Including Tecolote Creek)	Indicator Bacteria	June 22, 2011

Because the TMDL-based requirements of this Order have been imposed to comply with 40 Code of Federal Regulations section 122.44(d)(1)(vii)(B), the requirements are not subject to the MEP standard. The Department must implement all controls necessary to meet the WLAs or LAs included with the TMDL, or to meet the specifically assigned actions to implement the TMDL. Implementation requirements for some of the TMDLs are contained in the Regional Water Board Basin Plans and adopted orders and are incorporated into this Order by reference (see Attachment IV). TMDLs approved during the term of this Order are expected to be incorporated into this Order through a reopening.

Pursuant to 40 Code of Federal Regulations section 122.44(d)(1)(vii)(B), the effluent limitations for NPDES permits must be consistent with the assumptions and requirements of any available WLA for the discharge prepared by the state and approved by EPA. In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement any relevant water quality control plans. Where effluent limitations are expressed as BMPs, there should be adequate demonstration in the

administrative record of the permit that the BMPs will be sufficient to comply with the WLAs.⁸

This Order requires the Department to comply with all TMDLs listed in Attachment IV. Attachment IV identifies TMDLs adopted by the Regional Water Boards and approved by the State Water Board and U.S. EPA that assign the Department a Waste Load Allocation (WLA) or that specify the Department as a responsible party. In addition, Attachment IV identifies TMDLs established by U.S. EPA that specify the Department as a responsible party or that identify NPDES permitted storm water sources or point sources generally, or identify roads generally, as subject to the TMDL. For many of the TMDLs, WLAs, LAs, effluent limitations, implementation requirements, and monitoring requirements are specified in the adopted and approved Regional Water Board Basin Plans, which are incorporated by reference as enforceable parts of this Order. The Order additionally requires the Department to prepare a TMDL Status Review report with each Annual Report.

Where complete implementation requirements have not been specified in the TMDLs or otherwise approved by the Regional Water Boards as of the date of adoption of this Order, it is necessary that specific requirements and clear deliverables be developed to ensure consistency of this permit with assigned WLAs and to provide clear and enforceable conditions for the Department. It is expected that Regional Water Boards will develop such specific TMDL permit requirements, in consultation with the Department as necessary, within one year of the effective date of this Order and that Attachment IV will be reopened consistent with provision E.11.c. for incorporation of such requirements into the Order. In order to be incorporated into Attachment IV, TMDL specific permit requirements developed by the Regional Water Board staff must be accompanied by a statement of how the requirements implement the TMDL, how the effluent limitations and conditions are consistent with the assumptions and requirements of any applicable WLA, and, where a BMP-based approach to permit limitations is selected, how these will achieve the goal of the TMDL.

The requirements of this Order, including the implementation requirements contained in the TMDL implementation plans which are incorporated by reference, are expected to be sufficient to implement the WLAs in each TMDL for which the Department has been assigned a WLA.

⁸ On November 12, 2010, U.S. EPA issued a revision to a November 22, 2002, memorandum, recommending that “where the TMDL includes WLAs for stormwater sources that provide numeric pollutant load or numeric surrogate pollutant parameter objectives, the WLA should, where feasible, be translated into numeric WQBELs in the applicable stormwater permits.” The revision further stated, however, that the permitting authority’s decision as to how to express water quality based effluent limitations (WQBELs), i.e. as numeric effluent limitations or BMPs, would be based on an analysis of the specific facts and circumstances surrounding the permit. U.S. EPA has since invited comment on the revisions to the memorandum and will be making a determination as to whether to “either retain the memorandum without change, to reissue it with revisions, or to withdraw it.” http://www.epa.gov/npdes/pubs/sw_tmdlwla_comments_pdf

Attachment IV incorporates TMDL-specific permit requirements for the sediments and nutrients TMDL for Lake Tahoe. The TMDL requires the Department to meet pollutant load reduction requirements and to develop and implement a comprehensive Pollutant Load Reduction Plan (PLRP).

Attachment IV specifies that the Department must reduce fine sediment particle (FSP), total phosphorus (TP), and total nitrogen (TN) loads by 10%, 7%, and 8%, respectively, by September 30, 2016. It additionally specifies that the load reductions shall be measured in accordance with the processes outlined in the Lake Clarity Crediting Program Handbook. The Lahontan Regional Water Board developed the Lake Clarity Crediting Program to establish protocols for accounting and tracking pollutant load reductions within the urban environment. The Lake Clarity Crediting Handbook defines one Lake Clarity Credit as equal to 1×10^{16} fine sediment particles, providing a water quality metric that is directly related to the Lake Tahoe TMDL primary pollutant of concern.

On February 9, 2011 the Lahontan Regional Water Board Executive Officer issued the Department an Order to submit a technical report in accordance with California Water Code Section 13267 requiring the development of jurisdiction-specific baseline load estimates for the Lake Tahoe TMDL pollutants of concern. The submitted baseline pollutant load estimate provides the basis for translating percentage based pollutant load reduction requirements defined by the TMDL into jurisdiction-specific, particle and mass-based pollutant load reduction requirements. The baseline basin-wide pollutant loads for the TMDL reflect conditions as of water year 2003/2004 (October 1, 2003 – September 30, 2004), hereafter referred to as “baseline.” The Department has estimated its baseline fine sediment particle load to be 3.72×10^{19} particles. To meet the required 10% fine sediment particle load reduction, the Department must reduce its fine sediment particle load to 3.35×10^{19} fine sediment particles, a difference of 3.70×10^{18} fine sediment particles. Dividing the needed fine sediment particle reduction (3.70×10^{18}) by the Lake Clarity Credit definition (1×10^{16} fine sediment particles per Credit) results in the requirement for the Department to earn 370 Lake Clarity Credits which is reflected in Attachment IV.

Consistent with the TMDL provisions, Attachment IV also requires the Department to develop, implement, and maintain a PLRP to guide stormwater activities and project implementation. The PLRP will describe how proposed operations and maintenance activities, capital improvements, facilities retrofit projects, and other actions are expected to meet required pollutant load reduction requirements. The PLRP lays out Department Plans to achieve required pollutant load reductions for the first five year period. The PLRP will be updated in 2017 to demonstrate how the Department will achieve pollutant load reduction requirements for the second five-year TMDL implementation period. The PLRP will also describe what areas or “catchments” the Department plans to perform load reduction activities and claim Lake Clarity Credits. The process of proposing Lake Clarity Credit awards is described as “catchment registration” in the Lake Clarity Crediting Program Handbook.

Attachment IV additionally requires submission of a Progress Report documenting pollutant load reductions and the preparation and submission of a Stormwater Monitoring Plan for review and approval by the Regional Water Board.

Region Specific Requirements

The Regional Water Boards have identified specific areas within their Regions requiring special conditions (Attachment V). These special conditions are needed to account for the unique value of the resource(s) within the Region, special pollutant or pollution control issues within the Region, or storm water management and compliance issues applicable to the Region. These special requirements need not be applied statewide but are applicable only to Department discharges within the Regions as specified in Attachment V. Region specific requirements are included for the North Coast, San Francisco Bay, and Lahontan Regional Water Boards.

North Coast Region

1. **Sediment.** Region specific requirements addressing sediment discharges in sediment-impaired watersheds in the North Coast Region are based on the "Total Maximum Daily Load Implementation Policy Statement for Sediment-Impaired Receiving Waters in the North Coast Region," as included in the Basin Plan and Resolution No. R1-2004-0087. The Policy requires the use of NPDES permits and waste discharge requirements to achieve compliance with sediment-related water quality standards. The requirements in Attachment V to systematically inventory, prioritize, control, monitor, and adapt, as well as to include a time schedule in the annual District Workplan, are consistent with region-wide excess sediment control regulations.

The sediment requirements are intended to reduce the adverse impacts of excessive sediment discharges to sediment-impaired waters, including impacts to the cold water salmonid fishery and the COLD, COMM, RARE, SPWN, and MIGR beneficial uses. The beneficial uses associated with the cold water salmonid fishery are often the most sensitive to sediment discharges. Risks to salmonids from excessive sediment are well documented in scientific literature and include:

- the filling of pools and subsequent reduction in available in-stream salmonid habitat;
- burial of spawning gravels;
- gill abrasion and death due to extremely high turbidity levels;
- reduction in macroinvertebrate populations available as food for salmonids; and
- alterations in channel geometry to a wider, shallower channel which is subject to increases in solar heating.

2. **Riparian Vegetation Requirements.** Region specific requirements to protect and restore riparian vegetation are based on the Water Quality Objective for temperature. The temperature objective states, in part, that the natural receiving water temperature shall not be altered unless it can be demonstrated that such alteration does not adversely affect beneficial uses. Removal of riparian vegetation associated with

Department activities has the potential to decrease shade, increase solar radiation, and raise water temperatures, and may therefore cause an exceedance of the temperature objective.

The requirements in Attachment V direct the Department to protect and restore riparian vegetation to the greatest extent feasible. In many cases, activities involving the removal of riparian vegetation will require a 401 water quality certification, which will contain more specific conditions regarding the removal and/or establishment of vegetation.

These requirements are intended to prevent alterations to natural receiving water temperature from Department activities. The primary mechanism in which riparian vegetation influences water temperature is through the shade. Loss of riparian vegetation and the shade that it provides can lead to increased solar radiation, hotter water temperatures, and adverse impacts to beneficial uses. The beneficial uses most sensitive to increases in water temperature are often those associated with the cold water salmonid fishery. Risks to salmonids are well documented in scientific literature and include:

- reduced feeding rates and growth rates;
- impaired development of embryos and alevins;
- changes in the timing of life history events, such as upstream migration, spawning, and seaward migration;
- increased disease infection rates and disease mortality; and
- direct mortality.

San Francisco Bay Region

The Urban Runoff Management, Comprehensive Control Program section of the Basin Plan (Chapter 4.14) requires municipalities and local agencies, including the Department, to address existing water quality problems and prevent new problems associated with urban runoff through the development and implementation of a comprehensive control program focused on reducing current levels of pollutant loading to storm drains to the maximum extent practicable.

The Highway Runoff Control Program section of the Basin Plan (Chapter 4.14.2) requires the Department to manage and monitor pollutant sources from its ROW through development and implementation of a highway runoff management plan.

The Basin Plan comprehensive and highway runoff program requirements are designed to be consistent with federal regulations (40 C.F.R., §§ 122-124) and are implemented through issuance of NPDES permits to owners and operators of MS4s. A summary of the regulatory provisions is contained in Title 23 of the California Code of Regulations at section 3912. The Basin Plan identifies beneficial uses and establishes water quality objectives for surface waters in the Region, as well as effluent limitations and discharge prohibitions intended to protect those uses. The region-specific requirements in Attachment V of this Order implement the plans, policies, and provisions of the Regional Water Board's Basin Plan.

1. Trash Load Reduction.

- a. Legal Authority. The following legal authorities apply to the trash load reduction requirements specified in Attachment V:
- Clean Water Act sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 Code of Federal Regulations sections 122.26(d)(2)(i)(B, C, D, E, and F) and 40 Code of Federal Regulations section 122.26(d)(2)(iv).
 - Federal NPDES regulations 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B) requires, “shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”
 - Federal NPDES regulation 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(2) requires, “a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.”
 - Federal NPDES regulation 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(3) requires, “a description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”
 - Federal NPDES regulations 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(4) requires, “a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.”
 - San Francisco Bay Basin Plan, Chapter 4 – Implementation, Table 4-1 Prohibitions, Prohibition 7, which is consistent with the State Water Board’s Enclosed Bays and Estuaries Policy, Resolution 95-84, prohibits the discharge of rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas. This prohibition was adopted by the Regional Water Board in the 1975 Basin Plan, primarily to protect recreational uses such as boating.
- b. Extent, Impacts, and Conclusions. Trash⁹ and litter are a pervasive problem near and in creeks and in San Francisco Bay having major impacts on the environment, including aquatic life and habitat in those waters. Ubiquitous, unacceptable levels of trash in waters of the San Francisco Bay Region warrant a comprehensive and

⁹ For the purposes of this provision, trash is defined to consist of litter and particles of litter. Man made litter is defined in California Government Code section 68055.1 (g): *Litter* means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing.

progressive program of education, warning, and enforcement, and certain areas warrant consideration of structural controls and treatment. Trash in urban waterways of coastal areas can become *marine debris*, known to harm fish and wildlife and cause adverse economic impacts.¹⁰ It accumulates in streams, rivers, bays, and ocean beaches throughout the San Francisco Bay Region, particularly in urban areas.

Trash adversely affects numerous beneficial uses of waters, particularly recreation and aquatic habitat. Not all litter and debris delivered to streams are of equal concern with regard to water quality. Besides the obvious negative aesthetic effects, most of the harm of trash in surface waters is to wildlife in the form of entanglement or ingestion.^{11,12} Some elements of trash exhibit significant threats to human health, such as discarded medical waste, human or pet waste, and broken glass.¹³ Also, some household and industrial wastes can contain toxic batteries, pesticide containers, and fluorescent light bulbs containing mercury. Large trash items such as discarded appliances can present physical barriers to natural stream flow, causing physical impacts such as bank erosion. From a management perspective, the persistent accumulation of trash in a waterbody is of particular concern, and signifies a priority for prevention of trash discharges. Also of concern are trash *hotspots* where illegal dumping, littering, and/or accumulation of trash occur.

The narrative water quality objectives applicable to trash are Floating Material (Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses), Settleable Material (Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses), and Suspended Material (Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses).

The Regional Water Board, at its February 11, 2009 hearing, adopted a resolution proposing that 26 waterbodies be added to the 303(d) list for trash. The adopted Resolution and supporting documents are contained in Attachment 10.1 – 303(d) Trash Resolution and Staff Report, Feb 2009.

¹⁰ Moore, S.L., and M.J. Allen. 2000. Distribution of anthropogenic and natural debris on the mainland shelf of the Southern California Bight. *Mar. Poll. Bull.* 40:83-88.

¹¹ Laist, D. W. and M. Liffmann. 2000. *Impacts of marine debris: research and management needs*. Issue papers of the International Marine Debris Conference, Aug. 6-11, 2000. Honolulu, HI, pp. 16–29.

¹² McCauley, S.J. and K.A. Bjorndahl. 1998. Conservation implications of dietary dilution from debris ingestion: sublethal effects in post-hatchling loggerhead sea turtles. *Conserv. Biol.* 13(4):925-929.

¹³ Sheavly, S.B. 2004. *Marine Debris: an Overview of a Critical Issue for our Oceans*. 2004 International Coastal Cleanup Conference, San Juan, Puerto Rico. The Ocean Conservancy.

Data collected by Regional Water Board staff using the SWAMP Rapid Trash Assessment (RTA) Protocol,¹⁴ over the 2003–2005 period,¹⁵ suggest that the current approach to managing trash in waterbodies is not reducing the adverse impact on beneficial uses. The levels of trash in the waters of the San Francisco Bay Region are high, even with the Basin Plan prohibitions and potentially large fines. During dry weather conditions, a significant quantity of trash, particularly plastic, is making its way into storm drains and being transported downstream to San Francisco Bay and the Pacific Ocean. On the basis of 85 surveys conducted at 26 sites throughout the Bay Area, staff have found an average of 2.93 pieces of trash for every foot of stream, and all the trash was removed when it was surveyed, indicating high return rates of trash over the 2003–2005 study period.

A number of key conclusions can be made from the RTA study:

- Lower watershed sites have higher densities of trash.
 - All watersheds studied in the San Francisco Bay Region have high levels of trash.
 - There are trash source hotspots, usually associated with parks, schools, or poorly kept commercial facilities.
 - Dry season deposition of trash, associated with wind and dry season runoff, contributes measurable levels of trash to downstream locations.
 - The majority of trash is plastic at lower watershed sites where trash accumulates in the wet season. This suggests that urban runoff is a major source of floatable plastic found in the ocean and on beaches as marine debris.
 - Parks that have more evident management of trash by city staff and local volunteers, including cleanup within the creek channel, have measurably less trash and higher RTA scores.
- c. Short-Term Trash Load Reduction Plan. The Short-Term Trash Load Reduction Plan is intended to describe actions to incrementally reduce trash loads toward the 2016 requirement of a 40% reduction and eventual abatement of trash loads to receiving waters.
- d. Baseline Trash Load and Trash Load Reduction Tracking Method. In order to achieve the incremental trash load reductions in an accountable manner, the Department will propose Baseline Trash Loads and a Trash Load Reduction Tracking Method. The Tracking will account for additional trash load reducing actions and BMPs implemented by the Department. The Department is also able to propose, with documentation, areas for exclusion from the Tracking Method accounting, by demonstrating that these areas already meet Discharge Prohibition A.3 and have no trash loads.

¹⁴ SWAMP Rapid Trash Assessment Protocol, Version 8

¹⁵ SWAMP S.F. Bay Region Trash Report, January 23, 2007

- e. Minimum Full Trash Capture. Installation of full trash capture systems is MEP as demonstrated by the significant implementation of these systems in the Los Angeles region. The minimum full trash capture requirements in Attachment V of this Order represent a moderate initial step toward employing this tool for trash load reduction.
- f. Long Term Trash Load Reduction. The Department will submit a plan to achieve a long term trash load reduction of 70% by 2019 and 100% reduction by 2024.
- g. Costs of Trash Control. Costs for either enhanced trash management measure implementation or installation and maintenance of trash capture devices are significant, but when spread over several years, and when viewed on a per-capita basis, are reasonable. To meet Basin Plan and local MS4 requirements, trash capture devices have already been installed by other municipalities in the Bay Area.

Cost information on various trash capture devices is included in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) BMP Trash Toolbox (July 2007). The Toolbox contains cost information for both trash capture devices and enhanced trash management measure implementation, covers a broad range of options, and also discusses operation and maintenance costs.

- 2. Storm Water Pump Stations. In late 2005, Regional Water Board staff investigated an occurrence of low salinity and dissolved oxygen conditions in Old Alameda Creek (Alameda County) and Alviso Slough (Santa Clara County). In the case of Old Alameda Creek, discharge of black-colored water from the Alvarado pump station to the slough was observed at the time of the data collection on September 7, 2005, confirming dry weather urban runoff as the source of the violations of the 5 mg/L dissolved oxygen water quality objective. Such conditions were measured again on September 21, 2005.

On October 17, 2005, waters in Alviso Slough were much less saline than the salt ponds and had the lowest documented dissolved oxygen of the summer, suggesting a dry weather urban runoff source. The dissolved oxygen sag was detected surface to bottom at 2.3 mg/L at a salinity of less than 1 part per thousand (ppt), mid-day, when oxygen levels should be high at the surface. The sloughs have a typical depth of 6 feet.

Board staff's investigations of these incidents, documented in a memorandum,¹⁶ found that "storm water pump stations, universally operated by automatic float triggers, have been confirmed as the cause in at least one instance, and may represent an overlooked source of controllable pollution to the San Francisco Bay

¹⁶ Internal Water Board Memo dated December 2, 2005: "Dry Weather Urban Weather Urban Runoff Causing or Contributing to Water Quality Violations: Low Dissolved Oxygen (DO) in Old Alameda Creek and Alviso Slough"

Estuary and its tidal sloughs... [that] discharges of dry weather urban runoff from these pump stations are not being managed to protect water quality, and [that] surveillance monitoring has detected measurable negative water quality consequences of this current state of pump station management.”

Pump station discharges of dry weather urban runoff can cause violations of water quality objectives. These discharges are controllable point sources of pollution that are virtually unregulated. The Regional Water Board has determined that the measures included in Attachment V are necessary to address these discharges and water quality problems.

Lahontan Region

1. The Lahontan Basin Plan encourages the infiltration of storm water runoff to treat pollutants in discharges and mitigate the effects of increased runoff to surface waters from the addition of impervious surfaces. The 20-year, 1-hour design storm has been historically applied and accepted as an effective requirement to mitigate discharges of storm water to surface waters in the sensitive high mountain watersheds of the Lahontan Region. Water Board staff has estimated that facilities designed to treat or infiltrate the 20-year, 1-hour storm event effectively capture approximately 85 percent of the average annual runoff volume in the Lake Tahoe Basin. However, it is recognized that the natural environment provides adequate infiltration and/or treatment in areas where there is little or no connectivity to surface waters. Therefore the Lahontan Water Board encourages the Department to focus implementation of storm water treatment facilities in those areas that discharge directly to surface waters to maximize water quality benefits. This requirement is applicable to existing highways and facilities in the Mammoth Lakes Area Hydrologic Unit.
2. The Natural Environment as Treatment (NEAT) study has helped identify the priority areas within the Lake Tahoe Hydrologic Unit where storm water treatment and control measure implementation has the most benefit for water quality protection. Similarly, the NEAT study has helped identify those areas where there may be limited water quality benefits associated with implementing structural treatment and control measures. The NEAT approach is also applicable in other areas. This provision is needed to focus available resources on the areas where the most water quality benefit can be achieved.
3. The October 15 to May 1 grading prohibition is necessary to reduce erosion and sedimentation from disturbed areas within the sensitive high elevation areas within the Lahontan Region. These are areas where snow fall restricts the ability to control storm water pollution through the winter months. This requirement mitigates winter erosion issues by requiring disturbed soil areas to be winterized prior to the onset of snow, and allows for exceptions where there is a compelling need.

Regional Water Board Authorities

Regional Water Boards and their staff will oversee implementation and compliance with this Order. As appropriate, they will review reports, conduct inspections, and take enforcement actions on violations of this Order.

Cost of Compliance and Other MEP Considerations

General Cost Considerations in Storm Water Regulation and Management

The Department will incur incremental costs in implementing this Order, such as the cost of complying with the Order's storm water treatment BMP, post-construction, hydromodification, Low Impact Development, and monitoring and reporting requirements. The Department will also incur additional costs in following the iterative process as required by the Order. The cost of complying with TMDL waste load allocations is not considered since TMDLs are not subject to the MEP standard.

In adopting Order WQ 2000-11, the State Water Board found that cost is a relevant factor, among others such as feasibility and public acceptance, that should be considered in determining MEP. The State Water Board considered the costs in preparing this Order and has determined that the costs reflect the MEP standard. The State Water Board further found in adopting Order WQ 2000-11 that in considering the cost of compliance, it is also important to consider the costs of impairment; that is, the negative impact of pollution on the economy and the positive impact of improved water quality. So, while it is appropriate and necessary to consider the cost of compliance, it is also important to consider the larger economic impacts of implementation of the storm water management program.

Many studies have been undertaken to assess the cost of compliance with storm water permits. Most studies have focused on municipal programs as opposed to "linear MS4s" or Departments of Transportation. A study by the Los Angeles Regional Water Board reported wide variability in the cost of compliance among municipal permit holders which was not easily explained (LARWQCB, 2003).

In 1999, United States Environmental Protection Agency (U.S. EPA) reported on multiple studies it conducted to determine the cost of urban runoff management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be \$9.16 per household. U.S. EPA also studied 35 Phase I municipalities, finding costs to be similar to those anticipated for Phase II municipalities, at \$9.08 per household annually (U.S. EPA, 1999a).

A program cost study was also conducted by the Los Angeles Regional Water Board, where program costs reported in the municipalities' annual reports were assessed. The Water Board estimated the average per household cost to implement the MS4 program in Los Angeles County was \$12.50.

The State Water Board also commissioned a study by California State University, Sacramento to assess costs of the Phase I MS4 program. This study is current and includes an assessment of costs incurred by the City of Encinitas in implementing its program. Annual cost per household ranged from \$18-46, with the City of Encinitas representing the upper end of the range (SWRCB, 2005). The cost of the City of Encinitas' program is understandable, given the city's coastal location, reliance on tourism, and additional costs resulting from a consent decree with environmental groups regarding its program. For these reasons, as well as the general recognition the city receives for implementing a superior program, the city's program cost can be considered as the high end of the spectrum for municipal storm water management program costs.

The California Department of Finance (Finance, 2003) conducted a comprehensive review of the Department's storm water program. Finance noted widely divergent compliance cost estimates produced by regulators and environmental organizations versus consultant's estimates. Finance also had difficulty identifying compliance costs because of the way storm water activities are integrated with other functions and allocated among the different divisions within the Department, and because they are funded from different sources. Finance made three findings related to cost:

1. The projected costs of compliance are escalating.
2. Storm water compliance costs are integrated into many of the Department's business processes and are not accurately tracked.
3. As storm water compliance costs increase, the amount of funding available for highway projects decreases, which reduces the number of projects that can be constructed.

The review concluded that balancing costs and benefits is a difficult policy decision and there should be a recognition of the trade-offs associated with resource allocation decisions given the Department's limited resources.

It is important to note that storm water program costs are not all attributable to compliance with MS4 permits. Many program components and their associated costs existed before any MS4 permits were issued. For example, for the Department, storm drain maintenance, street sweeping and trash/litter collection costs cannot be solely or even principally attributable to MS4 permit compliance since these practices have long been implemented before the MS4 permit was issued. Even many structural BMPs (erosion protection, energy dissipation devices, detention basins etc.) are standard engineering practice for many projects and are not implemented solely to comply with permit provisions. Therefore, the true cost resulting from MS4 permit requirements is some fraction of the cost to operate and maintain the highway system.

The California State University, Sacramento study found that only 38% of program costs are new costs fully attributable to MS4 permits. The remainder of program costs was either pre-existing or resulted from enhancement of pre-existing programs (SWRCB, 2005). The County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to

implement its Drainage Area Management Plan is less than 20% of the total budget. The remaining 80% is attributable to pre-existing programs (County of Orange, 2007). Any increase in cost to the Department by the requirements of this Order will be incremental in nature.

Storm water management programs cannot be considered solely in terms of their costs. The programs must also be viewed in terms of their value to the public. For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by U.S. EPA to be \$158-210 per household (U.S. EPA, 1999a). This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study corroborates U.S. EPA's estimates, reporting annual household willingness to pay for statewide clean water to be \$180 (SWRCB, 2005). Though these costs may be assessed differently at the state level (for the Department) than at the municipal level, the results indicate that there is public support for storm water management programs and that costs incurred by the Department to implement its storm water management program remain reasonable.

It is also important to consider the cost of not implementing a storm water management program. Urban runoff in southern California has been found to cause illness in people bathing near storm drains (Haile et al., 1996). A study of south Huntington Beach and north Newport Beach found that an illness rate of about 0.8% among bathers at those beaches resulted in about \$3 million annually in health-related expenses (Lin, 2005). Extrapolation of such numbers to the beaches and other water contact recreation areas in the state would increase these numbers significantly.

Storm water runoff and its impact on receiving waters also impacts the tourism industry. The California Travel and Tourism Commission (2009) estimated that in 2008 direct travel spending in California was \$97.6 billion directly supporting 924,000 jobs, with earnings of \$30.6 billion. Travel spending in 2008 generated \$1.6 billion in local taxes and \$2.8 billion in state taxes. Impacts on tourism from storm water runoff (e.g. beach closures) can have a significant impact on the economy. The experience of Huntington Beach provides an example of the potential economic impact of poor water quality. Approximately 8 miles of Huntington Beach were closed for two months in the middle of summer of 1999, impacting beach visitation and the local economy.

Cost Considerations Relative to the Department

In written comments and before the Board, the Department has stated that the requirements of the first public drafts would impose prohibitive costs on the Department at a time of economic difficulty and limited resources. State Water Board staff has carefully considered the Department's comments and revised the draft Tentative Order to continue to address critical water quality problems in consideration of the cost of compliance.

State Water Board staff completed a Draft Tentative Order and submitted it to the Department, U.S. EPA, and the Natural Resources Defense Council for informal stakeholder review in the fall of 2010. Further review was provided by the Regional Water Boards. Staff revised the Draft Tentative Order to address the informal comments received and released it for public review on January 7, 2011 (Draft Tentative Order). Approximately 330 comments from 16 commenters were received on the Draft Tentative Order, and a public hearing was held on July 19, 2011. Staff further revised the Draft Tentative Order and released a Revised Draft Tentative Order on August 18, 2011 (Revised Draft Tentative Order). Approximately 220 comments from 33 commenters were received on the Revised Draft Tentative Order, and a State Water Board workshop was held on September 21, 2011. In each set of comments and before the Board, the Department expressed significant concerns with the cost of compliance with the Tentative Orders.

On October 6, 2011, the California Senate Select Committee on California Job Creation and Retention held a hearing on the economic impacts of the State Water Board's three general or statewide storm water permits that were under renewal: the Phase II Small MS4 permit, the Industrial General Permit, and the Department's MS4 permit. The Executive Director of the State Water Board testified at the hearing that the comments regarding cost of compliance with the permits were being considered carefully and that the three permits required substantial revision to address the comments. State Water Board staff held bi-weekly meetings with the Department in October through December 2011 to discuss their concerns. Revisions resulting from these meetings are contained in the Second Revised Draft Tentative Order which was released for public review on April 27, 2012 (Second Revised Draft Tentative Order).

This section is a general discussion of the cost of compliance with the Second Revised Draft Tentative Order and of current expenditures by the Department to comply with the existing permit (Order 99-06-DWQ) (Existing Permit). It also discusses the more significant changes between the Revised Draft and Second Revised Draft Tentative Orders.

It is very difficult to precisely determine the true cost of implementation of the Department's storm water management program as affected by this Order. Due to the extensive, distributed nature of the Department's MS4, permit requirements that involve an unknown level of implementation or that depend on environmental variables that are as yet undefined, and the difficulty in isolating program costs attributable to permit compliance, only general conclusions can be drawn from this information.

The Department has made a number of estimates of the cost of complying with the Draft and Revised Draft Tentative Orders. Generally, the Department's estimates are based on worst-case scenarios or the most restrictive interpretation of the Tentative Orders. In a presentation to a meeting of the American Association of State Highway and

Transportation Officials (AASHTO) on June 22, 2011,¹⁷ the Department's Chief Environmental Engineer, Scott McGowen estimated the annual cost of compliance at \$281 million. This estimate was based on the January 7, 2011 Draft Tentative Order. At the July 19, 2011 public hearing, the Department estimated the annual compliance cost at approximately \$450 million, based on the same January 7, 2011 Draft Tentative Order. At the September 21, 2011 State Water Board workshop, the Department estimated an annual compliance cost of \$904 million, based on the requirements of the August 18, 2011 Revised Draft Tentative Order. It should be noted that the August 18 draft removed or modified a number of provisions that were expected to reduce the cost of compliance.

Annual expenditures for the Department's storm water management program under the Existing Permit (DWQ 99-06) are provided in the Department's annual reports. For fiscal years 2007-08 through 2010-11, the Department reported annual personal services and operating expenses of \$93.8 million, \$93.6 million, \$75.2 million, and \$89.2 million. These figures do not include the cost of capital improvements needed to comply with the permit.

State Water Board staff estimated the capital expenditures for the Existing Permit in two ways. First, the Department provided the number of post-construction storm water treatment BMPs installed in 2009-10 and 2010-11 along with typical unit costs for each BMP. In 2007-08, the Department spent approximately \$74.7 million for 396 treatment BMPs, \$104.5 million in 2009-10 for 667 treatment BMPs, and \$75.7 million in 2010-11 for 506 treatment BMPs. The Department indicated that anomalies in the data for 2008-09 make them unreliable and they are therefore not included. The Department also indicated that the unit cost factors do not include costs for design, ROW and other related elements. The estimates therefore can be considered on the low side.

Second, capital expenditures were estimated from budget appropriations from the Department's State Highway Operation and Protection Program (SHOPP) as reported in the 2008-09 annual report. The SHOPP account is the primary source of funding for storm water-related capital expenses. Storm water compliance costs are not consistently reported in the annual reports; however, the 2008-09 annual report contains sufficient information to make an estimate. The capital value of the SHOPP "storm water mitigation element" for fiscal years 2009-10 through 2012-13 is \$640 million, including capital outlay support, or about \$160 million per year.

Using average personal services and operating expenses for the last four years (\$88 million) and average annual programmed SHOPP funding, the Department's expenditures to comply with the Existing Permit amount to approximately \$248 million.

¹⁷ Caltrans NPDES Tentative Order, Natural Systems and Ecological Communities Subcommittee at the National Planning and Environmental Practitioners Meeting. AASHTO, June 22, 2011.

As stated above, the Department has estimated cost of compliance with the Draft Tentative and Revised Draft Tentative Orders variously at \$281 to \$904 million. These estimates are based on “worst case scenarios” and on the most restrictive interpretations of the Orders’ requirements. In preparing the Second Revised Tentative Order, staff worked to provide greater clarity and certainty to the Department on the scope of permit obligations and to eliminate compliance costs that were not expected to yield significant water quality benefits. With the exception of a lowering of the post-construction treatment threshold for non-highway facility projects from 10,000 square feet of new impervious surface to 5,000 square feet¹⁸, no requirements have been added to the Second Revised Draft Tentative Order that would materially increase the cost of compliance over the Revised Draft Tentative Order. In contrast, a number of substantive requirements have been removed, replaced or modified from the Revised Draft Tentative Order with the goal of focusing the Department’s limited resources on the most significant water quality issues. These changes are expected to result in a lower cost of compliance with the Second Revised Draft Tentative Order as compared to the Revised Tentative Order. These include:

1. Water quality monitoring program
 - a. Replaced random compliance-driven monitoring approach with a tiered approach focusing on ASBS and TMDL watersheds, and deferring to the monitoring requirements specified in the ASBS Special Protections and TMDLs
 - b. Deleted sampling pool, water quality action levels, and response process flow chart
 - c. Removed 29 constituents from the monitoring constituent list
 - d. Limited the monitoring for new constituents to TMDL watersheds
 - e. For sites with existing monitoring data, limited BMP retrofits to 15 percent of the highest priority sites
 - f. Deleted the long-term monitoring program
 - g. Deleted maintenance facility compliance monitoring
2. Project Planning and Design
 - a. Raised the treatment threshold for highway projects from 5,000 square feet of new impervious surface to one acre
 - b. Deleted the requirement for pilot Low Impact Development retrofits and effectiveness evaluations
3. Hydromodification
 - a. Removed requirement for programmatic stream stability assessments and a retrofit implementation schedule
 - b. Raised the risk assessment threshold for non-highway facility projects from 10,000 square feet of new impervious surface to one acre

¹⁸ The threshold was lowered for consistency with the draft statewide Phase II Small MS4 General Permit and with regional MS4 permits.

4. Region Specific Requirements – removed, modified or scaled back requirements for the San Francisco Bay, Los Angeles, Central Valley, Lahontan, and San Diego Regional Water Boards with the goal of maximizing statewide consistency of requirements for the Department.
5. Construction Program – replaced requirement to inspect contractor operations outside the ROW with a requirement to include compliance language in its construction contracts
6. TMDLs – Revised Attachment IV to more precisely identify the TMDLs applicable to the Department and shifted responsibility to prepare TMDL implementation plans from the Department to the Regional Water Boards.
7. ASBS – Added Attachment III to identify priority Department ASBS outfalls for installation of controls
8. Maintenance Program
 - a. Deleted the requirement to report the amount of waste and debris removed from drainage inlets
 - b. Replaced the site-by-site characterization of waste management sites with a programmatic characterization
 - c. Deleted the requirement to prepare and implement a storm drain system survey plan
 - d. Replaced quantitative measurements of trash and litter removal with estimated annual volumes
9. Non-Storm Water
 - a. Deleted surveillance monitoring of agricultural return flows
 - b. Deleted characterization monitoring of slope lateral drains

Though no firm conclusions or precise estimates can be drawn from this analysis, it is expected that the revisions to the Revised Draft Tentative Order will significantly reduce the cost of compliance.

ATTACHMENT I Incident Report Form

Type of incident: <input type="checkbox"/> Field <input type="checkbox"/> Administrative	
Name of person completing this form: _____	Person's agency name and address:
	Person's phone and e-mail:

For Field incidents complete Sections 1 and 3. For Administrative incidents complete Section 2. See Non-Compliance Notification Schedule on Page 2.

SECTION 1: Field incidents

Date(s) and time(s) of incident:	1. Start date / time:
	2. End date / time:
Location of Incident:	3. Nearest city / town:
	4. Street address / nearest cross street:
County: _____	5. Latitude / Longitude:
	6. Additional location detail:
Materials involved in the incident: (use Comments Section below if necessary):	6. Name(s) of material(s) discharged:
	7. Approximate quantity discharged (specify units):
	8. Approximate concentration of material:
Discharge to surface water? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, answer questions 9-11	9. Name of waterbody:
	10. Apparent effects (if any) on waterbody:
	11. Estimated extent of impacts to waterbody:
Was CalEMA notified? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, answer questions 12-14	12. Date and time of notification:
	13. Name of person making the notification:
	14. Phone number of person making the notification:
Was the Regional Water Board (RWB) notified? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, answer questions 15-17	15. Name of RWB contact:
	16. RWB contact's phone / e-mail:
	17. Name of person making the notification:
Were downgradient communities / people notified? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, answer questions 18 - 20	18. Date and time of notification:
	19. Name of person making the notification:
	20. Phone number of person making the notification:
	21. Name of downgradient community/ person:
Field Non-Compliance (check all that apply)	
<input type="checkbox"/>	Lack of BMP(s), ineffective implementation of BMP(s), or failure of BMP(s) resulted in a discharge of pollutants to surface water.
<input type="checkbox"/>	Monitoring data indicates an exceedance of a defined standard. Defined standards include TMDL Waste Load Allocations, and water quality standards in the Water Quality Control Plans and promulgated policies and regulations of the State and Regional Water Boards, including California Ocean Plan limitations and prohibitions.
<input type="checkbox"/>	Discharge of prohibited non-storm water.
<input type="checkbox"/>	Failure to comply with Facility Pollution Prevention Plan (FPPP) requirements.
<input type="checkbox"/>	Failure to comply with inspection, monitoring, and reporting requirements and protocols.
<input type="checkbox"/>	Other (describe - use Comments Section below if needed):

SECTION 2: Administrative Non-Compliance (check all that apply)

<input type="checkbox"/>	Failure to submit reports or documents required by the Permit and/or SWMP, failure of timely submittal, and/or failure to submit required information.
<input type="checkbox"/>	Failure to develop and/or maintain a site-specific FPPP or to implement any other procedural requirement of the Permit.
<input type="checkbox"/>	Other (describe - use Comments Section below if needed):

SECTION 3: Description of Incident

Activities in the area prior to the incident (If any):
Initial assessment of any impact caused by the discharge (If any):
Samples collected and analyses requested (If any):
Steps taken to mitigate damage and prevent reoccurrence (If any):
Current Status:
Schedule for proposed mitigation/abatement (If any):
Other Comments:

Non-Compliance Notification Schedule

Type of Incident	Within 5 Working Days (Verbal)	Within 10 Working Days (Written)	Within 30 Calendar Days (Written)	In Annual Report
Emergency Incidents ¹	—	—	—	Chronological summary and status of all incidents
Field ²	Notify RWB Executive Officer	To RWB Executive Officer and copies to Dept. HQ	—	Chronological summary and status of all incidents
Administrative ³	Notify RWB Executive Officer or SWB Contact ³	—	To RWB Executive Officer, SWB Executive Director, and copies to Dept. HQ.	Chronological summary and status of all incidents

¹ Sudden, unexpected, unpreventable incidents that threaten public health, public safety, property, or the environment that pose a clear and imminent danger requiring immediate action to prevent or mitigate the damage or threat, and that result in a discharge or potential discharge.

² Failure to meet any non-administrative requirement of the SWMP or Permit or to meet any applicable water quality standard. This includes failure to install required BMPs or conduct required monitoring or maintenance. It also includes discharges or prohibited non-storm water that do not meet the definition of emergency incidents. It does not include determinations by the Department or a Regional Water Board Executive Officer that a discharge is causing or contributing to an exceedance of an applicable WQS. See provision E.2.c.6)c).

³ Failure to meet any administrative or procedural requirement of the SWMP or Permit including submission of required reports, notifications and certifications. The report of non-compliance shall be submitted to the same organization (State or Regional Water Board) to which the required report was originally due.

<i>Certification – I certify that under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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.</i>			
Signature of Contractor (if applicable)	Title	Telephone	Date:
Signature of Department Representative	Title	Telephone	Date:

ATTACHMENT II

Monitoring Constituent List (Not Applicable to ASBS Discharges)

Constituent	Analytical Method	Reporting Limit ¹	Units
<i>WATER COLUMN CHEMISTRY</i>			
<i>Conventional Pollutants</i>			
Hardness as CaCO ₃	SM 2340 B or C	5	mg/L
pH	Calibrated Field Instrument		pH Units
Temperature	Calibrated Field Instrument		C +/-
Flow Rate	Calibrated Field Instrument		ft ³ /s
Total Dissolved Solids	EPA 160.1	1	mg/L
Total Suspended Solids	EPA 160.2	1	mg/L
<i>Hydrocarbons</i>			
Oil & Grease	EPA 1664B	1.4	mg/L
Polycyclic Aromatic Hydrocarbons (Total)	EPA 8310	0.05	µg/L
<i>Nutrients</i>			
Total Kjeldahl Nitrogen (TKN)	EPA 351.3	100	µg/L
Nitrate as Nitrogen (NO ₃ -N)	EPA 300.0	100	µg/L
Phosphorous (Total)	EPA 365.2	30	µg/L
<i>Metals</i>			
Aluminum (Total)	EPA 200.8	25	µg/L
Chromium (Total)	EPA 200.8	1	µg/L
Copper (Total)	EPA 200.8	1	µg/L
Iron (Total)	EPA 200.8	1	µg/L
Lead (Total)	EPA 200.8	1	µg/L
Zinc (Total)	EPA 200.8	5	µg/L
<i>Microbiological</i>			
Fecal Coliform	SM 9221 C E	2	MPN/100 mL
Enterococcus ²	EPA 1600	2	CFU/100 mL
<i>WATER COLUMN TOXICITY</i>			
Chronic ³	EPA 821-R-02-013	Pass/Fail	

¹ Reporting limits should be sufficient enough to detect the presence of a constituent based on the applicable Regional Water Board Basin Plan. If no limit is specified in the Basin Plan, the reporting limit specified in this table will be used. If no limit is specified in this table, then the Regional Boards shall be consulted.

² Only applicable for direct discharges to marine waters. See definition of direct discharges and indirect discharges in Attachment VIII (glossary).

³ To calculate either a Pass or Fail of the effluent concentration chronic toxicity test at the IWC, the instructions in Appendix A in the National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA/833-R-10-003) shall be used.

ATTACHMENT II

ASBS Monitoring

TABLE A
Monitoring Constituent List
(excerpted from California Ocean Plan dated 2009)

Constituent	Units
Grease and Oil	mg/L
Suspended Solids	mg/L
Settleable Solids	mL/L
Turbidity	NTU
PH	

TABLE B
Monitoring Constituent List
(excerpted from California Ocean Plan dated 2009)

Constituent	Units
Arsenic	µg/L
Cadmium	µg/L
Chromium	µg/L
Copper	µg/L
Lead	µg/L
Mercury	µg/L
Nickel	µg/L
Selenium	µg/L
Silver	µg/L
Zinc	µg/L
Cyanide	µg/L
Total Chlorine Residual	µg/L
Ammonia (as N)	µg/L
Acute Toxicity	TUa
Chronic Toxicity	TUc
Phenolic Compounds (non-chlorinated)	µg/L
Chlorinated Phenolics	µg/L
Endosulfan	µg/L
Endrin	µg/L
HCH	µg/L

Analytical Chemistry Methods: All constituents shall be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, shall be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

ATTACHMENT III
ASBS Priority Discharge Locations

SampleID	Regional Board	ASBS Name	Longitude	Latitude
SAU020	1	Saunders Reef	-123.65329	38.86177
SAU019	1	Saunders Reef	-123.65328	38.86161
SAU016	1	Saunders Reef	-123.65178	38.85683
SAU017	1	Saunders Reef	-123.65164	38.85692
SAU012	1	Saunders Reef	-123.65019	38.8543
SAU011	1	Saunders Reef	-123.64983	38.85387
SAU021	1	Saunders Reef	-123.64868	38.85176
SAU008	1	Saunders Reef	-123.6478	38.8521
SAU006	1	Saunders Reef	-123.64727	38.85041
SAU002	1	Saunders Reef	-123.64709	38.84988
RED026	1	Redwoods National Park	-124.10221	41.59516
RED027	1	Redwoods National Park	-124.10126	41.59657
RED028	1	Redwoods National Park	-124.10101	41.59729
RED029	1	Redwoods National Park	-124.10046	41.59976
RED030	1	Redwoods National Park	-124.1003	41.60084
RED031	1	Redwoods National Park	-124.10026	41.6013
RED065	1	Redwoods National Park	-124.09299	41.28217
FIT011	2	James V. Fitzgerald	-122.51771	37.53154
ANO030	3	Ano Nuevo	-122.30121	37.11334
ANO033	3	Ano Nuevo	-122.29881	37.11202
ANO032	3	Ano Nuevo	-122.29764	37.1113
ANO034	3	Ano Nuevo	-122.297	37.11084
ANO035	3	Ano Nuevo	-122.29297	37.10714
MUG002	4	Laguna Point to Latigo Point	-119.0618833	34.08635
MUG005	4	Laguna Point to Latigo Point	-119.0382833	34.08393
MUG009	4	Laguna Point to Latigo Point	-119.0367000	34.08367
MUG007	4	Laguna Point to Latigo Point	-119.0363667	34.08378
MUG008	4	Laguna Point to Latigo Point	-119.0363667	34.08378
MUG010	4	Laguna Point to Latigo Point	-119.0149833	34.07098
MUG013	4	Laguna Point to Latigo Point	-118.9931667	34.06530
MUG016	4	Laguna Point to Latigo Point	-118.9869833	34.06287
MUG017	4	Laguna Point to Latigo Point	-118.9867500	34.06268
MUG028	4	Laguna Point to Latigo Point	-118.9740500	34.05890
MUG029	4	Laguna Point to Latigo Point	-118.9730167	34.05835
MUG031	4	Laguna Point to Latigo Point	-118.9683000	34.05622
MUG041	4	Laguna Point to Latigo Point	-118.9645	34.0534833
MUG046	4	Laguna Point to Latigo Point	-118.9608500	34.05205
MUG048	4	Laguna Point to Latigo Point	-118.9594833	34.05172
MUG049	4	Laguna Point to Latigo Point	-118.9594333	34.05165
MUG051	4	Laguna Point to Latigo Point	-118.9581000	34.05033
MUG052	4	Laguna Point to Latigo Point	-118.9574333	34.04982
MUG053	4	Laguna Point to Latigo Point	-118.9564500	34.04943
MUG059	4	Laguna Point to Latigo Point	-118.9514167	34.04738

ATTACHMENT III
ASBS Priority Discharge Locations

SampleID	Regional Board	ASBS Name	Longitude	Latitude
MUG058	4	Laguna Point to Latigo Point	-118.9506000	34.04778
MUG060	4	Laguna Point to Latigo Point	-118.9499000	34.04728
MUG061	4	Laguna Point to Latigo Point	-118.9498500	34.04723
MUG077	4	Laguna Point to Latigo Point	-118.9345833	34.04513
MUG078	4	Laguna Point to Latigo Point	-118.9341	34.0451333
MUG070	4	Laguna Point to Latigo Point	-118.9320000	34.04600
MUG066	4	Laguna Point to Latigo Point	-118.9252333	34.04612
MUG073	4	Laguna Point to Latigo Point	-118.9236833	34.04577
MUG135	4	Laguna Point to Latigo Point	-118.89858	34.0401
MUG147	4	Laguna Point to Latigo Point	-118.89558	34.03921
MUG150	4	Laguna Point to Latigo Point	-118.8919800	34.03906
MUG187	4	Laguna Point to Latigo Point	-118.87051	34.0369
SAD0950	4	Laguna Point to Latigo Point	-118.8385500	34.02699
SAD0960	4	Laguna Point to Latigo Point	-118.8375000	34.02619
SAD0970	4	Laguna Point to Latigo Point	-118.8364600	34.02535
SAD0980	4	Laguna Point to Latigo Point	-118.8348600	34.02435
MUG318	4	Laguna Point to Latigo Point	-118.8342000	34.02389
SAD0990	4	Laguna Point to Latigo Point	-118.8326600	34.02302
SAD1000	4	Laguna Point to Latigo Point	-118.8303400	34.02123
MUG355	4	Laguna Point to Latigo Point	-118.8292000	34.02056
SAD1030	4	Laguna Point to Latigo Point	-118.8263200	34.01810
SAD1040	4	Laguna Point to Latigo Point	-118.8256600	34.01748
SAD1050	4	Laguna Point to Latigo Point	-118.8249200	34.01700
SAD1060	4	Laguna Point to Latigo Point	-118.8225400	34.01559
MUG347	4	Laguna Point to Latigo Point	-118.7834300	34.02196
MUG346	4	Laguna Point to Latigo Point	-118.7831400	34.02207
MUG283	4	Laguna Point to Latigo Point	-118.7658600	34.02550
IRV020	8	Irvine Coast	-117.8402333	33.5740167
IRV009	8	Irvine Coast	-117.8312	33.5653
IRV007	8	Irvine Coast	-117.8281667	33.5645
IRV003	8	Irvine Coast	-117.823917	33.56195
IRV002	8	Irvine Coast	-117.8221	33.5606
CAR007	3	Carmel Bay	-121.9247	36.52453
CAR006	3	Carmel Bay	-121.92457	36.52469

Attachment IV TMDL Requirements

Attachment IV identifies TMDLs adopted by the Regional Water Boards and approved by the State Water Board and U.S. EPA which assign the Department a Waste Load Allocation (WLA) or which specify the Department as a responsible party. In addition, Attachment IV identifies TMDLs established by U.S. EPA which specify the Department as a responsible party or which identify NPDES permitted storm water sources or point sources generally, or identify roads generally, as subject to the TMDL.

The Department is obligated to consult each TMDL and to comply with all applicable allocations and other provisions. Applicable Regional Water Board Basin Plan Amendments, orders and resolutions are listed in the first column in Attachment IV. Compliance with all TMDLs must be demonstrated to the satisfaction of the appropriate Regional Water Board.

Attachment IV also contains TMDL-specific permit requirements for the Lake Tahoe Sediment and Nutrients TMDL. These requirements are directly enforceable through this Order. Consistent with provision E.4.b, within one year of the adoption date of this Order, the State Water Board will re-open Attachment IV for incorporation of specific permit requirements implementing the remainder of the TMDLs listed in Attachment IV. Once the TMDL-specific permit requirements are adopted, the Department shall comply with the incorporated requirements in accordance with the specified compliance due dates.

**Attachment IV
TMDL Requirements**

TMDL	Implementation Requirements
<i>R1 – North Coast Region</i>	
Albion River * <i>Sediment</i> Effective Date: December 2001 BPA: Resolution:	
Big River * <i>Sediment</i> Effective Date: December 2001 BPA: Resolution:	
Eel River, Lower HA* <i>Temperature and Sediment</i> Effective Date: December 18, 2007 BPA: Resolution:	
Eel River, Middle Fork, Eden Valley and Round Valley HSAs * <i>Temperature and Sediment</i> Effective Date: December 2003 BPA: Resolution:	
Eel River, Middle Main HA * <i>Temperature and Sediment</i> Effective Date: December 2005	

TMDL	Implementation Requirements
BPA: Resolution:	
Eel River, North Fork HA* <i>Sediment and Temperature</i> Effective Date: December 30, 2002 BPA: Resolution:	
Eel River, South Fork HA* <i>Sediment and Temperature</i> Effective Date: December 16, 1999 BPA: Resolution:	
Eel River, Upper Main HA * <i>Sediment and Temperature</i> Effective Date: December 29, 2004 BPA: Resolution:	
Garcia River <i>Sediment</i> Effective Date: March 16, 1998 BPA: Action Plan for the Garcia River Watershed Resolution:	
Gualala River * <i>Sediment</i> Effective Date: November 29, 2004 BPA:	

TMDL	Implementation Requirements
Resolution:	
<p>Klamath River in California <i>Temperature, Dissolved Oxygen, Nutrient, & Microcystin</i></p> <p>Effective Date: December 28, 2010</p> <p>BPA: Action Plan for Klamath River TMDLs</p> <p>Resolution: R1-2010-0026</p>	
<p>Lost River <i>Nitrogen and Biochemical oxygen Demand to address Dissolved Oxygen and pH Impairments</i></p> <p>Effective Date: December 30, 2008</p> <p>BPA: Action Plan for Lost River TMDL</p> <p>Resolution: R1-2010-0026</p>	
<p>Mad River * <i>Sediment and Turbidity</i></p> <p>Effective Date: December 21, 2007</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Mattole River * <i>Sediment & Temperature</i></p> <p>Effective Date: December 30, 2003</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Navarro River * <i>Temperature & Sediment</i></p>	

TMDL	Implementation Requirements
<p>Effective Date: December 27, 2000</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Noyo River * <i>Sediment</i></p> <p>Effective Date: December 16, 1999</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Redwood Creek * <i>Sediment</i></p> <p>Effective Date: December 30, 1998</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Scott River <i>Sediment and Temperature</i></p> <p>Effective Date: August 11, 2006</p> <p>BPA: Action Plan for Scott River.</p> <p>Resolutions: R1-2005-0113 & R-2010-0026</p>	
<p>Shasta River <i>Dissolved Oxygen & Temperature</i></p> <p>Effective Date: January 26, 2007</p> <p>BPA: Action Plan for the Shasta River Watershed</p> <p>Resolution: R1-2006-0052</p>	
<p>Ten Mile River * <i>Sediment</i></p>	

TMDL	Implementation Requirements
Effective Date: December 2000 BPA: Resolution:	
Trinity River* <i>Sediment</i> Effective Date: December 20, 2001 BPA: Resolution:	
Trinity River, South Fork HA* <i>Sediment</i> Effective Date: December 1998 BPA: Resolution:	
Van Duzen River and Yager Creek * <i>Sediment</i> Effective Date: December 16, 1999 BPA: Resolution:	
R2 - San Francisco Region	
Napa River <i>Sediment</i> Effective Date: January 20, 2011 BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs Resolution: R2-2009-0064	
Richardson Bay <i>Pathogens</i> Effective Date: December 18, 2009	

TMDL	Implementation Requirements
<p>BPA – Pathogens in Richardson Bay</p> <p>Resolution: R2-2008-0061</p>	
<p>San Francisco Bay <i>PCBs</i></p> <p>Effective Date: March 29, 2010</p> <p>BPA: Exhibit A & TMDL & Implementation Plan for PCBs</p> <p>Resolution: R1-2008-0012</p>	
<p>San Francisco Bay <i>Mercury</i></p> <p>Effective Date: February 12, 2008</p> <p>BPA – Chapter 7, SF Bay Mercury TMDL</p> <p>Resolution: R2-2006-0052</p>	
<p>Sonoma Creek <i>Sediment</i></p> <p>Effective Date: September 8, 2010</p> <p>BPA: Exhibit A & Implementation Plan</p> <p>Resolutions: R2-2008-0103 and 2010-0016</p>	
<p>Urban Creek <i>Diazinon & Pesticide Toxicity</i></p> <p>Effective Date: May 16, 2007</p> <p>BPA: BPA – Chapter 3, Toxicity</p> <p>Resolution: R2-2005-0063</p>	

TMDL	Implementation Requirements
R3 - Central Coast Region	
<p>San Lorenzo River (includes Carbonera Lompico, and Shingle Mill Creeks) <i>Sediment</i></p> <p>Effective Date: February 19, 2004</p> <p>BPA: Attachment to R3-2002-0063</p> <p>Resolution: R3-2002-0063</p>	
<p>Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary) <i>Sediment</i></p> <p>Effective Date: January 20, 2004</p> <p>BPA: Attachment A to R3-2002-0051</p> <p>Resolution: R3-2003-0051</p>	
R4 - Los Angeles Region	
<p>Ballona Creek <i>Trash</i></p> <p>Effective Date: August 1, 2002 & February 8, 2005</p> <p>BPA: Attachment A, Chapter 7-3.</p> <p>Resolution: 2004-0023</p>	
<p>Legg Lake <i>Trash</i></p> <p>Effective Date: February 27, 2008</p>	

TMDL	Implementation Requirements
<p>BPA: Attachment A Chapter 7-27</p> <p>Resolution: R4-2007-10</p>	
<p>Los Angeles River <i>Trash</i></p> <p>Effective Date: July 24, 2008</p> <p>BPA: Attachment A, Chapter 7-2</p> <p>Resolution: R4-2007-012</p>	
<p>Machado Lake <i>Trash</i></p> <p>Effective Date: February 27, 2008</p> <p>BPA: Attachment A Chapter 7-26</p> <p>Resolution: R4-2007-06</p>	
<p>Malibu Creek Watershed <i>Trash</i></p> <p>Effective Date: June 26, 2009</p> <p>BPA: Attachment A, Chapter 7-31</p> <p>Resolution: R4-2008-007</p>	
<p>Revolon Slough and Beardsley Wash <i>Trash</i></p> <p>Effective Date: August 1, 2002 & February 8, 2005</p> <p>BPA: Attachment A, Chapter 7-3.</p> <p>Resolution: 2004-0023</p>	
<p>Ventura River Estuary <i>Trash</i></p>	

TMDL	Implementation Requirements
<p>Effective Date: February 27, 2008</p> <p>BPA: Attachment A, Chapter 7-25</p> <p>Resolution: R4-2007-008</p>	
<p>Ballona Creek, Ballona Estuary, and Sepulveda Channel <i>Bacteria</i></p> <p>Effective Date: March 26, 2007</p> <p>BPA: Attachment A, Chapter 7-21</p> <p>Resolution: R4-2006-011</p>	
<p>Harbor Beaches of Ventura County (Kiddie Beach and Hobie Beach) <i>Bacteria</i></p> <p>Effective Date: December 18, 2008</p> <p>BPA: Attachment A, Chapter 7-28</p> <p>Resolution: R2007-017</p>	
<p>Malibu Creek and Lagoon <i>Bacteria</i></p> <p>Effective Date: January 10, 2006</p> <p>BPA: Attachment A, Chapter 7-10</p> <p>Resolution: 2004-019R</p>	
<p>Marina del Rey, Harbor Back Basins, Mother's Beach <i>Bacteria</i></p> <p>Effective Date: March 18, 2004</p>	

TMDL	Implementation Requirements
<p>BPA: Attachment A, Chapter 7-5</p> <p>Resolution: 2003-012</p>	
<p>Santa Monica Bay Beaches during Dry & Wet Weather Bacteria</p> <p>Effective Date: June 19, 2003</p> <p>BPA: Attachment A, Chapter 7-5</p> <p>Resolution: 2003-012</p>	
<p>Ballona Creek Metals</p> <p>Effective Date: December 22, 2005 and reaffirmed on October 29, 2008</p> <p>BPA: Attachment A, Chapter 7-12</p> <p>Resolution: R2007-015</p>	
<p>Calleguas Creek and its Tributaries and Mugu Lagoon Metals and Selenium</p> <p>Effective Date: March 26, 2007</p> <p>BPA: Attachment A, Chapter 7-19</p> <p>Resolution: R4-2006-012</p>	
<p>Los Cerritos Channel * <i>Metals</i></p> <p>Effective Date: March 17, 2010</p> <p>BPA:</p> <p>Resolution:</p>	

TMDL	Implementation Requirements
<p>Los Angeles River <i>Metals</i></p> <p>Effective Date: December 22, 2005 and October 29, 2008</p> <p>BPA: Attachment A, Chapter 7-13 and Attachment B.</p> <p>Resolution: R2007-014</p>	
<p>San Gabriel River * <i>Metals</i></p> <p>Effective Date: March 26, 2007</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Machado Lake <i>Eutrophic, Algae, Ammonia, and Odors (Nutrient)</i></p> <p>Effective Date: March 11, 2009</p> <p>BPA: Attachment A to R08-006</p> <p>Resolution: R08-006</p>	
<p>Santa Clara River Reach 3 * <i>Chloride</i></p> <p>Effective Date: June 18, 2003</p> <p>BPA:</p> <p>Resolution:</p>	
<p>Ballona Creek Estuary <i>Toxic Pollutants</i></p> <p>Effective Date: December 22, 2005</p> <p>BPA: Attachment A, Chapter 7-14</p>	

TMDL	Implementation Requirements
Resolution: R4-2005-008	
Colorado Lagoon <i>Organochlorine Pesticides, Polychlorinated Biphenyls, Sediment Toxicity, Polycyclic Aromatic Hydrocarbons, and Metals</i> Effective Date: June 14, 2011 BPA: Attachment A, Chapter 7-30 Resolution: No. R09-005	
Machado Lake <i>Pesticides and Polychlorinated Biphenyls</i> Effective Date: March 20, 2011 BPA: Attachment A, Chapter 7-38 Resolution: Resolution No. R10-008	
Marina del Rey Harbor <i>Toxic Pollutants</i> Effective Date: March 16, 2006 BPA: Attachment A, Chapter 7-18 Resolution: R4-2005-012	

TMDL	Implementation Requirements
<p>Calleguas Creek its Tributaries and Mugu Lagoon <i>Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation</i></p> <p>Effective Date: March 14, 2006</p> <p>BPA: Attachment A, Chapter 7-17</p> <p>Resolution: R4-2005-010</p>	
R5 – Central Valley Region	
<p>Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch <i>Mercury</i></p> <p>Effective Date: February 7, 2007</p> <p>BPA: Attachment 1 to R5-2005-0146</p> <p>Resolution: R5-2005-0146</p>	
<p>Clear Lake <i>Nutrients</i></p> <p>Effective Date: September 21, 2007</p> <p>BPA: Attachment 1 to R5-2006-0060</p> <p>Resolution: R5-2006-0060</p>	
<p>Sacramento-San Joaquín River Delta Estuary <i>Methyl mercury</i></p> <p>Effective Date: October 20, 2011</p> <p>BPA: Sacramento River and San Joaquin River</p>	

TMDL	Implementation Requirements
Basins for the Control of Methylmercury and Total Mercury in the Sacramento –San Joaquin River Delta Estuary Resolution: R5-2010-0043	
R6 – Lahontan Region	
Lake Tahoe Sediment and Nutrients Effective Date: August 16, 2011 BPA: WQ Amendment May 2008 Resolution: 2009-0028	<p><u>IMPLEMENTATION REQUIREMENTS</u></p> <p>A. Pollutant Load Reduction Requirements</p> <p>The Department must reduce fine sediment particle (FSP), total phosphorus (TP), and total nitrogen (TN) loads by 10%, 7%, and 8%, respectively, by September 30, 2016.</p> <p>Pollutant load reductions shall be measured in accordance with the processes outlined in the most recent version of Lake Clarity Crediting Program Handbook. To demonstrate compliance with the average annual fine sediment particle pollutant load reduction requirements, the Department must earn and maintain 361 Lake Clarity Credits for the water year October 1, 2015 to September 30, 2016, and for subsequent water years.</p> <p>B. Pollutant Load Reduction Plans</p> <p>The Department shall prepare a Pollutant Load Reduction Plan (PLRP) describing how it expects to meet the pollutant load reduction requirements described in Section A above. The Department shall submit a plan no later than September 15, 2013 that shall include, at a minimum, the following elements:</p> <ol style="list-style-type: none"> 1. <i>Catchment registration schedule</i> <p>The PLRP shall include a list of catchments that the Department plans to register pursuant to the approved Lake Clarity Crediting Program to meet load reduction requirements. The list shall include catchments where capital improvement projects have been constructed since May 1, 2004 that the Department expects to claim credit for, and catchments where projects will be constructed and other load reduction activities (capital improvements, institutional controls, and other measures/practices implement) taken during the term of this Order.</p> 2. <i>Proposed pollutant control measures</i> <p>The PLRP shall generally describe storm water program activities to reduce fine sediment particle, total phosphorus, and total nitrogen loading that the Department will implement in identified catchments.</p> 3. <i>Pollutant load reduction estimates</i> <p>The Department shall conduct pollutant load reduction analyses on a representative catchment subset to demonstrate that proposed implementation actions are expected to achieve the pollutant load reduction requirements specified in Section A above. For representative catchments, the analysis shall include detailed estimates of both baseline pollutant loading and expected pollutant loading resulting from implementation actions and provide justification why the conducted load reduction analysis is adequate for extrapolation to other catchments.</p>

TMDL	Implementation Requirements
	<p>The pollutant loading estimates shall differentiate between estimates of pollutant load reductions achieved since May 1, 2004 and pollutant load reductions from actions not yet taken.</p> <p>4. <i>Load reduction schedule</i></p> <p>The PLRP shall describe a schedule for achieving the pollutant load reduction requirements described in Section A above. The schedule shall include an estimate of expected pollutant load reductions for each year of this Permit term based on preliminary numeric modeling results. The schedule shall also describe which catchments the Department anticipates it will register for each year of this Permit term.</p> <p>5. <i>Annual adaptive management</i></p> <p>The PLRP shall include a description of the processes and procedures to annually assess storm water management activities and associated load reduction progress. The plan shall describe how the Department will use information from the monitoring and implementation or other efforts to improve operational effectiveness and for achieving the pollutant load reduction requirements specified in Section A.</p> <p>6. <i>Pollutant Load Reduction Plan Update</i></p> <p>By March 15, 2017, the Department shall update its Pollutant Load Reduction Plan to describe how it will achieve the pollutant load reduction requirements for the second five-year TMDL implementation period, defined as the ten-year load reduction milestone in the Lake Tahoe TMDL.</p> <p>Specifically, the update Pollutant Load Reduction Plan shall demonstrate how the Department will reduce baseline fine sediment particle, total nitrogen, and total phosphorus loads by 21 percent, 14 percent, and 14 percent, respectively, by water year 2021.</p> <p>C. Pollutant Load Reduction Progress</p> <p>To demonstrate pollutant load reduction progress, the Department shall submit a Progress Report by March 15, 2014 documenting pollutant load reductions accomplished between May 1, 2004 (baseline year) and October 15, 2011.</p> <p>D. Pollutant Load Reduction Monitoring and Water Quality Monitoring Requirements</p> <p>Caltrans shall prepare and submit a Stormwater Monitoring Plan for review and approval by the Regional Board by July 15, 2013 and implement the approved plan.</p>

TMDL	Implementation Requirements
<p>Truckee River Sediment</p> <p>Effective Date: September 16, 2009</p> <p>BPA: WQ Amendment May 2008</p> <p>Resolution: 2009-0028</p>	
R7 - Colorado River Region	
<p>Coachella Valley Storm Water Channel Bacterial Indicators</p> <p>Effective Date: <i>April 27, 2012</i></p> <p>BPA: Attachment 1: Final CVSC Bacteria TMDL</p> <p>Resolution: R7-2010-0028</p>	
R8 - Santa Ana Region	
<p>Big Bear Lake Nutrients for Dry Hydrological Conditions</p> <p>Effective Date: September 25, 2007</p> <p>BPA: Attachment to R8-2006-0023</p> <p>Resolutions: R8-2006-0023, and R8-2008-0070</p>	
<p>Lake Elsinore and Canyon Lake Nutrients</p> <p>Effective Date: September 30, 2005</p> <p>BPA: Attachment to. R8-2004-0037 & R8-2006- 0031</p>	

TMDL	Implementation Requirements
Resolution: R8-2007-0083	
Rhine Channel Area of the Lower Newport Bay* <i>Chromium and Mercury</i> Effective Date: June 14, 2002 BPA: Resolution:	
San Diego Creek and Newport Bay* <i>Metals (Cadmium, Copper, Lead, & Zinc)</i> Effective Date: June 14, 2002 BPA: Resolution:	
San Diego Creek Watershed* <i>Selenium</i> Effective Date: June 14, 2002 BPA: Resolution:	
San Diego Creek Watershed and the Upper & Lower Newport Bay* <i>Organochlorine Compounds (DDT, Chlordane, Dieldrin, PCBs, & Toxaphene</i> Effective Date: June 14, 2002 BPA: Resolution:	

TMDL	Implementation Requirements
R9 – San Diego Region	
<p>Chollas Creek <i>Diazinon</i></p> <p>Effective Date: November 3, 2003</p> <p>BPA: Attachment A to R9-2002-0123</p> <p>Resolution: Investigation Order R9-2004-0277</p>	
<p>Chollas Creek <i>Dissolved Copper, Lead and Zinc</i></p> <p>Effective Date: December 18, 2008</p> <p>BPA: Attachment A to Resolution No. R9-2007-0043</p> <p>Resolution: R9-2007-0036</p>	
<p>Rainbow Creek <i>Total Nitrogen and Total Phosphorus</i></p> <p>Effective Date: March 22, 2006</p> <p>BPA: Attachment A to R9-2005-0036</p> <p>Resolution: R9-2007-0036</p>	
<p>Project 1- Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) <i>Indicator Bacteria</i></p> <p>Effective Date: June 22, 2011</p> <p>BPA: Attachment A to Resolution R9- 2010-001</p>	

TMDL	Implementation Requirements
Resolution: R9-2010-0001	

* U.S. EPA Established TMDLs

ATTACHMENT V—REGION SPECIFIC REQUIREMENTS

PART 1 NORTH COAST REGION

1. North Coast Regional Water Board Resolution R1-2004-0087 directs its staff to utilize existing regulatory programs to address sources of sediment within sediment impaired watersheds. The Department owns road right-of-way and other property within watersheds that are listed as impaired for sediment. Some of these facilities have sources of sediment (eroding shoulders, failed culverts, unstabilized cut and fill slopes, etc) that discharge into sediment impaired waterbodies. Consistent with Resolution R1-2004-0087 and the Water Quality Control Plan for the North Coast Region, the Department shall take the following steps in watersheds listed for sediment to identify, prioritize and control sources of sediment that discharge anthropogenic amounts of sediment into impaired waters. These requirements are in addition to any watershed-specific TMDL implementation requirements listed in Attachment IV of this Order. Steps to be taken include:
 - a. Inventory: Identify sources of excess sediment or threatened discharge, and quantify the discharge or threatened discharges from the source(s).
 - b. Prioritize: Prioritize efforts to control discharge of excess sediment based on, but not limited to, severity of threat to water quality and beneficial uses, the feasibility of source control, and source site accessibility. The inventory and prioritized steps shall be completed within two (2) years of the adoption of this Order and updated annually.
 - c. Implement: Develop and implement feasible sediment control practices to prevent, minimize, and control the discharge.
 - d. Monitor and Adapt: Use monitoring results to direct adaptive management measures in order to refine and adjust erosion control practices and implementation schedules, until sediment discharge is reduced and no longer causes a violation of any sediment related narrative or numeric objective.

Each District within the North Coast Region shall include a time schedule for the above-referenced activities within the District Workplan for Regional Water Board approval. The time schedule shall implement the required activities as quickly as feasible. An annual update on activities and compliance with the projected time schedule shall be included in each subsequent annual report.

2. Removal of riparian vegetation may result in a threatened discharge or an exceedance of a water quality objective. The North Coast Region has many watersheds that are impaired for excess sediment and temperature. Riparian vegetation shall be protected and restored to the greatest extent feasible and removal may require permitting by the Regional Water Board.

PART 2
SAN FRANCISCO BAY REGION

1. Trash Load Reduction

a. The Department shall demonstrate compliance with Discharge Prohibition 7, Table 4-1 of the San Francisco Bay Regional Water Board Basin Plan¹ through the timely implementation of control measures to achieve the following target levels to reduce trash loads from the Department's MS4 by 40% by 2017, 70% by 2020, and 100% by 2025.

b. Trash Load Reduction Plans

- i. **Short-Term Trash Loading Reduction** – The Department shall submit a Short-Term Trash Load Reduction Plan, including an implementation schedule, to the Regional Water Board by July 1, 2013. The Plan shall describe control measures and best management practices that are currently being implemented and the current level of implementation and additional control measures and best management practices that will be implemented, and/or an increased level of implementation designed to attain a 40 percent trash load reduction from its MS4 by July 1, 2017. The Plan shall account for the Minimum Full Trash Capture requirement of subsection 2.b.iii of this Part.
- ii. **Long-Term Trash Load Reduction** - The Department shall submit a Long-Term Trash Load Reduction Plan, including an implementation schedule, to the Regional Water Board by October 1, 2017. The Plan shall describe control measures and best management practices that are being implemented and the level of implementation and additional control measures and best management practices that will be implemented and/or increased level of implementation designed to attain a 70 percent trash load reduction from its MS4 by July 1, 2020, and 100 percent trash load reduction by July 1, 2025.

The Department may choose to establish a municipal-coordination plan to design, build, operate, or maintain controls in conjunction with other watershed stakeholders. The Short-Term Trash Load Reduction Plan goal may be met with Department specific activities and devices, or from load reduction resulting from municipal-coordination implementation or any combination thereof.

¹ San Francisco Bay Basin Plan, Chapter 4 – Implementation, Table 4-1 Prohibitions, Prohibition 7, which is consistent with the State Water Board's Enclosed Bays and Estuaries Policy, Resolution 95-84, prohibits the discharge of rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas.

- iii. **Baseline Trash Load and Trash Load Reduction Tracking Method** – The Department shall determine the baseline trash load from its MS4 to establish the basis for trash load reductions from its MS4 and submit the determined baseline trash load level to the Regional Water Board by July 1, 2013, along with documentation of methodology used to determine the load level. The submittal shall also include a description of the trash load reduction tracking method that will be used to account for trash load reduction actions and to demonstrate progress toward and attainment of trash load reduction levels. The submittal shall account for the drainage areas in the Department's jurisdiction that are associated with the baseline trash load from its MS4, and the baseline trash load level per unit drainage area characteristics used to derive the total baseline trash load level.

In the determination of applicable areas that generate trash loads for inclusion in the Baseline Trash Load, the Department may propose areas for exclusion, with supporting documentation that the areas demonstrate no material trash presence.

- iv. **Minimum Full Trash Capture** – The Department shall install and maintain controls to capture and treat runoff from an area that cumulatively totals at least ten percent of the Department's right-of-way by July 1, 2017.

All installed devices that meet the following full trash capture definition may be counted toward this requirement regardless of date of installation. A full capture system or device is any single device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate Q resulting from a one-year, one-hour, storm in the subdrainage area.

The Department may choose to establish a municipal coordination plan to design, build, operate, and/or maintain controls in conjunction with other watershed stakeholders. The minimum trash capture requirement may be met with Department specific activities and devices, or from load reduction resulting from municipal coordination implementation, or any combination thereof, so long as the municipal coordination is a full capture device.

c. **Trash Reduction Reporting**

In each Annual Report, the Department shall provide a summary of its trash load reduction actions (control measures and best management practices) including the types of actions and levels of implementation, and the total trash loads by volume removed. Beginning with the 2014 Annual Report, the Department shall also report its percent annual trash load reduction relative to its Baseline Trash Load.

2. Storm Water Pump Stations

The Department shall comply with the following implementation measures to reduce polluted water discharges from its pump stations:

- a. Complete an inventory of pump stations within the Department's jurisdiction in Region 2, including locations and key characteristics² and submit to the Regional Water Board within one year of permit adoption.
- b. Inspect and collect dissolved oxygen (DO) data from 20 percent of the pump stations once a year (100 percent in five years) after a minimum of a two week antecedent period with no precipitation. DO monitoring is exempted where all discharge from a pump station remains in the storm water collection system or infiltrates into a dry creek immediately downstream.
- c. If DO levels are at or below 3 milligrams per liter (3 mg/L), apply corrective actions, such as continuous pumping at a low flow rate, aeration, or other appropriate methods to maintain DO concentrations of the discharge above 3 mg/L.
- d. Report inspection and monitoring results in the Annual Report.

² Characteristics include name of pump station, latitude and longitude in NAD83, number of pumps, drainage area in acres, dominant land use(s), first receiving water body, maximum pumping capacity of station in gallons per minute (gpm), flow measurement capability (Y or N), flow measurement method, average wet season discharge rate in gpm, dry season discharge (Y, N, or unknown), nearest municipal wastewater treatment plant, wet well storage capacity in gallons, trash control (Y or N), trash control measure, and date built or last updated.

PART 3 LAHONTAN REGION

The Water Quality Control Plan for the Lahontan Region (Basin Plan) has additional requirements which have been historically applied to the Department's permits and which apply to this NPDES Permit in the Lahontan Region. These requirements include:

1. For projects meeting the criteria specified in Provision E.2.d. of the permit (Project Planning and Design), the following numeric sizing criteria for storm water treatment control BMPs apply:

Where storm water runoff is determined to have connectivity to surface waters and/or is not adequately infiltrated or treated by the natural environment, storm water/urban runoff collection, treatment, and/or infiltration disposal facilities shall be designed, installed, and maintained for the discharge of storm water runoff from all impervious surfaces generated by the 20-year, one-hour design storm (1) within the Truckee River Hydrologic Unit (3/4- inch of rain), (2) within the East Fork Carson River and West Fork Carson River Hydrologic Units (one inch of rain), and (3) within the Mammoth Creek Hydrologic Unit above 7,000-foot elevation (one inch of rain). Hydrologic evaluations may be required or may be conducted consistent with the NEAT study described in item No. 2 below to help determine areas where infiltration of the 20-year, 1-hour storm is required.

2. In 2009, the Department completed the Natural Environment as Treatment (NEAT) study and report for 38 miles of roadway within the Lake Tahoe Hydrologic Unit. The NEAT approach is consistent with the strategic approach required by this permit. Projects developed within the NEAT study area shall be designed and constructed based on the priority areas identified by the study.
3. Unless granted a variance by the Lahontan Regional Water Board Executive Officer, there shall be neither removal of vegetation nor disturbance of existing ground surface conditions between October 15 of any year and May 1 of the following year, except when there is an emergency situation that threatens the public health or welfare. This prohibition period applies to the Lake Tahoe, Truckee River, East Fork Carson River, and West Fork Carson River Hydrologic Units and above the 5,000-foot elevation in the portions of Mono and Inyo Counties within the Lahontan Region.
4. Project Review Requirements
 - a. The Department shall participate in early project design consultation for all projects within the Lake Tahoe, Truckee River, East and West Forks Carson River and Mammoth Creek Hydrologic Units.
 - b. The Department must solicit Lahontan Regional Water Board staff review when project development/design is at the 20 to 30 percent design level (prior to Project "Approval" and Environmental Document), 60 percent design level, and 90 percent design level (Plans, "Specifications" and Estimates).

ATTACHMENT VI — STANDARD PROVISIONS

1. **Duty to Comply.** The Department shall comply with all of the conditions of this Order. Any permit noncompliance constitutes a violation of the CWA and the Porter-Cologne Water Quality Control Act, which may be grounds for enforcement action or denial of permit coverage. [40 C.F.R. § 122.41(a)]

The Department shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. [40 C.F.R. § 122.41(a)(1)]

2. **Modification, Revocation and Reissuance, or Termination.** This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Department for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any General Permit condition.

3. **Enforcement**

- a. The provision contained in this enforcement section shall not act as a limitation on the statutory or regulatory authority of the State and Regional Water Board.
- b. Any violation of the Order constitutes violation of the California Water Code and regulations adopted hereunder and the provisions of the Clean Water Act, and is the basis for enforcement action, permit termination, permit revocation and reissuance, denial of an application for permit reissuance; or a combination thereof.
- c. The State and Regional Water Boards may impose administrative civil liability may refer a discharger to the State Attorney General to seek civil monetary penalties, may seek injunctive relief or take other appropriate enforcement action as provided in the California Water Code or federal law.
- d. All applications, reports, or information submitted to the State Water Board or Regional Water Boards shall be signed and certified. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both. [40 C.F.R. § 122.41(k)]

4. **Need to Halt or Reduce Activity not a Defense.** It shall not be a defense for the Department in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. [40 C.F.R. § 122.41(c)]
5. **Duty to Mitigate.** The Department shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. [40 C.F.R. § 122.41(d)]
6. **Proper Operation and Maintenance.** The Department at all times shall properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Department to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems installed by the Department only when necessary to achieve compliance with the conditions of this Order. [40 C.F.R. § 122.41(e)]
7. **Property Rights.** This Order does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State, or local laws or regulations. [40 C.F.R. § 122.41(g)]
8. **Duty to Provide Information.** Within a reasonable time specified by the State Water Board, Regional Water Boards, or U.S. EPA, the Department shall furnish records, reports, or information required to be kept by this Order, and shall furnish any information requested to determine whether cause exists for modifying, revoking, and reissuing, or terminating this Order or to determine compliance with this Order. [40 C.F.R. § 122.41(h)]
9. **Inspection and Entry.** [40 C.F.R. § 122.41(i)] Upon the presentation of credentials and other documents as may be required by law, the Department shall allow the State and Regional Water Boards, or U.S. EPA to:
 - a. Enter upon the Department's premises where a regulated facility or activity is located or conducted or where records are required to be kept under the conditions of this Order;
 - b. Have access to and copy at reasonable times any records that must be kept under the conditions of this Order;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

- d. Sample or monitor at reasonable times for the purposes of assuring ensuring permit compliance, or as otherwise authorized by the Clean Water Act.

10. Monitoring and Records. [40 C.F.R. § 122.41(j)]

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. The Department shall retain records of all monitoring information for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the State Water Board's Executive Director or Regional Water Board's Executive Officer at any time.
- c. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
- d. Monitoring must be conducted according to test procedures approved under 40 C.F.R. § 136 unless another method is required under 40 C.F.R. subchapters N or O.
- e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both.

11. Signatory Requirements. All reports, certifications, and records required by this Order or requested by the State Water Board and Regional Water Boards or U.S. EPA shall be signed by either a principal executive officer or by a duly authorized representative. A person is a duly authorized representative only if [40 C.F.R. §§ 122.22 & 122.41(k)]:

- a. The authorization is made in writing by the principal executive officer; and
- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for

environmental matters for the Department. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, the Department shall provide a new authorization prior to submittal of any reports, certifications, or records signed by the newly authorized representative.

12. **Certification.** Any person signing documents under Provision 11 above shall make the following certification [40 C.F.R. § 122.22(d)]:

"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."

13. **Reporting Requirements.**

- a. *Planned changes.* The Department shall give advance notice to the State Water Board and the appropriate Regional Water Board of any planned physical alteration or additions to the permitted facility. Notice is required under this provision only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged; [40 C.F.R. § 122.41(l)(1)]
- b. *Anticipated noncompliance.* The Department shall give advance notice to the appropriate Regional Water Board of any planned changes at the permitted facility or activity which may result in noncompliance with Permit requirements; [40 C.F.R. § 122.41(l)(2)]
- c. *Compliance Schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following each scheduled date; [40 C.F.R. § 122.41(l)(5)]
- d. *Other Information.* Where the Department becomes aware that it failed to submit any relevant facts, or submitted incorrect information in a permit application or in any required report, it shall promptly submit such facts or information [40 C.F.R. § 122.41(l)(8)].

- e. The Department shall submit, except for the Annual Report, one copy of each report required by the permit to the State Water Board. The Department shall also submit one copy to each of the appropriate Regional Water Boards. The Department may choose to submit its properly signed reports electronically into SMARTS in the Portable Document Format (PDF) and submit hard copies only upon request of the State or Regional Water Board staff.

- 14. **Oil and Hazardous Substance Liability.** Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Department from any responsibilities, liabilities, or penalties to which the Department is or may be subject to under Section 311 of the CWA.
- 15. **Severability.** The provisions of this Order are severable; and if any provision of this Order or the application of any provision of this Order to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.
- 16. **Availability.** A copy of this Order shall be maintained at the facility and be available at all times to the appropriate facility personnel and to representatives of the Regional Water Boards, State Water Board, or U.S. EPA.
- 17. **Education.** The Department shall ensure that all personnel whose decisions or activities could affect storm water quality are familiar with the requirements of this NPDES Permit.

ATTACHMENT VII — LIST OF ACRONYMS & ABBREVIATIONS

ASBS	Areas of Special Biological Significance
BAT	Best Available Technology Economically Achievable
Basin Plans	Regional Water Quality Control Plans
BCT	Best Conventional Pollutant Control Technology
BMPs	Best Management Practices
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	Construction General Permit - NPDES General Permit for Storm Water Discharges Associated with Construction Activities
CTR	California Toxics Rule
CWA	Clean Water Act
CWC	California Water Code
Department	California Department of Transportation (Caltrans)
EC	Electrical Conductivity
EMA	Emergency Management Agency
ESA	Environmentally Sensitive Area
FPPP	Facility Pollution Prevention Plan
GPS	Global Positioning System
Hydromodification	Hydrograph Modification
IC/ID	Illegal Connection/ Illicit Discharge
IGP	Industrial General Permit - NPDES General Permit for Discharges Associated with Industrial Activities Excluding Construction Activities
LA	Load Allocation
LID	Low Impact Development
MEP	Maximum Extent Practicable
MRP	Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
NCIR	Non-Compliance Incident Report
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
Ocean Plan	California Ocean Plan
PAHs	Polycyclic Aromatic Hydrocarbons
POTW	Publicly Owned Treatment Works
Regional Water Board	Regional Water Quality Control Board
ROW	Department Right-of-Way
State Water Board	State Water Resources Control Board
SUSMP	Standard Urban Storm Water Mitigation Plan
SWAMP	Surface Water Ambient Monitoring Program
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TCGP	Tahoe Construction General Permit
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TPH	Total Petroleum Hydrocarbon
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Agency
WDRs	Waste Discharge Requirements
WLA	Waste Load Allocation
WQBEL	Water Quality-Based Effluent Limitation
WQO	Water Quality Objective
WQS	Water Quality Standard
Workplans	District Workplans

ATTACHMENT VIII - GLOSSARY

Acute Toxicity. A chemical stimulus severe enough to rapidly induce an effect; in aquatic toxicity tests, an effect observed within 96 hours or less is considered acute. When expressed as toxic units acute (TUa), $TUa=100/96\text{-hour LC } 50\%$. Acute toxicity can also be expressed as lethal concentration 50% (LC 50).

Administrative Noncompliance. Failure to comply with the procedural requirements of this Order. Examples include but are not limited to: failure to submit required reports or documents required by the Permit and/or SWMP, missed deadlines or late submittal, and/or failure to submit required information, failure to develop and/or maintain site-specific FPPP or to implement any other procedural requirement of the Permit.

Areas of Special Biological Significance (ASBS). Ocean or estuarine areas designated by the State Water Board that require special protection of species or biological communities to the extent where alteration of natural water quality is undesirable. The California Ocean Plan describes ASBSs as "those areas containing biological communities of such extraordinary value that no risk of change in their environment as the result of man's activities can be entertained". ASBSs are a subset of State Water Quality Protection Areas.

Basin Plans. Basin Plans (regional water quality control plans) are the principal regulatory mechanisms for protection of water quality in California. Basin plans describe the beneficial uses that each water body supports, e.g. drinking, swimming, fishing, and agricultural irrigation; the water quality objectives necessary to protect those uses; and the program implementation needed to achieve the objectives, such as waste discharge permits and enforcement actions.

Batch Plant. A processing plant where concrete or asphalt is mixed before transport to a construction site. Batch plants are considered to be industrial activities as defined in 40 CFR 122.26(b)(14) (iii) and are regulated under the Industrial General Permit.

Beneficial Uses. The uses of the water protected against degradation including, but not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Available Technology Economically Achievable (BAT). Technology-based compliance standard established by the Clean Water Act. BAT is based on consideration of the age of the equipment and facilities involved, the processes employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements) and other factors as deemed appropriate. BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT). Technology-based compliance standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, oil and grease. BCT is established by a two-part “cost reasonableness” test, which compares the cost for an industry to reduce its pollutant discharge with the cost to a POTW for similar levels of reduction of a pollutant loading. The second test examines the cost-effectiveness of additional industrial treatment beyond BCT. Limits must be reasonable under both tests.

Best Management Practices (BMPs). Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of “waters of the United States.” BMPs include structural and nonstructural controls, treatment requirements, operation and maintenance procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Non-Approved BMP. Any BMP for maintenance, construction, design pollution prevention, and treatment that are not in the Department’s SWMP (CTSW-RT-02-008) or Statewide Storm Water Quality Practice Guidelines (CTSW-RT-02-009) approved for statewide use.

Post-Construction BMPs. Any structural or non-structural controls that detain, retain, or filter storm water to prevent the release of pollutants to receiving waters after final site stabilization is attained.

Structural BMPs. Any structural facility designed and constructed to mitigate the adverse impacts of storm water runoff (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

Source Control BMPs. Any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source. Examples include treatment techniques that use natural measures to reduce pollution levels, do not require extensive construction efforts, and/or promote pollutant reduction by controlling the pollutant source.

Treatment Control BMPs. Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

California Ocean Plan (Ocean Plan). The water quality control plan for California near-coastal waters, first adopted by the State Water Resources Control Board in 1972. The purpose of the Ocean Plan is to protect the beneficial uses of the State's ocean waters by identifying water quality objectives, setting general waste discharge requirements, and listing discharge prohibitions. In addition, the Ocean Plan is used to develop and update statewide water quality control plans, policies, and standards involving marine waters.

California Toxics Rule. The Federal regulation, found at 40 CFR § 131.38. Establishes water quality criteria (limits) for heavy metals and other toxic compounds for the protection of beneficial uses of surface waters in California.

Catch Basins. A storm drain inlet having a sump below the outlet to capture settled solids, debris, sediment, and prevent clogging.

Chronic Toxicity. The ability of a substance or a mixture of substances to cause harmful effects over an extended period of time. Expressed as toxic units chronic (TUC), $TUC=100/NOEL$, where NOEL is the No Observed Effect Level.

Construction Activity. Any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

Cut and Fill. The process of moving earth by excavating part of an area and using the excavated material for adjacent embankment of fill areas.

Department Airspaces. Any area within the Department's operating right-of-way that can safely accommodate a privately managed use such as: parking lots, self storage units, commercial businesses, light industry, and cellular telephone towers. The Department executes airspace leases with third parties for these uses.

Department Facility. A Maintenance Facility, Non-maintenance Facility, Highway Facility, Industrial Facility, or Vehicle Maintenance.

Maintenance Facility. A facility under Department ownership or control that contains fueling areas, maintenance stations/yards, waste storage or disposal facilities, wash racks, equipment or vehicle storage and materials storage areas.

Non-maintenance Facility. Laboratories or office buildings used exclusively for administrative functions.

Highway Facility. Highways are linear facilities designed to carry vehicular and pedestrian traffic. These include freeways, highways, and expressways as designated by the California Streets and Highway Code and the California legislature. These facilities also include all support infrastructure associated with these freeways, including bridges, toll plazas, inspection and weigh stations, sound walls, retaining walls, culverts, vegetated slopes, shoulders, intersections, off ramps, on ramps, over passes, lights, signal lights, gutter, guard rail, and other support facilities. The support infrastructure is considered a Highway Facility only when accompanied by an increase in highway impervious surface. Otherwise, it is considered a non-highway .

Industrial Facility. A collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.

Non-Highway Facility. For purposes of this permit, a Non-Highway Facility is any facility not meeting the definition of a Highway Facility, including but not limited to rest stops, park and ride facilities, maintenance stations, vista points, warehouses, laboratories, and office buildings.

Discharge. When used without qualification means the discharge of a pollutant.

Direct Discharge. Any discharge from the MS4 that does not meet the definition of an indirect discharge.

Indirect Discharge. Any discharge from the MS4 that is conveyed to the receiving water through 300 feet or more of an unlined ditch or channel as measured between the discharge point from the MS4 and the receiving water.

Discharge of a Pollutant. The addition of any pollutant or combination of pollutants to waters of the United States from any point source, or any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. The term includes additions of pollutants to waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

District Workplans (DWPs). Annual workplans prepared by each District containing descriptions of all activities and projects to be undertaken in the District that are necessary to implement the SWMP and comply with the requirements of this Order. DWPs are submitted annually with the Annual Report. Formerly known as the Regional Work Plans.

Drainage Inlet. A location where water runoff enters a storm water drainage system that includes streets, gutters, conduits, natural or artificial drains, channels and watercourses, or other facilities that are owned, operated, maintained and used for the purpose of collecting, storing, transporting or disposing of storm water

Effluent. Any discharge from the MS4.

Emergency. Any sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage.

Erosion. The diminishing or wearing away of land due to wind, or water. Often the eroded material (silt or sediment) becomes a pollutant via stormwater runoff. Erosion occurs naturally, but can be intensified by land disturbing and grading activities such as farming, development, road building, and timber harvesting.

Facility Pollution Prevention Plan (FPPP). A plan that identifies the functional activities specific to the maintenance facility and the applicable BMPs and other procedures utilized by facility personnel to control the discharge of pollutants in storm water. Facilities subject to FPPPs include: maintenance yards/stations; material storage facilities/permanent stockpile locations (if not totally enclosed); equipment storage and repair facilities, roadside rest areas, agricultural and highway patrol weigh stations, decant storage or disposal locations, and permanent and temporary solid and liquid waste management sites.

FPPPs are not required for temporary stockpile locations (in continuous use for less than one year). All temporary stockpile locations shall implement the applicable best management practices defined in the Caltrans Stormwater Quality Handbook Maintenance Staff guide. Any stockpile location in continuous use for more than one year is deemed permanent and requires a Facility Pollution Prevention Plan.

Hydrograph Modification (Hydromodification). The alteration of the hydrologic characteristics of surface waters through watershed development. Under past practices, new and re-development construction activities resulted in urbanization, which in turn modified natural watershed and stream processes. The impacts of hydromodification include, but are not limited to, increased bed and bank erosion, loss of habitat, increased sediment transport and deposition, and increased flooding. Urbanization does this by altering the terrain, modifying the vegetation and soil characteristics, introducing impervious surfaces such as pavement and buildings, and altering the condition of stream channels through straightening, deepening, and armoring. These changes affect hydrologic characteristics in the watershed and affect the supply and transport of sediment in the stream system.

Hydromodification Management Plan. A plan to control and reduce the impacts of hydrograph modification from development activities in a watershed.

Illegal Connection/Illicit Discharge (IC/ID).

Illegal Connection. An engineered conveyance that is connected to an MS4 without authorization by local, state, or federal statutes, ordinances, codes, or regulations.

Illicit Discharge. Any discharge to an MS4 that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. It includes all non-storm water discharges except conditionally exempt non-storm water discharges.

Illegal Dumping. Discarding or disposal within the Department's right-of-way, properties or facilities, either intentionally or unintentionally, of trash and other wastes in non-designated areas that may contribute to storm water pollution.

Impervious Cover. Any surface in the landscape that cannot effectively absorb or infiltrate rainfall; for example, sidewalks, rooftops, roads, and parking lots.

Incidental Runoff. Unintended small amounts (volume) of runoff from landscape irrigation, such as minimal over-spray from sprinklers that escapes the irrigated area. Water leaving an irrigated area is not considered incidental if it is due to improper (e.g. during a precipitation event) or excessive application, if it is due to intentional overflow or application, or if it is due to negligence. Leaks and other discharges (e.g. broken sprinkler heads) are not considered incidental if not corrected within 72 hours of learning of the discharge or if the discharge exceeds 1000 gallons.

Land Use. How land is managed or used by humans (e.g., residential and industrial development, roads, mining, timber harvesting, agriculture, grazing, etc.). Land use is generally regulated at the local level in the U.S. based on zoning and other regulations. Land use mapping differs from land cover mapping in that it is not always obvious what the land use is from visual inspection.

Load Allocation. The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which can range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading (40 CFR 130.2(g)).

Low Impact Development (LID). An approach to land development with the goal of mimicking or replicating the pre-project hydrologic regime through the use of design techniques to create a functionally equivalent hydrologic site design. Hydrologic functions of storage, infiltration and ground water recharge, as well as the volume and frequency of discharges are maintained through the use of integrated and distributed micro-scale storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of runoff flow paths and flow time. Other strategies include the preservation/protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, mature trees, flood plains, woodlands, and highly permeable soils.

Maximum Extent Practicable (MEP). The minimum required performance standard for implementation of municipal storm water management programs to reduce pollutants in storm water. Clean Water Act § 402(p)(3)(B)(iii) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." MEP is the cumulative effect of implementing, evaluating, and making corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate controls are implemented in the most effective manner. To achieve the MEP standard, municipalities must employ whatever BMPs are technically feasible and are not cost-prohibitive. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the costs would be prohibitive. A final determination of whether a municipality has reduced pollutants to the MEP can only be made by the State or Regional Water Boards.

Municipal Separate Storm Sewer System (MS4). A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is: (1) Owned or operated by a state, city, town, village, or other public entity that discharges to waters of the U.S.; (2) Designed or used to collect or convey storm water; (3) Not a combined sewer; and (4) Not part of a Publicly Owned Treatment Works.

Natural Ocean Water Quality. The water quality (based on selected physical, chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, i.e., an absence of significant amounts of: (a) man-made constituents (e.g., DDT); (b) other chemical (e.g., trace metals), physical (temperature/thermal pollution, sediment burial), and biological (e.g., bacteria) constituents at concentrations that have been elevated due to man's activities above those resulting from the naturally occurring processes that affect the area in question; and (c) non-indigenous biota (e.g., invasive algal bloom species) that have been introduced either deliberately or accidentally by man. Discharges "shall not alter natural ocean water quality" as determined by a comparison to the range of constituent concentrations in reference areas agreed upon via the regional monitoring program(s). If monitoring information indicates that natural ocean water quality is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff sample data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

New Development. Any newly constructed facility, street, road, highway or contiguous road surface installed as part of a street, road or highway project within the Department's right-of-way.

Non-Department Activities. Third party activities that are primarily controlled by encroachment permits, leases, and rental agreements. They include both construction activities and non-construction activities.

Non-Department Projects. Same as Non-Department Activities.

Non-storm Water. Discharges that are not induced by precipitation events and are not composed entirely of storm water. These discharges include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, concrete washout water, paint wash water, irrigation water, pipe testing water, lawn watering overspray, hydrant flushing, and fire fighting activities.

Nonpoint Source. Pollution that is not released through a discrete conveyance but rather originates from multiple sources over a relatively large area. Nonpoint sources can be divided into source activities related to either land or water use, including failing septic tanks, animal agriculture, forest practices, and urban and rural runoff.

Nuisance. Anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; (3) occurs during, or as a result of, the treatment or disposal of wastes.

Perennial Stream. Any stream shown as a solid blue line on the latest version of the U.S. Geological Survey (USGS) 7.5 minute series quadrangle map (sometimes referred to as a blue-line stream). Where 7.5 minute series maps have not been prepared by USGS, 15 minute series maps are used.

Pesticide. Substances intended to repel, kill, or control any species designated a "pest" including weeds, insects, rodents, fungi, bacteria, or other organisms. The family of pesticides includes herbicides, insecticides, rodenticides, fungicides, algicides, and bactericides.

Algicide. A pesticide that controls algae in swimming pools and water tanks.

Herbicide. A pesticide designed to control or kill plants, weeds, or grasses.

Insecticide. A pesticide compound specifically used to kill or prevent the growth of insects.

Rodenticide. A pesticide or other agent used to kill rats and other rodents or to prevent them from damaging food, crops, or forage

Fungicide. A pesticide used to control or destroy fungi on food or grain crops.

Bactericide. A pesticide used to control or destroy bacteria, typically in the home, schools, or on hospital equipment.

pH. A measure of the degree of acidity or alkalinity in a water sample. The pH of natural waters tends to range between 6 and 9, with neutral being 7. Extremes of pH can have deleterious effects on aquatic systems.

Point source. Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.

Pollutant. Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

Pollutants of Concern. Pollutants in a discharge with potential to cause a condition of pollution or nuisance due to the discharge of excessive amounts, proximity to receiving waters, or the properties of the pollutant. Pollutants that impair waterbodies listed under CWA section 303(d) are also Pollutants of Concern. Pollutants in the Department's discharge that may be Pollutants of Concern include, but are not limited to, total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (e.g., decaying vegetation and animal waste), and litter and trash.

Pollution. An alteration of the quality of the waters of the state by waste to a degree which unreasonably affects the beneficial uses of the water or facilities which serve those beneficial uses (Porter-Cologne Water Quality Control Act, section 13050(l)(1)).

Redevelopment. The creation, addition, and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that removes impervious materials and exposes the underlying soil or pervious subgrade. Redevelopment does not include trenching and resurfacing associated with utility work; pavement grinding and resurfacing of existing roadways; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway. Redevelopment does include replacement of existing roadway surfaces where the underlying soil or pervious subgrade is exposed during construction. Replaced impervious surfaces of this type shall be considered "new impervious surfaces" for purposes of determining the applicability of post-construction treatment controls as provided in provision E.2.d.2).

Roadway. Any road within the Department's right-of-way.

Routine Maintenance. Activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of a facility. Routine maintenance does not include replacement of existing roadway surfaces where the underlying soil or pervious subgrade is exposed.

Right-of-Way (ROW). Real property that is either owned or controlled by the Department or subject to a property right of the Department. Right-of-way that is in current use is referred to as operating ROW.

Sediment. Soil, sand, and minerals washed from land into water, usually after rain.

Slope Lateral Drainage. Horizontal drains placed in hillside embankments to intercept groundwater and direct it away from slopes to provide stability.

Spill. The sudden release of a potential pollutant to the environment.

Storm Water. Storm water runoff, snowmelt runoff, and surface runoff and drainage, as defined in 40 CFR 122.26 (b)(13).

Storm Water Runoff. The portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels or pipes.

Standard Urban Storm Water Mitigation Plan (SUSMP). Plans designating the Best Management Practices that must be used in specified categories of development and redevelopment. The State Water Board adopted a precedential decision (Order WQ 2000-11) upholding a SUSMP requirement imposed under a Phase I MS4 permit and requiring SUSMPs in all MS4 permits.

Storm Water Management Plan (SWMP). Description of the procedures and practices used to reduce or eliminate the discharge of pollutants to storm drain systems and receiving waters.

Surface Water Ambient Monitoring Program (SWAMP). The State Water Board's monitoring, assessment, and reporting program for ambient surface water.

Threshold Drainage Area (TDA). The area draining to a location 20 channel widths downstream (representative reach) of a stream crossing (pipe, swale, culvert, or bridge) within Project Limits.

Threatened Non-compliance. Any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

Total Dissolved Solids (TDS). A quantitative measure of the residual minerals dissolved in water that remain after evaporation of a solution and used to evaluate the quality of freshwater systems.

Total Kjeldahl Nitrogen (TKN). The sum of organic nitrogen and total ammonia nitrogen.

Total Maximum Daily Load (TMDL). The sum of the individual WLAs for point sources and LAs for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs (40 CFR 130.2(i)).

Total Petroleum Hydrocarbon (TPH). A measure of the concentration or mass of petroleum hydrocarbons in a given amount of soil or water. TPH is a mixture of different compounds from different sources.

Total Suspended Solids (TSS). Suspended particulate matter: Fine material or soil particles that remain suspended by the water column. They create turbidity and, when deposited, can smother fish eggs or alevins.

Toxicity. The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Trash. All improperly discarded waste material associated with human habitation, of human origin; or from any producing, manufacturing, or processing operation including, but not limited to, product packaging or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials that are thrown or deposited in waters or where it could be transported, as floating, suspended, and/or settleable materials, to waters of the State, including watersheds. (SWRCB Trash Policy).

Turbidity. Murkiness or cloudiness of water, indicating the presence of suspended solids.

United States Environmental Protection Agency (U.S. EPA). U.S. EPA works to develop and enforce regulations that implement environmental laws enacted by the United States Congress. U.S. EPA is responsible for researching and setting national standards for the Storm Water Program.

Waste. Includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

Wasteload Allocation (WLA). The portion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution. Waste load allocations constitute a type of water quality-based effluent limitation.

Water Quality Objectives (WQO). The limits or levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or to prevent nuisance within a specific area. Water quality objectives may be numeric or narrative.

Water Quality Standards (WQS). State-adopted and U.S. EPA-approved water quality standards for surface water bodies. The standards prescribe the beneficial uses (swimmable, fishable, drinkable, etc.) of the water body and establish the WQOs that must be met to protect designated uses.

Waters of the State. Any surface water or groundwater, including saline waters, within boundaries of the state, as defined in CWC 13050(e). This Order contains requirements to protect the beneficial uses of waters of the State.

Waters of the United States. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. Waters of the United States [as defined in 40 CFR 230.3(s)] include all interstate waters and intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use of which would affect or could affect interstate or foreign commerce. The definition also applies to tributaries of the aforementioned waters. See 40 CFR 122.2 for the complete definition, which is hereby incorporated by reference.

Watershed. A drainage area or basin in which all water drains or flows toward a central collector such as a stream, river, or lake at a lower elevation.

Wetlands. Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Workplans. See District Workplans

Attachment IX: Reporting Requirements

Reporting Requirement	Permit Section	Page #	Due Date	Frequency
Annual Report	E.3.	54	October 1, 2013	Annually
Draft ASBS Compliance Plan	E.5.b.2)	58	September 20, 2013	18 months after the General Exception effective date
Final ASBS Compliance Plan	E.5.b.2)	58	September 20, 2014	30 months after the General Exception effective date
Budget Analysis	E.2.b.3)c)	26	October 1, 2017	Year 4 of Permit Cycle
Certification of the Adequacy of Legal Authority	E.2.b.2)b)	25	October 1, 2013	Annually as part of the Annual Report
District Workplans	E.3.b.	55	October 1, 2013	Annually as part of the Annual Report
Facility Pollution Prevention Plan (FPPP)	E.2.h.2)	46	October 1, 2013	Annually as part of the Annual Report and as required by the Regional Water Board
Fiscal Analysis	E.2.b.3)b)	25	October 1, 2013	Annually as part of the Annual Report
IC/ID & Illegal Dumping Response Plan	E.2.h.4)b)ii)	50	December 31, 2013	Update as needed annually
Incident Report Form	E.2.b.6)and Attachment I	26	October 1, 2013	As Needed
Landslide Management Plan	E.2.h.3)d)	50	October 1, 2013	Year 1 Annual Report
Monitoring Results Report (MRR)	E.2.c.5)	35	October 1, 2013	Annually
Monitoring Site Prioritization (Tier 2)	E.2.c.1)	27	March 1, 2014	Within 8 months of the effective date
Municipal Coordination Plan	E.2.b.1)b)	25	October 1, 2013	To be Included in the SWMP and Progress Report as part of the Annual Report
Overall Program Effectiveness Evaluation	E.2.m.3)	54	October 1, 2013	Annually as part of the Annual Report
Public Education Program Progress Report	E.2.l.2)	53	October 1, 2013	Annually as part of the Annual Report
Self-Audit - (includes construction activities)	E.2.m.2)	53	October 1, 2013	Annually as part of the Annual Report
Stormwater Monitoring & BMP Development Status Report	E.2.e.	43	October 1, 2013	Annually as part of the Annual Report
Stormwater Treatment BMP Technology Report	E.2.e.	43	October 1, 2013	Annually as part of the Annual Report
TMDL Status Review Report	E.4.c.	57	October 1, 2014	Annually as part of the Annual Report
Updated Stormwater Management Plan (SWMP)	E.1.a.	23	October 1, 2013	Revisions as part of the Annual Report
Waste Management Plan	E.2.h.3)c)iii)	49	July 1, 2014	Within 1 year of the Effective Date

Note: This table is a partial list of reporting requirements. The Department shall submit all required reports as provided in the Order. Any discrepancy between the text of the NPDES Permit and this table will be resolved in favor of the Permit.

Effective Date of this Order is July 1, 2013

Effective Date of the ASBS Special Protections (General Exception) is March 20, 2012

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Appendix B: Industrial General Permit (IGP)

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES

ORDER
NPDES NO. CAS000001

This Order was adopted by the State Water Resources Control Board on:	April 1, 2014
This Order shall become effective on:	July 1, 2015
This Order shall expire on:	June 30, 2020

IT IS HEREBY ORDERED that as of July 1, 2015 this Order supersedes Order 97-03-DWQ except for Order 97-03-DWQ's requirement to submit annual reports by July 1, 2015 and except for enforcement purposes. As of July 1, 2015, a Discharger shall comply with the requirements in this Order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder.

CERTIFICATION

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order, including its fact sheet, attachments, and appendices is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on April 1, 2014.

AYE: Chair Felicia Marcus
Vice Chair Frances Spivy-Weber
Board Member Tam M. Doduc
Board Member Steven Moore

NAY: None

ABSENT: Board Member Dorene D'Adamo

ABSTAIN: None



Jeanine Townsend
Clerk to the Board

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I. FINDINGS

A. General Findings

The State Water Resources Control Board (State Water Board) finds that:

1. The Federal Clean Water Act (Clean Water Act) prohibits certain discharges of storm water containing pollutants except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. (33 U.S.C. §§ 1311, 1342 (also referred to as Clean Water Act §§ 301, 402).) The United States Environmental Protection Agency (U.S. EPA) promulgates federal regulations to implement the Clean Water Act's mandate to control pollutants in storm water discharges. (40 C.F.R. § 122, et seq.) The NPDES permit must require implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges (NSWDs). The NPDES permit must also include additional requirements necessary to implement applicable water quality objectives or water quality standards (water quality standards, collectively).
2. On November 16, 1990, U.S. EPA promulgated Phase I storm water regulations in compliance with section 402(p) of the Clean Water Act. (55 Fed. Reg. 47990, codified at 40 C.F.R. § 122.26.) These regulations require operators of facilities subject to storm water permitting (Dischargers), that discharge storm water associated with industrial activity (industrial storm water discharges), to obtain an NPDES permit. Section 402(p)(3)(A) of the Clean Water Act also requires that permits for discharges associated with industrial activity include requirements necessary to meet water quality standards.
3. Phase II storm water regulations¹ require permitting for storm water discharges from facilities owned and operated by a municipality with a population of less than 100,000. The previous exemption from the Phase I permitting requirements under section 1068 of the Intermodal Surface Transportation Efficiency Act of 1991 was eliminated.
4. This Order (General Permit) is an NPDES General Permit issued in compliance with section 402 of the Clean Water Act and shall take effect on July 1, 2015, provided that the Regional Administrator of U.S. EPA has no objection. If the U.S. EPA Regional Administrator has an objection, this General Permit will not become effective until the objection is withdrawn.
5. This action to adopt an NPDES General Permit is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000, et seq.) in accordance with section 13389 of the Water Code. (See *County of*

¹ U.S. EPA. Final NPDES Phase II Rule. <<http://cfpub.epa.gov/npdes/stormwater/swfinal.cfm>>. [as of February 4, 2014]

Los Angeles v. California State Water Resources Control Bd. (2006) 143 Cal.App.4th 985.)

6. State Water Board Order 97-03-DWQ is rescinded as of the effective date of this General Permit (July 1, 2015) except for Order 97-03-DWQ's requirement that annual reports be submitted by July 1, 2015 and except for enforcement purposes.
7. Effective July 1, 2015, the State Water Board and the Regional Water Quality Control Boards (Regional Water Boards) (Water Boards, collectively) will enforce the provisions herein.
8. This General Permit authorizes discharges of industrial storm water to waters of the United States, so long as those discharges comply with all requirements, provisions, limitations, and prohibitions in this General Permit.
9. Industrial activities covered under this General Permit are described in Attachment A.
10. The Fact Sheet for this Order is incorporated as findings of this General Permit.
11. Acronyms are defined in Attachment B and terms used in this General Permit are defined in Attachment C.
12. This General Permit regulates industrial storm water discharges and authorized NSWDS from specific categories of industrial facilities identified in Attachment A hereto, and industrial storm water discharges and authorized NSWDS from facilities designated by the Regional Water Boards to obtain coverage under this General Permit. This General Permit does not apply to industrial storm water discharges and NSWDS that are regulated by other individual or general NPDES permits
13. This General Permit does not preempt or supersede the authority of municipal agencies to prohibit, restrict, or control industrial storm water discharges and authorized NSWDS that may discharge to storm water conveyance systems or other watercourses within their jurisdictions as allowed by state and federal law.
14. All terms defined in the Clean Water Act, U.S. EPA regulations, and the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000, et seq.) will have the same definition in this General Permit unless otherwise stated.
15. Pursuant to 40 Code of Federal Regulations section 131.12 and State Water Board Resolution 68-16, which incorporates the requirements of 40 Code of Federal Regulations section 131.12 where applicable, the State Water Board finds that discharges in compliance with this General Permit will not result in the lowering of water quality to a level that does not achieve water quality objectives and protect beneficial uses. Any degradation of water quality from existing high quality water to a level that achieves water quality objectives and

protects beneficial uses is appropriate to support economic development. This General Permit's requirements constitute best practicable treatment or control for discharges of industrial storm water and authorized non-storm water discharges, and are therefore consistent with those provisions.

16. Compliance with any specific limits or requirements contained in this General Permit does not constitute compliance with any other applicable permits.
17. This General Permit requires that the Discharger certify and submit all Permit Registration Documents (PRDs) for Notice of Intent (NOI) and No Exposure Certification (NEC) coverage via the State Water Board's Storm Water Multiple Application and Report Tracking System (SMARTS) website. (See Attachment D for an example of the information required to be submitted in the PRDs via SMARTS.) All other documents required by this General Permit to be electronically certified and submitted via SMARTS can be submitted by the Discharger or by a designated Duly Authorized Representative on behalf of the Discharger. Electronic reporting is required to reduce the state's reliance on paper, to improve efficiency, and to make such General Permit documents more easily accessible to the public and the Water Boards.
18. All information provided to the Water Boards shall comply with the Homeland Security Act and all other federal law that concerns security in the United States, as applicable.

B. Industrial Activities Not Covered Under this General Permit

19. Discharges of storm water from areas on tribal lands are not covered under this General Permit. Storm water discharges from industrial facilities on tribal lands are regulated by a separate NPDES permit issued by U.S. EPA.
20. Discharges of storm water regulated under another individual or general NPDES permit adopted by the State Water Board or Regional Water Board are not covered under this General Permit, including the State Water Board NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.
21. Storm water discharges to combined sewer systems are not covered under this General Permit. These discharges must be covered by an individual permit. (40 C.F.R. § 122.26(a)(7).)
22. Conveyances that discharge storm water runoff combined with municipal sewage are not covered under this General Permit.
23. Discharges of storm water identified in Clean Water Act section 402(l) (33 U.S.C. § 1342(l)) are not covered under this General Permit.
24. Facilities otherwise subject to this General Permit but for which a valid Notice of Non-Applicability (NONA) has been certified and submitted via SMARTS, by the Entity are not covered under this General Permit. Entities (See Section XX.C.1 of this General Permit) who are claiming "No Discharge"

through the NONA shall meet the eligibility requirements and provide a No Discharge Technical Report in accordance with Section XX.C.

25. This General Permit does not authorize discharges of dredged or fill material regulated by the US Army Corps of Engineers under section 404 of the Clean Water Act and does not constitute a water quality certification under section 401 of the Clean Water Act.

C. Discharge Prohibitions

26. Pursuant to section 13243 of the Water Code, the State Water Board may specify certain conditions or areas where the discharge of waste, or certain types of waste, is prohibited.
27. With the exception of certain authorized NSWDS as defined in Section IV, this General Permit prohibits NSWDS. The State Water Board recognizes that certain NSWDS should be authorized because they are not generated by industrial activity, are not significant sources of pollutants when managed appropriately, and are generally unavoidable because they are related to safety or would occur regardless of industrial activity. Prohibited NSWDS may be authorized under other individual or general NPDES permits, or waste discharge requirements issued by the Water Boards.
28. Prohibited NSWDS are referred to as unauthorized NSWDS in this General Permit. Unauthorized NSWDS shall be either eliminated or permitted by a separate NPDES permit. Unauthorized NSWDS may contribute significant pollutant loads to receiving waters. Measures to control sources of unauthorized NSWDS such as spills, leakage, and dumping, must be addressed through the implementation of Best Management Practices (BMPs).
29. This General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the Water Boards.
30. Direct discharges of waste, including industrial storm water discharges, to Areas of Special Biological Significance (ASBS) are prohibited unless the Discharger has applied for and the State Water Board has granted an exception to the State Water Board's 2009 Water Quality Control Plan for Ocean Waters of California as amended by State Water Board Resolution 2012-0056 (California Ocean Plan)² allowing the discharge.

² State Water Resources Control Board. Ocean Standards Web Page.

<http://www.waterboards.ca.gov/water_issues/programs/ocean/>. [as of February 4, 2014].

State Water Resources Control Board. Water Quality Control Plan for Ocean Waters of California 2009.

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State Water Resources Control Board. Resolution 2012-0056.

<http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0056.pdf>. [as of February 4, 2014].

D. Effluent Limitations

31. Section 301(b) of the Clean Water Act and 40 Code of Federal Regulations section require NPDES permits to include technology-based requirements at a minimum, and any more stringent effluent limitations necessary for receiving waters to meet applicable water quality standards. Clean Water Act section 402(p)(3)(A) requires that discharges of storm water runoff from industrial facilities comply with Clean Water Act section 301.
32. This General Permit requires control of pollutant discharges using BAT and BCT to reduce and prevent discharges of pollutants, and any more stringent effluent limitations necessary for receiving waters to meet applicable water quality standards.
33. It is not feasible for the State Water Board to establish numeric technology based effluent limitations for discharges authorized by this General Permit at this time. The rationale for this determination is discussed in detail in the Fact Sheet of this General Permit. Therefore, this General Permit requires Dischargers to implement minimum BMPs and applicable advanced BMPs as defined in Section X.H (collectively, BMPs) to comply with the requirements of this General Permit. This approach is consistent with U.S. EPA's 2008 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (2008 MSGP).
34. 40 Code of Federal Regulations section 122.44(d) requires that NPDES permits include Water Quality Based Effluent Limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality standards for receiving waters.
35. Where numeric water quality criteria have not been established, 40 Code of Federal Regulations section 122.44(d)(1)(vi) provides that WQBELs may be established using U.S. EPA criteria guidance under section 304(a) of the Clean Water Act, a proposed state criteria or policy interpreting narrative criteria supplemented with other relevant information, and/or an indicator parameter.
36. This General Permit requires Dischargers to implement BMPs when necessary, in order to support attainment of water quality standards. The use of BMPs to control or abate the discharge of pollutants is authorized by 40 Code of Federal Regulations section 122.44(k)(3) because numeric effluent limitations are infeasible and implementation of BMPs is reasonably necessary to achieve effluent limitations and water quality standards, and to carry out the purposes and intent of the Clean Water Act. (40 C.F.R. § 122.44(k)(4).)

E. Receiving Water Limitations

37. This General Permit requires compliance with receiving water limitations based on water quality standards. The primary receiving water limitation requires that industrial storm water discharges and authorized NSWDS not

cause or contribute to an exceedance of applicable water quality standards. Water quality standards apply to the quality of the receiving water, not the quality of the industrial storm water discharge. Therefore, compliance with the receiving water limitations generally cannot be determined solely by the effluent water quality characteristics. If any Discharger's storm water discharge causes or contributes to an exceedance of a water quality standard, that Discharger must implement additional BMPs or other control measures in order to attain compliance with the receiving water limitation. Compliance with water quality standards may, in some cases, require Dischargers to implement controls that are more protective than controls implemented solely to comply with the technology-based requirements in this General Permit.

F. Total Maximum Daily Loads (TMDLs)

38. TMDLs relate to the maximum amount of a pollutant that a water body can receive and still attain water quality standards. A TMDL is defined as the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations) and non-point sources (load allocations), plus the contribution from background sources. (40 C.F.R. § 130.2(i).) Discharges addressed by this General Permit are considered to be point source discharges, and therefore must comply with effluent limitations that are "consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the state and approved by U.S. EPA pursuant to 40 Code of Federal Regulations section 130.7. (40 C.F.R. § 122.44 (d)(1)(vii).) In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement any relevant water quality control plans. Many TMDLs contained in water quality control plans include implementation requirements in addition to waste load allocations. Attachment E of this General Permit lists the watersheds with U.S. EPA-approved and U.S. EPA-established TMDLs that include requirements, including waste load allocations, for Dischargers covered by this General Permit.

39. The State Water Board recognizes that it is appropriate to develop TMDL-specific permit requirements derived from each TMDL's waste load allocation and implementation requirements, in order to provide clarity to Dischargers regarding their responsibilities for compliance with applicable TMDLs. The development of TMDL-specific permit requirements is subject to public noticing requirements and a corresponding public comment period. Due to the number and variety of Dischargers subject to a wide range of TMDLs, development of TMDL-specific permit requirements for each TMDL listed in Attachment E will severely delay the reissuance of this General Permit. Because most of the TMDLs were established by the Regional Water Boards, and because some of the waste load allocations and/or implementation requirements may be shared by multiple Dischargers, the development of TMDL-specific permit requirements is best coordinated at the Regional Water Board level.

40. State and Regional Water Board staff will develop proposed TMDL-specific permit requirements (including monitoring and reporting requirements) for each of the TMDLs listed in Attachment E. After conducting a 30-day public comment period, the Regional Water Boards will submit to the State Water Board proposed TMDL-specific permit requirements for adoption by the State Water Board into this General Permit by July 1, 2016. The Regional Water Boards may also include proposed TMDL-specific monitoring requirements for inclusion in this General Permit, or may issue Regional Water Board orders pursuant to Water Code section 13383 requiring TMDL-specific monitoring. The proposed TMDL-specific permit requirements shall have no force or effect until adopted, with or without modification, by the State Water Board. Consistent with the 2008 MSGP, Dischargers are not required to take any additional actions to comply with the TMDLs listed in Attachment E until the State Water Board reopens this General Permit and includes TMDL-specific permit requirements, unless notified otherwise by a Regional Water Board.
41. The Regional Water Boards shall submit to the State Water Board the following information for each of the TMDLs listed in Attachment E:
- a. Proposed TMDL-specific permit, monitoring and reporting requirements applicable to industrial storm water discharges and NSWDS authorized under this General Permit, including compliance schedules and deliverables consistent with the TMDLs. TMDL-specific permit requirements are not limited by the BAT/BCT technology-based standards;
 - b. An explanation of how the proposed TMDL-specific permit requirements, compliance schedules, and deliverables are consistent with the assumptions and requirements of any applicable waste load allocation and implement each TMDL; and,
 - c. Where a BMP-based approach is proposed, an explanation of how the proposed BMPs will be sufficient to implement applicable waste load allocations.
42. Upon receipt of the information described in Finding 40, and no later than July 1, 2016, the State Water Board will issue a public notice and conduct a public comment period for the reopening of this General Permit to amend Attachment E, the Fact Sheet, and other provisions as necessary for incorporation of TMDL-specific permit requirements into this General Permit. Attachment E may also be subsequently reopened during the term of this General Permit to incorporate additional TMDL-specific permit requirements.

G. Discharges Subject to the California Ocean Plan

43. On October 16, 2012 the State Water Board amended the California Ocean Plan. The amended California Ocean Plan requires industrial storm water dischargers with outfalls discharging to ocean waters to comply with the

California Ocean Plan's model monitoring provisions. These provisions require Dischargers to: (a) monitor runoff for specific parameters at all outfalls from two storm events per year, and collect at least one representative receiving water sample per year, (b) conduct specified toxicity monitoring at certain types of outfalls at a minimum of once per year, and (c) conduct marine sediment monitoring for toxicity under specific circumstances. The California Ocean Plan provides conditions under which some of the above monitoring provisions may be waived by the Water Boards.

44. This General Permit requires Dischargers with outfalls discharging to ocean waters that are subject to the model monitoring provisions of the California Ocean Plan to develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers that have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015 (the effective date of this General Permit), or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.
45. The California Ocean Plan prohibits the direct discharge of waste to ASBS. ASBS are defined in California Ocean Plan as "those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable."
46. The California Ocean Plan authorizes the State Water Board to grant an exception to Ocean Plan provisions where the board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.
47. On March 20, 2012, the State Water Board adopted Resolution 2012-0012 which contains exceptions to the California Ocean Plan for specific discharges of storm water and non-point sources. This resolution also contains the special protections that are to be implemented for those discharges to ASBS.
48. This General Permit requires Dischargers who have been granted an exception to the Ocean Plan authorizing the discharges to ASBS by the State Water Board to comply with the requirements contained in Section VIII.B of this General Permit.

H. Training

49. To improve compliance and maintain consistent implementation of this General Permit, Dischargers are required to designate a Qualified Industrial Storm Water Practitioner (QISP) for each facility the Discharger operates that has entered Level 1 status in the Exceedance Response Action (ERA) process as described in Section XII of this General Permit. A QISP may be assigned to more than one facility. In order to qualify as a QISP, a State

Water Board-sponsored or approved training course must be completed. A competency exam may be required by the State Water Board to demonstrate sufficient knowledge of the QISP course material.

50. A QISP must assist the Discharger in completing the Level 1 status and Level 2 status ERA requirements as specified in Section XII of this General Permit. A QISP is also responsible for assisting New Dischargers that will be discharging to an impaired water body with a 303(d) listed impairment, demonstrate eligibility for coverage through preparing the data and/or information required in Section VII.B.
51. A Compliance Group Leader, as defined in Section XIV of this General Order must complete a State Water Board sponsored or approved training program for Compliance Group Leaders.
52. All engineering work subject to the Professional Engineers Act (Bus. & Prof. Code § 6700, et seq.) and required by this General Permit shall be performed by a California licensed professional engineer.
53. California licensed professional civil, industrial, chemical, and mechanical engineers and geologists have licenses that have professional overlap with the topics of this General Permit. The California Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors and Geologists (CBPELSG) provides the licensure and regulation of professional civil, industrial, chemical, and mechanical engineers and professional geologists in California. The State Water Board is developing a specialized self-guided State Water Board-sponsored registration and training program specifically for these CPBELSG licensed engineers and geologists in good standing with CBPELSG.

I. Storm Water Pollution Prevention Plan (SWPPP) Requirements

54. This General Permit requires the development of a site-specific SWPPP in accordance with Section X of this General Permit. The SWPPP must include the information needed to demonstrate compliance with the requirements of this General Permit. The SWPPP must be submitted electronically via SMARTS, and a copy be kept at the facility. SWPPP revisions shall be completed in accordance with Section X.B of this General Permit

J. Sampling, Visual Observations, Reporting and Record Keeping

55. This General Permit complies with 40 Code of Federal Regulations section 122.44(i), which establishes monitoring requirements that must be included in storm water permits. Under this General Permit, Dischargers are required to:
 - (a) conduct an Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation) to identify areas of the facility contributing pollutants to industrial storm water discharges, (b) evaluate whether measures to reduce or prevent industrial pollutant loads identified in the Discharger's SWPPP are adequate and properly implemented in accordance with the terms of this

General Permit, and (c) determine whether additional control measures are needed.

56. This General Permit contains monitoring requirements that are necessary to determine whether pollutants are being discharged, and whether response actions are necessary. Data and information resulting from the monitoring will assist in Dischargers' evaluations of BMP effectiveness and compliance with this General Permit. Visual observations are one form of monitoring. This General Permit requires Dischargers to perform a variety of visual observations designed to identify pollutants in industrial storm water discharges and their sources. To comply with this General Permit Dischargers shall: (1) electronically self-report any violations via SMARTS, (2) comply with the Level 1 status and Level 2 status ERA requirements, when applicable, and (3) adequately address and respond to any Regional Water Board comments on the Discharger's compliance reports.

57. Dischargers that meet the requirements of the No Exposure Certification (NEC) Conditional Exclusion set forth in Section XVII of this General Permit are exempt from the SWPPP requirements, sampling requirements, and visual observation requirements in this General Permit.

K. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

58. U.S. EPA regulations at 40 Code of Federal Regulations Chapter I Subchapter N (Subchapter N) establish technology-based Effluent Limitation Guidelines and New Source Performance Standards (ELGs) for industrial storm water discharges from facilities in specific industrial categories. For these facilities, compliance with the BAT/BCT and ELG requirements constitutes compliance with technology-based requirements of this General Permit.

59. 40 Code of Federal Regulations section 122.44(i)(3) and (4) require storm water permits to require at least one Annual Evaluation and any monitoring requirements for applicable ELGs in Subchapter N. This General Permit requires Dischargers to comply with all applicable ELG requirements found in Subchapter N.

L. Sampling and Analysis Reduction

60. This General Permit reduces the number of qualifying sampling events required to be sampled each year when the Discharger demonstrates: (1) consistent compliance with this General Permit, (2) consistent effluent water quality sampling, and (3) analysis results that do not exceed numerical action levels.

M. Role of Numeric Action Levels (NALs) and Exceedance Response Actions (ERAs)

61. This General Permit incorporates a multiple objective performance measurement system that includes NALs, new comprehensive training requirements, Level 1 ERA Reports, Level 2 ERA Technical Reports, and Level 2 ERA Action Plans. Two objectives of the performance measurement system are to inform Dischargers, the public and the Water Boards on: (1) the overall pollutant control performance at any given facility, and (2) the overall performance of the industrial statewide storm water program. Additionally, the State Water Board expects that this information and assessment process will provide information necessary to determine the feasibility of numeric effluent limitations for industrial dischargers in the next reissuance of this General Permit, consistent with the State Water Board Storm Water Panel of Experts' June 2006 Recommendations.³
62. This General Permit contains annual and instantaneous maximum NALs. The annual NALs are established as the 2008 MSGP benchmark values, and are applicable for all parameters listed in Table 2. The instantaneous maximum NALs are calculated from a Water Board dataset, and are only applicable for Total Suspended Solids (TSS), Oil and Grease (O&G), and pH. An NAL exceedance is determined as follows:
- a. For annual NALs, an exceedance occurs when the average of all analytical results from all samples taken at a facility during a reporting year for a given parameter exceeds an annual NAL value listed in Table 2 of this General Permit; or,
 - b. For the instantaneous maximum NALs, an exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for Total Suspended Solids, and Oil and Grease), or are outside of the instantaneous maximum NAL range (for pH) listed in Table 2 of this General Permit. For the purposes of this General Permit, the reporting year is July 1 through June 30.
63. The NALs are not intended to serve as technology-based or water quality-based numeric effluent limitations. The NALs are not derived directly from either BAT/BCT requirements or receiving water objectives. NAL exceedances defined in this General Permit are not, in and of themselves, violations of this General Permit. A Discharger that does not fully comply with the Level 1 status and/or Level 2 status ERA requirements, when required by the terms of this General Permit, is in violation of this General Permit.
64. ERAs are designed to assist Dischargers in complying with this General Permit. Dischargers subject to ERAs must evaluate the effectiveness of their

³ State Water Board Storm Water Panel of Experts, The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 19, 2006) <http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf> [as of February 4, 2014].

BMPs being implemented to ensure they are adequate to achieve compliance with this General Permit.

65. U.S. EPA regulations at Subchapter N establish ELGs for storm water discharges from facilities in 11 industrial categories. Dischargers subject to these ELGs are required to comply with the applicable requirements.
66. Exceedances of the NALs that are attributable solely to pollutants originating from non-industrial pollutant sources (such as run-on from adjacent facilities, non-industrial portions of the Discharger's property, or aerial deposition) are not a violation of this General Permit because the NALs are designed to provide feedback on industrial sources of pollutants. Dischargers may submit a Non-Industrial Source Pollutant Demonstration as part of their Level 2 ERA Technical Report to demonstrate that the presence of a pollutant causing an NAL exceedance is attributable solely to pollutants originating from non-industrial pollutant sources.
67. A Discharger who has designed, installed, and implemented BMPs to reduce or prevent pollutants in industrial storm water discharges in compliance with this General Permit may submit an Industrial Activity BMPs Demonstration, as part of their Level 2 ERA Technical Report.
68. This General Permit establishes design storm standards for all treatment control BMPs. These design standards are directly based on the standards in State Water Board Order 2000-0011 regarding Standard Urban Storm Water Mitigation Plans (SUSMPs). These design standards are generally expected to be consistent with BAT/BCT, to be protective of water quality, and to be effective for most pollutants. The standards are intended to eliminate the need for most Dischargers to further treat/control industrial storm water discharges that are unlikely to contain pollutant loadings that exceed the NALs set forth in this General Permit.

N. Compliance Groups

69. Compliance Groups are groups of Dischargers (Compliance Group Participants) that share common types of pollutant sources and industrial activity characteristics. Compliance Groups provide an opportunity for the Compliance Group Participants to combine resources and develop consolidated Level 1 ERA Reports for Level 1 NAL exceedances and appropriate BMPs for implementation in response to Level 2 status ERA requirements that are representative of the entire Compliance Group. Compliance Groups also provide the Water Boards and the public with valuable information as to how industrial storm water discharges are affected by non-industrial background pollutant sources (including natural background) and geographic locations. When developing the next reissuance of this General Permit, the State Water Board expects to have a better understanding of the feasibility and benefits of sector-specific and watershed-based permitting alternatives, which may include technology- or water quality-based numeric effluent limitations. The effluent data, BMP performance data

and other information provided from Compliance Groups' consolidated reporting will further assist the State Water Board in addressing sector-specific and watershed-based permitting alternatives.

O. Conditional Exclusion – No Exposure Certification (NEC)

70. Pursuant to U.S. EPA Phase II regulations, all Dischargers subject to this General Permit may qualify for a conditional exclusion from specific requirements if they submit a NEC demonstrating that their facilities have no exposure of industrial activities and materials to storm water discharges.
71. This General Permit requires Dischargers who seek the NEC conditional exclusion to obtain coverage in accordance with Section XVII of this General Permit. Dischargers that meet the requirements of the NEC are exempt from the SWPPP, sampling requirements, and monitoring requirements in this General Permit.
72. Dischargers seeking NEC coverage are required to certify and submit the applicable permit registration documents. Annual inspections, re-certifications, and fees are required in subsequent years. Light industry facility Dischargers excluded from coverage under the previous permit (Order 97-03-DWQ) must obtain the appropriate coverage under this General Permit. Failure to comply with the Conditional Exclusion conditions listed in this General Permit may lead to enforcement for discharging without a permit pursuant to sections 13385 or 13399.25, et seq., of the Water Code. A Discharger with NEC coverage that anticipates a change (or changes) in circumstances that would lead to exposure should register for permit coverage prior to the anticipated changes.

P. Special Requirements for Facilities Handling Plastic Materials

73. Section 13367 of the Water Code requires facilities handling preproduction plastic to implement specific BMPs aimed at minimizing discharges of such materials. The definition of Plastic Materials for the purposes of this General Permit includes the following types of sources of Plastic Materials: virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other types of preproduction plastics with the potential to discharge or migrate off-site.

Q. Regional Water Board Authorities

74. Regional Water Boards are primarily responsible for enforcement of this General Permit. This General Permit recognizes that Regional Water Boards have the authority to protect the beneficial uses of receiving waters and prevent degradation of water quality in their region. As such, Regional Water Boards may modify monitoring requirements and review, comment, approve or disapprove certain Discharger submittals required under this General Permit.

IT IS HEREBY ORDERED that all Dischargers subject to this General Permit shall comply with the following conditions and requirements.

II. RECEIVING GENERAL PERMIT COVERAGE

A. Certification

1. For Storm Water Multiple Application and Report Tracking System (SMARTS) electronic account management and security reasons, as well as enforceability of this General Permit, the Discharger's Legally Responsible Person (LRP) of an industrial facility seeking coverage under this General Permit shall certify and submit all Permit Registration Documents (PRDs) for Notice of Intent (NOI) or No Exposure Certification (NEC) coverage. All other documents shall be certified and submitted via SMARTS by the Discharger's (LRP) or by their Duly Authorized Representative in accordance with the Electronic Signature and Certification Requirements in Section XXI.K. All documents required by this General Permit that are certified and submitted via SMARTS shall be in accordance with Section XXI.K.
2. Hereinafter references to certifications and submittals by the Discharger refer to the Discharger's LRP and their Duly Authorized Representative.

B. Coverages

This General Permit includes requirements for two (2) types of permit coverage, NOI coverage and NEC coverage. State Water Board Order 97-03-DWQ (previous permit) remains in effect until July 1, 2015. When PRDs are certified and submitted and the annual fee is received, the State Water Board will assign the Discharger a Waste Discharger Identification (WDID) number.

1. General Permit Coverage (NOI Coverage)
 - a. Dischargers that discharge storm water associated with industrial activity to waters of the United States are required to meet all applicable requirements of this General Permit.
 - b. The Discharger shall register for coverage under this General Permit by certifying and submitting PRDs via SMARTS (<http://smarts.waterboards.ca.gov>), which consist of:
 - i. A completed NOI and signed certification statement;
 - ii. A copy of a current Site Map from the Storm Water Pollution Prevention Plan (SWPPP) in Section X.E;
 - iii. A SWPPP (see Section X); and,

- c. The Discharger shall pay the appropriate Annual Fee in accordance with California Code of Regulations, title 23, section 2200 et seq.⁴
2. General Permit Coverage (NEC Coverage)
 - a. Dischargers that certify their facility has no exposure of industrial activities or materials to storm water in accordance with Section XVII qualify for NEC coverage and are not required to comply with the SWPPP or monitoring requirements of this General Permit.
 - b. Dischargers who qualify for NEC coverage shall conduct one Annual Facility Comprehensive Compliance Evaluation (Annual Evaluation) as described in Section XV, pay an annual fee, and certify annually that their facilities continue to meet the NEC requirements.
 - c. The Discharger shall submit the following PRDs on or before October 1, 2015 for NEC coverage via SMARTS:
 - i. A completed NEC Form (Section XVII.F.1) and signed certification statement (Section XVII.H);
 - ii. A completed NEC Checklist (Section XVII.F.2); and
 - iii. A current Site Map consistent with requirements in Section X.E.;
 - d. The Discharger shall pay the appropriate annual fee in accordance with California Code of Regulations, title 23, section 2200 et seq.⁵
3. General PRD Requirements
 - a. Site Maps

Dischargers registering for NOI or NEC coverage shall prepare a site map(s) as part of their PRDs in accordance with Section X.E. A separate copy of the site map(s) is required to be in the SWPPP. If there is a significant change in the facility layout (e.g., new building, change in storage locations, boundary change, etc.) a revision to the site map is required and shall be certified and submitted via SMARTS.
 - b. A Discharger shall submit a single set of PRDs for coverage under this General Permit for multiple industrial activities occurring at the same facility.
 - c. Any information provided to the Water Boards by the Discharger shall comply with the Homeland Security Act and other federal law that

⁴ Annual fees must be mailed or sent electronically using the State Water Boards' Electronic Funds Transfer (EFT) system in SMARTS.

⁵ See footnote 4.

addresses security in the United States; any information that does not comply should not be submitted in the PRDs. The Discharger must provide justification to the Regional Water Board regarding redacted information within any submittal.

- d. Dischargers may redact trade secrets from information that is submitted via SMARTS. Dischargers who certify and submit redacted information via SMARTS must include a general description of the redacted information and the basis for the redaction in the version that is submitted via SMARTS. Dischargers must submit complete and un-redacted versions of the information that are clearly labeled "CONFIDENTIAL" to the Regional Water Board within 30 days of the submittal of the redacted information. All information labeled "CONFIDENTIAL" will be maintained by the Water Boards in a separate, confidential file.
4. Schedule for Submitting PRDs - Existing Dischargers Under the Previous Permit.
 - a. Existing Dischargers⁶ with coverage under the previous permit shall continue coverage under the previous permit until July 1, 2015. All waste discharge requirements and conditions of the previous permit are in effect until July 1, 2015.
 - b. Existing Dischargers with coverage under the previous permit shall register for NOI coverage by July 1, 2015 or for NEC coverage by October 1, 2015. Existing Dischargers previously listed in Category 10 (Light Industry) of the previous permit, and continue to have no exposure to industrial activities and materials, have until October 1, 2015 to register for NEC coverage.
 - c. Existing Dischargers with coverage under the previous permit, that do not register for NOI coverage by July 1, 2015, may have their permit coverage administratively terminated as soon as July 1, 2015.
 - d. Existing Dischargers with coverage under the previous permit that are eligible for NEC coverage but do not register for NEC coverage by October 1, 2015 may have their permit coverage administratively terminated as soon as October 1, 2015.
 - e. Existing Dischargers shall continue to comply with the SWPPP requirements in State Water Board Order 97-03-DWQ up to, but no later than, June 30, 2015.

⁶ Existing Dischargers are Dischargers with an active Notice of Intent (permit coverage) under the previous permit (97-03-DWQ) prior to the effective date of this General Permit.

- f. Existing Dischargers shall implement an updated SWPPP in accordance with Section X by July 1, 2015.
 - g. Existing Dischargers that submit a Notice of Termination (NOT) under the previous permit prior to July 1, 2015 and that receive NOT approval from the Regional Water Board are not subject to this General Permit unless they subsequently submitted new PRDs.
5. Schedule for Submitting PRDs - New Dischargers Obtaining Coverage On or After July 1, 2015
- New Dischargers registering for NOI coverage on or after July 1, 2015 shall certify and submit PRDs via SMARTS at least seven (7) days prior to commencement of industrial activities or on July 1, 2015, whichever comes later.
- a. New Dischargers registering for NEC coverage shall electronically certify and submit PRDs via SMARTS by October 1, 2015, or at least seven (7) days prior to commencement of industrial activities, whichever is later.

C. Termination and Changes to General Permit Coverage

1. Dischargers with NOI or NEC coverage shall request termination of coverage under this General Permit when either (a) operation of the facility has been transferred to another entity, (b) the facility has ceased operations, completed closure activities, and removed all industrial related pollutants, or (c) the facility's operations have changed and are no longer subject to the General Permit. Dischargers shall certify and submit a Notice of Termination via SMARTS. Until a valid NOT is received, the Discharger remains responsible for compliance with this General Permit and payment of accrued annual fees.
2. Whenever there is a change to the facility location, the Discharger shall certify and submit new PRDs via SMARTS. When ownership changes, the prior Discharger (seller) must inform the new Discharger (buyer) of the General Permit applications and regulatory coverage requirements. The new Discharger must certify and submit new PRDs via SMARTS to obtain coverage under this General Permit.
3. Dischargers with NOI coverage where the facility qualifies for NEC coverage in accordance with Section XVII of this General Permit, may register for NEC coverage via SMARTS. Such Dischargers are not required to submit an NOT to cancel NOI coverage.
4. Dischargers with NEC coverage, where changes in the facility and/or facility operations occur, which result in NOI coverage instead of NEC coverage, shall register for NOI coverage via SMARTS. Such Dischargers are not required to submit an NOT to cancel NEC coverage.

5. Dischargers shall provide additional information supporting an NOT, or revise their PRDs via SMARTS, upon request by the Regional Water Board.
6. Dischargers that are denied approval of a submitted NOT or registration for NEC coverage by the Regional Water Board, shall continue compliance with this General Permit under their existing NOI coverage.
7. New Dischargers (Dischargers with no previous NOI or NEC coverage) shall register for NOI coverage if the Regional Water Board denies NEC coverage.

D. Preparation Requirements

1. The following documents shall be certified and submitted by the Discharger via SMARTS:
 - a. Annual Reports (Section XVI) and SWPPPs (Section X);
 - b. NOTs;
 - c. Sampling Frequency Reduction Certification (Section XI.C.7);
 - d. Level 1 ERA Reports (Section XII.C) prepared by a QISP;
 - e. Level 2 ERA Technical Reports and Level 2 ERA Action Plans (Sections XII.D.1-2) prepared by a QISP; and,
 - f. SWPPPs for inactive mining operations as described in Section XIII, signed (wet signature and license number) by a California licensed professional engineer.
2. The following documents shall be signed (wet signature and license number) by a California licensed professional engineer:
 - a. Calculations for Dischargers subject to Subchapter N in accordance with Section XI.D;
 - b. Notice of Non-Applicability (NONA) Technical Reports described in Section XX.C for facilities that are engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website;
 - c. NONA Technical Reports described in Section XX.C for facilities located in basins or other physical locations that are not tributaries or hydrologically connected to waters of the United States; and,
 - d. SWPPPs for inactive mines described in Section XIII.

III. DISCHARGE PROHIBITIONS

- A. All discharges of storm water to waters of the United States are prohibited except as specifically authorized by this General Permit or another NPDES permit.
- B. Except for non-storm water discharges (NSWDs) authorized in Section IV, discharges of liquids or materials other than storm water, either directly or indirectly to waters of the United States, are prohibited unless authorized by another NPDES permit. Unauthorized NSWDs must be either eliminated or authorized by a separate NPDES permit.
- C. Industrial storm water discharges and authorized NSWDs that contain pollutants that cause or threaten to cause pollution, contamination, or nuisance as defined in section 13050 of the Water Code, are prohibited.
- D. Discharges that violate any discharge prohibitions contained in applicable Regional Water Board Water Quality Control Plans (Basin Plans), or statewide water quality control plans and policies are prohibited.
- E. Discharges to ASBS are prohibited in accordance with the California Ocean Plan, unless granted an exception by the State Water Board and in compliance with the Special Protections contained in Resolution 2012-0012.
- F. Industrial storm water discharges and NSWDs authorized by this General Permit that contain hazardous substances equal to or in excess of a reportable quantity listed in 40 Code of Federal Regulations sections 110.6, 117.21, or 302.6 are prohibited.

IV. AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- A. The following NSWDs are authorized provided they meet the conditions of Section IV.B:
 - 1. Fire-hydrant and fire prevention or response system flushing;
 - 2. Potable water sources including potable water related to the operation, maintenance, or testing of potable water systems;
 - 3. Drinking fountain water and atmospheric condensate including refrigeration, air conditioning, and compressor condensate;
 - 4. Irrigation drainage and landscape watering provided all pesticides, herbicides and fertilizers have been applied in accordance with the manufacturer's label;
 - 5. Uncontaminated natural springs, groundwater, foundation drainage, footing drainage;

6. Seawater infiltration where the seawater is discharged back into the source:
and,
 7. Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g., “piped” cooling tower blowdown or drains).
- B.** The NSWDs identified in Section IV.A are authorized by this General Permit if the following conditions are met:
1. The authorized NSWDs are not in violation of any Regional Water Board Water Quality Control Plans (Basin Plans) or other requirements, or statewide water quality control plans or policies requirement;
 2. The authorized NSWDs are not in violation of any municipal agency ordinance or requirements;
 3. BMPs are included in the SWPPP and implemented to:
 - a. Reduce or prevent the contact of authorized NSWDs with materials or equipment that are potential sources of pollutants;
 - b. Reduce, to the extent practicable, the flow or volume of authorized NSWDs;
 - c. Ensure that authorized NSWDs do not contain quantities of pollutants that cause or contribute to an exceedance of a water quality standards;
and,
 - d. Reduce or prevent discharges of pollutants in authorized NSWDs in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.
 4. The Discharger conducts monthly visual observations (Section XI.A.1) of NSWDs and sources to ensure adequate BMP implementation and effectiveness; and,
 5. The Discharger reports and describes all authorized NSWDs in the Annual Report.
- C.** Firefighting related discharges are not subject to this General Permit and are not subject to the conditions of Section IV.B. These discharges, however, may be subject to Regional Water Board enforcement actions under other sections of the Water Code. Firefighting related discharges that are contained and are later discharged may be subject to municipal agency ordinances and/or Regional Water Board requirements.

V. EFFLUENT LIMITATIONS

- A. Dischargers shall implement BMPs that comply with the BAT/BCT requirements of this General Permit to reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.
- B. Industrial storm water discharges from facilities subject to storm water ELGs in Subchapter N shall not exceed those storm water ELGs. The ELGs for industrial storm water discharges subject to Subchapter N are in Attachment F of this General Permit.
- C. Dischargers located within a watershed for which a Total Maximum Daily Load (TMDL) has been approved by U.S. EPA, shall comply with any applicable TMDL-specific permit requirements that have been incorporated into this General Permit in accordance with Section VII.A. Attachment E contains a reference list of potential TMDLs that may apply to Dischargers subject to this General Permit.

VI. RECEIVING WATER LIMITATIONS

- A. Dischargers shall ensure that industrial storm water discharges and authorized NSWDS do not cause or contribute to an exceedance of any applicable water quality standards in any affected receiving water.
- B. Dischargers shall ensure that industrial storm water discharges and authorized NSWDS do not adversely affect human health or the environment.
- C. Dischargers shall ensure that industrial storm water discharges and authorized NSWDS do not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

VII. TOTAL MAXIMUM DAILY LOADS (TMDLs)

A. Implementation

1. The State Water Board shall reopen and amend this General Permit, including Attachment E, the Fact Sheet and other applicable Permit provisions as necessary, in order to incorporate TMDL-specific permit requirements, as described in Findings 38 through 42. Once this General Permit is amended, Dischargers shall comply with the incorporated TMDL-specific permit requirements in accordance with any specified compliance schedule(s). TMDL-specific compliance dates that exceed the term of this General Permit may be included for reference, and are enforceable in the event that this General Permit is administratively extended or reissued.
2. The State Water Board may, at its discretion, reopen this General Permit to add TMDL-specific permit requirements to Attachment E, or to incorporate new TMDLs adopted during the term of this General Permit that include requirements applicable to Dischargers covered by this General Permit.

- B.** New Dischargers applying for NOI coverage under this General Permit that will be discharging to a water body with a 303(d) listed impairment are ineligible for coverage unless the Discharger submits data and/or information, prepared by a QISP, demonstrating that:
1. The Discharger has eliminated all exposure to storm water of the pollutant(s) for which the water body is impaired, has documented the procedures taken to prevent exposure onsite, and has retained such documentation with the SWPPP at the facility;
 2. The pollutant for which the water body is impaired is not present at the Discharger's facility, and the Discharger has retained documentation of this finding with the SWPPP at the facility; or,
 3. The discharge of any listed pollutant will not cause or contribute to an exceedance of a water quality standard. This is demonstrated if: (1) the discharge complies with water quality standard at the point of discharge, or (2) if there are sufficient remaining waste load allocations in an approved TMDL and the discharge is controlled at least as stringently as similar discharges subject to that TMDL.

VIII. DISCHARGES SUBJECT TO THE CALIFORNIA OCEAN PLAN

A. Discharges to Ocean Waters

1. Dischargers with outfalls discharging to ocean waters that are subject to the model monitoring provisions of the California Ocean Plan shall develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015, or seven (7) days prior to commencing of operations, whichever is later, are ineligible to obtain coverage under this General Permit.
2. Dischargers are ineligible for the methods and exceptions provided in Section XI.C of this General permit for any of the outfalls discharging to ocean waters subject to the model monitoring provisions of the California Ocean Plan.

B. Discharge Granted an Exceptions for Areas of Special Biological Significance (ASBS)

Dischargers who were granted an exception to the California Ocean Plan prohibition against direct discharges of waste to an ASBS pursuant to Resolution 2012-0012⁷ amended by Resolution 2012-0031⁸ shall comply with the conditions and requirements set forth in Attachment G of this General Permit. Any Discharger that applies for and is granted an exception to the California Ocean Plan prohibition after July 1, 2013 shall comply with the conditions and requirements set forth in the granted exception.

IX. TRAINING QUALIFICATIONS

A. General

1. A Qualified Industrial Storm Water Practitioner (QISP) is a person (either the Discharger or a person designated by the Discharger) who has completed a State Water Board-sponsored or approved QISP training course⁹, and has registered as a QISP via SMARTS. Upon completed registration the State Water Board will issue a QISP identification number.
2. The Executive Director of the State Water Board or an Executive Officer of a Regional Water Board may rescind any QISP's registration if it is found that the QISP has repeatedly demonstrated an inadequate level of performance in completing the QISP requirements in this General Permit. An individual whose QISP registration has been rescinded may request that the State Water Board review the rescission. Any request for review must be received by the State Water Board no later than 30 days of the date that the individual received written notice of the rescission.
3. Dischargers with Level 1 status shall:
 - a. Designate a person to be the facility's QISP and ensure that this person has attended and satisfactorily completed the State Water Board-sponsored or approved QISP training course.
 - b. Ensure that the facility's designated QISP provides sufficient training to the appropriate team members assigned to perform activities required by this General Permit.

⁷ State Water Resources Control Board. Resolution 2012-0012. <http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0012.pdf>. [as of February 4, 2014].

⁸ State Water Resources Control Board. Resolution 2012-0031. <http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0031.pdf>. [as of February 4, 2014].

⁹ A specialized self-guided State Water Board-sponsored registration and training program will be available as an option for CPBELSG licensed professional civil, mechanical, industrial, and chemical engineers and professional geologists by the effective date of this General Permit.

X. Storm Water Pollution Prevention Plan (SWPPP)**A. SWPPP Elements**

Dischargers shall develop and implement a site-specific SWPPP for each industrial facility covered by this General Permit that shall contain the following elements, as described further in this Section¹⁰:

1. Facility Name and Contact Information;
2. Site Map;
3. List of Industrial Materials;
4. Description of Potential Pollution Sources;
5. Assessment of Potential Pollutant Sources;
6. Minimum BMPs;
7. Advanced BMPs, if applicable;
8. Monitoring Implementation Plan;
9. Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation); and,
10. Date that SWPPP was Initially Prepared and the Date of Each SWPPP Amendment, if Applicable.

B. SWPPP Implementation and Revisions

All Dischargers are required to implement their SWPPP by July 1, 2015 or upon commencement of industrial activity. The Discharger shall:

1. Revise their on-site SWPPP whenever necessary;
2. Certify and submit via SMARTS their SWPPP within 30 days whenever the SWPPP contains significant revision(s); and,
3. With the exception of significant revisions, the Discharger is not required to certify and submit via SMARTS their SWPPP revisions more than once every three (3) months in the reporting year.

¹⁰ Appendix 1 (SWPPP Checklist) of this General Permit is provided to assist the Discharger in including information required in the SWPPP. This checklist is not required to be used.

C. SWPPP Performance Standards

1. The Discharger shall ensure a SWPPP is prepared to:
 - a. Identify and evaluate all sources of pollutants that may affect the quality of industrial storm water discharges and authorized NSWDS;
 - b. Identify and describe the minimum BMPs (Section X.H.1) and any advanced BMPs (Section X.H.2) implemented to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDS. BMPs shall be selected to achieve compliance with this General Permit; and,
 - c. Identify and describe conditions or circumstances which may require future revisions to be made to the SWPPP.
2. The Discharger shall prepare a SWPPP in accordance with all applicable SWPPP requirements of this Section. A copy of the SWPPP shall be maintained at the facility.

D. Planning and Organization

1. Pollution Prevention Team

Each facility must have a Pollution Prevention Team established and responsible for assisting with the implementation of the requirements in this General Permit. The Discharger shall include in the SWPPP detailed information about its Pollution Prevention Team including:

- a. The positions within the facility organization (collectively, team members) who assist in implementing the SWPPP and conducting all monitoring requirements in this General Permit;
- b. The responsibilities, duties, and activities of each of the team members; and,
- c. The procedures to identify alternate team members to implement the SWPPP and conduct required monitoring when the regularly assigned team members are temporarily unavailable (due to vacation, illness, out of town business, or other absences).

2. Other Requirements and Existing Facility Plans

- a. The Discharger shall ensure its SWPPP is developed, implemented, and revised as necessary to be consistent with any applicable municipal, state, and federal requirements that pertain to the requirements in this General Permit.
- b. The Discharger may include in their SWPPP the specific elements of existing plans, procedures, or regulatory compliance documents that

contain storm water-related BMPs or otherwise relate to the requirements of this General Permit.

- c. The Discharger shall properly reference the original sources for any elements of existing plans, procedures, or regulatory compliance documents included as part of their SWPPP and shall maintain a copy of the documents at the facility as part of the SWPPP.
- d. The Discharger shall document in their SWPPP the facility's scheduled operating hours as defined in Attachment C. Scheduled facility operating hours that would be considered irregular (temporary, intermittent, seasonal, weather dependent, etc.) shall also be documented in the SWPPP.

E. Site Map

1. The Discharger shall prepare a site map that includes notes, legends, a north arrow, and other data as appropriate to ensure the map is clear, legible and understandable.
2. The Discharger may provide the required information on multiple site maps.
3. The Discharger shall include the following information on the site map:
 - a. The facility boundary, storm water drainage areas within the facility boundary, and portions of any drainage area impacted by discharges from surrounding areas. Include the flow direction of each drainage area, on-facility surface water bodies, areas of soil erosion, and location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.) or municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized NSWDS;
 - b. Locations of storm water collection and conveyance systems, associated discharge locations, and direction of flow. Include any sample locations if different than the identified discharge locations;
 - c. Locations and descriptions of structural control measures¹¹ that affect industrial storm water discharges, authorized NSWDS, and/or run-on;
 - d. Identification of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;

¹¹ Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

- e. Locations where materials are directly exposed to precipitation and the locations where identified significant spills or leaks (Section X.G.1.d) have occurred; and
- f. Areas of industrial activity subject to this General Permit. Identify all industrial storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and material reuse areas, and other areas of industrial activity that may have potential pollutant sources.

F. List of Industrial Materials

The Discharger shall ensure the SWPPP includes a list of industrial materials handled at the facility, and the locations where each material is stored, received, shipped, and handled, as well as the typical quantities and handling frequency.

G. Potential Pollutant Sources

1. Description of Potential Pollutant Sources

a. Industrial Processes

The Discharger shall ensure the SWPPP describes each industrial process including: manufacturing, cleaning, maintenance, recycling, disposal, and any other activities related to the process. The type, characteristics, and approximate quantity of industrial materials used in or resulting from the process shall be included. Areas protected by containment structures and the corresponding containment capacity shall be identified and described.

b. Material Handling and Storage Areas

The Discharger shall ensure the SWPPP describes each material handling and storage area, including: the type, characteristics, and quantity of industrial materials handled or stored; the shipping, receiving, and loading procedures; the spill or leak prevention and response procedures; and the areas protected by containment structures and the corresponding containment capacity.

c. Dust and Particulate Generating Activities

The Discharger shall ensure the SWPPP describes all industrial activities that generate a significant amount of dust or particulate that may be deposited within the facility boundaries. The SWPPP shall describe such industrial activities, including the discharge locations, the source type, and the characteristics of the dust or particulate pollutant.

d. Significant Spills and Leaks

The Discharger shall:

- i. Evaluate the facility for areas where spills and leaks can likely occur;
- ii. Ensure the SWPPP includes:
 - a) A list of any industrial materials that have spilled or leaked in significant quantities and have discharged from the facility's storm water conveyance system within the previous five-year period;
 - b) A list of any toxic chemicals identified in 40 Code of Federal Regulations section 302 that have been discharged from the facilities' storm water conveyance system as reported on U.S. EPA Form R, as well as oil and hazardous substances in excess of reportable quantities (40 C.F.R. §§ 110, 117, and 302) that have discharged from the facility's storm water conveyance system within the previous five-year period;
 - c) A list of any industrial materials that have spilled or leaked in significant quantities and had the potential to be discharged from the facility's storm water conveyance system within the previous five-year period; and,
- iii. Ensure that for each discharge or potential discharge listed above the SWPPP includes the location, characteristics, and approximate quantity of the materials spilled or leaked; approximate quantity of the materials discharged from the facility's storm water conveyance system; the cleanup or remedial actions that have occurred or are planned; the approximate remaining quantity of materials that have the potential to be discharged; and the preventive measures taken to ensure spills or leaks of the material do not reoccur.

e. NSWDS

The Discharger shall:

- i. Ensure the SWPPP includes an evaluation of the facility that identifies all NSWDS, sources, and drainage areas;
- ii. Ensure the SWPPP includes an evaluation of all drains (inlets and outlets) that identifies connections to the storm water conveyance system;
- iii. Ensure the SWPPP includes a description of how all unauthorized NSWDS have been eliminated; and,

- iv. Ensure all NSWDs are described in the SWPPP. This description shall include the source, quantity, frequency, and characteristics of the NSWDs, associated drainage area, and whether it is an authorized or unauthorized NSWD in accordance with Section IV.
- f. Erodible Surfaces

The Discharger shall ensure the SWPPP includes a description of the facility locations where soil erosion may be caused by industrial activity, contact with storm water, authorized and unauthorized NSWDs, or run-on from areas surrounding the facility.

2. Assessment of Potential Pollutant Sources

- a. The Discharger shall ensure that the SWPPP includes a narrative assessment of all areas of industrial activity with potential industrial pollutant sources. At a minimum, the assessment shall include:
 - i. The areas of the facility with likely sources of pollutants in industrial storm water discharges and authorized NSWDs;
 - ii. The pollutants likely to be present in industrial storm water discharges and authorized NSWDs;
 - iii. The approximate quantity, physical characteristics (e.g., liquid, powder, solid, etc.), and locations of each industrial material handled, produced, stored, recycled, or disposed;
 - iv. The degree to which the pollutants associated with those materials may be exposed to, and mobilized by contact with, storm water;
 - v. The direct and indirect pathways by which pollutants may be exposed to storm water or authorized NSWDs;
 - vi. All sampling, visual observation, and inspection records;
 - vii. The effectiveness of existing BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDs;
 - viii. The estimated effectiveness of implementing, to the extent feasible, minimum BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDs; and,
 - ix. The identification of the industrial pollutants related to the receiving waters with 303(d) listed impairments identified in Appendix 3 or approved TMDLs that may be causing or contributing to an exceedance of a water quality standard in the receiving waters.
- b. Based upon the assessment above, Dischargers shall identify in the SWPPP any areas of the facility where the minimum BMPs described in

subsection H.1 below will not adequately reduce or prevent pollutants in storm water discharges in compliance with Section V.A. Dischargers shall identify any advanced BMPs, as described in subsection H.2 below, for those areas.

- c. Based upon the assessment above, Dischargers shall identify any drainage areas with no exposure to industrial activities and materials in accordance with the definitions in Section XVII.
- d. Based upon the assessment above, Dischargers shall identify any additional parameters, beyond the required parameters in Section XI.B.6 that indicate the presence of pollutants in industrial storm water discharges.

H. Best Management Practices (BMPs)

1. Minimum BMPs

The Discharger shall, to the extent feasible, implement and maintain all of the following minimum BMPs to reduce or prevent pollutants in industrial storm water discharges.¹²

a. Good Housekeeping

The Discharger shall:

- i. Observe all outdoor areas associated with industrial activity; including storm water discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas impacted by off-facility materials or storm water run-on to determine housekeeping needs. Any identified debris, waste, spills, tracked materials, or leaked materials shall be cleaned and disposed of properly;
- ii. Minimize or prevent material tracking;
- iii. Minimize dust generated from industrial materials or activities;
- iv. Ensure that all facility areas impacted by rinse/wash waters are cleaned as soon as possible;
- v. Cover all stored industrial materials that can be readily mobilized by contact with storm water;

¹² For the purposes of this General Permit, the requirement to implement BMPs “to the extent feasible” requires Dischargers to select, design, install and implement BMPs that reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

- vi. Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with storm water;
 - vii. Prevent disposal of any rinse/wash waters or industrial materials into the storm water conveyance system;
 - viii. Minimize storm water discharges from non-industrial areas (e.g., storm water flows from employee parking area) that contact industrial areas of the facility; and,
 - ix. Minimize authorized NSWDS from non-industrial areas (e.g., potable water, fire hydrant testing, etc.) that contact industrial areas of the facility.
- b. Preventive Maintenance
- The Discharger shall:
- i. Identify all equipment and systems used outdoors that may spill or leak pollutants;
 - ii. Observe the identified equipment and systems to detect leaks, or identify conditions that may result in the development of leaks;
 - iii. Establish an appropriate schedule for maintenance of identified equipment and systems; and,
 - iv. Establish procedures for prompt maintenance and repair of equipment, and maintenance of systems when conditions exist that may result in the development of spills or leaks.
- c. Spill and Leak Prevention and Response
- The Discharger shall:
- i. Establish procedures and/or controls to minimize spills and leaks;
 - ii. Develop and implement spill and leak response procedures to prevent industrial materials from discharging through the storm water conveyance system. Spilled or leaked industrial materials shall be cleaned promptly and disposed of properly;
 - iii. Identify and describe all necessary and appropriate spill and leak response equipment, location(s) of spill and leak response equipment, and spill or leak response equipment maintenance procedures; and,
 - iv. Identify and train appropriate spill and leak response personnel.
- d. Material Handling and Waste Management

The Discharger shall:

- i. Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with storm water during a storm event;
 - ii. Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with storm water;
 - iii. Cover industrial waste disposal containers and industrial material storage containers that contain industrial materials when not in use;
 - iv. Divert run-on and storm water generated from within the facility away from all stockpiled materials;
 - v. Clean all spills of industrial materials or wastes that occur during handling in accordance with the spill response procedures (Section X.H.1.c); and,
 - vi. Observe and clean as appropriate, any outdoor material or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes.
- e. Erosion and Sediment Controls

For each erodible surface facility location identified in the SWPPP (Section X.G.1.f), the Discharger shall:

- i. Implement effective wind erosion controls;
 - ii. Provide effective stabilization for inactive areas, finished slopes, and other erodible areas prior to a forecasted storm event;
 - iii. Maintain effective perimeter controls and stabilize all site entrances and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site;
 - iv. Divert run-on and storm water generated from within the facility away from all erodible materials; and,
 - v. If sediment basins are implemented, ensure compliance with the design storm standards in Section X.H.6.
- f. Employee Training Program

The Discharger shall:

- i. Ensure that all team members implementing the various compliance activities of this General Permit are properly trained to implement the requirements of this General Permit, including but not limited to: BMP implementation, BMP effectiveness evaluations, visual observations,

and monitoring activities. If a Discharger enters Level 1 status, appropriate team members shall be trained by a QISP;

- ii. Prepare or acquire appropriate training manuals or training materials;
 - iii. Identify which personnel need to be trained, their responsibilities, and the type of training they shall receive;
 - iv. Provide a training schedule; and,
 - v. Maintain documentation of all completed training classes and the personnel that received training in the SWPPP.
- g. Quality Assurance and Record Keeping

The Discharger shall:

- i. Develop and implement management procedures to ensure that appropriate staff implements all elements of the SWPPP, including the Monitoring Implementation Plan;
- ii. Develop a method of tracking and recording the implementation of BMPs identified in the SWPPP; and
- iii. Maintain the BMP implementation records, training records, and records related to any spills and clean-up related response activities for a minimum of five (5) years (Section XXI.J.4).

2. Advanced BMPs

- a. In addition to the minimum BMPs described in Section X.H.1, the Discharger shall, to the extent feasible, implement and maintain any advanced BMPs identified in Section X.G.2.b, necessary to reduce or prevent discharges of pollutants in its storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.
- b. Advanced BMPs may include one or more of the following BMPs:

- i. Exposure Minimization BMPs

These include storm resistant shelters (either permanent or temporary) that prevent the contact of storm water with the identified industrial materials or area(s) of industrial activity.

- ii. Storm Water Containment and Discharge Reduction BMPs

These include BMPs that divert, infiltrate, reuse, contain, retain, or reduce the volume of storm water runoff. Dischargers are

encouraged to utilize BMPs that infiltrate or reuse storm water where feasible.

iii. Treatment Control BMPs

This is the implementation of one or more mechanical, chemical, biologic, or any other treatment technology that will meet the treatment design standard.

iv. Other Advanced BMPs

Any additional BMPs not described in subsections b.i through iii above that are necessary to meet the effluent limitations of this General Permit.

3. Temporary Suspension of Industrial Activities

For facilities that plan to temporarily suspend industrial activities for ten (10) or more consecutive calendar days during a reporting year, the Discharger may also suspend monitoring if it is infeasible to conduct monitoring while industrial activities are suspended (e.g., the facility is not staffed, or the facility is remote or inaccessible) and the facility has been stabilized. The Discharger shall include in the SWPPP the BMPs necessary to achieve compliance with this General Permit during the temporary suspension of the industrial activity. Once all necessary BMPs have been implemented to stabilize the facility, the Discharger is not required to:

- a. Perform monthly visual observations (Section XI.A.1.a.); or,
- b. Perform sampling and analysis (Section XI.B.) if it is infeasible to do so (e.g. facility is remotely located).

The Discharger shall upload via SMARTS (7) seven calendar days prior to the planned temporary suspension of industrial activities:

- a. SWPPP revisions specifically addressing the facility stabilization BMPs;
- b. The justification for why monitoring is infeasible at the facility during the period of temporary suspension of industrial activities;
- c. The date the facility is fully stabilized for temporary suspension of industrial activities; and,
- d. The projected date that industrial activities will resume at the facility.

Upon resumption of industrial activities at the facility, the Discharger shall, via SMARTS, confirm and/or update the date the facility's industrial activities have resumed. At this time, the Discharger is required to resume all compliance activities under this General Permit.

The Regional Water Boards may review the submitted information pertaining to the temporary suspension of industrial activities. Upon review, the Regional Water Board may request revisions or reject the Discharger's request to temporarily suspend monitoring.

4. BMP Descriptions

- a. The Discharger shall ensure that the SWPPP identifies each BMP being implemented at the facility, including:
 - i. The pollutant(s) that the BMP is designed to reduce or prevent in industrial storm water discharges;
 - ii. The frequency, time(s) of day, or conditions when the BMP is scheduled for implementation;
 - iii. The locations within each area of industrial activity or industrial pollutant source where the BMP shall be implemented;
 - iv. The individual and/or position responsible for implementing the BMP;
 - v. The procedures, including maintenance procedures, and/or instructions to implement the BMP effectively;
 - vi. The equipment and tools necessary to implement the BMP effectively; and,
 - vii. The BMPs that may require more frequent visual observations beyond the monthly visual observations as described in Section XI.A.1.
- b. The Discharger shall ensure that the SWPPP identifies and justifies each minimum BMP or applicable advanced BMP not being implemented at the facility because they do not reflect best industry practice considering technological availability and economic practicability and achievability.
- c. The Discharger shall identify any BMPs described in subsection a above that are implemented in lieu of any of the minimum or applicable advanced BMPs.

5. BMP Summary Table

The Discharger shall prepare a table summarizing each identified area of industrial activity, the associated industrial pollutant sources, the industrial pollutants, and the BMPs being implemented.

6. Design Storm Standards for Treatment Control BMPs

All new treatment control BMPs employed by the Discharger to comply with Section X.H.2 Advanced BMPs and new sediment basins installed after the effective date of this order shall be designed to comply with design storm standards in this Section, except as provided in an Industrial Activity BMP Demonstration (Section XII.D.2.a). A Factor of Safety shall be incorporated into the design of all treatment control BMPs to ensure that storm water is sufficiently treated throughout the life of the treatment control BMPs. The design storm standards for treatment control BMPs are as follows:

- a. Volume-based BMPs: The Discharger, at a minimum, shall calculate¹³ the volume to be treated using one of the following methods:
 - i. The volume of runoff produced from an 85th percentile 24-hour storm event, as determined from local, historical rainfall records;
 - ii. The volume of runoff produced by the 85th percentile 24-hour storm event, determined as the maximized capture runoff volume for the facility, from the formula recommended in the Water Environment Federation's Manual of Practice;¹⁴ or,
 - iii. The volume of annual runoff required to achieve 80% or more treatment, determined in accordance with the methodology set forth in the latest edition of California Stormwater Best Management Practices Handbook¹⁵, using local, historical rainfall records.
- b. Flow-based BMPs: The Discharger shall calculate the flow needed to be treated using one of the following methods:
 - i. The maximum flow rate of runoff produced from a rainfall intensity of at least 0.2 inches per hour for each hour of a storm event;
 - ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from local historical rainfall records, multiplied by a factor of two; or,
 - iii. The maximum flow rate of runoff, as determined using local historical rainfall records, that achieves approximately the same reduction in total pollutant loads as would be achieved by treatment of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

¹³ All hydrologic calculations shall be certified by a California licensed professional engineer in accordance with the Professional Engineers Act (Bus. & Prof. Code § 6700, et seq).

¹⁴ Water Environment Federation (WEF). Manual of Practice No. 23/ ASCE Manual of Practice No. 87, cited in chapter 5 (1998 Edition) and Cited in Chapter 3 (2012 Edition) .

¹⁵ California Stormwater Quality Association. Stormwater Best Management Practice New Development and Redevelopment Handbook. < <http://www.casqa.org/> >. [as of July 3, 2013].

I. MONITORING IMPLEMENTATION PLAN

The Discharger shall prepare a Monitoring Implementation Plan in accordance with the requirements of this General Permit. The Monitoring Implementation Plan shall be included in the SWPPP and shall include the following items:

1. An identification of team members assigned to conduct the monitoring requirements;
2. A description of the following in accordance with Attachment H:
 - a. Discharge locations;
 - b. Visual observation procedures; and,
 - c. Visual observation response procedures related to monthly visual observations and sampling event visual observations.
3. Justifications for any of the following that are applicable to the facility:
 - a. Alternative discharge locations in accordance with Section XI.C.3;
 - b. Representative Sampling Reduction in accordance with Section XI.C.4; or,
 - c. Qualified Combined Samples in accordance with Section XI.C.5.
4. Procedures for field instrument calibration instructions, including calibration intervals specified by the manufacturer; and,
5. An example Chain of Custody form used when handling and shipping water quality samples to the lab.

XI. MONITORING

A. Visual Observations

1. Monthly Visual Observations
 - a. At least once per calendar month, the Discharger shall visually observe each drainage area for the following:
 - i. The presence or indications of prior, current, or potential unauthorized NSWDS and their sources;
 - ii. Authorized NSWDS, sources, and associated BMPs to ensure compliance with Section IV.B.3; and,

- iii. Outdoor industrial equipment and storage areas, outdoor industrial activities areas, BMPs, and all other potential source of industrial pollutants.
- b. The monthly visual observations shall be conducted during daylight hours of scheduled facility operating hours and on days without precipitation.
- c. The Discharger shall provide an explanation in the Annual Report for uncompleted monthly visual observations.

2. Sampling Event Visual Observations

Sampling event visual observations shall be conducted at the same time sampling occurs at a discharge location. At each discharge location where a sample is obtained, the Discharger shall observe the discharge of storm water associated with industrial activity.

- a. The Discharger shall ensure that visual observations of storm water discharged from containment sources (e.g. secondary containment or storage ponds) are conducted at the time that the discharge is sampled.
- b. Any Discharger employing volume-based or flow-based treatment BMPs shall sample any bypass that occurs while the visual observations and sampling of storm water discharges are conducted.
- c. The Discharger shall visually observe and record the presence or absence of floating and suspended materials, oil and grease, discolorations, turbidity, odors, trash/debris, and source(s) of any discharged pollutants.
- d. In the event that a discharge location is not visually observed during the sampling event, the Discharger shall record which discharge locations were not observed during sampling or that there was no discharge from the discharge location.
- e. The Discharger shall provide an explanation in the Annual Report for uncompleted sampling event visual observations.

3. Visual Observation Records

The Discharger shall maintain records of all visual observations. Records shall include the date, approximate time, locations observed, presence and probable source of any observed pollutants, name of person(s) that conducted the observations, and any response actions and/or additional SWPPP revisions necessary in response to the visual observations.

4. The Discharger shall revise BMPs as necessary when the visual observations indicate pollutant sources have not been adequately addressed in the SWPPP.

B. Sampling and Analysis

1. A Qualifying Storm Event (QSE) is a precipitation event that:
 - a. Produces a discharge for at least one drainage area; and,
 - b. Is preceded by 48 hours with no discharge from any drainage area.
2. The Discharger shall collect and analyze storm water samples from two (2) QSEs within the first half of each reporting year (July 1 to December 31), and two (2) QSEs within the second half of each reporting year (January 1 to June 30).
3. Compliance Group Participants are only required to collect and analyze storm water samples from one (1) QSE within the first half of each reporting year (July 1 to December 31) and one (1) QSE within the second half of the reporting year (January 1 to June 30).
4. Except as provided in Section XI.C.4 (Representative Sampling Reduction), samples shall be collected from each drainage area at all discharge locations. The samples must be:
 - a. Representative of storm water associated with industrial activities and any commingled authorized NSWDS; or,
 - b. Associated with the discharge of contained storm water.
5. Samples from each discharge location shall be collected within four (4) hours of:
 - a. The start of the discharge; or,
 - b. The start of facility operations if the QSE occurs within the previous 12-hour period (e.g., for storms with discharges that begin during the night for facilities with day-time operating hours). Sample collection is required during scheduled facility operating hours and when sampling conditions are safe in accordance with Section XI.C.6.a.ii.
6. The Discharger shall analyze all collected samples for the following parameters:
 - a. Total suspended solids (TSS) and oil and grease (O&G);
 - b. pH (see Section XI.C.2);

- c. Additional parameters identified by the Discharger on a facility-specific basis that serve as indicators of the presence of all industrial pollutants identified in the pollutant source assessment (Section X.G.2). These additional parameters may be modified (added or removed) in accordance with any updated SWPPP pollutant source assessment;
 - d. Additional applicable parameters listed in Table 1 below. These parameters are dependent on the facility Standard Industrial Classification (SIC) code(s);
 - e. Additional applicable industrial parameters related to receiving waters with 303(d) listed impairments or approved TMDLs based on the assessment in Section X.G.2.a.ix. Test methods with lower detection limits may be necessary when discharging to receiving waters with 303(d) listed impairments or TMDLs;
 - f. Additional parameters required by the Regional Water Board. The Discharger shall contact its Regional Water Board to determine appropriate analytical test methods for parameters not listed in Table 2 below. These analytical test methods will be added to SMARTS; and
 - g. For discharges subject to Subchapter N, additional parameters specifically required by Subchapter N. If the discharge is subject to ELGs, the Dischargers shall contact the Regional Water Board to determine appropriate analytical methods for parameters not listed in Table 2 below.
7. The Discharger shall select corresponding NALs, analytical test methods,, and reporting units from the list provided in Table 2 below. SMARTS will be updated over time to add additional acceptable analytical test methods. Dischargers may propose an analytical test method for any parameter or pollutant that does not have an analytical test method specified in Table 2 or in SMARTS. Dischargers may also propose analytical test methods with substantially similar or more stringent method detection limits than existing approved analytical test methods. Upon approval, the analytical test method will be added to SMARTS.
 8. The Discharger shall ensure that the collection, preservation and handling of all storm water samples are in accordance with Attachment H, Storm Water Sample Collection and Handling Instructions.
 9. Samples from different discharge locations shall not be combined or composited except as allowed in Section XI.C.5 (Qualified Combined Samples).
 10. The Discharger shall ensure that all laboratory analyses are conducted according to test procedures under 40 Code of Federal Regulations part 136, including the observation of holding times, unless other test procedures have been specified in this General Permit or by the Regional Water Board.

11. Sampling Analysis Reporting

- a. The Discharger shall submit all sampling and analytical results for all individual or Qualified Combined Samples via SMARTS within 30 days of obtaining all results for each sampling event.
- b. The Discharger shall provide the method detection limit when an analytical result from samples taken is reported by the laboratory as a "non-detect" or less than the method detection limit. A value of zero shall not be reported.
- c. The Discharger shall provide the analytical result from samples taken that is reported by the laboratory as below the minimum level (often referred to as the reporting limit) but above the method detection limit.

Reported analytical results will be averaged automatically by SMARTS. For any calculations required by this General Permit, SMARTS will assign a value of zero (0) for all results less than the minimum level as reported by the laboratory.

TABLE 1: Additional Analytical Parameters

SIC code	SIC code Description	Parameters*
102X	Copper Ores	COD; N+N
12XX	Coal Mines	Al; Fe
144X	Sand and Gravel	N+N
207X	Fats and Oils	BOD; COD; N+N
2421	Sawmills & Planning Mills	COD; Zn
2426	Hardwood Dimension	COD
2429	Special Product Sawmills	COD
243X	Millwork, Veneer, Plywood	COD
244X	Wood Containers	COD
245X	Wood Buildings & Mobile Homes	COD
2491	Wood Preserving	As; Cu
2493	Reconstituted Wood Products	COD
263X	Paperboard Mills	COD
281X	Industrial Inorganic Chemicals	Al; Fe; N+N
282X	Plastic Materials, Synthetics	Zn
284X	Soaps, Detergents, Cosmetics	N+N; Zn
287X	Fertilizers, Pesticides, etc.	Fe; N+N; Pb; Zn; P
301X	Tires, Inner Tubes	Zn
302X	Rubber and Plastic Footwear	Zn
305X	Rubber & Plastic Sealers & Hoses	Zn
306X	Misc. Fabricated Rubber Products	Zn
325X	Structural Clay Products	Al
326X	Pottery & Related Products	Al
3297	Non-Clay Refractories	Al
327X	Concrete, Gypsum, Plaster Products (Except 3274)	Fe
3295	Minerals & Earths	Fe
331X	Steel Works, Blast Furnaces, Rolling and Finishing Mills	Al; Zn
332X	Iron and Steel Foundries	Al; Cu; Fe; Zn
335X	Metal Rolling, Drawing, Extruding	Cu; Zn

336X	Nonferrous Foundries (Castings)	Cu; Zn
34XX	Fabricated Metal Products (Except 3479)	Zn; N+N; Fe; Al
3479	Coating and Engraving	Zn; N+N
4953	Hazardous Waste Facilities	NH ₃ ; Mg; COD; As; Cn; Pb; HG; Se; Ag
44XX	Water Transportation	Al; Fe; Pb; Zn
45XX	Air Transportation Facilities ¹⁶	BOD; COD; NH ₃
4911	Steam Electric Power Generating Facilities	Fe
4953	Landfills and Land Application Facilities	Fe
5015	Dismantling or Wrecking Yards	Fe; Pb; Al
5093	Scrap and Waste Materials (not including source-separated recycling)	Fe; Pb; Al; Zn; COD

*Table 1 Parameter Reference	
Ag – Silver	Mg – Magnesium
Al – Aluminum	N+N - Nitrate & Nitrite Nitrogen
As – Arsenic	NH – Ammonia
BOD – Biochemical Oxygen Demand	Ni – Nickel
Cd - Cadmium	P – Phosphorus
Cn – Cyanide	Se – Selenium
COD – Chemical Oxygen Demand	TSS – Total Suspended Solids
Cu – Copper	Zn – Zinc
Fe – Iron	Pb – Lead
Hg – Mercury	

¹⁶ Only airports (SIC 4512-4581) where a single Discharger, or a combination of permitted facilities use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis, are required to monitor these parameters for those outfalls that collect runoff from areas where deicing activities occur.

TABLE 2: Parameter NAL Values, Test Methods, and Reporting Units

PARAMETER	TEST METHOD	REPORTING UNITS	ANNUAL NAL	INSTANTANEOUS MAXIMUM NAL
pH*	See Section XI.C.2	pH units	N/A	Less than 6.0 Greater than 9.0
Suspended Solids (TSS)*, Total	SM 2540-D	mg/L	100	400
Oil & Grease (O&G)*, Total	EPA 1664A	mg/L	15	25
Zinc, Total (H)	EPA 200.8	mg/L	0.26**	
Copper, Total (H)	EPA 200.8	mg/L	0.0332**	
Cyanide, Total	SM 4500–CN C, D, or E	mg/L	0.022	
Lead, Total (H)	EPA 200.8	mg/L	0.262**	
Chemical Oxygen Demand (COD)	SM 5220C	mg/L	120	
Aluminum, Total	EPA 200.8	mg/L	0.75	
Iron, Total	EPA 200.7	mg/L	1.0	
Nitrate + Nitrite Nitrogen	SM 4500-NO3- E	mg/L as N	0.68	
Total Phosphorus	SM 4500-P B+E	mg/L as P	2.0	
Ammonia (as N)	SM 4500-NH3 B+ C or E	mg/L	2.14	
Magnesium, total	EPA 200.7	mg/L	0.064	
Arsenic, Total (c)	EPA 200.8	mg/L	0.15	
Cadmium, Total (H)	EPA 200.8	mg/L	0.0053**	
Nickel, Total (H)	EPA 200.8	mg/l	1.02**	
Mercury, Total	EPA 245.1	mg/L	0.0014	
Selenium, Total	EPA 200.8	mg/L	0.005	
Silver, Total (H)	EPA 200.8	mg/L	0.0183**	
Biochemical Oxygen Demand (BOD)	SM 5210B	mg/L	30	

SM – Standard Methods for the Examination of Water and Wastewater, 18th edition

EPA – U.S. EPA test methods

(H) – Hardness dependent

* Minimum parameters required by this General Permit

**The NAL is the highest value used by U.S. EPA based on their hardness table in the 2008 MSGP.

C. Methods and Exceptions

1. The Discharger shall comply with the monitoring methods in this General Permit and Attachment H.
2. pH Methods
 - a. Dischargers that are not subject to Subchapter N ELGs mandating pH analysis related to acidic or alkaline sources and have never entered Level 1 status for pH, are eligible to screen for pH using wide range litmus pH paper or other equivalent pH test kits. The pH screen shall be performed as soon as practicable, but no later than 15 minutes after the sample is collected.
 - b. Dischargers subject to Subchapter N ELGs shall either analyze samples for pH using methods in accordance with 40 Code of Federal Regulations 136 for testing storm water or use a calibrated portable instrument for pH.
 - c. Dischargers that enter Level 1 status (see Section XII.C) for pH shall, in the subsequent reporting years, analyze for pH using methods in accordance with 40 Code of Federal Regulations 136 or use a calibrated portable instrument for pH.
 - d. Dischargers using a calibrated portable instrument for pH shall ensure that all field measurements are conducted in accordance with the accompanying manufacturer's instructions.
3. Alternative Discharge Locations
 - a. The Discharger is required to identify, when practicable, alternative discharge locations for any discharge locations identified in accordance with Section XI.B.4 if the facility's discharge locations are:
 - i. Affected by storm water run-on from surrounding areas that cannot be controlled; and/or,
 - ii. Difficult to observe or sample (e.g. submerged discharge outlets, dangerous discharge location accessibility).
 - b. The Discharger shall submit and certify via SMARTS any alternative discharge location or revisions to the alternative discharge locations in the Monitoring Implementation Plan.
4. Representative Sampling Reduction
 - a. The Discharger may reduce the number of locations to be sampled in each drainage area (e.g., roofs with multiple downspouts, loading/unloading areas with multiple storm drains) if the industrial

activities, BMPs, and physical characteristics (grade, surface materials, etc.) of the drainage area for each location to be sampled are substantially similar to one another. To qualify for the Representative Sampling Reduction, the Discharger shall provide a Representative Sampling Reduction justification in the Monitoring Implementation Plan section of the SWPPP.

- b. The Representative Sampling Reduction justification shall include:
 - i. Identification and description of each drainage area and corresponding discharge location(s);
 - ii. A description of the industrial activities that occur throughout the drainage area;
 - iii. A description of the BMPs implemented in the drainage area;
 - iv. A description of the physical characteristics of the drainage area;
 - v. A rationale that demonstrates that the industrial activities and physical characteristics of the drainage area(s) are substantially similar; and,
 - vi. An identification of the discharge location(s) selected for representative sampling, and rationale demonstrating that the selected location(s) to be sampled are representative of the discharge from the entire drainage area.
- c. A Discharger that satisfies the conditions of subsection 4.b.i through v above shall submit and certify via SMARTS the revisions to the Monitoring Implementation Plan that includes the Representative Sampling Reduction justification.
- d. Upon submittal of the Representative Sampling Reduction justification, the Discharger may reduce the number of locations to be sampled in accordance with the Representative Sampling Reduction justification. The Regional Water Board may reject the Representative Sampling Reduction justification and/or request additional supporting documentation. In such instances, the Discharger is ineligible for the Representative Sampling Reduction until the Regional Water Board approves the Representative Sampling Reduction justification.

5. Qualified Combined Samples

- a. The Discharger may authorize an analytical laboratory to combine samples of equal volume from as many as four (4) discharge locations if the industrial activities, BMPs, and physical characteristics (grade, surface materials, etc.) within each of the drainage areas are substantially similar to one another.

- b. The Qualified Combined Samples justification shall include:
 - i. Identification and description of each drainage area and corresponding discharge locations;
 - ii. A description of the BMPs implemented in the drainage area;
 - iii. A description of the industrial activities that occur throughout the drainage area;
 - iv. A description of the physical characteristics of the drainage area; and,
 - v. A rationale that demonstrates that the industrial activities and physical characteristics of the drainage area(s) are substantially similar.
 - c. A Discharger that satisfies the conditions of subsection 5.b.i through iv above shall submit and certify via SMARTS the revisions to the Monitoring Implementation Plan that includes the Qualified Combined Samples justification.
 - d. Upon submittal of the Qualified Combined Samples justification revisions in the Monitoring Implementation Plan, the Discharger may authorize the lab to combine samples of equal volume from as many as four (4) drainage areas. The Regional Water Board may reject the Qualified Combined Samples justification and/or request additional supporting documentation. In such instances, the Discharger is ineligible for the Qualified Combined Samples justification until the Regional Water Board approves the Qualified Combined Samples justification.
 - e. Regional Water Board approval is necessary to combine samples from more than four (4) discharge locations.
6. Sample Collection and Visual Observation Exceptions
- a. Sample collection and visual observations are not required under the following conditions:
 - i. During dangerous weather conditions such as flooding or electrical storms; or,
 - ii. Outside of scheduled facility operating hours. The Discharger is not precluded from collecting samples or conducting visual observations outside of scheduled facility operating hours.
 - b. In the event that samples are not collected, or visual observations are not conducted in accordance with Section XI.B.5 due to these exceptions, an explanation shall be included in the Annual Report.

- c. Sample collection is not required for drainage areas with no exposure to industrial activities and materials in accordance with the definitions in Section XVII.
7. Sampling Frequency Reduction Certification
- a. Dischargers are eligible to reduce the number of QSEs sampled each reporting year in accordance with the following requirements:
 - i. Results from four (4) consecutive QSEs that were sampled (QSEs may be from different reporting years) did not exceed any NALs as defined in Section XII.A; and
 - ii. The Discharger is in full compliance with the requirements of this General Permit and has updated, certified and submitted via SMARTS all documents, data, and reports required by this General Permit during the time period in which samples were collected.
 - b. The Regional Water Board may notify a Discharger that it may not reduce the number of QSEs sampled each reporting year if the Discharger is subject to an enforcement action.
 - c. An eligible Discharger shall certify via SMARTS that it meets the conditions in subsection 7.a above.
 - d. Upon Sampling Frequency Reduction certification, the Discharger shall collect and analyze samples from one (1) QSE within the first half of each reporting year (July 1 to December 31), and one (1) QSE within the second half of each reporting year (January 1 to June 30). All other monitoring, sampling, and reporting requirements remain in effect.
 - e. Dischargers who participate in a Compliance Group and certify a Sampling Frequency Reduction are only required to collect and analyze storm water samples from one (1) QSE within each reporting year.
 - f. A Discharger may reduce sampling per the Sampling Frequency Reduction certification unless notified by the Regional Water Board that: (1) the Sampling Frequency Reduction certification has been rejected or (2) additional supporting documentation must be submitted. In such instances, a Discharger is ineligible for the Sampling Frequency Reduction until the Regional Water Board provides Sampling Frequency Reduction certification approval. Revised Sampling Frequency Reduction certifications shall be certified and submitted via SMARTS by the Discharger.
 - g. A Discharger loses its Sampling Frequency Reduction certification if an NAL exceedance occurs (Section XII.A).

D. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

1. In addition to the other requirements in this General Permit, Dischargers with facilities subject to storm water ELGs in Subchapter N shall:
 - a. Collect and analyze samples from QSEs for each regulated pollutant specified in the appropriate category in Subchapter N as specified in Section XI.B;
 - b. For Dischargers with facilities subject to 40 Code of Federal Regulations parts 419¹⁷ and 443¹⁸, estimate or calculate the volume of industrial storm water discharges from each drainage area subject to the ELGs and the mass of each regulated pollutant as defined in parts 419 and 443; and,
 - c. Ensure that the volume/mass estimates or calculations required in subsection b are completed by a California licensed professional engineer.
2. Dischargers subject to Subchapter N shall submit the information in Section XI.D.1.a through c in their Annual Report.
3. Dischargers with facilities subject to storm water ELGs in Subchapter N are ineligible for the Representative Sampling Reduction in Section XI.C.4.

XII. EXCEEDANCE RESPONSE ACTIONS (ERAs)

A. NALs and NAL Exceedances

The Discharger shall perform sampling, analysis and reporting in accordance with the requirements of this General Permit and shall compare the results to the two types of NAL values in Table 2 to determine whether either type of NAL has been exceeded for each applicable parameter. The two types of potential NAL exceedances are as follows:

1. Annual NAL exceedance: The Discharger shall determine the average concentration for each parameter using the results of all the sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data). The Discharger shall compare the average concentration for each parameter to the corresponding annual NAL values in Table 2. For Dischargers using composite sampling or flow-weighted measurements in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA's NPDES Storm Water

¹⁷ Part 419 - Petroleum refining point source category

¹⁸ Part 443 - Effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources for the paving and roofing materials (tars and asphalt) point source category

Sampling Guidance Document.¹⁹ An annual NAL exceedance occurs when the average of all the analytical results for a parameter from samples taken within a reporting year exceeds the annual NAL value for that parameter listed in Table 2; and,

2. Instantaneous maximum NAL exceedance: The Discharger shall compare all sampling and analytical results from each distinct sample (individual or combined as authorized by XI.C.5) to the corresponding instantaneous maximum NAL values in Table 2. An instantaneous maximum NAL exceedance occurs when two (2) or more analytical results from samples taken for any single parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G) or are outside of the instantaneous maximum NAL range for pH.

B. Baseline Status

At the beginning of a Discharger's NOI Coverage, all Dischargers have Baseline status for all parameters.

C. Level 1 Status

A Discharger's Baseline status for any given parameter shall change to Level 1 status if sampling results indicate an NAL exceedance for that same parameter. Level 1 status will commence on July 1 following the reporting year during which the exceedance(s) occurred.²⁰

1. Level 1 ERA Evaluation

- a. By October 1 following commencement of Level 1 status for any parameter with sampling results indicating an NAL exceedance, the Discharger shall:
 - b. Complete an evaluation, with the assistance of a QISP, of the industrial pollutant sources at the facility that are or may be related to the NAL exceedance(s); and,
 - c. Identify in the evaluation the corresponding BMPs in the SWPPP and any additional BMPs and SWPPP revisions necessary to prevent future NAL exceedances and to comply with the requirements of this General Permit. Although the evaluation may focus on the drainage areas where the NAL exceedance(s) occurred, all drainage areas shall be evaluated.

2. Level 1 ERA Report

¹⁹ U.S. EPA. NPDES Storm Water Sampling Guidance Document. <<http://www.epa.gov/npdes/pubs/owm0093.pdf>>. [as of February 4, 2014]

²⁰ For all sampling results reported before June 30th of the preceding reporting year. If sample results indicating an NAL exceedance are submitted after June 30th, the Discharger will change status once those results have been reported.

- a. Based upon the above evaluation, the Discharger shall, as soon as practicable but no later than January 1 following commencement of Level 1 status :
 - i. Revise the SWPPP as necessary and implement any additional BMPs identified in the evaluation;
 - ii. Certify and submit via SMARTS a Level 1 ERA Report prepared by a QISP that includes the following:
 - 1) A summary of the Level 1 ERA Evaluation required in subsection C.1 above; and,
 - 2) A detailed description of the SWPPP revisions and any additional BMPs for each parameter that exceeded an NAL.
 - iii. Certify and submit via SMARTS the QISP's identification number, name, and contact information (telephone number, e-mail address).
 - b. A Discharger's Level 1 status for a parameter will return to Baseline status once a Level 1 ERA report has been completed, all identified additional BMPs have been implemented, and results from four (4) consecutive QSEs that were sampled subsequent to BMP implementation indicate no additional NAL exceedances for that parameter.
3. NAL Exceedances Prior to Implementation of Level 1 Status BMPs.

Prior to the implementation of an additional BMP identified in the Level 1 ERA Evaluation or October 1, whichever comes first, sampling results for any parameter(s) being addressed by that additional BMP will not be included in the calculations of annual average or instantaneous NAL exceedances in SMARTS.

D. Level 2 Status

A Discharger's Level 1 status for any given parameter shall change to Level 2 status if sampling results indicate an NAL exceedance for that same parameter while the Discharger is in Level 1. Level 2 status will commence on July 1 following the reporting year during which the NAL exceedance(s) occurred.²¹

1. Level 2 ERA Action Plan

²¹ For all sampling results reported before June 30th of the preceding reporting year. If sample results indicating an NAL exceedance are submitted after June 30th, the Discharger will change status upon the date those results have been reported into SMARTS.

- a. Dischargers with Level 2 status shall certify and submit via SMARTS a Level 2 ERA Action Plan prepared by a QISP that addresses each new Level 2 NAL exceedance by January 1 following the reporting year during which the NAL exceedance(s) occurred. For each new Level 2 NAL exceedance, the Level 2 Action Plan will identify which of the demonstrations in subsection D.2.a through c the Discharger has selected to perform. A new Level 2 NAL exceedance is any Level 2 NAL exceedance for 1) a new parameter in any drainage area, or 2) the same parameter that is being addressed in an existing Level 2 ERA Action Plan in a different drainage area.
- b. The Discharger shall certify and submit via SMARTS the QISP's identification number, name, and contact information (telephone number, e-mail address) if this information has changed since previous certifications.
- c. The Level 2 ERA Action Plan shall at a minimum address the drainage areas with corresponding Level 2 NAL exceedances.
- d. All elements of the Level 2 ERA Action Plan shall be implemented as soon as practicable and completed no later than 1 year after submitting the Level 2 ERA Action Plan.
- e. The Level 2 ERA Action Plan shall include a schedule and a detailed description of the tasks required to complete the Discharger's selected demonstration(s) as described below in Section D.2.a through c.

2. Level 2 ERA Technical Report

On January 1 of the reporting year following the submittal of the Level 2 ERA Action Plan, a Discharger with Level 2 status shall certify and submit a Level 2 ERA Technical Report prepared by a QISP that includes one or more of the following demonstrations:

a. Industrial Activity BMPs Demonstration

This shall include the following requirements, as applicable:

- i. Shall include a description of the industrial pollutant sources and corresponding industrial pollutants that are or may be related to the NAL exceedance(s);
- ii. Shall include an evaluation of all pollutant sources associated with industrial activity that are or may be related to the NAL exceedance(s);
- iii. Where all of the Discharger's implemented BMPs, including additional BMPs identified in the Level 2 ERA Action Plan, achieve

compliance with the effluent limitations of this General Permit and are expected to eliminate future NAL exceedance(s), the Discharger shall provide a description and analysis of all implemented BMPs;

- iv. In cases where all of the Discharger's implemented BMPs, including additional BMPs identified in the Level 2 ERA Action Plan, achieve compliance with the effluent limitations of this General Permit but are not expected to eliminate future NAL exceedance(s), the Discharger shall provide, in addition to a description and analysis of all implemented BMPs:
 - 1) An evaluation of any additional BMPs that would reduce or prevent NAL exceedances;
 - 2) Estimated costs of the additional BMPs evaluated; and,
 - 3) An analysis describing the basis for the selection of BMPs implemented in lieu of the additional BMPs evaluated but not implemented.
 - v. The description and analysis of BMPs required in subsection a.iii above shall specifically address the drainage areas where the NAL exceedance(s) responsible for the Discharger's Level 2 status occurred, although any additional Level 2 ERA Action Plan BMPs may be implemented for all drainage areas; and,
 - vi. If an alternative design storm standard for treatment control BMPs (in lieu of the design storm standard for treatment control BMPs in Section X.H.6 in this General Permit) will achieve compliance with the effluent limitations of this General Permit, the Discharger shall provide an analysis describing the basis for the selection of the alternative design storm standard.
- b. Non-Industrial Pollutant Source Demonstration

This shall include:

- i. A statement that the Discharger has determined that the exceedance of the NAL is attributable solely to the presence of non-industrial pollutant sources. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance.) The sources shall be identified as either run-on from adjacent properties, aerial deposition from man-made sources, or as generated by on-site non-industrial sources;

- ii. A statement that the Discharger has identified and evaluated all potential pollutant sources that may have commingled with storm water associated with the Discharger's industrial activity and may be contributing to the NAL exceedance;
 - iii. A description of any on-site industrial pollutant sources and corresponding industrial pollutants that are contributing to the NAL exceedance;
 - iv. An assessment of the relative contributions of the pollutant from (1) storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition and (2) the storm water associated with the Discharger's industrial activity;
 - v. A summary of all existing BMPs for that parameter; and,
 - vi. An evaluation of all on-site/off-site analytical monitoring data demonstrating that the NAL exceedances are caused by pollutants in storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition.
- c. Natural Background Pollutant Source Demonstration

This shall include:

- i. A statement that the Discharger has determined that the NAL exceedance is attributable solely to the presence of the pollutant in the natural background that has not been disturbed by industrial activities. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance);
- ii. A summary of all data previously collected by the Discharger, or other identified data collectors, that describes the levels of natural background pollutants in the storm water discharge;
- iii. A summary of any research and published literature that relates the pollutants evaluated at the facility as part of the Natural Background Source Demonstration;
- iv. Map showing the reference site location in relation to facility along with available land cover information;
- v. Reference site and test site elevation;

- vi. Available geology and soil information for reference and test sites;
- vii. Photographs showing site vegetation;
- viii. Site reconnaissance survey data regarding presence of roads, outfalls, or other human-made structures; and,
- ix. Records from relevant state or federal agencies indicating no known mining, forestry, or other human activities upstream of the proposed reference site.

3. Level 2 ERA Technical Report Submittal

- a. The Discharger shall certify and submit via SMARTS the Level 2 ERA Technical Report described in Section D.2 above.
- b. The State Water Board and Regional Boards (Water Boards) may review the submitted Level 2 ERA Technical Reports. Upon review of a Level 2 ERA Technical Report, the Water Boards may reject the Level 2 ERA Technical Report and direct the Discharger to take further action(s) to comply with this General Permit.
- c. Dischargers with Level 2 status who have submitted the Level 2 ERA Technical Report are only required to annually update the Level 2 ERA Technical Report based upon additional NAL exceedances of the same parameter and same drainage area (if the original Level 2 ERA Technical Report contained an Industrial Activity BMP Demonstration and the implemented BMPs were expected to eliminate future NAL exceedances in accordance with Section XII.D.2.a.ii), facility operational changes, pollutant source(s) changes, and/or information that becomes available via compliance activities (monthly visual observations, sampling results, annual evaluation, etc.). The Level 2 ERA Technical Report shall be prepared by a QISP and be certified and submitted via SMARTS by the Discharger with each Annual Report. If there are no changes prompting an update of the Level 2 ERA Technical Report, as specified above, the Discharger will provide this certification in the Annual Report that there have been no changes warranting re-submittal of the Level 2 ERA Technical Report.
- d. Dischargers are not precluded from submitting a Level 2 ERA Action Plan or ERA Technical Report prior to entering Level 2 status if information is available to adequately prepare the report and perform the demonstrations described above. A Discharger who chooses to submit a Level 2 ERA Action Plan or ERA Technical Report prior to entering Level 2 status will automatically be placed in Level 2 in accordance to the Level 2 ERA schedule.

4. Eligibility for Returning to Baseline Status

- a. Dischargers with Level 2 status who submit an Industrial Activity BMPs Demonstration in accordance with subsection 2.a.i through iii above and have implemented BMPs to prevent future NAL exceedance(s) for the Level 2 parameter(s) shall return to baseline status for that parameter, if results from four (4) subsequent consecutive QSEs sampled indicate no additional NAL exceedance(s) for that parameter(s). If future NAL exceedances occur for the same parameter(s), the Discharger's Baseline status will return to Level 2 status on July 1 in the subsequent reporting year during which the NAL exceedance(s) occurred. These Dischargers shall update the Level 2 ERA Technical Report as required above in Section D.3.c.
- b. Dischargers are ineligible to return to baseline status if they submit any of the following:
 - i. A industrial activity BMP demonstration in accordance with subsection 2.a.iv above;
 - ii. An non-industrial pollutant source demonstration; or,
 - iii. A natural background pollutant source demonstration.

5. Level 2 ERA Implementation Extension

- a. Dischargers that need additional time to submit the Level 2 ERA Technical Report shall be automatically granted a single time extension for up to six (6) months upon submitting the following items into SMARTS, as applicable:
 - i. Reasons for the time extension;
 - ii. A revised Level 2 ERA Action Plan including a schedule and a detailed description of the necessary tasks still to be performed to complete the Level 2 ERA Technical Report; and
 - iii. A description of any additional temporary BMPs that will be implemented while permanent BMPs are being constructed.
- b. The Regional Water Boards will review Level 2 ERA Implementation Extensions for completeness and adequacy. Requests for extensions that total more than six (6) months are not granted unless approved in writing by the Water Boards. The Water Boards may (1) reject or revise the time allowed to complete Level 2 ERA Implementation Extensions, (2) identify additional tasks necessary to complete the Level 2 ERA Technical Report, and/or (3) require the Discharger to implement additional temporary BMPs.

XIII. INACTIVE MINING OPERATION CERTIFICATION

- A.** Inactive mining operations are defined in Part 3 of Attachment A of this General Permit. The Discharger may, in lieu of complying with the General Permit requirements described in subsection B below, certify and submit via SMARTS that their inactive mining operation meets the following conditions:
1. The Discharger has determined and justified in the SWPPP that it is impracticable to implement the monitoring requirements in this General Permit for the inactive mining operation;
 2. A SWPPP has been signed (wet signature and license number) by a California licensed professional engineer and is being implemented in accordance with the requirements of this General Permit; and,
 3. The facility is in compliance with this General Permit, except as provided in subsection B below.
- B.** The Discharger who has certified and submitted that they meet the conditions in subsection A above, are not subject to the following General Permit requirements:
1. Monitoring Implementation Plan in Section X.I;
 2. Monitoring Requirements in Section XI;
 3. Exceedance Response Actions (ERAs) in Section XII; and,
 4. Annual Report Requirements in Section XVI.
- C.** Inactive Mining Operation Certification Submittal Schedule
1. The Discharger shall certify and submit via SMARTS NOI coverage PRDs listed in Section II.B.1 and meet the conditions in subsection A above.
 2. The Discharger shall annually inspect the inactive mining site and certify via SMARTS no later than July 15th of each reporting year, that their inactive mining operation continues to meet the conditions in subsection A above.
 3. The Discharger shall have a California licensed professional engineer review and update the SWPPP if there are changes to their inactive mining operation or additional BMPs are needed to comply with this General Permit. Any significant updates to the SWPPP shall be signed (wet signature and license number) by a California license professional engineer.
 4. The Discharger shall certify and submit via SMARTS any significantly revised SWPPP within 30 days of the revision(s).

XIV. COMPLIANCE GROUPS AND COMPLIANCE GROUP LEADERS

A. Compliance Group Qualification Requirements

1. Any group of Dischargers of the same industry type or any QISP representing Dischargers of the same industry type may form a Compliance Group. A Compliance Group shall consist of Dischargers that operate facilities with similar types of industrial activities, pollutant sources, and pollutant characteristics (e.g., scrap metals recyclers would join a different group than paper recyclers, truck vehicle maintenance facilities would join a different group than airplane vehicle maintenance facilities, etc.). A Discharger participating in a Compliance Group is termed a Compliance Group Participant. Participation in a Compliance Group is not required. Compliance Groups may be formed at any time.
2. Each Compliance Group shall have a Compliance Group Leader.
3. To establish a Compliance Group, the Compliance Group Leader shall register as a Compliance Group Leader via SMARTS. The registration shall include documentation demonstrating compliance with the Compliance Group qualification requirements above and a list of the Compliance Group Participants.
4. Each Compliance Group Participant shall register as a member of an established Compliance Group via SMARTS.
5. The Executive Director of the State Water Board may review Compliance Group registrations and/or activities for compliance with the requirements of this General Permit. The Executive Director may reject the Compliance Group, the Compliance Group Leader, or individual Compliance Group Participants within the Compliance Group.

B. Compliance Group Leader Responsibilities

1. A Compliance Group Leader must complete a State Water Board sponsored or approved training program for Compliance Group Leaders.
2. The Compliance Group Leader shall assist Compliance Group Participants with all compliance activities required by this General Permit.
3. A Compliance Group Leader shall prepare a Consolidated Level 1 ERA Report for all Compliance Group Participants with Level 1 status for the same parameter. Compliance Group Participants who certify and submit these Consolidated Level 1 ERA Reports are subject to the same provisions as individual Dischargers with Level 1 status, as described in Section XII.C. A Consolidated Level 1 ERA Report is equivalent to a Level 1 ERA Report.

4. The Compliance Group Leader shall update the Consolidated Level 1 ERA Report as needed to address additional Compliance Group Participants with ERA Level 1 status.
5. A Compliance Group Leader shall prepare a Level 2 ERA Action Plan specific to each Compliance Group Participant with Level 2 status. Compliance Group Participants who certify and submit these Level 2 ERA Action Plans are subject to the same provisions as individual Dischargers with Level 2 status, as described in Section XII.D.
6. A Compliance Group Leader shall prepare a Level 2 ERA Technical Report specific to each Compliance Group Participant with Level 2 status. Compliance Group Participants who certify and submit these Level 2 ERA Technical Reports are subject to the same provisions as individual Dischargers with Level 2 status, as described in Section XII.D.
7. The Compliance Group Leader shall inspect all the facilities of the Compliance Group Participants that have entered Level 2 status prior to preparing the individual Level 2 ERA Technical Report.
8. The Compliance Group Leader shall revise the Consolidated Level 1 ERA Report, individual Level 2 ERA Action Plans, or individual Level 2 Technical Reports in accordance with any comments received from the Water Boards.
9. The Compliance Group Leader shall inspect all the facilities of the Compliance Group Participants at a minimum of once per reporting year (July 1 to June 30).

C. Compliance Group Participant Responsibilities

1. Each Compliance Group Participant is responsible for permit compliance for the Compliance Group Participant's facility and for ensuring that the Compliance Group Leader's activities related to the Compliance Group Participant's facility comply with this General Permit.
2. Compliance Group Participants with Level 1 status shall certify and submit via SMARTS the Consolidated Level 1 ERA Report. The Compliance Group Participants shall certify that they have reviewed the Consolidated Level 1 ERA Report and have implemented any required additional BMPs. Alternatively, the Compliance Group Participant may submit an individual Level 1 ERA Report in accordance with the provisions in Section XII.C.2.
3. Compliance Group Participants with Level 2 status shall certify and submit via SMARTS their individual Level 2 ERA Action Plan and Technical Report prepared by their Compliance Group Leader. Each Compliance Group Participant shall certify that they have reviewed the Level 2 ERA Action Plan and Technical Report and will implement any required additional BMPs.

4. Compliance Group Participants can at any time discontinue their participation in their associated Compliance Group via SMARTS. Upon discontinuation, the former Compliance Group Participant is immediately subject to the sampling and analysis requirements described in Section XI.B.2.

XV. ANNUAL COMPREHENSIVE FACILITY COMPLIANCE EVALUATION (ANNUAL EVALUATION)

The Discharger shall conduct one Annual Evaluation for each reporting year (July 1 to June 30). If the Discharger conducts an Annual Evaluation fewer than eight (8) months, or more than sixteen (16) months, after it conducts the previous Annual Evaluation, it shall document the justification for doing so. The Discharger shall revise the SWPPP, as appropriate, and implement the revisions within 90 days of the Annual Evaluation. At a minimum, Annual Evaluations shall consist of:

- A. A review of all sampling, visual observation, and inspection records conducted during the previous reporting year;
- B. An inspection of all areas of industrial activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the storm water conveyance system;
- C. An inspection of all drainage areas previously identified as having no exposure to industrial activities and materials in accordance with the definitions in Section XVII;
- D. An inspection of equipment needed to implement the BMPs;
- E. An inspection of any BMPs;
- F. A review and effectiveness assessment of all BMPs for each area of industrial activity and associated potential pollutant sources to determine if the BMPs are properly designed, implemented, and are effective in reducing and preventing pollutants in industrial storm water discharges and authorized NSWDS; and,
- G. An assessment of any other factors needed to comply with the requirements in Section XVI.B.

XVI. ANNUAL REPORT

- A. The Discharger shall certify and submit via SMARTS an Annual Report no later than July 15th following each reporting year using the standardized format and checklists in SMARTS.
- B. The Discharger shall include in the Annual Report:
 1. A Compliance Checklist that indicates whether a Discharger complies with, and has addressed all applicable requirements of this General Permit;

2. An explanation for any non-compliance of requirements within the reporting year, as indicated in the Compliance Checklist;
3. An identification, including page numbers and/or sections, of all revisions made to the SWPPP within the reporting year; and,
4. The date(s) of the Annual Evaluation.

XVII. CONDITIONAL EXCLUSION - NO EXPOSURE CERTIFICATION (NEC)

A. Discharges composed entirely of storm water that has not been exposed to industrial activity are not industrial storm water discharges. Dischargers are conditionally excluded from complying with the SWPPP and monitoring requirements of this General Permit if all of the following conditions are met:

1. There is no exposure of Industrial Materials and Activities to rain, snow, snowmelt, and/or runoff;
2. All unauthorized NSWDS have been eliminated and all authorized NSWDS meet the conditions of Section IV;
3. The Discharger has certified and submitted via SMARTS PRDs for NEC coverage pursuant to the instructions in Section II.B.2; and,
4. The Discharger has satisfied all other requirements of this Section.

B. NEC Specific Definitions

1. No Exposure - all Industrial Materials and Activities are protected by a Storm-Resistant Shelter to prevent all exposure to rain, snow, snowmelt, and/or runoff.
2. Industrial Materials and Activities - includes, but is not limited to, industrial material handling activities or equipment, machinery, raw materials, intermediate products, by-products, final products, and waste products.
3. Material Handling Activities - includes the storage, loading and unloading, transportation, or conveyance of any industrial raw material, intermediate product, final product, or waste product.
4. Sealed - banded or otherwise secured, and without operational taps or valves.
5. Storm-Resistant Shelters - includes completely roofed and walled buildings or structures. Also includes structures with only a top cover supported by permanent supports but with no side coverings, provided material within the structure is not subject to wind dispersion (sawdust, powders, etc.), or track-out, and there is no storm water discharged from within the structure that comes into contact with any materials.

C. NEC Qualifications

To qualify for an NEC, a Discharger shall:

1. Except as provided in subsection D below, provide a Storm-Resistant Shelter to protect Industrial Materials and Activities from exposure to rain, snow, snowmelt, run-on, and runoff;
2. Inspect and evaluate the facility annually to determine that storm water exposed to industrial materials or equipment has not and will not be discharged to waters of the United States. Evaluation records shall be maintained for five (5) years in accordance with Section XXI.J.4;
3. Register for NEC coverage by certifying that there are no discharges of storm water contaminated by exposure to Industrial Materials and Activities from areas of the facility subject to this General Permit, and certify that all unauthorized NSWDS have been eliminated and all authorized NSWDS meet the conditions of Section IV (Authorized NSWDS). NEC coverage and annual renewal requires payment of an annual fee in accordance with California Code of Regulations, title 23, section 2200 et seq.; and,
4. Submit PRDs for NEC coverage shall be prepared and submitted in accordance with the:
 - a. Certification requirements in Section XXI.K; and,
 - b. Submittal schedule in accordance with Section II.B.2.

D. NEC Industrial Materials and Activities - Storm-Resistant Shelter Not Required

To qualify for NEC coverage, a Storm-Resistant Shelter is not required for the following:

1. Drums, barrels, tanks, and similar containers that are tightly Sealed, provided those containers are not deteriorated, do not contain residual industrial materials on the outside surfaces, and do not leak;
2. Adequately maintained vehicles used in material handling;
3. Final products, other than products that would be mobilized in storm water discharge (e.g., rock salt);
4. Any Industrial Materials and Activities that are protected by a temporary shelter for a period of no more than ninety (90) days due to facility construction or remodeling; and,
5. Any Industrial Materials and Activities that are protected within a secondary containment structure that will not discharge storm water to waters of the United States.

E. NEC Limitations

1. NEC coverage is available on a facility-wide basis only, not for individual outfalls. If a facility has industrial storm water discharges from one or more drainage areas that require NOI coverage, Dischargers shall register for NOI coverage for the entire facility through SMARTS in accordance with Section II.B.2. Any drainage areas on that facility that would otherwise qualify for NEC coverage may be specially addressed in the facility SWPPP by including an NEC Checklist and a certification statement demonstrating that those drainage areas of the facility have been evaluated; and that none of the Industrial Materials or Activities listed in subsection C above are, or will be in the foreseeable future, exposed to precipitation.
2. If circumstances change and Industrial Materials and Activities become exposed to rain, snow, snowmelt, and/or runoff, the conditions for this exclusion shall no longer apply. In such cases, the Discharger may be subject to enforcement for discharging without a permit. A Discharger with NEC coverage that anticipates changes in circumstances should register for NOI coverage at least seven (7) days before anticipated exposure.
3. The Regional Water Board may deny NEC coverage and require NOI coverage upon determining that:
 - a. Storm water is exposed to Industrial Materials and Activities; and/or
 - b. The discharge has a reasonable potential to cause or contribute to an exceedance of an applicable water quality standards.

F. NEC Permit Registration Documents Required for Initial NEC Coverage

A Discharger shall submit via SMARTS the following PRDs for NEC coverage to document the applicability of the conditional exclusion:

1. The NEC form, which includes:
 - a. The legal name, postal address, telephone number, and e-mail address of the Discharger;
 - b. The facility business name and physical mailing address, the county name, and a description of the facility location if the facility does not have a physical mailing address; and,
 - c. Certification by the Discharger that all PRDs submitted are correct and true and the conditions of no exposure have been met.
2. An NEC Checklist prepared by the Discharger demonstrating that the facility has been evaluated; and that none of the following industrial materials or activities are, or will be in the foreseeable future, exposed to precipitation:

- a. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed;
- b. Materials or residuals on the ground or in storm water inlets from spills/leaks;
- c. Materials or products from past industrial activity;
- d. Material handling equipment (except adequately maintained vehicles);
- e. Materials or products during loading/unloading or transporting activities;
- f. Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);
- g. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;
- h. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;
- i. Waste material (except waste in covered, non-leaking containers, e.g., dumpsters);
- j. Application or disposal of processed wastewater (unless already covered by an NPDES permit); and,
- k. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.

3. Site Map (see Section X.E).

G. Requirements for Annual NEC Coverage Recertification

By October 1 of each reporting year beginning in 2015, any Discharger who has previously registered for NEC coverage shall either submit and certify an NEC demonstrating that the facility has been evaluated, and that none of the Industrial Materials or Activities listed above are, or will be in the foreseeable future, exposed to precipitation, or apply for NOI coverage.

H. NEC Certification Statement

All NEC certifications and re-certifications shall include the following certification statement:

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of 'no exposure' and obtaining an exclusion from NPDES storm water permitting; and that there are no discharges of storm water contaminated by exposure to industrial activities

or materials from the industrial facility identified in this document (except as allowed in subsection C above). I understand that I am obligated to submit a no exposure certification form annually to the State Water Board and, if requested, to the operator of the local Municipal Separate Storm Sewer System (MS4) into which this facility discharges (where applicable). I understand that I must allow the Water Board staff, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of storm water from the facility. 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 assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

XVIII. SPECIAL REQUIREMENTS - PLASTIC MATERIALS

- A.** Facilities covered under this General Permit that handle Plastic Materials are required to implement BMPs to eliminate discharges of plastic in storm water in addition to the other requirements of this General Permit that are applicable to all other Industrial Materials and Activities. Plastic Materials are virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other similar types of preproduction plastics with the potential to discharge or migrate off-site. Any Dischargers' facility handling Plastic Materials will be referred to as Plastics Facilities in this General Permit. Any Plastics Facility covered under this General Permit that manufactures, transports, stores, or consumes these materials shall submit information to the State Water Board in their PRDs, including the type and form of plastics, and which BMPs are implemented at the facility to prevent illicit discharges. Pursuant to Water Code section 13367, Plastics Facilities are subject to mandatory, minimum BMPs.
1. At a minimum, Plastics Facilities shall implement and include in the SWPPP:
 - a. Containment systems at each on-site storm drain discharge location down gradient of areas containing plastic material. The containment system shall be designed to trap all particles retained by a 1mm mesh screen, with a treatment capacity of no less than the peak flow rate from a one-year, one-hour storm.
 - b. When a containment system is infeasible, or poses the potential to cause an illicit discharge, the facility may propose a technically feasible

alternative BMP or suite of BMPs. The alternative BMPs shall be designed to achieve the same or better performance standard as a 1mm mesh screen with a treatment capacity of the peak flow rate from a one-year, one-hour storm. Alternative BMPs shall be submitted to the Regional Water Board for approval.

- c. Plastics Facilities shall use durable sealed containers designed not to rupture under typical loading and unloading activities at all points of plastic transfer and storage.
 - d. Plastics Facilities shall use capture devices as a form of secondary containment during transfers, loading, or unloading Plastic Materials. Examples of capture devices for secondary containment include, but are not limited to catch pans, tarps, berms or any other device that collects errant material.
 - e. Plastics Facilities shall have a vacuum or vacuum-type system for quick cleanup of fugitive plastic material available for employees.
 - f. Pursuant to Water Code section 13367(e)(1), Plastics Facilities that handle Plastic Materials smaller than 1mm in size shall develop a containment system designed to trap the smallest plastic material handled at the facility with a treatment capacity of at least the peak flow rate from a one-year, one-hour storm, or develop a feasible alternative BMP or suite of BMPs that are designed to achieve a similar or better performance standard that shall be submitted to the Regional Water Board for approval.
2. Plastics Facilities are exempt from the Water Code requirement to install a containment system under section 13367 of the Water Code if they meet one of the following requirements that are determined to be equal to, or exceed the performance requirements of a containment system:
- a. The Discharger has certified and submitted via SMARTS a valid No Exposure Certification (NEC) in accordance with Section XVII; or
 - b. Plastics Facilities are exempt from installing a containment system, if the following suite of eight (8) BMPs is implemented. This combination of BMPs is considered to reduce or prevent the discharge of plastics at a performance level equivalent to or better than the 1mm mesh and flow standard in Water Code section 13367(e)(1).
 - i. Plastics Facilities shall annually train employees handling Plastic Materials. Training shall include environmental hazards of plastic discharges, employee responsibility for corrective actions to prevent errant Plastic Materials, and standard procedures for containing, cleaning, and disposing of errant Plastic Materials.

- ii. Plastics Facilities shall immediately fix any Plastic Materials containers that are punctured or leaking and shall clean up any errant material in a timely manner.
- iii. Plastics Facilities shall manage outdoor waste disposal of Plastic Materials in a manner that prevents the materials from leaking from waste disposal containers or during waste hauling.
- iv. Plastics Facilities that operate outdoor conveyance systems for Plastic Materials shall maintain the system in good operating condition. The system shall be sealed or filtered in such a way as to prevent the escape of materials when in operation. When not in operation, all connection points shall be sealed, capped, or filtered so as to not allow material to escape. Employees operating the conveyance system shall be trained how to operate in a manner that prevents the loss of materials such as secondary containment, immediate spill response, and checks to ensure the system is empty during connection changes.
- v. Plastics Facilities that maintain outdoor storage of Plastic Materials shall do so in a durable, permanent structure that prevents exposure to weather that could cause the material to migrate or discharge in storm water.
- vi. Plastics Facilities shall maintain a schedule for regular housekeeping and routine inspection for errant Plastic Materials. The Plastics Facility shall ensure that their employees follow the schedule.
- vii. PRDs shall include the housekeeping and routine inspection schedule, spill response and prevention procedures, and employee training materials regarding plastic material handling.
- viii. Plastics Facilities shall correct any deficiencies in the employment of the above BMPs that result in errant Plastic Materials that may discharge or migrate off-site in a timely manner. Any Plastic Materials that are discharged or that migrate off-site constitute an illicit discharge in violation of this General Permit.

XIX. REGIONAL WATER BOARD AUTHORITIES

- A.** The Regional Water Boards may review a Discharger’s PRDs for NOI or NEC coverage and administratively reject General Permit coverage if the PRDs are deemed incomplete. The Regional Water Boards may take actions that include rescinding General Permit coverage, requiring a Discharger to revise and re-submit their PRDs (certified and submitted by the Discharger) within a specified time period, requiring the Discharger to apply for different General Permit coverage or a different individual or general permit, or taking no action.
- B.** The Regional Water Boards have the authority to enforce the provisions and requirements of this General Permit. This includes, but is not limited to,

reviewing SWPPPs, Monitoring Implementation Plans, ERA Reports, and Annual Reports, conducting compliance inspections, and taking enforcement actions.

- C. As appropriate, the Regional Water Boards may issue NPDES storm water general or individual permits to a Discharger, categories of Dischargers, or Dischargers within a watershed or geographic area. Upon issuance of such NPDES permits, this General Permit shall no longer regulate the affected Discharger(s).
- D. The Regional Water Boards may require a Discharger to revise its SWPPP, ERA Reports, or monitoring programs to achieve compliance with this General Permit. In this case, the Discharger shall implement these revisions in accordance with a schedule provided by the Regional Water Board.
- E. The Regional Water Boards may approve requests from a Discharger to include co-located, but discontinuous, industrial activities within the same facility under a single NOI or NEC coverage.
- F. Consistent with 40 Code of Federal Regulations section 122.26(a)(9)(i)(D), the Regional Water Boards may require any discharge that is not regulated by this General Permit, that is determined to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States, to be covered under this General Permit as appropriate. Upon designation, the Discharger responsible for the discharge shall obtain coverage under this General Permit.
- G. The Regional Water Boards may review a Discharger's Inactive Mining Operation Certification and reject it at any time if the Regional Water Board determines that access to the facility for monitoring purposes is practicable or that the facility is not in compliance with the applicable requirements of this General Permit.
- H. All Regional Water Board actions that modify a Discharger's obligations under this General Permit must be in writing and should also be submitted in SMARTS.

XX. SPECIAL CONDITIONS

A. Reopener Clause

This General Permit may be reopened and amended to incorporate TMDL-related provisions. This General Permit may also be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, water quality control plans or water quality control policies, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations sections 122.62, 122.63, 122.64, and 124.5.

B. Water Quality Based Corrective Actions

1. Upon determination by the Discharger or written notification by the Regional Water Board that industrial storm water discharges and/or authorized NSWDS contain pollutants that are in violation of Receiving Water Limitations (Section VI), the Discharger shall:
 - a. Conduct a facility evaluation to identify pollutant source(s) within the facility that are associated with industrial activity and whether the BMPs described in the SWPPP have been properly implemented;
 - b. Assess the facility's SWPPP and its implementation to determine whether additional BMPs or SWPPP implementation measures are necessary to reduce or prevent pollutants in industrial storm water discharges to meet the Receiving Water Limitations (Section VI); and,
 - c. Certify and submit via SMARTS documentation based upon the above facility evaluation and assessment that:
 - i. Additional BMPs and/or SWPPP implementation measures have been identified and included in the SWPPP to meet the Receiving Water Limitations (Section VI); or
 - ii. No additional BMPs or SWPPP implementation measures are required to reduce or prevent pollutants in industrial storm water discharges to meet the Receiving Water Limitations (Section VI).
2. The Regional Water Board may reject the Dischargers water quality based corrective actions and/or request additional supporting documentation.

C. Requirements for Dischargers Claiming “No Discharge” through the Notice of Non-Applicability (NONA)

1. For the purpose of the NONA, the Entity (Entities) is referring to the person(s) defined in section 13399.30 of the Water Code.
2. Entities who are claiming “No Discharge” through the NONA shall meet the following eligibility requirements:
 - a. The facility is engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website (or other nearby precipitation data available from other government agencies) so that there will be no discharge of industrial storm water to waters of the United States; or,
 - b. The facility is located in basins or other physical locations that are not hydrologically connected to waters of the United States.
3. When claiming the “No Discharge” option, Entities shall submit and certify via SMARTS both the NONA and a No Discharge Technical Report. The No

Discharge Technical Report shall demonstrate the facility meets the eligibility requirements described above.

4. The No Discharge Technical Report shall be signed (wet signature and license number) by a California licensed professional engineer.

XXI. STANDARD CONDITIONS

A. Duty to Comply

Dischargers shall comply with all standard conditions in this General Permit. Permit noncompliance constitutes a violation of the Clean Water Act and the Water Code and is grounds for enforcement action and/or removal from General Permit coverage.

Dischargers shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions.

B. Duty to Reapply

Dischargers that wish to continue an activity regulated under this General Permit after the expiration date of this General Permit shall apply for and obtain authorization from the Water Boards as required by the new general permit once it is issued.

C. General Permit Actions

1. This General Permit may be modified, revoked and reissued, or terminated for cause. Submittal of a request by the Discharger for General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.
2. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge, and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.

D. Need to Halt or Reduce Activity Not a Defense

In an enforcement action, it shall not be a defense for a Discharger that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

E. Duty to Mitigate

Dischargers shall take all responsible steps to reduce or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

F. Proper Operation and Maintenance

Dischargers shall at all times properly operate and maintain any facilities and systems of treatment and control (and related equipment and apparatuses) which are installed or used by the Discharger to achieve compliance with the conditions of this General Permit. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a Discharger when necessary to achieve compliance with the conditions of this General Permit.

G. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges. It also does not authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of federal, state, or local laws and regulations.

H. Duty to Provide Information

Upon request by the relevant agency, Dischargers shall provide information to determine compliance with this General Permit to the Water Boards, U.S. EPA, or local Municipal Separate Storm Sewer System (MS4) within a reasonable time. Dischargers shall also furnish, upon request by the relevant agency, copies of records that are required to be kept by this General Permit.

I. Inspection and Entry

Dischargers shall allow the Water Boards, U.S. EPA, and local MS4 (including any authorized contractor acting as their representative), to:

1. Enter upon the premises at reasonable times where a regulated industrial activity is being conducted or where records are kept under the conditions of this General Permit;
2. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;
3. Inspect the facility at reasonable times; and,
4. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

J. Monitoring and Records

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. If Dischargers monitor any pollutant more frequently than required, the results of such monitoring shall be included in the calculation and reporting of the data submitted.
3. Records of monitoring information shall include:
 - a. The date, exact location, and time of sampling or measurement;
 - b. The date(s) analyses were performed;
 - c. The individual(s) that performed the analyses;
 - d. The analytical techniques or methods used; and,
 - e. The results of such analyses.
4. Dischargers shall retain, for a period of at least five (5) years, either a paper or electronic copy of all storm water monitoring information, records, data, and reports required by this General Permit. Copies shall be available for review by the Water Board's staff at the facility during scheduled facility operating hours.
5. Upon written request by U.S. EPA or the local MS4, Dischargers shall provide paper or electronic copies of Annual Reports or other requested records to the Water Boards, U.S. EPA, or local MS4 within ten (10) days from receipt of the request.

K. Electronic Signature and Certification Requirements

1. All Permit Registration Documents (PRDs) for NOI and NEC coverage shall be certified and submitted via SMARTS by the Discharger's Legally Responsible Person (LRP). All other documents may be certified and submitted via SMARTS by the LRP or by their designated Duly Authorized Representative.
2. When a new LRP or Duly Authorized Representative is designated, the Discharger shall ensure that the appropriate revisions are made via SMARTS. In unexpected or emergency situations, it may be necessary for the Discharger to directly contact the State Water Board's Storm Water Section to register for SMARTS account access in order to designate a new LRP.
3. Documents certified and submitted via SMARTS by an unauthorized or ineligible LRP or Duly Authorized Representative are invalid.

4. LRP eligibility is as follows:
 - a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function; or
 - ii. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
 - c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. This includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).
5. Duly Authorized Representative eligibility is as follows:
 - a. The Discharger must authorize via SMARTS any person designated as a Duly Authorized Representative;
 - b. The authorization shall specify that a person designated as a Duly Authorized Representative has responsibility for the overall operation of the regulated facility or activity, such as a person that is a manager, operator, superintendent, or another position of equivalent responsibility, or is an individual who has overall responsibility for environmental matters for the company; and,
 - c. The authorization must be current (it has been updated to reflect a different individual or position) prior to any report submittals, certifications, or records certified by the Duly Authorized Representative.

L. Certification

Any person signing, certifying, and submitting documents under Section XXI.K above shall make the following certification:

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 assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons that manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, 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.

M. Anticipated Noncompliance

Dischargers shall give advance notice to the Regional Water Board and local MS4 of any planned changes in the industrial activity that may result in noncompliance with this General Permit.

N. Penalties for Falsification of Reports

Clean Water Act section 309(c)(4) provides that any person that knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years or by both.

O. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the initiation of any legal action or relieve the Discharger from any responsibilities, liabilities, or penalties to which the Discharger is or may be subject to under section 311 of the Clean Water Act.

P. Severability

The provisions of this General Permit are severable; if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

Q. Penalties for Violations of Permit Conditions

1. Clean Water Act section 309 provides significant penalties for any person that violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act or any permit condition or limitation implementing any such section in a permit issued under section 402. Any

person that violates any permit condition of this General Permit is subject to a civil penalty not to exceed \$37,500²² per calendar day of such violation, as well as any other appropriate sanction provided by section 309 of the Clean Water Act.

2. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which may be greater than penalties under the Clean Water Act.

R. Transfers

Coverage under this General Permit is non-transferrable. When operation of the facility has been transferred to another entity, or a facility is relocated, new PRDs for NOI and NEC coverage must be certified and submitted via SMARTS prior to the transfer, or at least seven (7) days prior to the first day of operations for a relocated facility.

S. Continuation of Expired General Permit

If this General Permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 Code of Federal Regulations 122.6 and remain in full force and effect.

²² May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act.

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FACT SHEET FOR
STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
NPDES NO. CAS000001**

*The factsheet to the IGP was updated in January 2015 to correct typographical errors. The deadline listed in Section I.D.13 (page 8) and Section II.G.1 (page 27) of the factsheet for dischargers with outfalls to ocean waters to develop and implement a monitoring program in compliance with the California Ocean Plan model monitoring provisions was corrected to July 1, 2015, which is the deadline listed in finding 44 in the general order.

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I. BACKGROUND

A. Purpose

The purpose of this Fact Sheet is to explain the legal requirements and technical rationale that serve as the basis for the requirements of this Order 2014-0057-DWQ (General Permit), adopted by the State Water Resources Control Board (State Water Board) on April 1, 2014. This General Permit regulates operators of facilities subject to storm water permitting (Dischargers), that discharge storm water associated with industrial activity (industrial storm water discharges). This General Permit replaces Water Quality Order 97-03-DWQ. This Fact Sheet does not contain any independently-enforceable requirements; the General Permit contains all of the actual requirements applicable to Dischargers. In case of any conflict between the Fact Sheet and the General Permit, the terms of the General Permit govern.

B. History

The Federal Clean Water Act (CWA)¹ prohibits discharges from point sources to waters of the United States, unless the discharges are in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. (CWA § 301(a).) In 1987, the CWA was amended to establish a framework for regulating municipal storm water discharges and discharges of storm water associated with industrial activity (industrial storm water discharges) under the NPDES program. (CWA § 402(p).) In 1990, the United States Environmental Protection Agency (U.S. EPA) promulgated regulations, commonly known as Phase I, establishing application requirements for storm water permits for specified categories of industries. (40 C.F.R. § 122.26.) In 1992, U.S. EPA revised the monitoring requirements for industrial storm water discharges. (40 C.F.R. § 122.44(i)(2), (4), (5).) In 1999, U.S. EPA adopted additional storm water regulations, known as Phase II. (64 Fed. Reg. 68722.) The Phase II regulations provide for, among other things, a conditional exclusion from NPDES permitting requirements for industrial activities that have no exposure to storm water.

Industrial storm water discharges are regulated pursuant to CWA section 402(p)(3)(A). This provision requires NPDES permits for industrial storm water discharges to implement CWA section 301, which includes requirements for Dischargers to comply with technology-based effluent limitations, and any more stringent water quality-based limitations necessary to meet water quality standards. Technology-based effluent limitations applicable to industrial activities are based on best conventional pollutant control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. (CWA § 301(b)(1)(A) and (2)(A).) To ensure compliance with water quality standards, NPDES permits may also require a Discharger to implement best management practices (BMPs). 40 Code of Federal Regulations section 122.44(k)(4) requires the use of BMPs to control or abate the discharge of pollutants when numeric effluent limitations (NELs) are infeasible. The State Water Board has concluded that it is infeasible to establish

¹ Federal Water Pollution Control Act of 1970 (also referred to as the Clean Water Act or CWA), 33 U.S.C. § 1201 et seq. All further statutory references herein are to the CWA unless otherwise indicated.

NELs for storm water discharges associated with industrial activity due to insufficient information at the time of adoption of this General Permit.

On April 17, 1997, the State Water Board issued NPDES General Permit for Industrial Storm Water Discharges, Excluding Construction Activities, Water Quality Order 97-03-DWQ (previous permit). This General Permit, Order 2014-0057-DWQ rescinds the previous permit and serves as the statewide general permit for industrial storm water discharges. The State Water Board concludes that significant revisions to the previous permit requirements are necessary for implementation, consistency and objective enforcement. As discussed in this Fact Sheet, this General Permit requires Dischargers to:

- Eliminate unauthorized non-storm water discharges (NSWDs);
- Develop and implement storm water pollution prevention plans (SWPPPs) that include best management practices (BMPs);
- Implement minimum BMPs, and advanced BMPs as necessary, to achieve compliance with the effluent and receiving water limitations of this General Permit;
- Conduct monitoring, including visual observations and analytical storm water monitoring for indicator parameters;
- Compare monitoring results for monitored parameters to applicable numeric action levels (NALs) derived from the U.S. EPA 2008 Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (2008 MSGP) and other industrial storm water discharge monitoring data collected in California;
- Perform the appropriate Exceedance Response Actions (ERAs) when there are exceedances of the NALs; and,
- Certify and submit all permit-related compliance documents via the Storm Water Multiple Application and Report Tracking System (SMARTS). Dischargers shall certify and submit these documents which include, but are not limited to, Permit Registration Documents (PRDs) including Notices of Intent (NOIs), No Exposure Certifications (NECs), and Storm Water Pollution Prevention Plans (SWPPPs), as well as Annual Reports, Notices of Termination (NOTs), Level 1 ERA Reports, and Level 2 ERA Technical Reports.

C. Blue Ribbon Panel of Experts (Panel)

In 2005 and 2006, the State Water Board convened a Blue Ribbon Panel of Experts (Panel) to address the feasibility of NELs in California's storm water permits. Specifically, the Panel was charged with answering the following questions:

Is it technically feasible to establish numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits?

How would such limitations or criteria be established, and what information and data would be required?²

The Panel was directed to answer these questions for industrial storm water discharge general permits, construction storm water discharge general permits, and area-wide municipal storm water discharge permits. The Panel was also directed to address both technology-based and water quality based limitations and criteria.

In evaluating the establishment of numeric limitations and criteria, the Panel was directed to consider all of the following:

- The ability of the State Water Board to establish appropriate objective limitations or criteria;
- How compliance is to be determined;
- The ability of Dischargers and inspectors to monitor for compliance; and
- The technical and financial ability of Dischargers to comply with the limitations or criteria.

Following an opportunity for public comment, the Panel identified several water quality concerns, public process and program effectiveness issues. A summary of the Panel's recommendations regarding industrial storm water discharges follows:³

- Current data are inadequate; accordingly, the State Water Board should improve monitoring requirements to collect useful data for establishing NALs and NELs.
- Required parameters for further monitoring should be consistent with the type of industrial activity (i.e., monitor for heavy metals when there is a reasonable expectation that the industrial activity will contribute to increased heavy metals concentrations in storm water).
- Insofar as possible, the use of California data (or national data applicable to California) is preferred when setting NELs and NALs.
- Industrial facilities that do not discharge to Municipal Separate Storm Sewer Systems (MS4s) should implement BMPs for their non-industrial exposure (e.g., parking lots, roof runoff) similar to BMPs implemented by commercial facilities in MS4 jurisdictions.

² State Water Board Storm Water Panel of Experts, The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 19, 2006). http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf. [as of February 4, 2014].

³ See footnote 2.

- In all cases, Dischargers should implement a suite of minimum BMPs, including, but not limited to, good housekeeping practices, employee training, and preventing exposure of materials to rain.
- Standard Industrial Classification (SIC) code categories are not a satisfactory way of identifying industrial activities at any given site. The State Water Board should develop an improved method of characterizing industrial activities that will improve water quality in storm water.
- Recognizing that implementing the Panel’s suggested changes is a large task, the State Water Board should set priorities for implementation of the Panel’s suggested approach in order to achieve the greatest reduction of pollutants statewide.
- Recognizing that an increasing number of industries have moved industrial activities indoors to prevent storm water pollution, such facilities should be granted regulatory relief from NALs and/or NELs , but should still be required to comply with any applicable MS4 permit requirements.
- Recognizing the need for improved monitoring and reduction of pollutants in industrial storm water discharges, the State Water Board should consider the total economic impact of its requirements to not economically penalize California industries when compared to industries outside of California.

With regard to the industrial activities component of its charge, the Panel limited its focus to the question of whether sampling data can be used to derive technology-based NELs. The Panel did not address other factors or approaches that may relate to the task of determining technology- and water quality-based NELs consistent with the regulations and law. Examples of these other factors are discussed in more detail in this Fact Sheet. Additionally, in its final report the Panel did not clearly differentiate between the role of numeric and non-numeric effluent limitations, nor did it consider U.S. EPA procedures used to promulgate effluent limitation guidelines (ELGs) in 40 Code of Federal Regulations, Chapter I, Subchapter N (Subchapter N).

D. Summary of Significant Changes in this General Permit

The previous permit issued by the State Water Board on April 17, 1997, had been administratively extended since 2002 until the adoption of this General Permit. Significant revisions to the previous permit were necessary to update permit requirements consistent with recent regulatory changes pertaining to industrial storm water under the CWA. This General Permit differs from the previous permit in the following areas:

1. Minimum Best Management Practices (BMPs)

This General Permit requires Dischargers to implement a set of minimum BMPs. Implementation of the minimum BMPs, in combination with any advanced BMPs (BMPs, collectively,) necessary to reduce or prevent pollutants in industrial storm water discharges, serve as the basis for compliance with this General Permit’s

technology-based effluent limitations and water quality based receiving water limitations. Although there is great variation in industrial activities and pollutant sources between industrial sectors and, in some cases between operations within the same industrial sector, the minimum BMPs specified in this General Permit represent common practices that can be implemented by most facilities.

The previous permit did not require a minimum set of BMPs but rather allowed Dischargers to consider which non-structural BMPs should be implemented and which structural BMPs should be considered for implementation when non-structural BMPs are ineffective.

This General Permit requires Dischargers to implement minimum BMPs (which are mostly non-structural BMPs), and advanced BMPs (which are mostly structural BMPs) when implementation of the minimum BMPs do not meet the requirements of the General Permit. Advanced BMPs consists of treatment control BMPs, exposure reduction BMPs, and storm water containment and discharge reduction BMPs. BMPs that exceed the performance expectation of minimum BMPs are considered advanced BMPs. Dischargers are encouraged to utilize advanced BMPs that infiltrate or reuse storm water where feasible.

The minimum and advanced BMPs required in this General Permit are consistent with U.S. EPA's 2008 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (2008 MSGP), guidance developed by the California Stormwater Quality Association, and recommendations by Regional Water Quality Control Board (Regional Water Board) inspectors. Dischargers are required to evaluate BMPs being implemented and determine an appropriate interval for the implementation and inspection of these BMPs.

2. Conditional Exclusion - No Exposure Certification (NEC)

This General Permit applies U.S. EPA Phase II regulations regarding a conditional exclusion for facilities that have no exposure of industrial activities and materials to storm water. (40 C.F.R. § 122.26(g).) (The previous permit required light industries to obtain coverage only if their activities were exposed to storm water.) This General Permit implements current U.S. EPA rules allowing any type of industry to claim a conditional exclusion. The NEC requires enrollment for coverage prior to conditionally excluding a Discharger from a majority of this General Permit's requirements.

3. Electronic Reporting Requirements

This General Permit requires Dischargers to submit and certify all reports electronically via SMARTS. The previous permit used a paper reporting process with electronic reporting as an option.

4. Training Expectations and Roles

This General Permit requires that Dischargers arrange to have appropriately trained personnel implementing this General Permit's requirements at each facility. In

addition, if a Discharger's facility enters Level 1 status, the Level 1 ERA Report must be prepared by a Qualified Industrial Storm Water Practitioner (QISP). All Action Plans and Technical Reports required in Level 2 status must also be prepared by a QISP.

Dischargers may appoint a staff person to complete the QISP training or may contract with an outside QISP. QISP training is tailored to persons with a high degree of technical knowledge and environmental experience. Although QISPs do not need to be California licensed professional engineers, it may be necessary to involve a California licensed professional engineer to perform certain aspects of the Technical Reports.

5. Numeric Action Levels (NALs) and NAL Exceedances

This General Permit contains two types of NAL exceedances. An annual NAL exceedance occurs when the average of all sampling results within a reporting year for a single parameter (except pH) exceeds the applicable annual NAL. The annual NALs are derived from, and function similarly to, the benchmark values provided in the 2008 MSGP. Instantaneous maximum NALs target hot spots or episodic discharges of pollutants. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the applicable instantaneous maximum NAL value. Instantaneous maximum NALs for Total Suspended Solids (TSS) and Oil and Grease (O&G) are based on previously gathered California industrial storm water discharge monitoring data. The instantaneous maximum NAL for pH is derived from the benchmark value provided in the 2008 MSGP.

6. Exceedance Response Actions (ERA)

This General Permit requires Dischargers to develop and implement ERAs, when an annual NAL or instantaneous maximum NAL exceedance occurs during a reporting year. The first time an annual NAL or instantaneous maximum NAL exceedance occurs for any one parameter, a Discharger's status is changed from Baseline to Level 1 status, and the Discharger is required to evaluate and revise, as necessary, its BMPs (with the assistance of a QISP) and submit a report prepared by a QISP. The second time an annual NAL or instantaneous maximum NAL exceedance occurs for the same parameter in a subsequent reporting year, the Discharger's status is changed from Level 1 to Level 2 status, and Dischargers are required to submit a Level 2 ERA Action Plan and a Level 2 ERA Technical Report. Unless the demonstration is not accepted by the State Water Board or a Regional Water Board, the Discharger is not required to perform additional ERA requirements for the parameter(s) involved if the Discharger demonstrates that:

- a. Additional BMPs required to eliminate NAL exceedances are not technologically available or economically practicable and achievable; or,
- b. NAL exceedances are solely caused by non-industrial pollutant sources; or,

- c. NAL exceedances are solely attributable to pollutants from natural background sources.

Information supporting the above demonstrations must be included in QISP-prepared Level 2 ERA Technical Reports.

7. CWA section 303(d) Impairment

This General Permit requires a Discharger to monitor additional parameters if the discharge(s) from its facility contributes pollutants to receiving waters that are listed as impaired for those pollutants (CWA section 303(d) listings). This General Permit lists the receiving waters that are 303(d) listed as impaired for pollutants that are likely to be associated with industrial storm water in Appendix 3. For example, if a Discharger discharges to a water body that is listed as impaired for copper, and the discharge(s) from its facility has the potential sources of copper, the Discharger must add copper to the list of parameters to monitor in its storm water discharge.

8. Design Storm Standards for Treatment Control BMPs

This General Permit includes design storm standards for Dischargers implementing treatment control BMPs. The design storm standards include both volume- and flow-based criteria. Dischargers are not required to retrofit existing treatment control BMPs unless required to meet the technology-based effluent limitations and receiving water limitations in this General Permit.

9. Qualifying Storm Event (QSE)

This General Permit defines a QSE as a precipitation event that:

- a. Produces a discharge for at least one drainage area; and,
- b. Is preceded by 48 hours with no discharge from any drainage area.

The definition above differs from the definition in the previous permit, resulting in an increase number of QSEs eligible for sample collection. Therefore, most Dischargers will be able to collect the required number of samples, regardless of their facility location.

10. Sampling Protocols

This General Permit requires Dischargers to collect samples during scheduled facility operating hours from each drainage location within four hours of: (1) the start of the discharge from a QSE occurring during scheduled facility operating hours, or (2) the start of scheduled facility operating hours if the QSE occurred in the previous twelve (12) hours. The benefits of this sampling protocol: (a) allows a more reasonable amount of time to collect samples, (b) increases the likelihood for samples collected at discharge locations to be representative of the drainage area discharge characteristics, (c) increases the number of QSEs eligible for sample collection, and, (d) reduces the likelihood of Dischargers collecting samples with short-term concentration spikes.

The previous permit required that Dischargers collect grab samples during the first hour of discharge that commenced during scheduled facility operating hours. These sample collection requirements were widely considered to be too rigid and out of step with other states' sample collection requirements. Since many storm events begin in the evening or early morning hours, numerous opportunities to collect samples were lost because Dischargers could not obtain samples during the first hour of discharge. Dischargers with facilities that have multiple discharge locations had difficulties collecting samples within such a short timeframe therefore affecting data quality.

11. Sampling Frequency

This General Permit increases the sampling frequency by requiring the Discharger to collect and analyze storm water samples from each discharge location for two (2) QSEs within the first half of each reporting year (July 1 to December 31), and two (2) QSEs within the second half of each reporting year (January 1 to June 30). The increased sampling, compared to the previous permit's two samples during the wet season, is consistent with the 2008 MSGP and other states' permit requirements and will improve compliance determination with this General Permit. The State Water Board expects that the elimination of the wet season sampling requirements will increase the number of possible QSEs eligible for monitoring.

12. Compliance Groups

To allow industrial facilities to efficiently share knowledge, skills and resources towards achieving General Permit compliance, this General Permit allows the formation of Compliance Groups and Compliance Group Leaders. Dischargers participating in a Compliance Group (Compliance Group Participants) are collectively required to sample twice a year. Compliance Group Leaders are required to be approved through the State Water Board-approved training program process, inspect each facility once within each reporting year, and prepare Level 1 and Level 2 ERA reports as necessary. The Compliance Group option is described in more detail in General Permit section XIV and in this Fact Sheet in the Section titled "Compliance Groups."

13. Discharges to Ocean Waters

This General Permit requires Dischargers with ocean-discharging outfalls subject to model monitoring provisions of the California Ocean Plan to develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan model monitoring provisions by July 1, 2015 or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.

II. TECHNICAL RATIONALE FOR REQUIREMENTS IN THIS GENERAL PERMIT

A. Receiving General Permit Coverage

1. This General Permit provides regulatory coverage for new and existing industrial storm water discharges and authorized NSWDS from:
 - a. Facilities required by federal regulations to obtain an NPDES permit;
 - b. Facilities designated by the Regional Water Boards to obtain an NPDES permit; and,
 - c. Facilities directed by the Regional Water Boards to obtain coverage specifically under this General Permit. The Regional Water Board typically directs a Discharger to change General Permit coverage under two circumstances:
 - (1) switch from an individual NPDES permit to this General Permit, or
 - (2) switch from the NPDES General Permit for Storm Water Discharges Associated with Construction And Land Disturbance Activities, (Order 2009-0009-DWQ, NPDES No CAS000002) to this General Permit for long-term construction related activities that are similar to industrial activities (e.g. concrete batch plants).

40 Code of Federal Regulations section 122.26(b)(14) defines "storm water discharge associated with industrial activity" and describes the types of facilities subject to permitting (primarily by Standard Industrial Classification (SIC) code). This General Permit provides regulatory coverage for all facilities with industrial activities described in Attachment A where the covered industrial activity is the Discharger's primary industrial activity. In some instances, a Discharger may have more than one primary industrial activity occurring at a facility.

The 1987 SIC manual uses the term "establishment" to determine the primary economic activity of a facility. The manual instructs that where distinct and separate economic activities are performed at a single location, each activity should be treated as a separate establishment (and, therefore, separate primary activity). For example, the United States Navy (primary SIC code 9711) may conduct industrial activities subject to permitting under this General Permit, such as landfill operations (SIC code 4953), ship and boat building and repair (SIC code 3731, and flying field operations (SIC code 4581).

The SIC manual also discusses "auxiliary" functions of establishments. Auxiliary functions provide management or support services to the establishment. Examples of auxiliary functions are warehouses and storage facilities for the establishment's own materials, maintenance and repair shops of the establishment's own machinery, automotive repair shops or storage garages of the establishment's own vehicles, administrative offices, research, development, field engineering support, and testing conducted for the establishment. When auxiliary functions are performed at physically separate facilities from the establishment they serve, they generally are not subject to General Permit coverage. If

auxiliary functions are performed at the same physical location as the establishment, then they are subject to General Permit coverage if they are associated with industrial activities.

This clarification does not change the scope of which facilities are subject to permitting relative to the 1997 IGP. The 1997 IGP Fact Sheet had used the term “auxiliary” to describe a facility’s separate primary activities, which has caused confusion.

In 1997, the North American Industrial Classification System (NAICS) was published, replacing the SIC code system. The U.S. EPA has indicated that it intends to incorporate the NAICS codes into the federal storm water regulations but has not done so yet. The State Water Board recognizes that many Dischargers in newer industries were not included in the 1987 SIC code manual and may have difficulty determining their SIC code information. To address this transition, SMARTS has been modified to accept both SIC codes and NAICS codes, and NAICS codes are automatically translated into SIC codes. There may be instances of conflict between SIC and NAICS codes. The use of NAICS codes shall not expand or reduce the types of industries subject to this General Permit as compared to the SIC codes listed in the General Permit. State Water Board staff will work closely with the applicant to resolve these conflicts in SMARTS as they are identified. Dischargers should be aware that the use of an NAICS code which results in failure to submit any of the required PRDs under this General Permit remains a violation of the terms of this General Permit.

The facilities included in category one of Attachment A (facilities subject to Subchapter N) are subject to storm water ELGs that are incorporated into the requirements of this General Permit. Dischargers whose facilities are included in this category must examine the appropriate federal ELGs to determine the applicability of those guidelines. This General Permit contains additional requirements (Section XI.D) that apply only to facilities with storm water ELGs.

2. Types of Discharges Not Covered by this General Permit
 - a. Discharges from construction and land disturbance activities that are subject to the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit).
 - b. Discharges covered by an individual or general storm water NPDES permit. Some industrial storm water discharges may be regulated by other individual or general NPDES permits issued by the State Water Board or the Regional Water Boards (Water Boards, collectively,). This General Permit shall not regulate these discharges. When the individual or general NPDES permits for such discharges expire, the Water Boards may authorize coverage under this General Permit or another general NPDES permit, or may issue a new individual NPDES permit consistent with the federal and state storm water regulations. Interested parties may request that the State Water Board or appropriate Regional Water Board issue individual or general NPDES permits for specific discharges that, in their view are not properly regulated through this General Permit. General permits may be issued for a particular industrial group or watershed area which

would supersede this General Permit. To date, two Regional Water Board have issued such permits:

- i. The Lahontan Regional Water Board has adopted an NPDES permit and general Waste Discharge Requirements to regulate discharges from marinas and maintenance dredging (Regional Water Board Order R6T-2005-0015 - NPDES Permit No. CAG616003) in the Lake Tahoe Hydrologic Unit.
 - ii. The Santa Ana Regional Water Board adopted the Sector Specific General Permit for Stormwater Runoff Associated with Industrial Activities from Scrap Metal Recycling Facilities within the Santa Ana Region, Order R8-2012-0012, NPDES Permit No. CAG 618001 (Scrap Metal Recycling Permit). The Scrap Metal Recycling Permit is applicable to facilities within the Santa Ana Region that are listed under Standard Industrial Classification (SIC) Code 5093 and engaged in the following types of activities: (1) automotive wrecking for scrap-wholesale (this category does not include facilities engaged in automobile dismantling for the primary purpose of selling second hand parts); (2) iron and steel scrap - wholesale; (3) junk and scrap metal - wholesale; (4) metal waste and scrap - wholesale; and (5) non-ferrous metals scrap - wholesale. Other types of facilities listed under SIC Code 5093 and engaged in waste recycling are not required to get coverage under the Scrap Metal Recycling Permit. A list of covered facilities as of February 8, 2011 was included in Attachment A of the Scrap Metal Recycling Permit.
- c. Discharges that the Regional Water Boards determine to be ineligible for coverage under this General Permit. In such cases, a Regional Water Board will require the discharges be covered by another individual or general NPDES permit. The applicability of this General Permit to such discharges is terminated when the discharge is subject to another individual or general NPDES permit.
- d. Discharges that do not enter waters of the United States. These include:
- i. Discharges to municipal separate sanitary sewer systems;
 - ii. Discharges to evaporation ponds, discharges to percolation ponds, and/or any other methods used to retain and prevent industrial storm water discharges from entering waters of the United States;
 - iii. Discharges to combined sewer systems. In California, the only major combined sewer systems are located in San Francisco and downtown Sacramento. Dischargers who believe they discharge into a combined sewer system should contact the local Regional Water Board to verify discharge location; and,
 - iv. Dischargers Claiming the “No Discharge” Option in the Notice of Non-Applicability (NONA) (Fact Sheet Section II.S).
- e. Discharges from mining operations or oil and gas facilities composed entirely of flows that are from conveyances or systems of conveyances used for collecting and conveying precipitation runoff and do not come into contact with any overburden, raw materials, intermediate products, finished products, by-products, or waste products located at the facility. (33 U.S.C. § 1342(l)(2).)
- f. Discharges from facilities on Tribal Lands regulated by U.S. EPA.

3. Obtaining General Permit Coverage (Section II of this General Permit)

The State Water Board has developed the SMARTS online database system to handle registration and reporting under this General Permit. More information regarding SMARTS and access to the database is available online at <https://smarts.waterboards.ca.gov>. The State Water Board has determined that all documents related to general storm water enrollment and compliance must be certified and submitted via SMARTS by Dischargers.

This General Permit requires all Dischargers to electronically certify and submit PRDs via SMARTS to obtain: (1) regulatory coverage, or (2) to certify that there are no industrial activities exposed to storm water at the facility and obtain regulatory coverage under the NEC provision of this General Permit. Facilities that were eligible to self-certify no exposure under the previous permit (see category 10 in Attachment 1 of the previous permit) are required to certify and submit via SMARTS PRDs for NOI coverage under this General Permit by July 1, 2015 or for NEC coverage by October 1, 2015. The Water Board is estimating that 10,000 – 30,000 Dischargers may be registering for NOI or NEC coverage under this General Permit. Separate registration deadlines, one for NOI coverage and one for NEC coverage, provides Dischargers better assistance from Storm Water Helpdesk and staff.

Dischargers shall electronically certify and submit the PRDs via SMARTS for each individual facility. This requirement is intended to establish a clear accounting of the name, address, and contact information for each Discharger, as well as a description of each Discharger's facility.

The Water Boards recognize that certain information pertaining to an industrial facility may be confidential. Many Stakeholders were asking for clarification on the process the Water Boards would use to manage confidential information or the process Dischargers could use to redact such information. Dischargers may redact trade secrets information from required submittals (Section II.B.3.d). Dischargers are required to include a general description of the redacted information and the basis for the redaction. Dischargers are still required to submit complete and un-redacted versions of the information to the Water Boards within 30 days, however these versions should be clearly labeled "CONFIDENTIAL" so that the confidentiality of these documents is clear to Regional Water Board staff, even when there is a change in staff. This General Permit requires that all information provided to the Water Boards by the Discharger comply with the Homeland Security Act and other federal law that addresses security in the United States.

All Dischargers who certify and submit PRDs via SMARTS for NOI coverage on or after July 1, 2015 or for NEC coverage on or after October 1, 2015, shall immediately comply with the provisions in this General Permit.

4. General Permit Coverage for Landfills

This General Permit covers storm water discharges from landfills, land application sites, and open dumps that receive or have received industrial waste from any facility covered by this General Permit. Industrial storm water discharges from these

facilities must be covered by this General Permit unless (1) they are already covered by another NPDES permit, or (2) the Regional Water Board has determined that an NPDES permit is not required because the site has been stabilized or required closure activities have been completed.

In most cases, it is appropriate for new landfill construction or final closure to be covered by the Construction General Permit, rather than this General Permit. Questions have arisen as to what constitutes new landfill construction at an existing landfill versus the normal planned expansion of a landfill. Similarly, questions have arisen about the type of closure activities that may be subject to the Construction General Permit versus the normal closure of "cells" that occurs during continued landfill operations and are not subject to the Construction General Permit. Other questions such as whether temporary or permanent newly graded/paved roads disturbing greater than one acre at a landfill are subject to the Construction General Permit. Landfill Dischargers have asked for clarity regarding these questions. The previous permit required Dischargers to contact the Regional Water Boards to determine permit appropriateness. Site specific circumstances continue to require Dischargers to contact Regional Water Boards for final determinations.

Based upon the State Water Board's storm water program history, there are only a handful of instances where an operating landfill has been simultaneously subject to both the construction and industrial permitting requirements. Typically a landfill is subject to the construction permitting requirements during the time the landfill is initially constructed and prior to operation. A landfill is subject to the industrial permitting requirements during landfill operations, and subject to the construction permitting requirements during final landfill closure activities.

Once a landfill begins operations, continued expansion or closure of incremental landfill cells is authorized under the industrial permitting requirements since these are normal aspects of landfill operations. These expansion/closure activities occur within a limited timeframe (often taking less than 90 days from beginning to end) and are not separately subject to additional local approval (e.g., a new building permit). Any construction or demolition of temporary non-impervious roads directly related to landfill operations are subject to the industrial permitting requirements.

Construction or closure of a separate section of the landfill that is either subject to additional permitting by the local authorities and/or lasts more than 90 days requires coverage under the Construction General Permit. Construction of permanent facility structures such as buildings and impervious parking lots or roads that disturb greater than one acre are also subject to the Construction General Permit. (Permanent facility structures are defined as any structural improvements designed to remain until the landfill is closed.)

Site specific circumstances such as proximity to nearby waterways, extent of activities, pollutants of concern, and other considerations can impact any decision as to whether a particular activity is to be regulated under this General Permit or the Construction General Permit. Regional Water Boards will continue to exercise their discretion as necessary to protect the beneficial uses of the receiving water(s).

5. General Permit Coverage for Small Municipal Separate Storm Sewer Systems (MS4s)

Section 1068 of the Intermodal Surface Transportation Efficiency Act of 1991 exempted municipal agencies serving populations of less than 100,000 from Phase I permit requirements other than sanitary landfills, power plants, and airports facilities. U.S. EPA's Phase II regulations eliminated the above exemption as of March 10, 2003. All facilities in Attachment A of this General Permit that are operated by a small municipal agency are subject to NPDES storm water permitting requirements and this General Permit.

6. Changes to General Permit Coverage

Dischargers who no longer operate a facility required to be covered under this General Permit (either NOI or NEC coverage) are required to electronically certify and submit via SMARTS a Notice of Termination (NOT). An NOT is required when there is a change in ownership of the industrial activities subject to permitting or when industrial activities subject to permitting are permanently discontinued by the Discharger at the site. When terminating NOI coverage, Dischargers may only submit an NOT once all exposure of industrial materials and equipment have been eliminated. Dischargers may not submit NOTs for temporary or seasonal facility closures. The General Permit requires Dischargers to implement appropriate BMPs to reduce or prevent pollutants in storm water discharges during the temporary facility closure.

This General Permit allows Dischargers to change General Permit coverage, as appropriate, from NOI coverage to NEC coverage or from NEC coverage to NOI coverage.

B. Discharge Prohibitions

This General Permit covers industrial storm water discharges and authorized NSWDS from industrial facilities and prohibits any discharge of materials other than storm water and authorized NSWDS (Section III and Section IV of this General Permit). It is a violation of this General Permit to discharge hazardous substances in storm water in excess of the reportable quantities established in 40 Code of Federal Regulations sections 117.3 and 302.4.

The State Water Board is authorized, under Water Code section 13377, to issue NPDES permits which apply and ensure compliance with all applicable provisions of the CWA, and any more stringent limitations necessary to implement water quality control plans, protect beneficial uses, and prevent nuisance.

C. Non-Storm Water Discharges (NSWDs)

Unauthorized NSWDS can be generated from various pollutant sources. Depending upon their quantity and location where generated, unauthorized NSWDS can discharge to the storm drain system during dry weather as well as during a storm event (comingled with storm water discharge). These NSWDS can consist of, but are not limited to; (1) waters generated by the rinsing or washing of vehicles, equipment,

buildings, or pavement, or (2) fluid, particulate or solid materials that have spilled, leaked, or been disposed of improperly.

Some NSWDs are not directly related to industrial activities and normally discharge minimal pollutants when properly managed. Section IV of this General Permit provides a limited list of NSWDs that are authorized if Dischargers implement BMPs to prevent contact with industrial materials prior to discharge. The list in Section IV is similar to the list provided in the 2008 MSGP but does not include pavement and external building surfaces washing without detergents. These two items are not included because the Discharger is responsible to reduce or prevent pollutants in storm water discharges from paved areas and buildings associated with industrial activities. Since industrial materials and non-industrial material likely co-exist, the washing of paved areas and external building surfaces may result in discharges of pollutants associated with industrial activities. In addition, washing activities generally occur during dry-weather periods when receiving water flows are lower than wet-weather periods. Wash waters are likely to discharge in higher concentrations than would occur if these pollutants were naturally discharged during a storm event. The discharge of high concentration wash water during a time of dry-weather flows is inconsistent with the goal of protecting receiving waters. These discharges are, therefore, considered unauthorized NSWDs. Similar to the 2008 MSGP, firefighting related discharges are not subject to this General Permit.

A major required element of the SWPPP is the identification and measures for elimination of unauthorized NSWDs. Unauthorized NSWDs can contribute a significant pollutant load to receiving waters. Measures to control spills, leakage, and dumping can often be addressed through BMPs. This General Permit's BMP requirements for NSWDs remain essentially unchanged from the previous permit other than the increased frequency of required visual observations from quarterly to monthly. See Section XI.A.1 of this General Permit.

D. Effluent Limitations

1. Technology-Based and Water Quality-Based Effluent Limitations

CWA Section 301(b)(1)(C) requires that discharges from existing facilities must, at a minimum, comply with technology-based effluent limitations based on the technological capability of Dischargers to control pollutants in their discharges. Discharges must also comply with any more stringent water quality-based limitations necessary to meet water quality standards in accordance with CWA Section 301(b)(1)(C). Water quality-based limitations are discussed in Section E of this Fact Sheet titled "Receiving Water Limitations." Both technology-based effluent limitations and water quality-based limitations are implemented through NPDES permits. (CWA sections 301(a) and (b).)

2. Types of Technology-Based Effluent Limitations

All NPDES permits are required to contain technology-based effluent limitations (TBELs). (40 C.F.R. §§122.44(a)(1) and 125.3.) TBELs may consist of effluent limitations guidelines (ELGs) established by U.S. EPA through regulation, or may be developed using best professional judgment on a case-by-case basis.

The CWA sets forth standards for TBELs based on the type of pollutant or the type of facility/source involved. The CWA establishes two levels of pollution control for existing sources. For the first level, existing sources that discharge pollutants directly to receiving waters were initially subject to effluent limitations based on the “best practicable control technology currently available” (BPT). (33 U.S.C. § 1314(b)(1)(B).) BPT applies to all pollutants. For the second level, existing sources that discharge conventional pollutants are subject to effluent limitations based on the “best conventional pollutant control technology” (BCT). (33 U.S.C. §1314(b)(4)(A); see also 40 C.F.R. §401.16 (list of conventional pollutants).) Also for the second level, other existing sources that discharge toxic pollutants or “nonconventional” pollutants (“nonconventional” pollutants are pollutants that are neither “toxic” nor “conventional”) are subject to effluent limitations based on “best available technology economically achievable” (BAT). (33 U.S.C. §1311(b)(2)(A); see also 40 C.F.R. §401.15 (list of toxic pollutants).) The factors to be considered in establishing the levels of these control technologies are specified in section 304(b) of the CWA and in U.S. EPA’s regulations at 40 C.F.R. §125.3.

When establishing ELGs for an industrial category, U.S. EPA evaluates a wide variety of technical factors to determine BPT, BCT, and BAT. U.S. EPA considers the specific factors of an industry such as pollutant sources, industrial processes, and the size and scale of operations. U.S. EPA evaluates the specific treatment, structural, and operational source control BMPs available to reduce or prevent pollutants in the discharges. The costs of implementing BMPs to address these factors are weighed against their effectiveness and ability to protect water quality. Factors such as industry economic viability, economies of scale, and retrofit costs are also considered.

To date, U.S. EPA has: (1) not promulgated storm water ELGs for most industrial categories, (2) not established NELs within all ELGs that have been promulgated, and (3) exempted certain types of facilities within an industrial category from complying with established ELGs. The feedlot category (40 Code of Federal Regulations part 412) provides an example of several of these points. In that instance, U.S. EPA did not establish numeric effluent limitations but instead: (1) established a narrative effluent limitation requiring retention of all feedlot-related runoff from a 25-year, 24-hour storm, and (2) limited application of the ELG to feedlots with a minimum number of animals. U.S. EPA also recently promulgated ELGs for the "Construction and Development (C&D)" industry, which included, among many other limitations, conditional numeric effluent limitations. Though the NELs in these ELGs were later stayed by U.S. EPA, the ELGs exempted construction sites of less than 30 acres from complying with the established numeric effluent limitations.

40 Code of Federal Regulations, Chapter I, Subchapter N (“Subchapter N”), includes over 40 separate industrial categories where the U.S. EPA has established ELGs for new and existing industrial wastewater discharges to surface waters, discharges to publicly owned treatment works (pre-treatment standards), and storm water discharges to surface waters. Generally, U.S. EPA has focused its efforts on the development of ELGs for larger industries and those industries with the greatest potential to pollute. In total, the 40 categories for which ELGs have been

established (not including construction) represent less than 10 percent of the types of facilities subject to this General Permit. Additionally, most ELGs focus on industrial process wastewater discharges and pre-treatment standards, and only 11 of the 40 categories establish numeric or narrative ELGs for industrial storm water discharges. Those that do include ELGs for industrial storm water discharges generally address storm water discharges that are generated from direct contact with primary pollutant sources at the subject facilities, and not the totality of the industrial storm water discharge from the facility, as the term “storm water discharge associated with industrial activity” for this General Order is defined in the CWA. (40 C.F.R. § 122.26(b)(14).) Where U.S. EPA has not issued effluent limitation guidelines for an industry, the State Water Board is required to establish effluent limitations for NPDES permits on a case-by-case basis based on best professional judgment (BPJ). (33 U.S.C. § 1342(a)(1); 40 C.F.R. § 125.3(c)(2).) In this General Permit, most of the TBELs are based on BPJ decision-making because no ELG applies.

The TBELs in this General Permit represent the BPT (for conventional, toxic, and non-conventional pollutants), BCT (for conventional pollutants), and BAT (for toxic pollutants and non-conventional pollutants) levels of control for the applicable pollutants. If U.S. EPA has not promulgated ELGs for an industry, or if a Discharger is discharging a pollutant not covered by the otherwise applicable ELG, the State Water Board is required to establish effluent limitations in NPDES permit limitations based on best professional judgment. (33 U.S.C. § 1342(a)(1); 40 C.F.R. 125.3(c).) This General Permit includes TBELs established on best professional judgment and limitations based on storm water-specific ELGs listed in Attachment F of this General Permit, where applicable.

3. Authority to Include Non-Numeric Technology-Based Limits in NPDES Permits

TBELs in this General Permit are based on best professional judgment and are non-numeric (“narrative”) technology-based effluent limitations expressed as requirements for implementation of effective BMPs. Federal regulations provide that permits must include BMPs to control or abate the discharge of pollutants when where “[n]umeric effluent limitations are infeasible.” 40 C.F.R. 122.44(k)(3).

Since 1977, courts have recognized that there are circumstances when numeric effluent limitations are infeasible and have held that EPA may issue permits with conditions (e.g., BMPs) designed to reduce the level of effluent discharges to acceptable levels. *Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369 (D.C.Cir.1977).

U.S. EPA has also interpreted the CWA to allow BMPs to take the place of numeric effluent limitations under certain circumstances. 40 C.F.R. §122.44(k), titled “Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs ...),” provides that permits may include BMPs to control or abate the discharge of pollutants when: (1) “[a]uthorized under section 402(p) of the CWA for the control of stormwater discharges”; or (2) “[n]umeric effluent limitations are infeasible.” 40 C.F.R. § 122.44(k).

In 2006, The U.S. Court of Appeals for the Sixth Circuit held that the CWA does not require U.S. EPA to set numeric limits where such limits are infeasible. (*Citizens Coal Council v. United States Environmental Protection Agency*, 447 F.3d 879, 895-96 (6th Cir. 2006)). The *Citizens Coal* court cited to the statement in *Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486, 502 (2d Cir. 2005) that “site-specific BMPs are effluent limitations under the CWA” in concluding that “the EPA’s inclusion of numeric and non-numeric limitations in the guideline for the coal remaining subcategory was a reasonable exercise of its authority under the CWA.” (447 F.3d at 896.) Additionally, the *Citizen’s Coal* court cited to *Natural Res. Def. Council, Inc. v. EPA*, 673 F.2d 400, 403 (D.C.Cir.1982) noting that “section 502(11) [of the CWA] defines ‘effluent limitation’ as ‘any restriction’ on the amounts of pollutants discharged, not just a numerical restriction.” NPDES permit writers have substantial discretion to impose non-quantitative permit requirements pursuant to section 402(a)(1)), especially when the use of numeric limits is infeasible. (*NRDC v. EPA*, 822 F.2d 104, 122-24 (D.C. Cir. 1987); 40 C.F.R. 122.44(k)(3).)

4. Decision to Include Non-Numeric Technology-Based Effluent Limits in This General Permit

It is infeasible for the State Water Board to develop numeric effluent limitations using the best professional judgment approach due to lack of sufficient information. Previous versions of this General Permit required Dischargers to sample their industrial storm water discharges and report the results to the Regional Water Boards. Dischargers were not required to submit this data online into a statewide database; as a result, much of this data is not available for analysis. Moreover, much of the data that are available for analysis are not of sufficient quality to make conclusions or perform basic statistical tests.

The Blue Ribbon Panel of Experts, State Water Board staff, and many stakeholders evaluated the available storm water data set and concluded that the information provides limited value due to the limited pool of industrial facilities submitting data, poor overall data quality, and extreme variance within the dataset, as described below.

The poor quality of the existing data set is attributable a number of factors. For example, the previous permits have required Dischargers to sample during the first hour of discharge from two storm events a year. This sampling schedule was designed to catch what was considered to represent the higher end of storm water discharge concentrations for most parameters. The results from this type of sampling were thought to be an indicator of whether or not additional BMPs would be necessary. The sampling schedule was not designed, however, to estimate pollutant discharge loading, or to characterize the impact of the discharge on the receiving water. Doing so would normally require the use of more advanced sampling protocols such as flow meters, continuous automatic sampling devices, certified/trained sampling personnel, and other facility-specific considerations.

Furthermore, there is currently no data which details the relationship between the BMPs implemented at each facility and the facility’s sampling results. The SWPPPs required by the previous permits were not submitted to the Water Boards, but were

kept onsite by Dischargers. Due to the limited availability of quality sampling data and "level of effort" information contained in SWPPPs, the State Water Board is unable to exercise best professional judgment to make the connection between effluent quality (sampling results) and the level of effort, costs, and performance of the various technologies that is needed in order to express the TBELs in this General Permit numerically, as NELs.

Some stakeholders have suggested that separating the data sets by industry type would lead to more reliable data with which to develop NELs. Advocates of this approach suggest that the variability of the data may be caused in part by the mixing of data from different industrial categories. The State Water Board believes that the variation is primarily due to storm intensity, duration, time of year, soil saturation or some other factors. It is necessary to collect information related to those factors and BMPs implemented in order to evaluate the variability attributable to those factors. There is currently too large of an information gap to begin the process of developing NELs for all industrial sectors not currently subject to ELGs.

The State Water Board has proposed NELs in past drafts of this General Permit. In comments, many stakeholders have highlighted the difficulty of developing statewide NELs that are applicable to all industry sectors, or even NELs that cover any specific industry sectors. For example, stakeholders have commented that:

- a. Background/ambient conditions in some hydrogeologic zones may contribute pollutant loadings that would significantly contribute to, if not exceed, the NEL values;
- b. Some advanced treatment technologies have flow/volume limitations as well as economy of scale issues for smaller facilities;
- c. Treatment technologies that require that sheet flows be captured and conveyed via discrete channels or basins may not only result in significant retrofit costs, but may conflict with local ordinances that prohibit such practices, as they can cause damage or erosion to down gradient property owners, or cause other environmental problems;
- d. There is insufficient regulatory guidance and procedures to allow permit writers to properly specify monitoring frequency and sampling protocols (e.g., instantaneous maximum, 1-day average, 3-day average, etc.), and for Dischargers to obtain representative samples to compare to NELs for the purpose of strict compliance; and,
- e. NELs must be developed with consideration of what is economically achievable for each industrial sector. These stakeholders point out that the U.S. EPA goes to great lengths evaluating the various BMP technologies available for a particular pollutant, the costs and efficiency of each BMP, and the applicability of the BMPs to the industry as a whole or to a limited number of industrial sites based upon the size of the facility, the quantity of material, and other considerations.

The State Water Board does not have the information (including monitoring data, industry specific information, BMP performance analyses, water quality information, monitoring guidelines, and information on costs and overall effectiveness of control technologies) necessary to promulgate NELs at the time of adoption of this General Permit. Therefore, it is infeasible to include NELs in this statewide General Permit.

Many of the new requirements in this General Permit have been designed to address the shortcomings of previous permits and the existing storm water data set. Under this General Permit, sampling results must be certified and submitted into SMARTS by Dischargers, along with SWPPPs which outline the technologies and BMPs used to control pollutants at each facility. The ERA process will also collect information on costs and the engineering aspects of the various control technologies employed by each facility. Previous permit versions did not have a mechanism for receiving this site specific information electronically, and only a small percentage of Dischargers submitted their Annual Reports via SMARTS. This General Permit will make this information more accessible, allowing the Water Boards to evaluate the relationship between BMPs and the ability of facilities to meet the NALs set forth in this General Permit. Finally, the new Qualified Industrial Storm Water Practitioner (QISP) training requirements of this General Permit have been designed in part to improve the quality of the data submitted.

5. Narrative Technology-Based Effluent Limitations (TBELs) and Best Management Practices (BMPs)

The primary TBEL in this General Permit requires Dischargers to “implement BMPs that comply with the BAT/BCT requirements of this General Permit to reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.” (Section V.A of this General Permit). This TBEL is a restatement of the BAT/BCT standard, as articulated by U.S. EPA in the 2008 MSGP and accompanying Fact Sheet. In order to comply with this TBEL, Dischargers must implement BMPs that meet or exceed the BAT/BCT technology-based standard. The requirement to “reduce or prevent” is equivalent to the requirement in the federal regulations that BMPs be used in lieu of NELs to “control or abate” the discharge of pollutants. (40 C.F.R. § 122.44(k).)

BMPs are defined as the “scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to reduce or prevent the discharge of pollutants... includ[ing] treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.” (40 C.F.R. § 122.2.)

This General Permit (Sections X.H.1 and X.H.2) requires all Dischargers to implement minimum BMPs, as well as any advanced BMPs that are necessary to adequately reduce or prevent pollutants in discharges consistent with the TBELs. The minimum BMPs specified in this General Permit represent common practices that can be implemented by most facilities. This General Permit generally does not mandate the specific mode of design, installation or implementation for the minimum BMPs at a Discharger’s facility. It is up to the Discharger, in the first instance, to

determine what must be done to meet the applicable effluent limits. For example, Section X.H.1.a.vi of this General Permit requires Dischargers to contain all stored non-solid industrial materials that can be transported or dispersed via wind or contact with storm water. How this is achieved will vary by facility: for some facilities, all activities may be moved indoors, while for others this will not be feasible. However, even for the latter, many activities may be moved indoors, others may be contained using tarps or a containment system, while still other activities may be limited to times when exposure to precipitation is not likely. Each of these control measures is acceptable and appropriate depending upon the facility-specific circumstances.

BMPs can be actions (including processes, procedures, schedules of activities, prohibitions on practices and other management practices), or structural or installed devices to reduce or prevent water pollution. (40 C.F.R. § 122.2.) They can be just about anything that is effective at preventing pollutants from entering the environment, and for meeting applicable limits of this General Permit. In this General Permit, Dischargers are required to select, design, install, and implement facility-specific control measures to meet these limits. Many industrial facilities already have such control measures in place for product loss prevention, accident and fire prevention, worker health and safety or to comply with other environmental regulations. Dischargers must tailor the BMPs detailed in this General Permit to their facilities, as well as improve upon them as necessary to meet permit limits. The examples detailed in this Fact Sheet emphasize prevention over treatment. However, sometimes more traditional end-of-pipe treatment may be necessary, particularly where a facility might otherwise cause or contribute to an exceedance of water quality standards.

This General Permit requires Dischargers to implement BMPs “to the extent feasible.” Consistent with the control level requirements of the CWA, for the purposes of this General Permit, the requirement to implement BMPs “to the extent feasible” means to reduce and/or prevent discharges of pollutants using BMPs that represent BAT and BPT in light of best industry practice.⁴ In other words, Dischargers are required to select, design, install and implement BMPs that reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering their technological availability and economic practicability and achievability.

To determine technological availability and economic practicability and achievability, Dischargers need to consider what control measures are considered “best” for their industry, and then select and design control measures for their site that are viable in terms of cost and technology. The State Water Board believes that for many facilities minimization of pollutants in storm water discharges can be achieved without using highly engineered, complex treatment systems. The BMPs included in

⁴ Because toxic and nonconventional pollutants are controlled in the first step by BPT and in the second step by BAT, and the second level of control is “increasingly stringent” (EPA v. National Crushed Stone, 449 U.S. 64, 69 (1980), for simplicity of discussion, the rest of this discussion will focus on BAT. Similarly, because the BAT levels of control in this General Permit are expressed as BMPs and pollution prevention measures, they will also control conventional pollutants. Therefore this discussion will focus on BAT rather than BCT or BPT for conventional pollutants.

this General Permit emphasize effective “low-tech” controls, such as regular cleaning of outdoor areas where industrial activities may take place, proper maintenance of equipment, diversion of storm water around areas where pollutants may be picked up, and effective advanced planning and training (e.g., for spill prevention and response).

E. Receiving Water Limitations and Water Quality Standards

Pursuant to CWA section 301(b)(1)(C) and Water Code section 13377, this General Permit requires compliance with receiving water limitations based on water quality standards. The primary receiving water limitation requires that industrial storm water discharges not cause or contribute to an exceedance of applicable water quality standards. Implementation of the BMPs as required by the technology-based effluent limitation in Section V of this General Permit will typically result in compliance with the receiving water limitations. The discussion of BMPs in this General Permit generally focuses on requiring implementation of BMPs to the extent necessary to achieve compliance with the technology-based effluent limitations, because the technology-based limitations apply similarly to all facilities. In addition, however, this General Permit also makes it clear that, if any individual facility's storm water discharge causes or contributes to an exceedance of a water quality standard, that Discharger must implement additional BMPs or other control measures that are tailored to that facility in order to attain compliance with the receiving water limitation. A Discharger that is notified by a Regional Water Board or who determines the discharge is causing or contributing to an exceedance of a water quality standard must comply with the Water Quality Based Corrective Actions found in Section XX.B of this General Permit.

Water Quality Based Corrective Actions are different from the Level 1 and Level 2 ERAs that result from effluent-based monitoring. It is possible for a Discharger to be engaged in Level 1 or Level 2 ERAs for one or more pollutants and simultaneously be required to perform Water Quality Based Corrective Actions for one or more other pollutants.

Failure to comply with these additional Water Quality Based Corrective Action requirements is a violation of this General Permit. If additional operational source control measures do not adequately reduce the pollutants, Dischargers must implement additional measures such as the construction of treatment systems and/or overhead coverage. Overhead coverage is any structure or temporary shelter that prevents the vertical contact of precipitation with industrial materials or activities. If the Regional Water Board determines that the Discharger's selected BMPs are inadequate, the Regional Water Board may require implementation of additional BMPs and/or may take enforcement against Dischargers for failure to comply with this General Permit.

F. Total Maximum Daily Loads (TMDLs)

TMDLs are regulatory tools that provide the maximum amount of a pollutant from potential source in the watershed that a water body can receive while attaining water quality standards. A TMDL is defined as the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations) and non-point sources (load allocations), plus the contribution from background sources. (40 C.F.R. § 130.2, subd. (i).) Discharges covered by this General Permit are considered to be point

source discharges, and therefore must comply with effluent limitations that are “consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the State and approved by EPA pursuant to 40 Code of Federal Regulations section 130.7.” (40 C.F.R. § 122.44, subd. (d)(1)(vii).) In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement relevant water quality control plans. Many TMDLs in existing water quality control plans include both waste load allocations and implementation requirements. Attachment E of this General Permit lists the watersheds with U.S. EPA-approved and U.S. EPA-established TMDLs that include TMDL requirements for Dischargers covered by this General Permit.

NPDES-regulated storm water discharges (which include industrial storm water) must be addressed by waste load allocations in TMDLs. (40 C.F.R. § 130.2(h).) NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the waste load allocations in TMDLs. (40 C.F.R. § 122.44(d)(1)(vii)(B).) To date, the relevant waste load allocations assigned to industrial storm water discharges are not directly translatable to effluent limitations. Many of the TMDLs lack sufficient facility specific information, discharge characterization data, implementation requirements, and compliance monitoring requirements. Accordingly, an analysis of each TMDL applicable to industrial storm water discharges must be performed to determine if it is appropriate to translate the waste load allocation into a numeric effluent limit, or if the effluent limit is to be expressed narratively using a BMP approach. U.S. EPA recognizes that because storm water discharges are highly variable in frequency and duration and are not easily characterized, it is often not feasible or appropriate to establish numeric limits. Variability and the lack of data available make it difficult to determine with precision or certainty actual and projected loadings for individual Dischargers or groups of Dischargers.

Regardless of whether the effluent limit is to be numeric or narrative, the existing waste load allocations must be carefully analyzed, and in many cases translated, to determine the appropriate effluent limitations. Issues of interpretation exist with all of the waste load allocations applicable to Dischargers, and these issues vary based on the TMDL. Below is an example of one of the simpler issues:

FIGURE 1: Example Waste Load Allocations Proposed Translation: Ballona Creek Estuary – Toxic Pollutants

Metals per Acre Waste Load Allocations for Individual General Construction or Industrial Storm Water Permittees (grams/year/acre)				
Cadmium	Copper	Lead	Silver	Zinc
0.1	3	4	0.1	13
Metals per Acre Waste Load Allocations for Individual General Construction or Industrial Storm Water Permittees (milligrams/year/acre)				
Chlordane	DDTs	Total Polychlorinated biphenyl (PCBs)	Total Polycyclic aromatic hydrocarbons (PAHs)	
0.04	0.14	2	350	

In order for the above waste load allocations to effectively be implemented as effluent limits under the General Permit, the Water Boards must (1) identify which discharges the waste load allocations apply to, (2) identify the acreages of the individual facilities, (3) convert the waste load allocations from grams/year/acre (or milligrams/year/acre) to grams/year (or milligrams/year) based on the acreage at each identified facility, (4) assign the effluent limits to the identified Dischargers, (5) determine appropriate monitoring to assess compliance with the effluent limits, and (6) develop a tracking mechanism for each identified facility and their individual effluent limits. A similar stepwise process is necessary for each TMDL with waste load allocations assigned to industrial storm water discharges. For TMDLs where effluent limits will be expressed as BMPs, analysis must be performed to determine the appropriate BMPs and the corresponding effectiveness to comply with the assigned waste load allocations.

Some waste load allocations are already expressed as concentration based numbers. It may appear simple to incorporate these values into this General Permit as effluent limits, but the questions still remain regarding how to determine compliance. The monitoring requirements in this General Permit are not designed to measure compliance with a numeric effluent limit or to measure the effect of a discharge on a receiving water body. (See the discussion on monitoring requirements in Fact Sheet Section II.J.) This General Permit requires sampling of four (4) storm events a year, with certain limitations as to when a discharge may be sampled. This method of monitoring may not appropriately serve as TMDL compliance sampling since grab samples are only representative of the particular moment in time when the sample was taken. Since storm water is highly variable, four grab samples per year may not provide sufficient confidence that the effluent limit is being met. An alternative monitoring scheme may be necessary to determine the facility's impact on the receiving water and to determine compliance with any assigned effluent limits. Questions concerning whether sampling results should be grab samples, composite samples, flow-weighted averaged over all drainage areas, etc. cannot be determined for each concentration-based TMDL without a more thorough analysis.

Additionally, monitoring and assessment requirements must be developed for all of the TMDLs to determine compliance with or progress towards meeting TMDL requirements. The proposed monitoring requirements in this General Permit are not designed to assess pollutant loading or determine compliance with TMDL-specific effluent limits.

Due to the large number and variety of discharges subject to a wide range of TMDLs statewide, to prevent a severe delay in the adoption of this General Permit, TMDL-specific permit requirements for the TMDLs listed in Attachment E will be proposed by the Regional Water Boards. Since the waste load allocations and/or implementation requirements apply to multiple discharges in the region(s) the TMDL were developed, the development of TMDL-specific permit requirements is best coordinated at the Regional Water Board level. The development of TMDL-specific permit requirements is subject to notice and a public comment period prior to incorporation into this General Permit.

Regional Water Board staff, with the assistance of State Water Board staff, will develop and submit the proposed TMDL-specific permit requirements for each of the TMDLs listed in Attachment E by July 1, 2016.⁵ After conducting a 30-day public comment period, the Regional Water Boards will propose TMDL-specific permit requirements to the State Water Board for adoption into this General Permit. The Regional Water Boards may also include TMDL-specific monitoring requirements for inclusion in this General Permit, or may issue Regional Water Board orders pursuant to Water Code section 13383 requiring TMDL-specific monitoring. The Regional Water Boards or their Executive Officers may complete these tasks, and the proposed TMDL-specific permit requirements shall have no force or effect until adopted, with or without modification, by the State Water Board. Unless directed to do so by the Regional Water Board, Dischargers are not required to take any additional actions to comply with the TMDLs listed in Attachment E until the State Water Board reopens this General Permit and includes TMDL-specific permit requirements. This approach is consistent with the 2008 MSGP. TMDL-specific permit requirements are not limited by the BAT/BCT technology-based standards.

The Regional Water Boards will submit to the State Water Board the following information for each of the TMDLs listed in Attachment E:

- Proposed TMDL-specific permit requirements, including any applicable effluent limitations, implementation timelines, additional monitoring requirements, reporting requirements, an explanation of how an exceedance of an effluent limitation or a violation of the TMDL will be determined, and required deliverables consistent with the TMDL(s);
- An explanation of how the proposed TMDL-specific permit requirements, timelines, and deliverables are consistent with the assumptions and requirements of applicable waste load allocation(s) to implement the TMDL(s);
- Where a BMP-based approach is proposed, an explanation of how the proposed BMPs will be sufficient to implement applicable waste load allocations; and
- Where concentration-based monitoring is required, an explanation of how the required monitoring, reporting and calculation methodology for an exceedance of an effluent limitation or a violation of the TMDL(s) will be sufficient to demonstrate compliance with the TMDL(s).

Upon receipt of the information described above, the State Water Board will conduct a public comment period and reopen this General Permit to populate Attachment E, the Fact Sheet, and other provisions as necessary in order to incorporate these TMDL-specific permit requirements into this General Permit. Attachment E may also be reopened during the term of this General Permit to add additional TMDLs and corresponding implementation requirements.

This General Permit (Section X.G.2.a.ix) requires a Discharger to identify any additional industrial parameters that may be discharged to a waterbody with a 303(d) impairment identified in Appendix 3 as likely to be associated with industrial storm water.

⁵ Due to the workload associated with the implementation of this General Permit (e.g., training program development, NEC outreach, electronic enrollment and reporting via SMARTS) it is believed that two years is necessary for Staff to complete a comprehensive analysis and stakeholder process for TMDLs applicable to Dischargers under this General Permit.

Dischargers may need to implement additional monitoring for any applicable parameters (Section XI.B.6.e). Appendix 3 of this General Permit includes the water bodies with 303(d) impairments or TMDLs for pollutants that are likely to be associated with industrial storm water in black font, and those that are not likely to be associated with industrial storm water in red font. This determination is based on the pollutant or pollutants that are causing each impairment, and the State Water Board's general experience regarding the types of pollutants that are typically found in industrial storm water discharges. The list of waterbodies is from the State Water Boards statewide 2010 Integrated CWA Section 303(d) List / Section 305(b) Report.

Some of the water bodies with 303(d) impairments or TMDLs listed in Appendix 3 of this General Permit are not applicable to Dischargers covered under this General Permit. Appendix 3 indicates these water bodies Dischargers are not required to include in their pollutant source assessment (unless directed to do so by the Regional Water Board).

New Dischargers (as defined in Attachment C) applying for NOI coverage under this General Permit that will be discharging to an impaired water body with a 303(d) listed impairment are ineligible for coverage unless the Discharger submits data and/or information, prepared by a QISP, demonstrating that the facility will not cause or contribute to the impairment. Section VII.B of this General Permit describes the three different options New Dischargers have for making this determination. This General Permit requires a QISP to assist the New Discharger with this determination because individuals making this determination will need expertise in industrial storm water pollutant sources, BMPs and a thorough understanding of complying with U.S. EPA's storm water regulations and this General Permit's requirements. Not requiring New Dischargers to have a QISP assist in this demonstration would possibly lead to costly retrofits or closure of a new facility that has not demonstrated that the facility will not cause or contribute to the impairment.

G. Discharges Subject to the California Ocean Plan

1. Discharges to Ocean Waters

On October 16, 2012 the State Water Board amended the California Ocean Plan (California Ocean Plan) to require industrial storm water Dischargers with outfalls discharging to ocean waters to comply with the California Ocean Plan's model monitoring provisions. The amended California Ocean Plan requires industrial storm water dischargers with outfalls discharging to ocean waters to comply with the California Ocean Plan's model monitoring provisions. These provisions require Dischargers to: (a) monitor runoff for specific parameters at all outfalls from two storm events per year, and collect at least one representative receiving water sample per year, (b) conduct specified toxicity monitoring at certain types of outfalls at a minimum of once per year, and (c) conduct marine sediment monitoring for toxicity under specific circumstances (California Ocean Plan, Appendix III). The California Ocean Plan provides conditions under which some of the above monitoring provisions may be waived by the Water Boards.

This General Permit requires dischargers with outfalls that discharge to ocean waters to comply with the California Ocean Plan's model monitoring provisions and

any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015 or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.

2. Areas of Special Biological Significance (ASBS) Exception

The State Water Board adopted the California Ocean Plan (California Ocean Plan) in 1972, and has subsequently amended the Plan. The California Ocean Plan prohibits the discharge of waste to designated ASBS. ASBS are ocean areas designated by the State Water Board as requiring special protection through the maintenance of natural water quality. The California Ocean Plan states that the State Water Board may grant an exception to California Ocean Plan provisions where the State Water Board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

On March 20, 2012, the State Water Board adopted Resolution 2012-0012 (ASBS Exception), which grants an exception to the California Ocean Plan prohibition on discharges to ASBS for a limited number of industrial storm water Discharger applicants. The ASBS Exception contains "Special Protections" to maintain natural water quality and protect the beneficial uses of the ASBS. In order to legally discharge into an ASBS, these Dischargers must comply with the terms of the ASBS Exception and obtain coverage under this General Permit. This General Permit incorporates the terms of the ASBS Exception and includes the applicable monitoring requirements for all Dischargers discharging to an ASBS under the ASBS Exception.

H. Training Qualifications

This General Permit and the previous permit both require Dischargers to ensure that personnel responsible for permit compliance have an acceptable level of knowledge. Stakeholders have observed that the previous permit did not adequately specify how to comply with various elements of the permit, such as selecting discharge locations representative of the facility storm water discharge and evaluating potential pollutant sources, nor did it provide a clearly outlined Discharger training program. Guidance that is available from outside sources can be complicated to understand or costly to obtain, which can result in many Dischargers developing and implementing deficient SWPPPs and conducting inadequate monitoring activities. Some Dischargers under the previous permit had the resources to hire professional environmental staff or environmental consultants to assist in compliance. Even in those cases, however, there was little certainty that Dischargers received training regarding implementation of the various BMPs being implemented and required monitoring activities under the previous permit. Through this General Permit, the State Water Board seeks to improve compliance and monitoring data quality, and expand each Discharger's understanding of this General Permit's requirements.

This General Permit establishes the Qualified Industrial Storm Water Practitioner (QISP) role. A QISP is someone who has completed a State Water Board sponsored or

approved QISP training course and has registered in SMARTS. A QISP is required to implement certain General Permit requirements at the facility once it has entered Level 1 status in the ERA process as described in Section XII of this General Permit. In some instances it may be advisable for a facility employee to take the training, or for a facility to hire a QISP prior to entering Level 1 status as the training will contain information on the new permit requirements and how to perform certain tasks such as selecting discharge locations representative of the facility storm water discharge, evaluating potential pollutant sources, and identifying inadequate SWPPP elements.

Some industry stakeholders have claimed that their staff is already adequately trained. These employees may continue to perform the basic permit functions (e.g. prepare SWPPPs, perform monitoring requirements, and prepare Annual Reports) without receiving any additional training if the facility's sampling and analysis results do not exceed the NALs. This requirement is structured in a manner to reduce the costs of compliance for facilities that may not negatively impact receiving water quality.

California licensed professional civil, industrial, chemical, and mechanical engineers and geologists have licenses that have professional overlap with the topics of this General Permit. The California Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors and Geologists (CBPELSG) provides the licensure and regulation of professional civil, industrial, chemical, and mechanical engineers and professional geologists in California. The State Water Board is developing a specialized self-guided State Water Board-sponsored registration and training program specifically for these CPBELSG licensed engineers and geologists in good standing with CBPELSG. The CBPELSG has staff and resources dedicated to investigate and take appropriate enforcement actions in instances where a licensed professional engineer or geologist is alleged to be noncompliant with CBPELSG's laws and regulations. Actions that result in noncompliance with this General Permit may constitute a potential violation of the CBPELSG requirements and may subject a licensee to investigation by the CBPELSG.

A QISP may represent one or more facilities but must be able to perform the functions required by this General Permit at all times. It is advisable that this individual be limited to a specific geographic region due to the difficulty of performing the needed tasks before, during, and after qualifying storm events may be difficult or impossible if extensive travel is required. Dischargers are required to ensure that the designated QISP has completed the appropriate QISP training course.

This General Permit contains a mechanism that allows for the Water Boards' Executive Director or Executive Officer to rescind the registration of any QISPs who are found to be inadequately performing their duties as a QISP will no longer be able to do so. A QISP may ask the State Water Board to review any decision to revoke his or her QISP registration. Table 1 of this Fact Sheet below describes the different roles that the QISP and California licensed professional engineers have in this General Permit.

TABLE 1: Role-Specific Permit Requirements

Qualifications	Task
QISP	Assist New Dischargers determine coverage eligibility for Discharges to an impaired water body, Level 1 ERA Evaluation and report, Level 2 ERA Action Plan, and Technical Report, and the Level 2 ERA extension
California licensed professional engineer	Inactive Mining Operation Certification, SWPPPs for inactive mining, and annual re-certification of Inactive Mining Operation Certification, NONA Technical Reports, and Subchapter N calculations

I. Storm Water Pollution Prevention Plan (SWPPP)

1. General

This General Permit requires that all Dischargers develop, implement, and retain onsite a site-specific SWPPP. The SWPPP requirements generally follow U.S. EPA’s five-phase approach to developing SWPPPs, which has been adapted to reflect the requirements of this General Permit in Figure 2 of this Fact Sheet. This approach provides the flexibility necessary to establish appropriate BMPs for different industrial activities and pollutant sources. This General Permit requires a Discharger to include in its SWPPP (Section X of this General Permit) a site map, authorized NSWDs at the facility, and an identification and assessment of potential pollutants sources resulting from exposure of industrial activities to storm water.

This General Permit requires that Dischargers clearly describe the BMPs that are being implemented in the SWPPP. In addition to providing descriptions, Dischargers must also describe who is responsible for the BMPs, where the BMPs will be installed, how often and when the BMPs will be implemented, and identify any pollutants of concern. Table 2 of this Fact Sheet provides an example of how a Discharger could assess potential pollution sources and provide a corresponding BMPs summary.

This General Permit requires that Dischargers select an appropriate facility inspection frequency beyond the required monthly inspections if necessary, and to determine if SWPPP revisions are necessary to address any physical or operational changes at the facility or make changes to the existing BMPs (Section X.H.4.a.vii and Section XI.A.4 of this General Permit). Facilities that are subject to multi-phased physical expansion or significant seasonal operational changes may require more frequent SWPPP updates and facility inspections. Facilities with very stable operations may require fewer SWPPP updates and facility inspections.

Failure to develop or implement an adequate SWPPP, or update or revise an existing SWPPP as required, is a violation of this General Permit. Failure to maintain the SWPPP on-site and have it available for inspection is also a violation of this General Permit.

Dischargers are also required to submit their SWPPPs and any SWPPP revisions via SMARTS; accordingly, BMP revisions made in response to observed compliance problems will be included in the revised SWPPP electronically submitted via SMARTS. Not all SWPPP revisions are significant and it is up to the Dischargers to distinguish between revisions that are significant and those that are not significant. If no changes are made at all to the SWPPP, the Discharger is not required to resubmit the SWPPP on any specific frequency.

- **Significant SWPPP Revisions:** Dischargers are required to certify and submit via SMARTS their SWPPP within 30 days of the significant revision(s). While it is not easy to draw a line generally between revisions that are significant and those that are not significant, Dischargers are not required to certify and submit via SMARTS any SWPPP revisions that are comprised of only typographical fixes or minor clarifications.
- **All Other SWPPP Revisions:** Dischargers are required to submit revisions to the SWPPP that are determined to not be significant every three (3) months in the reporting year.

FIGURE 2: Five Phases for Developing and Implementing an Industrial Storm Water Pollution Prevention Plan (SWPPP)

PLANNING AND ORGANIZATION

- *Form Pollution Prevention Team
- *Review other facility plans

ASSESSMENT

- *Develop a site map
- *Identify potential pollutant sources
- *Inventory of materials and chemicals
- *List significant spills and leaks
- *Identify Non-Storm Water Discharges
- *Assess pollutant risk

Best Management Practice (BMP) IDENTIFICATION

- *Identify minimum required BMPs
- *Identify any advanced BMPs

IMPLEMENTATION

- *Train employees for the Pollution Prevention Team
- *Implement BMPs
- *Collect and review records

EVALUATION / MONITORING

- *Conduct annual facility evaluation (Annual Evaluation)
- *Review monitoring information
- *Evaluate BMPs
- *Review and revise SWPPP

TABLE 2: Example - Assessment of Potential Industrial Pollution Sources and Corresponding BMPs Summary

Area	Activity	Pollutant Source	Industrial Pollutant	BMPs
Vehicle and Equipment Fueling	Fueling	Spills and leaks during delivery	Fuel oil	-Use spill and overflow protection
		Spills caused by topping off fuel tanks	Fuel oil	-Train employees on proper fueling, cleanup, and spill response techniques
		Hosing or washing down fuel area	Fuel oil	-Use dry cleanup methods rather than hosing down area -Implement proper spill prevention control program
		Leaking storage tanks	Fuel oil	-Inspect fueling areas regularly to detect problems
		Rainfall running off fueling area, and rainfall running onto and off fueling area	Fuel oil	-Minimize run-on of storm water into the fueling area, cover fueling area

2. Minimum and Advanced BMPs

Section V of this General Permit requires the Discharger to comply with technology-based effluent limitations (TBELs). In this General Permit, TBELs rely on implementation of BMPs for Dischargers to reduce and prevent pollutants in their discharge. The BMP effluent limitations have been integrated into the Section X.H of this General Permit and are divided into two categories – minimum BMPs which are generally non-structural BMPs that all Dischargers must implement to the extent feasible, and advanced BMPs which are generally structural BMPs that must be implemented if the minimum BMPs are inadequate to achieve compliance with the TBELs. Section X of this General Permit includes both substantive control requirements in the form of the BMPs listed in Section X.H, as well as various reporting and recordkeeping requirements. The requirement to implement BMPs “to the extent feasible” allows Dischargers flexibility when implementing BMPs, by not requiring the implementation of BMPs that are not technologically available and economically practicable and achievable in light of best industry practices.

The 2008 MSGP requires Dischargers to comply with 12 non-numeric technology-based effluent limits in Section 2.1.2 of the permit through the implementation of “control measures.” This requirement is an expansion of the general considerations outlined in the MSGP adopted in 2000. The control measures specified by the U.S. EPA in the 2008 MSGP are as follows (in order as listed in the 2008 MSGP):

1. Minimize Exposure
2. Good Housekeeping
3. Maintenance
4. Spill Prevention and Response Procedures
5. Erosion and Sediment Controls
6. Management of Runoff
7. Salt Storage Piles or Piles Containing Salt
8. Sector Specific Non-Numeric Effluent Limits
9. Employee Training
10. Non-Storm Water Discharges (NSWDs)
11. Waste, Garbage and Floatable Debris
12. Dust Generation and Vehicle Tracking of Industrial Materials

This General Permit addresses eleven of the above twelve control measures from the 2008 MSGP Section 2.1.2 Non-Numeric Technology-Based Effluent Limits (BPT/BAT/BCT). Eleven of the control measures are addressed as minimum BMPs that the State Water Board has determined to be most applicable to California’s Dischargers. Two of those eleven control measures (1- Minimize Exposure, 6 – Management of Runoff) are also identified as advanced BMPs (Section X.H.2 of this General Permit). This General Permit is not a sector-specific permit and therefore does not contain limitations to address control measure number 8 (Sector Specific Non-Numeric Effluent Limits).

The non-structural elements of the control measure to minimize exposure are addressed in the minimum BMP Section X.H.1 of this General Permit while structural control elements are addressed in the advanced BMP Section X.H.2 of this General Permit. The on-site diversion elements of the control measure to minimize exposure are addressed as minimum BMPs.

The runoff reduction elements of the control measure to minimize exposure are included as advanced BMPs. Advanced BMPs that are required to be implemented when a Discharger has implemented the minimum BMPs to the extent feasible and they are not adequate to comply with the TBELs. The advanced BMP categories are: (1) exposure minimization BMPs, (2) storm water containment and discharge reduction BMPs, (3) treatment control BMPs, and (4) additional advanced BMPs needed to meet the effluent limitations of this General Permit. Advanced BMPs are generally structural control measures and can include any BMPs that exceed the minimum BMPs. The control measure for Non-Storm Water Discharges (NSWDs) is addressed in both the discharge prohibitions (Section III) and authorized non-storm water discharges (Section IV) of this General Permit and essentially represents a minimum BMP.

This General Permit encourages Dischargers to utilize BMPs that infiltrate or reuse storm water where feasible. The State Water Board expects that these types of BMPs will not be appropriate for all industrial facilities, but recognizes the many possible benefits (e.g. increased aquifer recharge, reduces flooding, improvements to water quality) associated with the infiltration and reuse of storm water. Encouraging the use of storm water infiltration and reuse BMPs is consistent with the statewide approach to managing storm water with lower impact methods.

The BMPs in this General Permit that coincide with the control measures in the 2008 MSGP are as follows (in order as listed in the 2008 MSGP):

a. Minimization of Exposure to Storm Water

Section 2.1.2.1 of the 2008 MSGP requires Dischargers to minimize the exposure of industrial materials and areas of industrial activity to rain, snow, snowmelt, and runoff. The 2008 MSGP mixes both structural and nonstructural BMPs and specifies particular BMPs to consider when minimizing exposure such as grading/berming areas to minimize runoff, locating materials indoors, spill clean up, contain vehicle fluid leaks or drain fluids before storing vehicles on-site, secondary containment of materials, conduct cleaning activities undercover, indoors or in bermed areas, and drain all wash water to a proper collection system.

This General Permit requires the evaluation of BMPs in the potential pollutant source assessment in the SWPPP (Section X.G.2). When the minimum BMPs are not adequate to comply with the TBELs, Dischargers are required to implement advanced BMPs (Section X.H.2.a). These advanced BMPs may include additional exposure minimization BMPs (Section X.H.2.b.1).

b. Good Housekeeping

Section 2.1.2.2 of the 2008 MSGP requires that Dischargers keep all exposed areas that may be a potential source of pollutants clean and orderly. This General Permit (Section X.H.1.a) seeks to define “clean and orderly” by specifying a required set of nine (9) minimum good housekeeping BMPs, which include: observations of outdoor/exposed areas, BMPs for controlling material tracking, BMPs for dust generated from industrial materials or activities, BMPs for rinse/wash water activities, covering stored industrial materials/waste, containing all stored non-solid industrial materials, preventing discharge of rinse/wash waters/industrial materials, prevent non-industrial area discharges from contact with industrial areas of the facility, and prevent authorized NSWDS from non-industrial areas from contact with industrial areas of the facility.

c. Preventative Maintenance

Section 2.1.2.3 of the 2008 MSGP requires that Dischargers regularly inspect, test, maintain, and repair all industrial equipment to prevent leaks, spills and releases of pollutants that may be exposed to storm water discharged to receiving waters. This General Permit (Section X.H.1.b) incorporates this

concept by requiring four (4) nonstructural BMPs which include: identification and inspection of equipment, observations of potential leaks in identified equipment, an equipment maintenance schedule, and equipment maintenance procedures.

d. Spill and Leak Prevention and Response

Section 2.1.2.4 of the 2008 MSGP requires that Dischargers minimize the potential for leaks, spills and other releases that may be exposed to storm water. Dischargers are also required to develop a spill response plan which includes procedures such as labeling of containers that are susceptible to a spill or a leakage, establishing containment measures for such industrial materials, procedures for stopping leaks/spills, and provisions for notification of the appropriate personnel about any occurrence. This General Permit (Section X.H.1.c) requires implementation of four (4) BMPs to address spills. These BMPs include: developing a set of spill response procedures to minimize spills/leaks, develop procedures to minimize the discharge of industrial materials generated through spill/leaks, identifying/describing the equipment needed and where it will be located at the facility, and identify/training appropriate spill response personnel.

e. Erosion and Sediment Controls

Section 2.1.2.5 of the 2008 MSGP requires the use of structural and/or non-structural control measures to stabilize exposed areas and contain runoff. Also required is the use of a flow velocity dissipation device(s) in outfall channels where necessary to reduce erosion and/or settle out pollutants. This General Permit (Section X.H.1.e) requires the implementation of (5) BMPs to prevent erosion and sediment discharges. The erosion and sediment control BMPs include: implementing effective wind erosion controls, providing for effective stabilization of erodible areas prior to a forecasted storm event, site entrance stabilization/prevent material tracking offsite and implement perimeter controls, diversion of run-on and storm water generated from within the facility away from all erodible materials, and ensuring compliance with the design storm standards in Section X.H.6. U.S. EPA has developed online resources for erosion and sediment controls.⁶

f. Management of Runoff

Section 2.1.2.6 of the 2008 MSGP requires the diversion, infiltration, reuse, containment, or otherwise reduction of storm water runoff, to minimize pollutants in discharges. This General Permit (Sections X.H.1.a.viii, X.H.1.d.iv., and

⁶ U.S. EPA. 2008 MSGP. <<http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>> [as of February 4, 2014].
 U.S. EPA. National Menu of BMPs. <<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>>.
 [as of February 4, 2014].
 U.S. EPA. National Management Measures to Control Nonpoint Source Pollution from Urban Areas
 <<http://water.epa.gov/polwaste/nps/urban/index.cfm>>. [as of February 4, 2014].

X.H.1.e.iv) requires Dischargers to divert run-on from non-industrial sources and manage storm water generated within the facility away from industrial materials and erodible surfaces. Runoff reduction is required as an advanced BMP when minimum BMPs are not adequate to comply with the TBELs. The 2008 MSGP encouraged Dischargers to consult with EPA's internet-based resources relating to runoff management.⁷

g. Salt Storage Piles or Piles Containing Salt

Section 2.1.2.7 of the 2008 MSGP requires salt storage piles/piles containing salt that may be discharged to be enclosed or covered and to use BMPs when the salt is being used. This General Permit does not have a minimum BMP specifically for salt storage, however it does require all stockpiled/stored industrial materials be managed in a way to reduce or prevent industrial storm water discharges of the stored/stockpiled pollutants. The good housekeeping (Section X.H.1.a) and material handling and waste management (Section X.H.1.d) minimum BMPs in this General Permit require that all materials readily mobilized by storm water be covered, the minimization of handling of industrial materials or wastes that can be readily mobilized by contact with storm water during a storm event, and the diversion of run-on from stock piled materials.

h. Sector Specific Non-Numeric Effluent Limits

Section 2.1.2.8 of the 2008 MSGP requires Dischargers to achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Part 8 of the 2008 MSGP. This General Permit is not a sector-specific permit and does not contain sector-specific non-numeric effluent limitations like the 2008 MSGP. While this General Permit does not specify sector-specific BMPs, Dischargers are required to select and implement BMPs for their specific facility to reduce or prevent industrial storm water discharges of pollutants to comply with the technology-based effluent limitations. In addition, sectors with applicable ELGs must comply with those ELGs.

i. Employee Training Program

Section 2.1.2.9 of the 2008 MSGP requires all employees engaged in industrial activities or the handling of industrial materials that may affect storm water to obtain training covering implementation of this General Permit. This General Permit (Section X.D.1 and X.H.1.f) requires a facility to establish a Pollution Prevention Team (team members, collectively) responsible for implementing permit requirements such as the SWPPP, monitoring requirements, or BMPs.

⁷ U.S. EPA. Sector-Specific Industrial Stormwater Fact Sheet Series <www.epa.gov/npdes/stormwater/msgp>. [as of February 4, 2014].
U.S. EPA. National Menu of Stormwater BMPs <www.epa.gov/npdes/stormwater/menuofbmps> [as of February 4, 2014].
U.S. EPA. National Management Measures to Control Nonpoint Source Pollution from Urban Areas (and any similar State or Tribal publications) <www.epa.gov/owow/nps/urbanmm/index.html>. [as of February 4, 2014].

The five (5) minimum training BMPs include: ensuring that all team members are properly trained, preparing the proper training materials and manuals, identifying which individuals need to be trained, providing a training schedule, and maintaining documentation on the training courses and which individuals received the training.

This General Permit also requires a QISP to be assigned to each facility that reaches Level 1 status. One purpose of a QISP is to have an individual available who can provide compliance assistance with these training requirements. The QISP is responsible for training the appropriate team members. Appropriate team members are any team members involved in implementing this General Permit for drainage areas causing NAL exceedances, and any other team members identified by the QISP that need additional training to implement this General Permit.

j. NSWDs

Section 2.1.2.10 of the 2008 MSGP requires that unauthorized NSWDs are eliminated (Part 1.2.3 of the 2008 MSGP lists the NSWDs authorized by the 2008 MSGP). The good housekeeping minimum BMP (Section X.H.1.a.ix of this General Permit) requires that contact between authorized NSWDs and industrial areas of the facility be minimized. This General Permit (Section IV) also includes separate requirements for authorized NSWDs and (Section III) prohibits unauthorized NSWDs.

k. Material Handling and Waste Management

Section 2.1.2.11 of the 2008 MSGP requires that Dischargers ensure waste, garbage, and floatable debris are not discharged into receiving waters. The 2008 MSGP identifies keeping areas clean and intercepting such materials as ways to minimize such discharges. This General Permit (Section X.H.1.d) requires Dischargers to implement six (6) general BMPs that address material handling and waste management. These BMPs include: preventing or minimizing handling of waste or materials during a storm event that could potentially result in a discharge, containing industrial materials susceptible to being dispersed by the wind, covering industrial waste disposal containers when not in use to contain industrial materials, diversion of run-on and storm water generated from within the facility away from all stock piled materials, cleaning and managing spills of such wastes or materials (in accordance with Section X.H.1.e of this General Permit), and conducting observations of outdoor areas and equipment that may come into contact with such materials or waste and become contaminated.

l. Waste, Garbage and Floatable Debris

Section 2.1.2.11 of the 2008 MSGP requires that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged. Material handling and waste management BMPs are included in Section X.H.1.d of this General Permit. Dischargers are required to: prevent handling of waste materials during a storm event that could result in a discharge, contain waste disposal

containers when not in use, clean and manage spills from waste, and observe outdoor areas and equipment that may come into contact with waste and become contaminated.

m. Dust Generation and Vehicle Tracking of Industrial Materials

Section 2.1.2.12 of the 2008 MSGP requires that generation of dust and off-site tracking of raw, final, or waste materials is minimized. This General Permit does not require minimization of dust generation and vehicle tracking of industrial materials as a minimum BMP directly. Dust generation and vehicle tracking of industrial materials BMPs are included in Section X.H.1.a (“good housekeeping”) of this General Permit where Dischargers must prevent dust generation from industrial materials or activities and contain all stored non-solid industrial materials that can be transported or dispersed via wind or come in contact with storm water, and Section X.H.1.d. (“material handling and waste management”) of this General Permit, which requires Dischargers to contain non-solid industrial materials or wastes that can be dispersed via wind erosion or come into contact with storm water during handling.

n. Quality Assurance and Record Keeping

Section 2.1.2 of the 2008 MSGP does not directly designate record keeping as a control measure. This General Permit (Section X.H.1.g) includes quality assurance and record keeping as a minimum BMP and requires Dischargers to implement three (3) general BMPs. These BMPs include: developing and implementing procedures to ensure that all elements of the SWPPP are implemented, develop a method of tracking and recording the implementation of all BMPs identified in the SWPPP, and a requirement to keep and maintain those records. This ensures that management procedures are designed and permit requirements are implemented by appropriate staff.

o. Implementation of BMPs in the SWPPP

Like the previous permit, this General Permit does not assign Dischargers a schedule to implement BMPs. Instead, this General Permit requires Dischargers to select the appropriate schedule to implement the minimum BMPs. In addition, this General Permit requires Dischargers to identify, as necessary, any BMPs that should be implemented prior to precipitation events. Although Dischargers are required to maintain internal procedures to ensure the BMPs are implemented according to schedule or prior to precipitation events, Dischargers are only required to certify in the Annual Report whether they complied with the BMP implementation requirements.

Dischargers are required to implement an effective suite of BMPs that meet the technology and water-quality based limitations of this General Permit. Based upon Regional Water Board staff inspections, there is significant variation between Dischargers’ interpretations of what BMPs were necessary to comply with the previous permit. This General Permit establishes a new requirement that Dischargers must implement, to the extent feasible, specific minimum BMPs

to reduce or prevent the presence of pollutants in their industrial storm water discharge. In addition, due to the wide variety of facilities conducting numerous and differing industrial activities throughout the state, this General Permit retains the requirement from the previous permit that Dischargers establish and implement additional BMPs beyond the minimum. Implementation of this General Permit's minimum BMPs, together with any necessary advanced BMPs, will result in compliance with the effluent limitations of this General Permit (Section V.A). All Dischargers must evaluate their facilities and determine the best practices within their industry considering technological availability and economic practicability and achievability to implement these minimum BMPs and any advanced BMPs.

The State Water Board has selected minimum BMPs that are generally applicable at all facilities. The minimum BMPs are consistent with the types of BMPs normally found in properly developed SWPPPs and, in most cases, should represent a significant portion of the effort required for a Discharger to achieve compliance. Due to the diverse industries covered by this General Permit, the development of a more comprehensive list of minimum BMPs is not currently feasible. The selection, applicability, and effectiveness of a given BMP is often related to industrial activity type and to facility-specific facts and circumstances. Advanced BMPs must be selected and implemented by Dischargers, based on the type of industry and facility-specific conditions, to the extent necessary to comply with the technology-based effluent limitation requirements of this General Permit.

Failure to implement all of the minimum BMPs to the extent feasible is a violation of this General Permit. (Section X.H.1.) Dischargers must justify any determination that it is infeasible to implement a minimum BMP in the SWPPP (Section X.H.4.b). Failure to implement advanced BMPs necessary to achieve compliance with either the technology or water quality standards requirements in this General Permit is a violation of this General Permit.

p. Temporary Suspension of Industrial Activities

The exception for inactive and unstaffed sites in section 6.2.1.3 of the 2008 MSGP does not require a Discharger with a facility that is inactive and unstaffed with no industrial materials or activities exposed to storm water (in accordance with the substantive requirements in 40 Code of Federal Regulations section 122.26(g)) to complete benchmark monitoring. The Discharger is required to sign and certify a statement in the SWPPP verifying that the site is inactive and unstaffed. If circumstances change and industrial materials or activities become exposed to storm water or the facility becomes active and/or staffed, this exception no longer applies and the Discharger is required to begin complying immediately with the applicable benchmark monitoring requirements under part 6.2 of the 2008 MSGP.

This General Permit allows Dischargers to temporarily suspend monitoring at facilities where industrial activities have been suspended in accordance with Section X.H.3. This is only intended for Dischargers with facilities where it is

infeasible to comply with this General Permit's monitoring while activities are suspended (e.g. remote, unstaffed, or inaccessible facilities during the time of such a suspension). Dischargers are required to update the facility's SWPPP with the BMPs being used to stabilize the site and submit the suspension dates and a justification for the suspension of monitoring via SMARTS.

3. Design Storm Standards for Treatment Control BMPs

It is the State Water Board's intent to minimize the regulatory uncertainty and costs concerning treatment control BMPs in order to encourage the implementation of treatment control BMPs when appropriate. Section X.H.6 of this General Permit specifies a design storm standard for use when treatment controls BMPs are installed. There is both a volume-based and flow-based design storm standard in this General Permit. Both are based on the 85th percentile 24-hour storm event. Without a design storm standard, Dischargers have installed treatment controls using a wide variety of designs that were sometimes either unnecessarily stringent/expensive, or deficient in complying with the requirements of the relevant permit. Some Dischargers have been hesitant to consider treatment options because of the uncertainty concerning acceptable treatment design. The design storm standards are generally expected to:

- Be consistent with the effluent limitations of this General Permit;
- Be protective of water quality;
- Be achievable for most pollutants and their associated treatment technologies; and,
- Reduce the costs associated with treating industrial storm water discharges beyond the levels necessary to achieve compliance with this General Permit.

In lieu of complying with the design storm standards for treatment control BMPs, Dischargers may certify and submit a Level 2 ERA Technical Report, including an Industrial Activity BMPs Demonstration (Section XII.D.2.a of this General Permit). The Level 2 ERA Technical Report requirement is based upon NAL exceedances. Under this option, a Discharger with Level 2 status must either implement BMPs to eliminate future NAL exceedances, or justify what BMPs must be implemented to comply with this General Permit even if the BMPs will not eliminate future exceedances of NALs. Dischargers who implement treatment control BMPs that vary from the design storm standards in Section X.H.6 must include an analysis showing that their treatment control BMPs comply with this General Permit's effluent limitations in the Industrial Activity BMP Demonstration.

This General Permit does not require Dischargers to retrofit existing treatment controls that do not meet the design storm standard, unless the Discharger determines that the existing treatment controls are not adequate to comply with this General Permit. In addition, once TMDL-specific implementation requirements are added to this General Permit, those Dischargers subject to TMDLs may need to add

new or retrofitted treatment control BMPs to meet the TMDL implementation requirements.

To arrive at these design storm standards, the State Water Board has relied heavily on previous Water Board decisions concerning treatment efficacy for municipalities, published documents, stakeholder comments, and reasonableness. In 2000, the State Water Board issued State Water Board Order WQ 2000-11, which upheld Los Angeles Regional Water Board's permit requirements which mandated that all new development and redevelopment exceeding certain size criteria design treatment BMPs based on a specific storm volume: the 85th percentile 24-hour storm event. This design storm standard was based on research demonstrating that the standard represents the maximized treatment volume cut-off at the point of diminishing returns for rainfall/runoff frequency.⁸ On the basis of this equation, the maximized runoff volume for 85 percent treatment of annual runoff volumes in California can range from 0.08 to 0.86 inch depending on the imperviousness of the watershed area and the mean amount of rainfall. This design storm standard is referred to as the Standard Urban Storm Water Mitigation Plan's volumetric criterion and there are multiple acceptable methods of calculating this volume. For more information, see the California Stormwater Best Management Practices Handbook.⁹

The San Diego Regional Water Board first established both volumetric and flow-based design storm criteria for NPDES MS4 permits. It is generally accepted by civil engineers doing hydrology work to use twice the peak hourly flow of a specific storm event to use as the basis for flow-based design of BMPs. This General Permit therefore establishes the flow-based design storm standard to be twice the peak hourly flow of the 85th percentile 24-hour storm event.

The primary objective of specifying a design storm standard is to properly size BMPs to, at a minimum, effectively treat the first flush of run-off from all storm events. The economic impacts of treating all storm water from a facility versus the minimal environmental benefit of complete treatment justify the design storm approach. It is unrealistic to require each facility to do a cost benefit analysis of their treatment structures. To simplify the requirements for design, the State Water Board reviewed research from the City of Portland¹⁰ and the City of San Jose¹¹ to determine the volume of each rain event compared to the amount of events that occur for that volume. The results of their findings show an inflection point that is typically found at approximately the 80 to 85 percentile of recorded storm events.

⁸ California Regional Water Quality Control Board Los Angeles Region, Standard Urban Storm Water Mitigation Plans and Numerical Design Standards for Best Management Practices - Staff Report and Record of Decision (Jan. 18, 2000) <http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/susmp/susmp_final_staff_report.pdf>. [as of February 4, 2014].

⁹ California Stormwater Quality Association, Stormwater Best Management Practice New Development and Redevelopment Handbook (2003) <<http://www.casqa.org/>>. [as of February 4, 2014].

¹⁰ City of Portland Oregon. Portland Stormwater Management Manual Appendix E.1: Pollution Reduction Methodology E.1-1 (August 1, 2008). <<http://www.portlandoregon.gov/bes/article/202909>>. [as of February 4, 2014].

¹¹ California Stormwater Quality Association (CASQA). CASQA BMP Handbook (January 2003) New Development and Redevelopment (Errata 9-04) <<http://www.casqa.org/>>. [as of February 4, 2014].

Dischargers should be aware of the potential unintended public health concerns associated with treatment control BMPs. Extensive monitoring studies conducted by the California Department of Public Health (CDPH) have documented that mosquitoes opportunistically breed in structural BMPs, particularly those that hold standing water for over 96 hours. BMPs that produce mosquitoes create potential public health concerns and increase the burden on local vector control agencies that are mandated to inspect for and abate mosquitoes and other vectors within their jurisdictional boundaries. These unintended consequences can be lessened when BMPs incorporate design, construction, and maintenance principles developed specifically to minimize standing water available to mosquitoes¹² while having negligible effects on the capacity of the structures to provide water quality improvements. The California Health and Safety Code prohibits landowners from knowingly providing habitat for or allowing the production of mosquitoes and other vectors, and gives local vector control agencies broad inspection and abatement powers.¹³

Dischargers who install any type of volume-based treatment device are encouraged to consider the BMPs in the California Department of Public Health's guidance manual published July 2012, "Best Management Practices for Mosquito Control in California" at <http://www.cdph.ca.gov/HealthInfo/discond/Documents/BMPforMosquitoControl07-12.pdf>.

4. Monitoring Implementation Plan

Dischargers are required to prepare and implement a Monitoring Implementation Plan (Section X.I of this General Permit). The Monitoring Implementation Plan requirements are designed to assist the Discharger in developing a comprehensive plan for the monitoring requirements in this General Permit and to assess their monitoring program. The Monitoring Implementation Plan includes a description of visual observation procedures and locations, as well as sampling procedures, locations, and methods. The Monitoring Implementation Plan shall be included in the SWPPP.

J. Monitoring and Reporting Requirements

1. General Monitoring Provisions

This General Permit requires Dischargers to develop and implement a facility-specific monitoring program. Monitoring is defined as visual observations, sampling and analysis. The monitoring data will be used to determine:

¹² California Department of Public Health. (2012). Best Management Practices for Mosquito Control in California. <<http://www.westnile.ca.gov/resources.php>>. [as of February 4, 2014]

¹³ California Health & Safety Code, Division 3, Section 2060 and following.

- a. Whether BMPs addressing pollutants in industrial storm water discharges and authorized NSWs are effective for compliance with the effluent and receiving water limitations of this General Permit,
- b. The presence of pollutants in industrial storm water discharges and authorized NSWs (and their sources) that may trigger the implementation of additional BMPs and/or SWPPP revisions; and,
- c. The effectiveness of BMPs in reducing or preventing pollutants in industrial storm water discharges and authorized NSWs.

Effluent sampling and analysis information may be useful to Dischargers when evaluating the need for improved BMPs. The monitoring requirements in this General Permit recognize the 2008 MSGP approach to visual observations as an effective monitoring method for evaluating the effectiveness of BMPs at most facilities. Section 6.2 of the 2008 MSGP limits its monitoring sampling requirements to certain industrial categories. Similar to the previous permit, this General Permit requires all Dischargers to sample unless they have obtained NEC coverage or have an inactive mining operation(s) certified as allowed under this General Permit Section XIII.

This General Permit defines a Qualifying Storm Event (QSE) to provide clarity to Dischargers of when sampling is required. The previous permit (Section B.5.a) specified that sampling was required within the first hour of discharge, however, this General Permit requires Dischargers to sample within four hours of the start of Discharge. Many Dischargers were not able to get samples of their discharge locations within one (1) hour under the previous permit so this general permit has expanded the timeframe allowed to provide enough time to sample all discharge locations. The previous permit required three working dry days before sampling and this General Permit defines this period as 48 hours, this timeframe was decreased to provide more opportunities for Dischargers to obtain samples. This General Permit does not specify a volume for sampling due to the complexity of using rain gauges and the limited access of rain gauge station data.

Dischargers are only required to obtain samples required during scheduled facility operating hours and when sampling conditions are safe in accordance with Section XI.C.6.a.ii of this General Permit. If a storm event occurs during unscheduled facility operating hours (e.g. during the weekend or night) and during the 12 hours preceding the scheduled facility operating hours, the Dischargers is still responsible for obtaining samples at discharge locations that are still producing a discharge at the start of facility operations. Under the previous permit, many Dischargers were unable to obtain samples due to rainfall beginning at night.

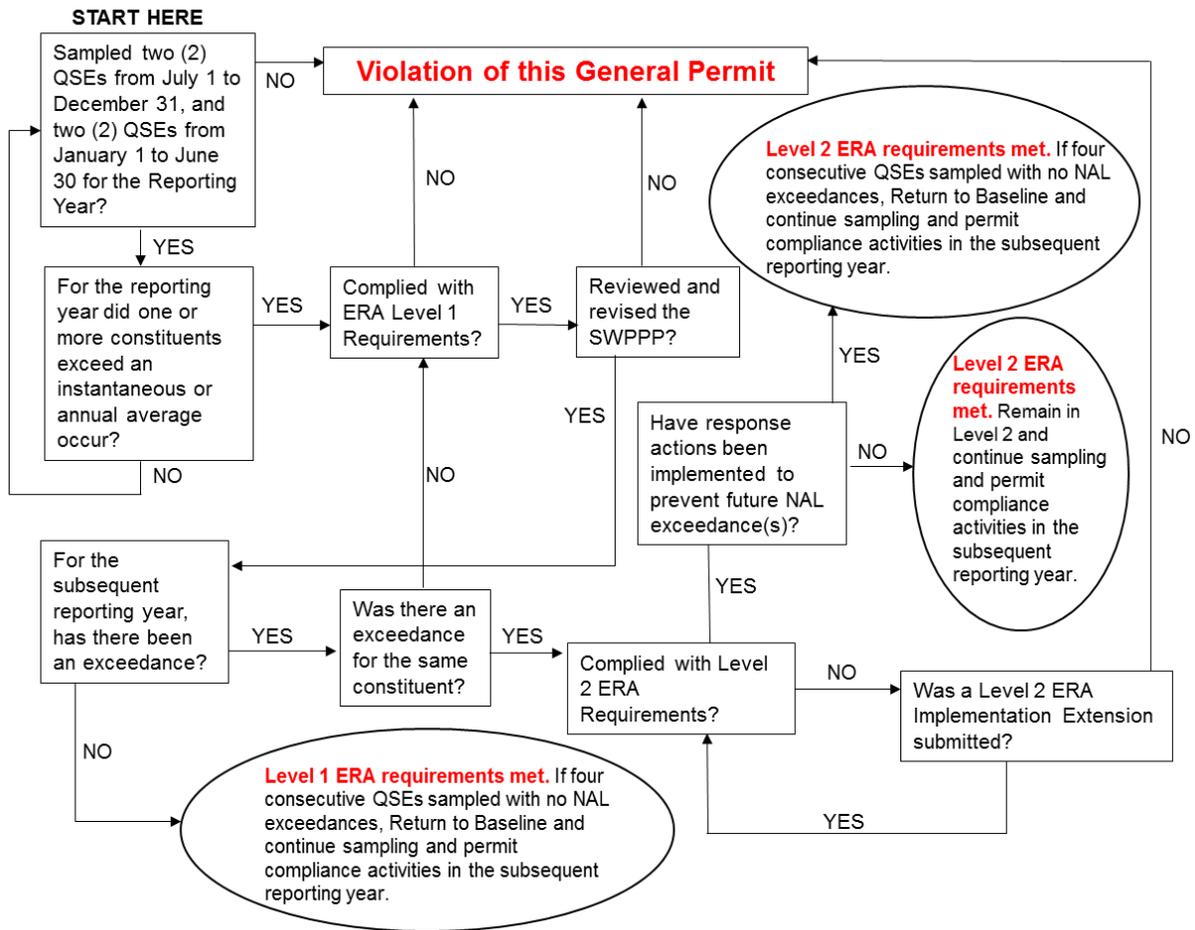
The State Water Board recognizes that it may not be feasible for all facilities to obtain four QSEs in a reporting year because there may not be enough qualifying storm events to do so. Therefore, a Discharger that is unable to collect and analyze storm water samples from two QSEs in each half of a reporting year due to a lack of QSEs is not in violation of Section XI.B.2. Dischargers that miss four QSEs during

a reporting year due to the fact that four QSEs did not occur are not required to make up these sampling events in subsequent reporting years.

The State Water Board recognizes that each facility has unique physical characteristics, industrial activities, and/or variations in BMP implementation and performance which warrants the requirement that each facility demonstrate its compliance. Figure 3 of this Fact Sheet provides a summary of all the monitoring-related requirements of this General Permit. This General Permit's monitoring requirements include sampling and analysis requirements for specific indicator parameters that indicate the presence of pollutants in industrial storm water discharges. The "indicator parameters" are oil and grease (for petroleum hydrocarbons), total suspended solids (for sediment and sediment bound pollutants) and pH (for acidic and alkaline pollutants). Additionally, Dischargers are required to evaluate their facilities and analyze samples for additional facility-specific parameters. These monitoring program requirements are designed to provide useful, cost-effective, timely, and easily obtained information to assist Dischargers as they identify their facility's pollutant sources and implement corrective actions and revise BMPs as necessary (Section XI.A.4 of this General Permit).

This General Permit requires a combination of visual observations and analytical monitoring. Visual observations provide Dischargers with immediate information indicating the presence of many pollutants and their sources. Dischargers must implement timely actions and revise BMPs as necessary (Section XI.A.4) when the visual observations indicate pollutant sources have not been adequately addressed in the SWPPP. Analytical monitoring provides an additional indication of the presence and concentrations of pollutants in storm water discharge. Dischargers are required to evaluate potential pollutant sources and corresponding BMPs and revise the SWPPP appropriately when specific types of NAL exceedances occur as described below.

FIGURE 3: Compliance Determination Flowchart



2. Visual Observations

There are two major changes to the visual observation requirements in this General Permit compared to the previous permit, which include:

a. Monthly Visual Observations

The previous permit required separate quarterly visual observations for unauthorized and authorized non-storm water discharges. It did not require periodic visual observations of the facility to determine whether all potential pollutant sources were being adequately controlled with BMPs. Prior drafts of this General Permit proposed the addition of pre-storm inspections. This was met with great resistance by Dischargers because of the complexity and burden of determining when a QSE would occur. Many of these Dischargers recommended that monthly BMP and non-storm water discharge visual observations should replace the proposed pre-storm inspections. This General Permit merges all visual observations into a single monthly visual observation.

b. Sampling Event Visual Observations

The previous permit required monthly storm water visual observations. This required Dischargers to conduct visual observations for QSEs that were not being sampled since only two QSEs were required to be sampled in the previous permit. As discussed below, the sampling requirement has been increased to four QSEs within each reporting year with two QSEs required in each half of the reporting year. We expect that this will result in more samples being collected and analyzed, since most of California experiences, on average, at least two QSEs per half year. This General Permit streamlines the storm water visual observation requirement by linking the visual observations to the time of sampling.

3. Sampling and Analysis

a. General

As part of the process for developing previous drafts of this General Permit, the State Water Board considered comments from numerous stakeholders concerning sampling and analysis. Sampling and analysis issues were the most dominant of all issues raised in the comments.

The State Water Board received stakeholder comments that fall into three primary categories concerning this General Permit's sampling and analysis approach:

- i. Comments supporting an intensive water quality sampling and analysis approach (with the goal of producing more accurate discharge-characterizing and pollutant concentration data) as the primary method of determining compliance with effluent limitations and receiving water limitations. Since this approach requires large amounts of high quality data to accurately quantify the characteristics of the discharges, it is referred to as the quantitative monitoring approach. Stakeholders supporting the quantitative approach generally also support the use of stringent NELs to evaluate compliance with this General Permit;
- ii. Comments supporting only visual observations as the primary method of determining compliance: These stakeholders generally assert that storm water sampling is an incomplete and not very cost effective means of determining water quality impacts on the receiving waters; and,
- iii. Comments supporting a combination of visual observations and cost-effective water quality sampling and analysis approach (sampling and analysis that would produce data indicating the presence of pollutants) to determine compliance (similar to the previous permit's approach). Since this approach uses more qualitative information to describe the quality and characteristics of the discharges, it is referred to as the qualitative monitoring approach.

Within each of the three categories, there are various recommendations and rationales as to the exact monitoring frequencies, procedures and methods, required to implement the approach. Stakeholders in favor of the quantitative monitoring approach commented that it is the only reliable and meaningful

method of assuring that: (1) BMPs are effective in reducing or preventing pollutants in storm water discharge in compliance with BAT/BCT, and (2) the discharge is not causing or contributing to an exceedance of a water quality standards. The stakeholders state that visual observations are not effective in measuring pollutant concentrations nor is it effective in determining the presence of colorless and/or odorless pollutants. The stakeholders state that qualitative monitoring (and the use of indicator parameters) will not provide results useful for calculating pollutant loading nor will it accurately characterize the discharge.

Stakeholders in favor of requiring only visual observations state that sampling and analysis is unnecessary because (1) the previous permit did not include NELs so the usefulness of sampling and analysis data is limited, (2) a significant majority of Dischargers should be able to develop appropriate BMPs without sampling and analysis data, (3) most pollutant sources and pollutants can be detected and mitigated through visual observations, (4) the costs associated with quantitative monitoring are excessive and disproportionate to any benefits, (5) U.S. EPA's storm water regulations do not require sampling, (6) The 2008 MSGP relies heavily on visual observations and requires only a limited number of specific industries to conduct sampling and analysis, and (7) the majority of Dischargers are small businesses and do not have sufficient training or understanding to perform accurate sampling and analysis.

Stakeholders in favor of requiring both visual observations and a cost-effective qualitative monitoring program state that (1) both are within the means and understanding of most Dischargers, and (2) monitoring results are useful for evaluating a Discharger's compliance without unnecessarily increasing the burden on the Discharger and without subjecting Dischargers to non-technical enforcement actions.

The State Water Board finds that it is feasible for the majority of Dischargers to develop appropriate BMPs without having to perform large amounts of quantitative monitoring, which can be very costly. In the absence of implementing NELs, the State Water Board has determined that the infeasibility and costs associated with developing quantitative monitoring programs at each of thousands industrial facilities currently permitted would outweigh the limited benefits. The primary difficulty associated with requiring intensive quantitative monitoring lies with the cost and the difficulty of accurately sampling industrial storm water discharges.

Stakeholders that support quantitative monitoring believe the data is necessary to determine pollutant loading, concentration, or contribution to water quality violations. In order to derive data necessary to support those goals, however, the data must be of high quality, meaning it must be accurate, precise and have an intact chain of custody. Many industrial facilities do not have well-defined storm water conveyance systems for sample collection. Storm water frequently discharges from multiple locations through sheet flow into nearby streets and adjoining properties. Sample collection from a portion of the sheet flow is an inexact measurement since not all of the flow is sampled. Requiring every Discharger to construct well-defined storm water conveyances may cost

anywhere from thousands to hundreds of thousands of dollars per facility depending on the size and nature of each industrial facility. At many facilities, the construction of such conveyances may also violate local building codes, create safety hazards, cause flooding, or increase erosion. In addition, eliminating sheet flow at some facilities could result in increased pollutant concentrations.

The State Water Board has considered the complexity and costs associated with quantitative monitoring. Unlike continuous point source discharges (e.g., publicly owned treatment works), storm water discharges are variable in intensity and duration. The concentration of pollutants discharged at any one time is dependent on many complex variables. The largest concentration of pollutants would be expected to discharge earlier in the storm event and taper off as discharges continue. Therefore, effective quantitative monitoring of storm water discharges would require that storm water discharges be collected and sampled until most or all of the pollutants have been discharged. Multiple samples would need to be collected over many hours. To determine the pollutant mass loading, the storm water discharge flow must also be measured each time a sample is collected.

For a quantitative monitoring approach to yield useful pollutant loading information, the installation of automatic sampling devices and flow meters at each discharge location would usually be necessary. In addition, qualified individuals would be needed to conduct the monitoring procedures, and to handle and maintain flow meters and automatic samplers are needed. A significant majority of storm water Dischargers under this General Permit do not possess the skills to manage such an effort. Dischargers will bear the cost of employing and/or training on-site staff to do this work, or the cost of contracting with environmental consultants and acquiring the required flow meters and automatic samplers. The cost to Dischargers to conduct quantitative monitoring varies depending on the number of outfalls, the number of storms, the length of each storm, the amount of staff training, and other variables.

To address these concerns, this General Permit includes a number of new items that bridge the gap between the previous permit's qualitative monitoring and the quantitative approach recommended by many commenters. This General Permit includes a requirement for all Dischargers to designate a QISP when they enter Level 1 status due to NAL exceedances. The QISP is required to be trained to: (1) more accurately identify discharge locations representative of the facility storm water discharge (2) select and implement appropriate sampling procedures (3) evaluate and develop additional BMPs to reduce or prevent pollutants in the industrial storm water discharges.

Dischargers that fail to develop and implement an adequate Monitoring Implementation Plan that includes both visual observations and sampling and analysis, are in violation of this General Permit. Dischargers that fail to comply with Level 1 status and Level 2 status ERA requirements, triggered by NAL exceedances, are in violation of this General Permit.

Water Code section 13383.5 requires that the State Water Board include (1) standardized methods for collection of storm water samples, (2) standardized methods for analysis of storm water samples, (3) a requirement that every sample analysis be completed by a State certified laboratory or in the field in accordance with Quality Assurance and Quality Control (QA/QC) protocols, (4) a standardized reporting format, (5) standardized sampling and analysis programs for QA/QC, and (6) minimum detection limits. The monitoring requirements in this General Permit (Section XI), as supplemented by SMARTS, address these requirements.

Under the previous permit, many Dischargers did not developed adequate sample collection and handling procedures, decreasing the quality of analytical results. In addition, Dischargers often selected inappropriate test methods, method detection limits, or reporting units. This General Permit requires all Dischargers to identify discharge locations that are representative of industrial storm water discharges and develop and implement reasonable sampling procedures to ensure that samples are not mishandled or contaminated.

It is infeasible for the State Water Board to provide a single comprehensive set of sample collection and handling procedures/instructions due to the wide variation in storm water conveyance and collection systems in use at facilities around the state. As an alternative, Attachment H of this General Permit provides minimum storm water sample collection and handling instructions that pertain to all facilities. Dischargers are required to develop facility-specific sample collection and handling procedures based upon these minimum requirements. Table 2 in this General Permit provides the minimum test methods that shall be used for a variety of common pollutants. Dischargers must be aware that use of more sensitive test methods (e.g., U.S. EPA Method 1631 for Mercury) may be necessary if they discharge to an impaired water body or are otherwise required to do so by the Regional Water Board. This General Permit allows Dischargers to propose an analytical test method for any parameter or pollutant that does not have an analytical test method specified in Table 2 or in SMARTS. Dischargers may also propose analytical test methods with substantially similar or more stringent method detection limits than existing approved analytical test methods. Upon approval, SMARTS will be updated over time to add additional acceptable analytical test methods.

The previous permit allowed Dischargers to reduce sampling analysis requirements for substantially similar drainage areas by either (1) combining samples for an unspecified maximum number of substantially similar drainage areas, or (2) sampling a reduced number of substantially similar drainage areas. The State Water Board provided this procedure to reduce analytical costs. The complexity associated with determining substantially similar drainage areas has led Dischargers to produce various, and sometimes questionable, analytical schemes. In addition, the previous permit did not establish a maximum number of samples that could be combined.

To standardize sample collection and analysis as required by Water Code section 13383.5, while continuing to offer a reduced analytic cost option, these

requirements have been revised. Section XI.B.4 of this General Permit requires Dischargers to collect samples from all discharge locations regardless of whether the discharges are substantially similar or not. Dischargers may analyze each sample collected, or may analyze a combined sample consisting of equal volumes, collected from as many as four (4) substantially similar discharge locations. A minimum of one combined sample shall be analyzed for every one (1) to four (4) discharge locations, and the samples shall be combined in the lab in accordance with Section XI.C.5 of this General Permit.

Representative sampling is only allowed for sheet flow discharges or discharges from drainage areas with multiple discharge locations. Dischargers shall select the appropriate location(s) to be sampled and intervals necessary to obtain samples representative of storm water associated with industrial activities generated within the corresponding drainage area. Dischargers are not required to sample discharge locations that have no exposure of industrial activities or materials as defined in Section XVII of this General Permit within the corresponding drainage area. However, Dischargers are required to conduct the monthly visual observations regardless of the selected locations to be sampled.

This General Permit defines a QSE as a precipitation event that produces a discharge from any drainage area that is preceded by 48 consecutive hours without a discharge from any drainage area. The previous permit did not include a QSE definition; instead, it utilized a different approach to defining the storm events that were required to be sampled. Under the previous permit, eligible storm events were storm events that occurred after three consecutive working days of dry weather. The three consecutive working days of dry weather definition in the previous permit led Dischargers to miss many opportunities to sample. Some Dischargers were unable to collect samples from two storm events in certain years under the previous definition. To resolve this difficulty, this General Permit increases the sampling requirements to four (4) QSEs per year, while decreasing the number of days without a discharge, resulting in additional opportunities for Dischargers to sample. Additionally, by eliminating the previous permit's reference to "dry weather," this General Permit allows some precipitation to occur between QSEs so long as there is no discharge from any drainage area. This change will result in more QSE sampling opportunities.

To improve clarity and consistency, the definitions contained in other storm water permits were considered with the goal of developing a standard definition for 'dry weather' for this General Permit. The 2008 MSGP sets a "measurable storm event" as one that produces at least 0.1 inches of precipitation and results in an actual discharge after 72 hours (three days) of dry weather. The State of Washington defines a "qualifying storm event" as a storm with at least 0.1 inches of precipitation preceded by at least 24 hours of no measurable precipitation, mirroring the definition found in the previous MSGP (2000 version). The State of Oregon requires that samples be taken in the first 12 hours of discharge and no less than 14 days apart. Review of other permits concludes that there is not a single commonly used approach to triggering sampling in industrial general permits. Therefore an enforceable sampling trigger is included in this General

permit that requires Dischargers to sample four storm events within each reporting year.

b. Effluent Water Quality Sampling and Analysis Parameters

Dischargers are required to sample and analyze their effluent for certain parameters. "Parameter" is a term used in laboratory analysis circles to represent a distinct, reportable measure of a particular type. For example, ammonia, hexavalent chromium, total nitrogen and chemical oxygen demand are all parameters that a laboratory can analyze storm water effluent for and report a quantity back. A parameter is also an indicator of pollution. In this General Permit, pH, total suspended solids and chemical oxygen demand are examples of indicator parameters. They are not direct measures of a water quality problem or condition of pollution but can be used to indicate a problem or condition of pollution. Indicator parameters can also be used to indicate practices and/or the presence of materials at a facility to bring forth information for compliance evaluation processes, like annual report review and inspection. For example, chemical oxygen demand concentrations can indicate the presence of dissolved organic compounds, like residual food from collected recycling materials.

Minimum parameter-specific monitoring is required for Dischargers, regardless of whether additional facility-specific parameters are selected. This General Permit requires some parameters to be analyzed and reported for the duration of permit coverage to develop comparable sampling data over time and over many storm events and to demonstrate compliance. The Regional Water Boards may use such data to evaluate individual facility compliance and assess the differences between various industries. Accordingly, the parameters selected correspond to a broad range of industrial facilities, are inexpensive to sample and analyze, and have sampling and analysis methods which are easy to understand and implement. Some analytical methods for field measurements of some parameters, such as pH, may be performed using relatively inexpensive field instruments and provides an immediate alert to possible pollutant sources.

The following three selected minimum parameters are considered indicator parameters, regardless of facility type. These parameters typically provide indication and/or the correlation of whether other pollutants are present in storm water discharge. These parameters were selected for the following reasons:

- i. pH is a numeric measurement of the hydrogen-ion concentration. Many industrial facilities handle materials that can affect pH. A sample is considered to have a neutral pH if it has a value of 7. At values less than 7, water is considered acidic; above 7 it is considered alkaline or basic. Pure rain water in California typically has a pH value of approximately 7.
- ii. Total Suspended Solids (TSS) is an indicator of the un-dissolved solids that are present in storm water discharge. Sources of TSS include sediment from erosion, and dirt from impervious (i.e., paved) areas. Many pollutants adhere to sediment particles; therefore, reducing sediment will reduce the amount of these pollutants in storm water discharge.

- iii. Oil and Grease (O&G) is a measure of the amount of O&G present in storm water discharge. At very low concentrations, O&G can cause sheen on the surface of water. O&G can adversely affect aquatic life, create unsightly floating material, and make water undrinkable. Sources of O&G include, but are not limited to, maintenance shops, vehicles, machines and roadways.

The previous permit allowed Dischargers to analyze samples for either O&G or Total Organic Carbon (TOC). This General Permit requires all Dischargers analyze samples for O&G since almost all Dischargers with outdoor activities operate equipment and vehicles can potentially generate insoluble oils and greases. Dischargers with water soluble-based organic oils may be required to also test for TOC. The TOC and O&G tests are not synonymous, duplicative or interchangeable.

This General Permit removes the requirement to analyze for specific conductance as part of the minimum analytic parameters. Specific conductance is not required by U.S. EPA for any industry type. Additionally, stakeholder comments indicate that there are many non-industrial sources that may cause high specific conductance and interfere with the efficacy of the test. For example, salty air deposition that occurs at facilities in coastal areas may raise the specific conductance in water over 500 micro-ohms per centimeter ($\mu\text{hos/cm}$). Dischargers are not prevented from performing a specific conductance test as a screening tool if it is useful to detect a particular pollutant of concern as required (e.g. salinity).

This General Permit requires Dischargers subject to Subchapter N ELGs for pH to analyze for pH using approved test methods in accordance with 40 Code of Federal Regulations part 136. These federal regulations specify that analysis of pH must take place within 15 minutes of sample collection. All other Dischargers may screen for pH using wide range litmus pH paper or other equivalent pH test kits within 15 minutes of sample collection. If in any reporting year a Discharger has two or more pH results outside of the range of 6.0 – 9.0 pH units, that Discharger is required to comply with the approved test methods in 40 Code of Federal Regulations part 136 in subsequent reporting years.

For almost all Dischargers, obtaining laboratory analysis within 15 minutes is logistically impossible. For many Dischargers, maintaining a calibrated pH meter is difficult, labor intensive, and error prone. Screening for pH will limit the number of additional Dischargers required to comply with 40 Code of Federal Regulations part 136 methods to those that have pH measures outside the range of 6.0-9.0 pH units. The use of wide range litmus pH paper or other equivalent pH test kits is not as accurate as a calibrated pH meter, however litmus paper is allowed in the 2008 MSGP, and when used properly it can provide an accurate screening measure to determine if further more-accurate pH sampling is necessary to determine compliance.

Review of available monitoring data shows that storm water discharges from most types of industrial facilities comply with the pH range of 6.0 to 9.0 pH units. There are specific types of industries, like cement or concrete manufacturers that

have shown a trend of higher pH values very close to 9.0 pH units. Rather than require all industries as a whole to monitor with the more costly 40 Code of Federal Regulations part 136 methods, this General Permit establishes a triggering mechanism for these more advanced pH test methods. The Regional Water Boards retain their authority to require more accurate test methods. Once a Discharger triggers the requirement to use the more accurate testing methods in 40 Code of Federal Regulations part 136, the Discharger may not revert back to screening for pH for the duration of coverage under this General Permit.

In the early 1990s, U.S. EPA, through its group application program, evaluated nationwide monitoring data and developed the listed parameters and SIC associations shown in Table 1 of this General Permit. The 2008 MSGP requires that Dischargers analyze storm water effluent for the listed parameters under certain conditions. In addition to the parameters in Table 1 of this General Permit, Dischargers are required to select additional facility-specific analytical parameters to be monitored, based upon the types of materials that are both exposed to and mobilized by contact with storm water. Dischargers must, at a minimum, understand how to identify industrial materials that are handled outdoors and which of those materials can easily dissolve or be otherwise transported via storm water.

The Regional Water Boards have the authority to revise the monitoring requirements for an individual facility or group of facilities based on site-specific factors including geographic location, industry type, and potential to pollute. For example, the Los Angeles Regional Water Board required all dismantlers (SIC Code 5015) within their jurisdiction to monitor for copper and zinc instead of aluminum and iron during the term of the previous permit. SMARTS will be programmed to incorporate any monitoring revisions required by the Regional Water Boards. Dischargers will receive email notification of the monitoring requirement revision and their SMARTS analytical reporting input screen will display the corresponding revisions. Dischargers may add, but not otherwise modify, the sampling parameters on their SMARTS input screen.

Dischargers are also required to identify pollutants that may cause or contribute to an existing exceedance of any applicable water quality standards for the receiving water. This General Permit requires Dischargers to control its discharge as necessary to meet the receiving water limitations, and to select additional monitoring parameters that are representative of industrial materials handled at the facility (regardless of the degree of storm water contact or relative mobility) that may be related to pollutants causing a water body to be impaired.

4. Methods and Exceptions

a. Storm Water Discharge Locations

Dischargers are required to visually observe and collect samples of industrial storm water discharges from each drainage area at all discharge locations. These samples must be representative of the storm water discharge leaving each drainage area. This is a change from the previous permit which allowed a

Discharger to reduce the number of discharge locations sampled if two or more discharge locations were substantially similar.

Dischargers are required to identify, when practicable, alternate discharge locations if: (1) the facility's industrial drainage areas are affected by storm water run-on from surrounding areas that cannot be controlled, or (2) discharge locations are difficult to observe or sample (e.g. submerged discharge outlets, dangerous discharge location accessibility).

b. Representative Sampling Reduction

Some stakeholders have indicated that there are unique circumstances where sampling a subset of representative discharge locations fully characterizes the full set of storm water discharges. Stakeholders provided examples related to drainage areas with multiple discharge locations where sampling only a subset of these discharge locations produces results that are representative of the drainage areas' storm water discharges. In such situations, this General Permit allows Dischargers to reduce the number of discharge locations. For each drainage area with multiple discharge locations (e.g. roofs with multiple downspouts, loading/unloading areas with multiple storm drain inlets), the Discharger may reduce the number of discharge locations to be sampled if the conditions in Section XI.C.4 of this General Permit are met.

c. Qualified Combined Samples

Dischargers may combine samples from up to four (4) discharge locations if the industrial activities within each drainage area and each drainage area's physical characteristics (i.e. grade, surface materials) are substantially similar.

Dischargers are required to provide documentation in the Monitoring Implementation Plan supporting that the above conditions have been evaluated and fulfilled. A Discharger may combine samples from more than four (4) discharge locations only with approval from the appropriate Regional Water Board.

d. Sample Collection and Visual Observation Exceptions

Dischargers are not required to collect samples or conduct visual observations during dangerous weather conditions such as flooding or electrical storms, or outside of scheduled facility operating hours. A Discharger is not precluded from conducting sample collection activities or visual observations outside of scheduled facility operating hours.

In the event that a Discharger is unable to collect the required samples or conduct visual observations due to the above exceptions, the Discharger must include an explanation of the conditions obstructing safe monitoring in its Annual Report. If access to a discharge location is dangerous on a routine basis, a Discharger must choose an alternative discharge location in accordance with General Permit Section XI.C.3.

e. Sampling Frequency Reduction

Facilities that do not have NAL exceedances for four (4) consecutive QSEs are unlikely to pose a significant threat to water quality. If the storm water from these facilities is also in full compliance with this General Permit, the Discharger is eligible for a reduction in sampling frequency. The Sampling Frequency Reduction allows a Discharger to decrease its monitoring from four (4) samples within each reporting year to one (1) QSE within the first half of each reporting year (July 1 to December 31) and one (1) QSE within the second half of each reporting year (January 1 to June 30). If a Discharger has a subsequent NAL exceedance after the Sampling Frequency Reduction, it must comply with the original sampling requirements of this General Permit. Only Dischargers that have baseline status or that have satisfied the Level 1 requirements are eligible for this sampling and analysis reduction.

A Discharger requesting to reduce its sampling frequency shall certify and submit a Sampling Frequency Reduction certification via SMARTS. The Sampling Frequency Reduction certification shall include documentation that the General Permit conditions for the Sampling Frequency Reduction have been satisfied.

Dischargers participating in a Compliance Group and certifying a Sampling Frequency Reduction are only required to collect and analyze storm water samples from one (1) QSE within each reporting year. These Dischargers must receive year-round compliance assistance from their Compliance Group Leader and must comply with all requirements of this General Permit.

5. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

Federal regulations at Subchapter N establish ELGs for industrial storm water discharges from facilities in eleven industrial sectors. For these facilities, compliance with the ELGs constitutes compliance with the technology standard of BPT, BAT, BCT, or New Source Performance Standards provided in the ELG for the specified pollutants, and compliance with the technology-based requirements in this General Permit for the specified pollutant.

K. Exceedance Response Actions (ERAs)

1. General

The previous permit did not incorporate the benchmarks from any of the MSGPs or NALs for Dischargers to evaluate sampling results. Unlike the requirements for industrial storm water discharges that cause or contribute to an exceedance of a water quality standards, the previous permit did not provide definitions, procedures or guidelines to assess sampling results. Many Regional Water Boards have formally or informally notified Dischargers that exceedances of the MSGP benchmarks should be used to determine whether additional BMPs are necessary. However, there was considerable confusion as to the extent to which a Discharger would be expected to implement actions in response to exceedances of these values, and the timelines that had to be met to prevent an enforcement action. The lack of specificity with regards to what constituted an exceedance, and what actions

are required in response to an exceedance, have been identified as a problem by the Water Boards, industry and environmental stakeholders.

This General Permit contains two (2) types of NALs. Annual NALs function similarly to, and are based upon, the values provided in the 2008 MSGP. Instantaneous maximum NALs target hot spots or episodic discharges of pollutants and are established based on California industrial storm water discharge monitoring data. When a Discharger exceeds an NAL it is required to perform ERAs. The ERAs are divided into two levels of responses and can generally be differentiated by the number of years in which a facility's discharge exceeds an NAL trigger. These two levels are explained further in Section XII of this General Permit. This ERA process provides Dischargers with an adaptive management-based process to develop and implement cost-effective BMPs that are protective of water quality and compliant with this General Permit. This process is also designed to provide Dischargers with a more defined pathway towards full compliance.

The ERA requirements in this General Permit were developed using best professional judgment and Water Board experience with the shortcomings of the previous permit's compliance procedures. Public comments received during State Water Board hearings on the 2002, 2005, 2011, 2012 and 2013 draft permits, and NPDES industrial storm water discharge permits from other states with well-defined ERA requirements were also considered by the State Water Board.

The State Water Board presumes that one single NAL exceedance for a particular parameter is not a clear indicator that a facility's discharge is out of compliance with the technology-based effluent limitations or receiving water limitations. This presumption recognizes the highly variable nature of storm water discharge and the limited value of a single quarterly grab sample to represent the quality of a facility's storm water discharge for an entire storm event and all other non-sampled storm events. With this presumption, the State Water Board is addressing costly monitoring requirements that do not bring forth valuable compliance and/or water quality information.

2. NALs and NAL Exceedances

a. This General Permit contains two types of NAL exceedances as follows:

Annual NAL exceedance - the Discharger is required to calculate the average annual concentration for each parameter using the results of all sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data), and compare the annual average concentration to the corresponding Annual NAL values in Table 2 of this General Permit. An annual NAL exceedance occurs when the annual average of all the sampling results for a parameter taken within a reporting year exceeds the annual NAL value for that parameter listed in Table 2 of this General Permit.

For the purposes of calculating the annual average concentration for each parameter, this General Permit considers any sampling result that are a "non-detect" or less than the method detection limit as a zero (0) value. The reason to use zero (0) values instead of the detected but not quantifiable

value (minimum level or reporting limit) is that these values are very low and are unlikely to contribute to an NAL exceedance. There are statistical methods to include low values when calculations are for numeric criteria and limitations, however, the NALs in this General Permit are approximate values used to provide feedback to the Discharger on site performance, and are not numeric criteria or limitations. Therefore, it is not necessary to include these insignificant values in the calculations for the NALs. For Dischargers using composite sampling or flow measurement in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA Guidance Manual for the Monitoring and Reporting Requirements of the NPDES Multi-Sector Storm Water General Permit.¹⁴

- i. Instantaneous maximum NAL exceedance - the Discharger is required to compare all sampling and analytical results from each distinct sample (individual or combined) to the corresponding instantaneous maximum NAL values in Table 2 of this General Permit. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G), or are outside of the instantaneous maximum NAL range (for pH).

b. Instantaneous maximum NAL analysis

In its June 19, 2006 report, the Blue Ribbon Panel of Experts (Panel) made several specific recommendations for how to set numeric limitations in future industrial storm water general permit(s). For sites not subject to TMDLs, the Panel suggested that the numeric values be based upon industry types or categories, with the recognition that each industry has its own specific water quality issues and financial viability. Furthermore, the Panel concluded:

To establish Numeric Limits for industrial sites requires a reliable database, describing current emissions by industry types or categories, and performance of existing BMPs. The current industrial permit has not produced such a database for most industrial categories because of inconsistencies in monitoring or compliance with monitoring requirements. The Board needs to reexamine the existing data sources, collect new data as required and for additional water quality parameters (the current permit requires only pH, conductivity, total suspended solids, and either total organic carbon or oil and grease) to establish practical and achievable Numeric Limits.

The Panel suggested an alternative method that would allow the use of the existing Water Board dataset to establish action levels, referred to as the “ranked percentile” method. The Panel recommended:

¹⁴ U.S. EPA. NPDES Storm Water Sampling Guidance Document. Web. July 1992. <<http://www.epa.gov/npdes/pubs/owm0093.pdf>>. [as of February 4, 2014].

The ranked percentile approach (also a statistical approach) relies on the average cumulative distribution of water quality data for each constituent developed from many water quality samples taken for many events at many locations. The Action Level would then be defined as those concentrations that consistently exceed some percentage of all water quality events (i.e. the 90th percentile). In this case, action would be required at those locations that were consistently in the outer limit (i.e. uppermost 10th percentile) of the distribution of observed effluent qualities from urban runoff.

After performing various data analysis exercises with the Water Board dataset, State Water Board staff concluded that the Water Board dataset is not adequate to calculate instantaneous NAL values using the Panel's recommended method for all of parameters that have annual NAL values based on the U.S. EPA benchmarks. Additionally, public comments on the January 2011 draft of this General Permit suggest that it is problematic to calculate NAL values based on the existing data. Therefore, the Water Board dataset was not used to calculate instantaneous NAL values for all parameters.

However, since all Dischargers regulated under the previous permit were required to sample for TSS and O&G/TOC, State Water Board staff found that the existing dataset for these parameters is of sufficient quality to calculate instantaneous NAL values. State Water Board staff also found that this data was less prone to what appear to be data input errors. The final dataset used to calculate the instantaneous NALs in this General Permit had outlier values that were eliminated from the dataset by using approved test method detection limits ranges. The methods and corresponding method detection limit ranges used to screen outliers are as follows:

- O&G - EPA 413.1 Applicable Range: 5-1,000 mg/L
- O&G - EPA 1664 Applicable Range: 5-1,000 mg/L
- TSS - EPA 160.2 Applicable Range: 4-20,000 mg/L

The intent of the instantaneous maximum NAL is to identify specific drainage areas of concern or episodic sources of pollution in industrial storm water that may indicate inadequate storm water controls and/or water quality impacts. In the effort to add instantaneous NAL exceedances to the ERA process, the State Water Board explored different options for the development of an appropriate value (i.e. percentile approach, benchmarks times a multiplier, confidence intervals). The California Stormwater Quality Association's comments on the previous draft permit included a proposed method for calculating NAL values using a percentile approach. The State Water Board researched and evaluated this methodology and determined it is the most appropriate way to directly compare available electronic sampling data from Dischargers regulated under the previous permit. This percentile approach was used to establish the instantaneous maximum NALs in this General Permit, for discharges to directly compare with sampling results and identify drainage areas of water quality concern.

The percentile approach is a non-parametric approach identified in many statistical textbooks for determining highly suspect values. Highly suspect values are defined as values that exceed the limits of the outer fences of a box plot. Upper limits of the outer fence are calculated by adding three times the inter-quartile range (25th to 75th percentiles) to the upper-end of the inter-quartile range (the 75th percentile). The California Stormwater Quality Association calculated an NAL value of 401 mg/L for TSS using the percentile approach using the Water Board dataset. The State Water Board performed the same analysis with the same Water Board dataset and calculated a slightly different value of 396 mg/L; therefore, the instantaneous maximum NAL value for TSS of 400 mg/L was established. Applying the percentile approach to the existing O&G data results in the instantaneous maximum NAL value for O&G of 25 mg/L.

The State Water Board compared existing sampling data to the instantaneous maximum NAL values and concluded that seven (7) percent of the total samples exceeded the highly suspected value for TSS and 7.8 percent of the total samples exceeded the highly suspected value for O&G. These results suggest that the instantaneous maximum NAL values are adequate to identify drainage areas of concern statewide since they are not regularly exceeded. Using best professional judgment, the State Water Board concludes that an exceedance of these values twice within a reporting year is unlikely to be the result of storm event variability or random BMP implementation problems, and the use of the percentile approach is therefore appropriate.

Due to issues with the ranges of concentrations and the logarithmic nature of pH, statistical methods cannot be applied to pH in the same ways as other parameters. Review of storm water sampling data by the State Water Board and other stakeholders has shown that pH is not typically a parameter of concern for most industrial facilities. Accordingly, a range of pH limits established in Regional Water Board Basin Plans is implemented in this General Permit for the instantaneous maximum NAL values. Most Basin Plans set a water quality objective of 6.0 - 9.0 pH units for water bodies, an exceedance outside the range of 6.0 - 9.0 pH units is consistent with the water quality concerns for pH among Regional Water Boards. An industrial facility with proper BMP implementation is expected to have industrial storm water discharges within the range of 6.0 - 9.0 pH units.

High concentrations of TSS and O&G, or pH values outside the range of 6.0 – 9.0 pH units, in a discharge may be an indicator of potential BMP implementation or receiving water quality concerns with other pollutants with parameters that do not have an instantaneous maximum NAL value. The State Water Board may consider instantaneous maximum NAL values for other parameters in a subsequent reissuance of this General Permit, based on data collected during this General Permit term.

The percentile approach is considered by many stakeholders to be the best method to evaluate BMP performance and general effluent quality in a community or population where the vast majority of the industrial facilities are implementing sufficient pollutant control measures. The Water Board's current

dataset does not provide a way of evaluating actual BMP implementation at each facility when analyzing the data; therefore the monitoring information reported during the previous permit term cannot be linked to compliance with technology-based standards. The State Water Board intends to use data collected during this General Permit term to evaluate the percentile approach, improve the quality of collected data for other parameters, and further develop an understanding of how reported data relates to implemented BMP-control technologies.

Under this General Permit, a Discharger enters Level 1 status and must fulfill the Level 1 status ERA requirements following its first occurrence of any NAL exceedance. Level 2 status ERA requirements follow the second occurrence of an NAL exceedance for the same parameter in a subsequent reporting year. This ERA process provides Dischargers with an adaptive management-based process to develop and implement cost-effective BMPs that are protective of water quality and compliant with this General Permit. This General Permit's ERA process is designed to have a well-defined compliance end-point. It is not a violation of this General Permit to exceed the NAL values; it is a violation of the permit, however, to fail to comply with the Level 1 status and Level 2 status ERA requirements in the event of NAL exceedances.

The State Water Board acknowledges that storm water discharge concentrations are often highly variable and dependent upon numerous circumstances such as storm size, the time elapsed since the last storm, seasonal activities, and the time of sample collection. Since there are potential enforcement consequences for failure to comply with this General Permit's ERA process, the State Water Board's intention is to use NAL exceedances to solely require Dischargers with recurring annual NAL exceedances or drainage areas that produce recurring instantaneous maximum NAL exceedances to be subject to the follow-up ERA requirements.

If NALs exceedances do not occur, the State Water Board generally expects that the Discharger has implemented sufficient BMPs to control storm water pollution. When NAL exceedances do occur, however, the potential that the Discharger may not have implemented appropriate and/or sufficient BMPs increases, and the Discharger is required to implement escalating levels of ERAs. If NAL exceedances occur, this General Permit requires Dischargers to evaluate and potentially install additional BMPs, or re-evaluate and improve existing BMPs to be in compliance with this General Permit.

3. Baseline Status

At the beginning of a Discharger's NOI coverage under this General Permit, the Discharger has Baseline status. A Discharger demonstrating compliance with all NALs will remain at Baseline status and is not required to complete Level 1 status and Level 2 status ERA requirements.

If a Discharger has returned to Baseline status (from Level 2 status) and additional NAL exceedances occur, the Discharger goes into Level 1 status, then potentially

Level 2 status. Dischargers do not go directly into Level 2 status from Baseline status.

4. Level 1 Status

Regardless of when an NAL exceedance occurs during Baseline status, a Discharger's status changes from Baseline status to Level 1 status on July 1 of the subsequent reporting year. By October 1 following the commencement of Level 1 status, the Discharger is required to appoint a QISP to assist with the completion of the Level 1 Evaluation. The Level 1 Evaluation must include a review of the facility's SWPPP for compliance with the effluent and receiving water limitations of this General Permit, an evaluation of the industrial pollutant sources at the facility that are or may be related to the NAL exceedance(s), and identification of any additional BMPs that will eliminate future exceedances. When conducting the Level 1 Evaluation, a Discharger must ensure that all potential pollutant sources that could be causing or contributing to the NAL exceedance(s) are fully characterized, that the current BMPs are adequately described, that employees responsible for implementing BMPs are appropriately trained, and that internal procedures are in place to track that BMPs are being implemented as designed in the SWPPP. A Discharger is additionally required to evaluate the need for additional BMPs. Level 1 ERAs are designed to provide the Discharger the opportunity to improve existing BMPs or add additional BMPs to comply with the requirements of this General Permit.

By January 1 following commencement of Level 1 status, a Discharger is required to certify and submit via SMARTS a Level 1 ERA Report prepared by a QISP. The Level 1 ERA Report must contain a summary of the Level 1 Evaluation, all new or revised BMPs added to the SWPPP.

In most cases, the State Water Board believes that Level 1 status BMPs will be operationally related rather than structural and, therefore can be implemented without delay. Recognizing that a Discharger should not be penalized for sampling results obtained before implementing BMPs, sampling results for parameters and their corresponding drainage areas that caused the NAL exceedance up to October 1 or the date the BMPs were implemented, whichever is sooner, will not be used for calculating NAL exceedances. Although this General Permit allows up to January 1 to implement Level 1 status BMPs, the State Board has chosen an interim date of October 1 to encourage more timely Level 1 BMP implementation. Dischargers who implement Level 1 BMPs after October 1 may risk obtaining subsequent sampling results that may cause them to go into Level 2 status.

5. Level 2 Status

Level 2 ERAs are required during any subsequent reporting year in which the same parameter(s) has an NAL exceedance (annual average or instantaneous maximum), if this occurs, a Discharger's status changes from Level 1 status to Level 2 status on July 1 of the subsequent reporting year. Dischargers with Level 2 status must further evaluate BMP options for their facility. Dischargers may have to implement additional BMPs, which may include physical, structural, or mechanical devices that

are intended to prevent pollutants from contacting storm water. Examples of such controls include, but are not limited to:

- Enclosing and/or covering outdoor pollutant sources within a building or under a roofed or tarped outdoor area.
- Physically separating the pollutant sources from contact with run-on of uncontaminated storm water.
- Devices that direct contaminated storm water to appropriate treatment BMPs (e.g., discharge to sanitary sewer as allowed by local sewer authority).
- Treatment BMPs including, but not limited to, detention ponds, oil/water separators, sand filters, sediment removal controls, and constructed wetlands.

Dischargers may select the most cost-effective BMPs to control the discharge of pollutants in industrial storm water discharges. Where appropriate, BMPs can be designed and targeted for various pollutant sources (e.g., providing overhead coverage for one potential pollutant while discharging to a detention basin for another source may be the most cost-effective solution).

a. Level 2 ERA Action Plans

The State Water Board acknowledges that there may be circumstances that make it difficult, if not impossible, for a Discharger to immediately implement additional BMPs. For example, it may take time to get a contract for construction in place, obtain necessary building permits, and design and construct the BMPs. Dischargers may also suspect that pollutants are from a non-industrial or natural background source and need time to study their site. A Discharger is required to certify and submit an Action Plan prepared by a QISP via SMARTS by January 1 following the reporting year in which the NAL exceedance that resulted in the Discharger entering Level 2 occurred. The Level 2 ERA Action Plan requires a Discharger to propose actions necessary to complete the Level 2 ERA Technical Report, the demonstrations the Discharger has selected, and propose a time frame for implementation.

If a Discharger changes the QISP assisting with the Level 2 ERA requirements this General Permit requires the Discharger to update the QISP information via SMARTS. Current information on individuals assisting Dischargers with compliance of this General Permit provides the Water Boards with the necessary contact information if there are questions on the submitted documents, and for possible verification of a QISP's certification.

Dischargers are required to address each Level 2 NAL exceedance in an Action Plan. The State Water Board recognizes that Dischargers with Level 2 status may have multiple parameters or facility areas that have Level 2 NAL exceedances and the timing of the exceedances may make it very difficult to address all Level 2 NAL exceedances in one Action Plan. When Level 2 ERA exceedances occur in subsequent reporting years, after an Action Plan is

certified and submitted, a Discharger will need to develop an Action Plan for this new Level 2 NAL exceedance. This General Permit defines new Level 2 NAL exceedances as an exceedance for a new parameter in any drainage area at the facility, or an exceedance for the same parameter being addressed in an existing Action Plan, but where the exceedance occurred in a different drainage area than identified in the existing Action Plan.

b. Level 2 ERA Technical Reports

The Level 2 ERA Technical Report contains three different options that require a Discharger to submit demonstrations showing the cause of the NAL exceedance(s). This General Permit requires a Discharger to appoint a QISP to prepare the Level 2 ERA Technical Reports. The State Water Board acknowledges that there may be cases where a combination of the demonstrations may be appropriate; therefore a Discharger may combine any of the following three demonstration options in their Level 2 ERA Technical Report when appropriate. A Discharger is only required to annually update its Level 2 ERA Technical Report when necessary as defined in Section XII.D.3.c of this General Permit, and is not required to annually re-certify and re-submit the entire Level 2 ERA Technical Report. If there are no changes prompting an update of the Level 2 ERA Technical Report, as specified in Section XII.D.3.c of this General Permit, the Discharger will provide this certification in the Annual Report that there have been no changes warranting re-submittal of the Level 2 ERA Technical Report.

i. Industrial Activity BMPs Demonstration

The Industrial Activity BMPs Demonstration is for the following:

- Dischargers who decided to implement additional BMPs that are expected to eliminate future NAL exceedance(s) and that have been implemented in order to achieve compliance with the technology-based effluent limitations of this General Permit, and
- Dischargers who decided to implement additional BMPs that may not eliminate future NAL exceedance(s) and that have been implemented in order to achieve compliance with the technology-based effluent limitations of this General Permit.

When preparing the Industrial Activity BMPs Demonstration, the QISP shall identify and evaluate all individual pollutant source(s) associated with industrial activity that are or may be related to an NAL exceedance and all designed, information on the drainage areas associated with the Level 2 NAL exceedances, and installed BMPs that are implemented to reduce or prevent pollutants in industrial storm water discharges in compliance with this General Permit.

If an Industrial Activity BMPs Demonstration is submitted as the Level 2 ERA Technical Report and the Discharger is able to show reductions in pollutant concentrations below the NALs for four (4) subsequent consecutive QSEs, the Discharger returns to Baseline Status. A Discharger that submits an Industrial Activity BMPs Demonstration but has not installed additional BMPs that are expected to eliminate future NAL exceedance(s) will remain with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

ii. Non-Industrial Pollutant Source Demonstration

A Non-Industrial Pollutant Source Demonstration is for a Discharger to demonstrate that the pollutants causing the NAL exceedances are not related to industrial activities conducted at the facility, and additional BMPs at the facility will not contribute to the reduction of pollutant concentrations.

Dischargers including the Non-Industrial Pollutant Demonstration in their Level 2 ERA Technical Report shall have a QISP determine that the sources of non-industrial pollutants in storm water discharges are not from industrial activity or natural background sources within the facility.

Sources of non-industrial pollutants that are discharged separately and are not comingled with storm water associated with industrial activity are not considered subject to this General Permit's requirements. When pollutants from non-industrial sources are comingled with storm water associated with industrial activity, the Discharger is responsible for all the pollutants in the combined discharge unless the technical report clearly demonstrates that the NAL exceedances due to the combined discharge are solely attributable to the non-industrial sources. The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance. In most cases, the Non-Industrial Pollutant Source Demonstration will contain sampling data and analysis distinguishing the pollutants from non-industrial sources from the pollutants generated by industrial activity.

Once the Level 2 ERA Technical Report, including this demonstration is certified and submitted via SMARTS, the Discharger has satisfied all the requirements necessary for that pollutant for ERA purposes. A Discharger that submits a Non-Industrial Pollutant Demonstration remains with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

iii. Natural Background Pollutant Source Demonstration

The benchmark monitoring schedule in section 6.2.1.2 of the 2008 MSGP allows a Discharger to determine that the exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background. A Discharger making this determination is not required to perform corrective

action or additional benchmark monitoring providing that the other 2008 MSGP requirements are met. The 2008 MSGP Fact Sheet requires Dischargers to include in the following in the SWPPP: 1) map(s) showing the reference site location, facility, available land cover information, reference site and test site elevation, available geology and soil information for reference and test sites, photographs showing site vegetation, site reconnaissance survey data and records. This General Permit requires this information to be included in the Natural Background Pollutant Source Demonstration in Section XII.D.2.c.

The Natural Background Pollutant Source Demonstration in this General Permit is for a Discharger that can demonstrate that pollutants causing the NAL exceedances are not related to industrial activities conducted at the facility, and are solely attributable to the presence of those pollutants in natural background. The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance. Natural background pollutants include those substances that are naturally occurring in soils or groundwater that have not been disturbed by industrial activities. Natural background pollutants do not include legacy pollutants from earlier activity on a site, or pollutants in run-on from neighboring sources which are not naturally occurring. Dischargers are not required to reduce concentrations for pollutants in the effluent caused by natural background sources if these pollutants concentrations are not increased by industrial activity.

The 2008 MSGP Fact Sheet states that the background concentration of a pollutant in runoff from a non-human impacted reference site in the same watershed must be determined by evaluation of ambient monitoring data or by using information from a peer-reviewed publication or a local, state, or federal government publication specific to runoff or storm water in the immediate region. Studies that are in other geographic areas, or are clearly based on different topographies or soils, are not sufficient to meet this requirement. When such data is not available, and there are no known sources of the pollutant, the background concentration should be assumed to be zero.

In cases where historic monitoring data from a site are used for generating a natural background concentration, and the site is no longer accessible or able to meet reference site acceptability criteria, the Discharger must submit documentation (e.g., historic land use maps) indicating the site did meet reference site criteria (such as indicating the absence of human activity) during the time data collection occurred.

Once the Level 2 ERA Technical Report, including a Natural Background Demonstration meeting the conditions in Section XII.D.2.c of this General Permit is certified and submitted via SMARTS, the Discharger is no longer responsible for the identified background parameters(s) in the corresponding drainage area(s). A Discharger that submits this type of demonstration will

remain with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

c. **Level 2 ERA Implementation Extension**

The State Water Board recognizes that there may be circumstances that make implementation of all necessary actions required in the Level 2 ERAs by the permitted due dates infeasible. In such circumstances a Discharger may request additional time by submitting a Level 2 ERA Implementation Extension. The Level 2 ERA Implementation Extension will automatically allow Dischargers up to an additional six (6) months to complete the tasks identified in the Level 2 ERA Action Plans while remaining in compliance with this General Permit. The Level 2 ERA Implementation Extension is subject to Regional Water Board review. If additional time is needed beyond the initial six (6) month extension, a second Level 2 ERA Implementation Extension may be submitted but is not effective unless it is approved by the Water Board.

L. Inactive Mining Operations

Inactive mining sites may need coverage under this General Permit. Inactive mining operations are mining sites, or portions of sites, where mineral mining and/or dressing occurred in the past with an identifiable Discharger (owner or operator), but are no longer actively operating. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials. A Discharger has the option to certify and submit via SMARTS that its inactive mining operations meet the conditions for an Inactive Mining Operation Certification in Section XIII of this General Permit. The Discharger must have a SWPPP for an inactive mine signed (wet signature with license number) by a California licensed professional engineer. The Inactive Mining Operation Certification in this General Permit is in lieu of performing certain identified permit requirements. This General Permit requires an annual inspection of an inactive mining site and an annual re-certification of the SWPPP. Any significant updates to the SWPPP shall be signed (wet signature and license number) by a California license professional engineer. The Discharger must certify and submit via SMARTS any significantly revised SWPPP within 30 days of the revision(s)

M. Compliance Groups and Compliance Group Leaders

Group Monitoring, as defined in the previous permit, has been eliminated in this General Permit and replaced with a new compliance option called Compliance Groups. The Compliance Group option differs from Group Monitoring as it requires (1) all Dischargers participating in a Compliance Group (Compliance Group Participants) sample two QSEs each year, (2) the Compliance Group Leader to inspect each Participant's facility within each reporting year, (3) the Compliance Group Leader must complete a State Water Board sponsored or approved training program for Compliance Group Leaders, and (4) the Compliance Group Leader to prepare Consolidated Level 1 ERA Reports, and individual Level 2 ERA Action Plans and Technical Reports. The Compliance Group option is similar to Group Monitoring as it retains a mechanism that

allows Dischargers of the same industry type to comply with this General Permit through shared resources in a cost saving manner.

This General Permit emphasizes sampling and analysis as a means to evaluate BMP performance and overall compliance, and the significantly reduced sampling requirements previously afforded to Group Monitoring Participants (two samples within a five-year period) does not provide the necessary information to achieve these goals. However, a moderate reduction in sampling requirements is included as an incentive for Compliance Group Participants while concurrently requiring sufficient individual facility sampling data to determine compliance. A Compliance Group Leader is required to provide the necessary sampling training and guidance to the Compliance Group Participants. This additional training requirement will increase sampling data quality that will offset the reduced sampling frequency for Compliance Groups.

Participation in Compliance Groups will provide additional cost savings for Dischargers in the preparation of the Consolidated Level 1 ERA Reports, and for Compliance Group Leader assistance in preparing the Level 2 ERA Action Plans and the individual Level 2 ERA Technical Reports. It is likely that many of the pollutant sources causing NAL exceedances, and the corresponding BMP cost evaluation and selection, when appropriate, will overlap for groups of facilities in a similar industry type. When these overlaps occur, a Compliance Group Leader should be able to more efficiently evaluate the pollutant sources and BMP options, and prepare the necessary reports.

The State Water Board believes that it is necessary for Compliance Group Leaders to have a higher level of industrial storm water compliance and training experience than the expectations of a QISP. Many stakeholder comments on this General Permit suggested various certifications to provide this higher level of experience; however, the State Water Board believes a process similar to the Trainer of Record process for the Construction General Permit training program will develop Compliance Group Leaders with the appropriate level of experience to fulfill the necessary qualifications.

The intent of the Compliance Groups is to have only one or a small number of Compliance Groups per industrial sector. The process for becoming a QISP trainer and/or a Compliance Group Leader is purposely similar to the Construction General Permit trainer of record process for consistency within storm water regulatory leaders. The formal process to qualify to conduct trainings for QISPs and/or to be a Compliance Group Leader will include the submittal of a statement of qualifications for review, a review fee, completion of an exam and training specific to this role. For more information see the Construction General Permit trainer of record process: <http://www.casqa.org/TrainingandEducation/ConstructionGeneralPermitTrainingQSDQSPToR/tabid/205/Default.aspx>

After the initial Compliance Group registration, Compliance Group Leaders are required to submit and maintain their list of Compliance Group Participants via SMARTS. There are no additional administrative documents required. The previous permit required group leaders to provide annual group evaluation reports and a letter of intent to continue group monitoring. The State Water Board found these items to be resource intensive and placed an unnecessary administrative burden on group leaders. The

Compliance Group requirements in this General Permit reduces the administrative burden on both the Compliance Group Leaders and Water Board staff.

The State Water Board's intent for the effluent data, BMP selection, cost, and performance information, and other industry specific information provided in Compliance Group reports is for evaluation of sector-specific permitting approaches and the use of NALs in the next reissuance of this General Permit.

N. Annual Evaluation

Federal regulations require NPDES industrial storm water Dischargers to evaluate their facility and SWPPP annually. Typically this requires an inspection of the facility to ensure: (1) the SWPPP site map is up to date, (2) control of all potential pollutant sources is included in the SWPPP, and (3) sampling data and visual observation records are used to evaluate if the proper BMPs are being implemented. As Dischargers are required to conduct monthly visual observation that partially overlap with the actions required by the annual evaluation requirements, Dischargers may perform the annual evaluation inspection concurrent with a monthly visual observation.

O. Annual Report

All Dischargers shall certify and submit via SMARTS an Annual Report no later than July 15 following each reporting year. The reporting requirements for this General Permit's Annual Report are streamlined in comparison to the previous permit. The Annual Report now consists of two primary parts: (1) a compliance checklist indicating which permit requirements were completed and which were not (e.g., a Discharger who completes the required sampling of four QSEs during the reporting year, versus a Discharger who is only able to sample two QSEs during the reporting year), and (2) an explanation for items on the compliance checklist that were determined incomplete by the Discharger. Unlike the previous permit, the Annual Report does not require Dischargers to provide the details of each visual observation (such as name of observer, time of observation, observation summary, corrective actions, etc.) or provide the details of the Annual Comprehensive Site Evaluation. Dischargers, however, continue to be required to retain those records and have them available upon request. The Annual Report is further simplified through the immediate electronic reporting via SMARTS of sampling data and copies of the original laboratory reports instead of such information being included in the Annual Report.

P. Conditional Exclusion - No Exposure Certification (NEC) Requirements

This General Permit's conditional exclusion requirements are similar to the requirements provided in 40 C.F.R. section 122.26(g)(3). Clarifications were added in this General Permit, however, to the types of "storm resistant shelters" and the periods when "temporary shelters" may be used in order to avert regulatory confusion. California does not have operating coal power plants, which are a major contributor to acid rain elsewhere in the United States. California does have nonpoint sources or atmospheric deposition that may locally impact the pH of the rain water, however this is

not categorized as acid rain as referred to by the U.S. EPA for the NEC coverage requirements. The No Exposure Guidance Document¹⁵ developed by the U.S. EPA mentions acid rain as a potential source of contaminants to consider for NEC coverage. The acid rain leachate language was not included in this General Permit's Appendix 2 to clarify that Dischargers may qualify for NEC coverage, even if the facility has metal buildings or structures.

The Discharger shall certify and submit complete PRDs for NEC coverage via SMARTS. Based upon the State Water Board's experience with reissuing and implementing the 2009 Construction General Permit, the transition for existing Dischargers to register under this new General Permit is staff resource intensive. The State Water Board staff is available to assist Dischargers requiring assistance with enrolling under this General Permit, both for NOI coverage and NEC coverage. The State Water Board has also experienced that more time is needed for its staff to assist Dischargers registering for NEC coverage. To provide better customer service to all Dischargers, three months have been added to the NEC coverage PRD submittal schedule for new and existing Dischargers (Section II.B.4 of this General Permit, extending the NEC coverage registration date to October 1, 2015).

Dischargers must annually inspect their facility to ensure continued compliance with NEC requirements, and annually re-certify and submit an NEC via SMARTS. Based on its regulatory experience, the State Water Board has determined that a five-year NEC re-certification period is inadequate. A significant percentage of facilities may revise, expand, or relocate their operations in any given year. Furthermore, a significant percentage of facilities experience turnover of staff knowledgeable of the NEC requirements and limitations. Accordingly, the State Water Board believes that annual NEC evaluation and re-certification requirements are appropriate to continually assure adequate program compliance.

Q. Special Requirements - Plastic Materials

Water Code section 13367 requires the Water Boards to implement measures that control discharges of preproduction plastic from point and nonpoint sources. The State Water Board intends to use this General Permit to regulate discharges of preproduction plastics from areas of facilities that are subject to this General Permit. A Regional Water Board may designate facilities, or areas of facilities, that are not otherwise subject to this General Permit, pursuant to Section XIX.F. For example, a Regional Water Board may designate Plastic Materials handling areas of a transportation facility that are not associated with vehicle maintenance as requiring coverage under this General Permit.

Preproduction plastics used by the plastic manufacturing industry are small in size and have the potential to mobilize in storm water. Preproduction plastic washed into storm water drains can move to waters of the United States where it contributes to the growing problem of plastic debris in inland and coastal waters. Water Code section 13367

¹⁵ U.S. EPA. Guidance Manual for Conditional Exclusion from Storm Water Permitting Based On "No Exposure" of Industrial Activities to Storm Water. Web. June 2000. < <http://www.epa.gov/npdes/pubs/noxguide.pdf>>. [as of January 31, 2014].

outlines five mandatory BMPs that are required for all facilities that handle preproduction plastic. These mandatory BMPs are included in this General Permit.

The State Water Board has received comments regarding the Water Code requirements for Plastics Facilities to install a containment system for on-site storm drain locations that meet 1mm capture and 1-year 1-hour storm flow requirement standards. As a result, this General Permit includes the option under Water Code section 13367 that allows a plastics facility to propose an alternative BMP or suite of BMPs that can meet the same performance and flow requirements as a 1mm capture and 1-year 1-hour storm flow containment system standards. These alternative BMPs are to be submitted to the Regional Water Board for approval. This alternative is intended to allow the facility to develop BMPs that focus on pollution prevention measures that can perform as well as, or better than, the containment system otherwise required by the statute.

The State Water Board also includes two additional containment system alternatives in this General Permit that are considered to be equivalent to, or better than, the 1mm capture and 1-year 1-hour storm flow requirements:

- An alternative allowing plastic facilities to implement a suite of eight BMPs addressing the majority of potential sources of plastic discharges. This suite of BMPs is based on industry and U.S. EPA recommendations and Water Board experience with storm water inspections, violations, and enforcement cases throughout California.
- An alternative allowing a facility to operate in a manner such that all preproduction plastic materials are used indoors and pose no potential threat for discharge off-site. The facility is required to notify the Regional Water Board of the intent to seek this exemption and of any changes to the facility or operations that may disqualify the facility for the exemption. The exemption may be revoked by the Regional Water Board at any time.

Plastics facilities may use preproduction plastic materials that are less than 1mm in size, or produce materials, byproducts, or waste that is smaller than 1mm in size. These small size materials will pass through the 1mm capture containment system required by Water Code section 13367. Plastics facilities with sub-1mm materials must design a containment system to capture the smallest size material onsite with a 1-year 1-hour storm flow requirement, or propose alternative BMPs for Regional Water Board approval that meet the same requirements.

The remaining BMPs required by Water Code section 13367 are consistent with recommendations for handling and clean-up of preproduction plastics in the American Chemistry Council publication, *Operation Clean Sweep* and U.S. EPA's publication *Plastic Pellets in the Aquatic Environment: Sources and Recommendations*. The State Water Board believes that the entire approach in this General Permit for plastic materials is consistent with Water Code section 13367.

R. Regional Water Board Authorities

The Regional Water Boards retain discretionary authority over many issues that may arise from industrial discharges within their respective regions. This General Permit

emphasizes the authority of the Regional Water Boards over specific requirements of this General Permit that do not meet region-specific water quality protection regulatory needs.

S. Special Conditions: Requirements for Dischargers Claiming the “No Discharge” Option in the Notice of Non-Applicability

1. General

Entities that operate facilities generating storm water associated with industrial activities that is not discharged to waters of the United States are not required to obtain General Permit coverage. Entities that have contacted the Water Boards to inquire what is necessary to avoid permit coverage have received inconsistent guidance. This has resulted in regulatory inconsistency and uncertainty as to whether they are in compliance if their industry operates without General Permit coverage. Depending upon how each Regional Water Board handles “No Discharge” claims, some facilities with advanced containment design may be required to obtain General Permit coverage while other facilities with less advanced containment design may be allowed to operate without General Permit coverage. Some stakeholders have complained that this type of regulatory inconsistency puts some facilities at an economically-competitive disadvantage given the costs associated with permit compliance.

U.S. EPA regulations do not provide a design standard, definition, or guidance as to what constitutes “No Discharge.” Unlike Conditional Exclusion requirements, U.S. EPA regulations do not require an entity to submit technical justification or certification that a facility does not discharge to waters of the United States (U.S.). Therefore entities have previously been allowed to self-determine that their facility does not discharge to water of the U.S. when using any containment design standard. The State Water Board does not have available information showing that most entities have adequately performed hydraulic calculations to determine the frequency of discharge corresponding to their containment controls or have had these hydraulic calculations reviewed or completed by a California licensed professional engineer. Although U.S. EPA makes clear that an unpermitted discharge to waters of the U.S. is a violation of the CWA, this leaves regulatory agencies with the very difficult task of knowing when any given facility discharges in order to carry-out enforcement actions.

In 1998, the Water Code was amended to require entities who are requested by the Water Boards to obtain General Permit coverage, but that have a valid reason to not obtain General Permit coverage, to submit a Notice of Non-Applicability (NONA). (Wat. Code, § 13399.30, subd. (a)(2)). The NONA covers multiple reasons why an entity is not required to be permitted including (1) facility closure, (2) not the legal owner, (3) incorrect SIC code, (4) eligibility for the Conditional Exclusion (No Exposure Certification), and (5) the facility not discharging to water of the U.S. (“No Discharge”). The previous permit contained definitions, requirements, and guidance that entities may reference to determine whether they are eligible to select any of the first four NONA reasons for not obtaining General Permit coverage. However, neither the previous permit nor the Water Code provide definitions, requirements,

and guidance for entities to determine whether they are eligible to indicate “No Discharge” on the NONA as a reason for not obtaining General Permit coverage.

This General Permit addresses and resolves the issues discussed above by establishing consistent, statewide eligibility requirements in Section XX.C for entities submitting NONAs indicating “No Discharge.” When requested by the Water Boards to obtain General Permit coverage, entities must meet these “No Discharge” eligibility requirements or obtain General Permit coverage. The Water Boards retain enforcement authority if a facility subsequently discharges.

2. “No Discharge” Eligibility Requirements

The entity must certify submit in SMARTS a NONA Technical Report signed (wet signature and license number) by a California licensed professional engineer that contains the analysis and details of the containment design supporting the “No Discharge” eligibility determination. Because containment design will require hydraulic calculations, soil permeability analysis, soil stability calculations, appropriate safety factor consideration, and the application of other general engineering principles, state law requires the technical report to be signed (wet signature and license number) by a California licensed professional engineer.

The State Water Board has selected a containment design target that, as properly applied will result in few, if any, discharges. The facility must either be:

- a. Engineered and constructed to contain all storm water associated with industrial activities from discharging to waters of the United States. (The determination of what is a water of the United States can be complicated, and in certain circumstances, a discharge to groundwater that has a direct hydrologic connection to waters of the United States may constitute a discharge to a water of the United States.) Dischargers must base their information upon maximum historic precipitation event data (or series of events) from the nearest rain gauges as provided by the National Oceanic and Atmospheric Administration’s (NOAA) website, or other nearby precipitation data available from other government agencies. At a minimum, Dischargers must ensure that the containment design addresses maximum 1-hour, 24-hour, weekly, monthly, and annual precipitation data for the duration of the exclusion.

Design storm events are generally specified as a one-time expected hydraulic failure over a reoccurrence of years for a specified storm event. For example, if a design storm standard is a 100 year 24-hour event, then a facility’s containment system designed to contain the maximum volume of water would be expected to fall in 24 hours once every 100 years. Design standards vary dependent upon the regulatory program and the level of protection needed. Since California has considerable variations in climate/topography/soil conditions across the state, the “No Discharge” NONA eligibility requirements have been created so that each facility’s containment design can incorporate unique site specific circumstances to meet the requirement that discharges will not occur based upon past historical precipitation data. Facilities that are not designed to not meet the “No Discharge” eligibility requirements must obtain General Permit coverage.

- b. Located in basins or other physical locations that are not hydrologically connected to waters of the United States.

The State Water Board considered allowing Entities to review United States Army Corp of Engineer maps to determine, without a California licensed professional engineer, whether their facility location is within a basin and/or other physical location that is not hydrologically connected to waters of the United States. The State Water Board believes that this determination can be difficult in some cases, or is likely to be performed incorrectly. In addition, there may be areas of the state that are not hydrologically connected to waters of the United States, but are not on United States Army Corps of Engineer maps. Therefore, all “No Discharge” Technical Reports must be signed (wet signature and license number) by a California licensed professional engineer.

3. Additional Considerations

The “No Discharge” determination does not cover storm water containment systems that transfer industrial pollutants to groundwater. Entities must determine whether designs that incorporate infiltration may discharge to and contaminate groundwater. If there is a threat to groundwater, Entities must contact the Regional Water Boards prior to construction of infiltration design elements.

Entities that have not eliminated all discharges that are subject to General Permit coverage (NOI Coverage or NEC Coverage) are ineligible to submit NONAs indicating “No Discharge.”

ATTACHMENT A

FACILITIES COVERED BY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

1. Facilities Subject To Storm Water Effluent Limitations Guidelines, New Source Performance Standards, or Toxic Pollutant Effluent Standards Found in 40 Code of Federal Regulations, Chapter I, Subchapter N (Subchapter N):

Cement Manufacturing (40 C.F.R. Part 411); Feedlots (40 C.F.R. Part 412); Fertilizer Manufacturing (40 C.F.R. Part 418); Petroleum Refining (40 C.F.R. Part 419), Phosphate Manufacturing (40 C.F.R. Part 422), Steam Electric (40 C.F.R. Part 423), Coal Mining (40 C.F.R. Part 434), Mineral Mining and Processing (40 C.F.R. Part 436), Ore Mining and Dressing (40 C.F.R. Part 440), Asphalt Emulsion (40 C.F.R. Part 443), Landfills (40 C.F.R. Part 445), and Airport Deicing (40 C.F.R. Part 449).
2. Manufacturing Facilities:

Facilities with Standard Industrial Classifications (SICs) 20XX through 39XX, 4221 through 4225. (This category combines categories 2 and 10 of the previous general permit.)
3. Oil and Gas/Mining Facilities:

Facilities classified as SICs 10XX through 14XX, including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 Code of Federal Regulations. 434.11(1) because the performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Acts authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations. Inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined material; or sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim.
4. Hazardous Waste Treatment, Storage, or Disposal Facilities:

Hazardous waste treatment, storage, or disposal facilities, including any facility operating under interim status or a general permit under Subtitle C of the Federal Resource, Conservation, and Recovery Act.
5. Landfills, Land Application Sites, and Open Dumps:

Landfills, land application sites, and open dumps that receive or have received industrial waste from any facility within any other category of this Attachment; including facilities subject to regulation under Subtitle D of the Federal Resource, Conservation, and Recovery Act, and facilities that have accepted wastes from construction activities (construction activities include any clearing, grading, or excavation that results in disturbance).
6. Recycling Facilities:

Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093.
7. Steam Electric Power Generating Facilities:

Any facility that generates steam for electric power through the combustion of coal, oil, wood, etc.
8. Transportation Facilities:

Facilities with SICs 40XX through 45XX (except 4221-25) and 5171 with vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or other operations identified under this Permit as associated with industrial activity.
9. Sewage or Wastewater Treatment Works:

Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge, that are located within the confines of the facility, with a design flow of one million gallons per day or more, or required to have an approved pretreatment program under 40 Code of Federal Regulations part 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the Clean Water Act.

ATTACHMENT B

ACRONYM LIST

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

ASBS	Areas of Special Biological Significance
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BPT	Best Practicable Control Technology Currently Available
CBPELSG	California Board for Professional Engineers, Land Surveyors and Geologists
DWQ	Division of Water Quality
ELGs	Effluent Limitations Guidelines and New Source Performance Standards
ERA	Exceedance Response Action
MS4	Municipal Separate Storm Sewer System
MSGP	Multi Sector General Permit
NAL	Numeric Action Level
NAICS	North American Industrial Classification System
NEC	No Exposure Certification
NEL	Numeric Effluent Limitation
NOI	Notice of Intent
NONA	Notice of Non Applicability
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NSWD	Non Storm Water Discharges
O&G	Oil and Grease
PRDs	Permit Registration Documents
QA/QC	Quality Assurance/Quality Control
QISP	Qualified Industrial Storm water Practitioner
QSE	Qualifying Storm Event
SIC	Standard Industrial Classification
SMARTS	Storm Water Multiple Application and Report Tracking System
SWPPP	Storm Water Pollution Prevention Plan
TBEL	Technology Based Effluent Limitation
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TSS	Total Suspended Solids
U.S. EPA	United States Environmental Protection Agency
WDID	Waste Discharge Identification Number
WQBEL	Water Quality Based Effluent Limitation

ATTACHMENT C

GLOSSARY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

Adoption Date April 1, 2014

Aerial Deposition

Total suspended particulate matter found in the atmosphere as solid particles or liquid droplets. Chemical composition of particulates varies widely, depending on location and time of year. Sources of airborne particulates include but are not limited to: dust, emissions from industrial processes, combustion products from the burning of wood and coal, combustion products associated with motor vehicle or non-road engine exhausts, and reactions to gases in the atmosphere. Deposition is the act of these materials being added to a landform.

Beneficial Uses

As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation, include but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Available Technology Economically Achievable (BAT)

As defined by United States Environmental Protection Agency (U.S. EPA), BAT is a technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. The BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT)

As defined by U.S. EPA, BCT is a technology-based standard for the discharge from existing industrial point sources of conventional pollutants including biochemical oxygen demand (BOD), total suspended sediment (TSS), fecal coliform, pH, oil and grease.

Best Professional Judgment (BPJ)

The method used by permit writers to develop technology-based NPDES permits conditions on a case-by-case basis using all reasonably available and relevant data.

GLOSSARY

Best Management Practices (BMPs)

Scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Chain of Custody

Form used to track sample handling as samples progress from sample collection to the laboratory. The chain of custody is also used to track the resulting analytical data from the laboratory to the client. Chain of custody forms can be obtained from an analytical laboratory upon request.

Debris

Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

Detected Not Quantifiable

A sample result that is between the Method Detection Limit (MDL) and the Minimum Level (ML).

Discharger

A person, company, agency, or other entity that is the operator of the industrial facility covered by this General Permit.

Drainage Area

The area of land that drains water, sediment, pollutants, and dissolved materials to a common discharge location.

Effective Date

The date, set by the State Water Resources Control Board (State Water Board), when at least one or more of the General Permit requirements take effect and the previous permit expires. This General Permit requires most of the requirements (such as SMARTs submittals, minimum BMPs, sampling and analysis requirements) to take effect on July 15, 2015.

Effluent

Any discharge of water either to the receiving water or beyond the property boundary controlled by the Discharger.

Effluent Limitation

Any numeric or narrative restriction imposed on quantities, discharge rates, and concentrations of pollutants that are discharged from point sources into waters of the United States, waters of the contiguous zone, or the ocean.

GLOSSARY

Erosion

The process by which soil particles are detached and transported by the actions of wind, water or gravity.

Erosion Control BMPs

Vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc., placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution.

Facility

A collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.

Field Measurements

Testing procedures performed in the field with portable field-testing kits or meters.

Good Housekeeping BMPs

BMPs designed to reduce or eliminate the addition of pollutants through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

Industrial Materials

Includes, but is not limited to: raw materials, recyclable materials, intermediate products, final products, by product, waste products, fuels, materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERLCA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge and that are used, handled, stored, or disposed in relation to a facility's industrial activity.

Method Detection Limit

The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.

Minimum Level

The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that all method-specified sample weights, volumes, and cleanup procedures have been employed.

Monitoring Implementation Plan

Planning document included in the Storm Water Pollution Prevention Plan (SWPPP). Dischargers are required to record information on the implementation of the monitoring requirements in this General Permit. The MIP should include relevant information on:

GLOSSARY

the Monthly Visual Observation schedule, Sampling Parameters, Representative Sampling Reduction, Sample Frequency Reduction, and Qualified Combined Samples.

Monitoring Requirements

Includes sampling and analysis activities as well as visual observations.

Natural Background

Pollutants including substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from previous activity at a facility, or pollutants in run-on from neighboring sources which are not naturally occurring.

New Discharge(r)

A facility from which there is a discharge, that did not commence the discharge at a particular site prior to August 13, 1979, which is not a new source as defined in 40 Code of Federal Regulations 122.29, and which has never received a finally effective NPDES permit for discharges at that site. See 40 Code of Federal Regulations 122.2.

Numeric Action Level (NAL) Exceedance

Annual NAL exceedance - the Discharger shall determine the average concentration for each parameter using the results of all the sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data) and compare this to the corresponding Annual NAL values in Table 2. For Dischargers using composite sampling or flow measurement in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA Guidance Manual for the Monitoring and Reporting Requirements of the NPDES Multi-Sector Storm Water General Permit.¹ An annual NAL exceedance occurs when the average of all the analytical results for a parameter from samples taken within a reporting year exceeds an annual NAL value for that parameter listed in Table 2 (or is outside the NAL pH range);

Instantaneous maximum NAL exceedance - the Discharger shall compare all sampling and analytical results from each distinct sample (individual or composite) to the corresponding Instantaneous maximum NAL values in Table 2. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G), or are outside of the instantaneous maximum NAL range (for pH).

Non Detect

Sample result is less than Method Detection Limit; Analyte being tested cannot be detected by the equipment or method.

¹ U.S. EPA. NPDES Storm Water Sampling Guidance Document. <<http://www.epa.gov/npdes/pubs/owm0093.pdf>>. [as of July 3, 2013]

GLOSSARY

Non-Storm Water Discharges (NSWDs)

Discharges that do not originate from precipitation events. Including but not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

Numeric Action Level (NAL)

Pollutant concentration levels used to evaluate if best management practices are effective and if additional measures are necessary to control pollutants. NALs are not effluent limits. The exceedance of an NAL is not a permit violation.

Operator

In the context of storm water associated with industrial activity, any party associated with an industrial facility that meets either of the following two criteria:

- a. The party has operational control over the industrial SWPPP and SWPPP specifications, including the ability to make modifications to those plans and specifications
- b. The party has day-to-day operational control of activities at the facility which are necessary to ensure compliance with a SWPPP for the facility or other permit conditions (e.g., authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

pH

Unit universally used to express the intensity of the acid or alkaline condition of a water sample. The pH of natural waters tends to range between 6.0 and 9.0, with neutral being 7.0.

Plastic Materials

Plastic Materials are virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other similar types of preproduction plastics with the potential to discharge or migrate off-site.

Qualified Industrial Storm Water Practitioner (QISP)

Only required once a Discharger reaches Level 1 status, a QISP is the individual assigned to ensure compliance with this General Permit or to assist New Dischargers with determining coverage eligibility for discharges to an impaired water body. A QISP's responsibilities include implementing the SWPPP, performing the Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation), assisting in the preparation of Annual Reports, performing ERAs, and training appropriate Pollution Prevention Team members. The individual must take the appropriate state approved or sponsored training to be qualified. Dischargers shall ensure that the designated QISP is geographically located in an area where they will be able to adequately perform the permit requirements at all of the facilities they represent.

GLOSSARY

Qualifying Storm Event (QSE)

A precipitation event that:

- a. Produces a discharge for at least one drainage area; and
- b. Is preceded by 48 hours with no discharge from any drainage area.

Regional Water Board

Includes the Executive Officer and delegated Regional Water Board staff.

Runoff Control BMPs

Measures used to divert run-on from offsite and runoff within the site.

Run-on

Discharges that originate offsite and flow onto the property of a separate facility or property or, discharges that originate onsite from areas not related to industrial activities and flow onto areas on the property with industrial activity.

Scheduled Facility Operating Hours

The time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

Sediment

Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

Sedimentation

Process of deposition of suspended matter carried by water, wastewater, or other liquids that flow by gravity. Control of sedimentation is accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material.

Sediment Control BMPs

Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. Includes those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (i.e., silt fence, sediment basin, fiber rolls, etc.).

Sheet Flow

Flow of water that occurs overland in areas where there are no defined channels and where the water spreads out over a large area at a uniform depth.

Source

Any facility or building, property, road, or area that causes or contributes to pollutants in storm water.

GLOSSARY

Storm Water

Storm water runoff, snowmelt runoff, and storm water surface runoff and drainage.

Storm Water Discharge Associated With Industrial Activity

The discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant as identified in Attachment A of this General Permit. The term does not include discharges from facilities or activities excluded from the NPDES program. The term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials; manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined at 40 C.F.R. section 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 C.F.R. section 122.

Material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph) include those facilities designated under 40 C.F.R. section 122.26(a)(1)(v).

Structural Controls

Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution.

Total Suspended Solids (TSS)

The measure of the suspended solids in a water sample including inorganic substances such as soil particles, organic substances such as algae, aquatic plant/animal waste, and particles related to industrial/sewage waste, etc. The TSS test measures the concentration of suspended solids in water by measuring the dry weight of a solid material contained in a known volume of a sub-sample of a collected water sample. Results are reported in mg/L.

GLOSSARY

Toxicity

The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses, such as impaired reproduction or growth anomalies.

Trade Secret

Information, including a formula, pattern, compilation, program, device, method, technique, or process, that: (1) derives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and (2) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

Turbidity

The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU).

Waters of the United States

Generally refers to surface waters, as defined for the purposes of the federal Clean Water Act.

Water Quality Objectives

Defined in the California Water Code as limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

Water Quality Standards

Consists of beneficial uses, water quality objectives to protect those uses, an antidegradation policy, and policies for implementation. Water quality standards are established in Regional Water Quality Control Plans (Basin Plans) and statewide Water Quality Control Plans. U.S. EPA has also adopted water quality criteria (the same as objectives) for California in the National Toxics Rule and California Toxics Rule.

ATTACHMENT D

PERMIT REGISTRATION DOCUMENTS (PRDs)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

This Attachment provides an example of the information Dischargers are required to submit in the PRDs via the Storm Water Multiple Application and Report Tracking System (SMARTS). The actual PRD requirements are in Section II of this General Permit.

A. Who Must Submit PRDs

All Dischargers that operate facilities as described in Attachment A of this General Permit are subject to either Notice of Intent (NOI) or No Exposure Certification (NEC) Coverage and shall comply with the PRD requirements in this General Permit.

B. Who Is Not Required to Submit PRDs

Dischargers that operate facilities described below are not required to submit PRDs:

1. Facilities that are not described in Attachment A;
2. Facilities that are described in Attachment A but do not have discharges of storm water associated with industrial activity to waters of the United States; or,
3. Facilities that are already covered by an NPDES permit for discharges of storm water associated with industrial activity.

C. Annual Fees for NOI and NEC Coverage

Annual Fees for NOI and NEC coverage are established through regulations adopted by the State Water Board and are subject to change (see California Code of Regulations, title 23, section 2200 et seq.).

D. When and How to Apply

Dischargers proposing to conduct industrial activities subject to this General Permit must electronically certify and submit PRDs via the Storm Water Multiple Application

PERMIT REGISTRATION DOCUMENTS (PRDS)

Reporting and Tracking System (SMARTS)¹ no less than seven (7) days prior to the commencement of industrial activity. Existing Dischargers must submit PRDs for NOI coverage by July 1, 2015 or for NEC coverage by October 1, 2015.

E. PRD Requirements for NOI Coverage

1. Notice of Intent (NOI) and Signed Electronic Authorization Form.
2. Site Map (Section X.E of this General Permit).
3. Storm Water Pollution Prevention Plan (see Section X of this General Permit).

F. Description of PRDs for NOI Coverage

1. The Notice of Intent (NOI) requires the following information:

- a. Operator/Owner Information

Operator/Owner Company or Organization Name
 Contact First Name
 Contact Last Name
 Title
 Street Address
 Address Line 2
 City/State/Zip
 Phone (e.g. 999-999-9999)
 E-mail (e.g. abc@xyz.com)
 Federal Tax ID

- b. Facility Information

Facility Name
 WDID Number (if applicable)
 Contact First Name
 Contact Last Name
 Title
 Street Address
 Address Line 2
 City
 County
 Phone (e.g. 999-999-9999)

¹ The State Water Board has developed the SMARTS online database system to handle registration and reporting under this General Permit. More information regarding SMARTS and access to the database is available online at <<https://smarts.waterboards.ca.gov>>. [as of June 26, 2013].

PERMIT REGISTRATION DOCUMENTS (PRDS)

Emergency Phone (e.g. 999-999-9999)
 E-mail (abc@xyz.com)
 State/Zip CA
 Total Site Size (Acres)
 Latitude (Decimal degrees only, minimum 5 significant digits, e.g. 99.99999)
 Longitude (Decimal degrees only, minimum 5 significant digits, e.g. 99.99999)
 Total Percentage Site Imperviousness Area of Facility (Acres)
 Total Areas of Industrial Activities and Materials Exposed to Precipitation
 Primary SIC Code
 Secondary SIC Code
 Tertiary SIC Code
 Regional Water Board

c. Billing Information

Billing Name
 Contact First Name
 Contact Last Name
 Title
 Street Address
 Address Line 2
 City/State/Zip
 Phone (e.g. 999-999-9999)
 E-mail (e.g. abc@xyz.com)

d. Receiving Water Information

Does your facility's storm water flow directly or indirectly into waters of the US such as river, lake, ocean, etc. (check box for directly or indirectly)

- i. Indirectly to waters of the US
- ii. Storm drain system - Enter owner's name:
- iii. Directly to waters of the US (e.g., river, lake, creek, stream, bay, ocean, etc.)
- iv. Name of the receiving water: _____

PERMIT REGISTRATION DOCUMENTS (PRDS)

2. The Site Map(s) shall include the following Information:
 - a. The facility boundary;
 - b. Storm water drainage areas within the facility boundary;
 - c. Portions of any drainage area impacted by discharges from surrounding areas and flow direction of each drainage area;
 - d. On-facility surface water bodies;
 - e. Areas of soil erosion;
 - f. Location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.);
 - g. Location(s) of municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized Non-Storm Water Discharges (NSWDs);
 - h. Locations of storm water collection and conveyance systems and associated points of discharge, and direction of flow;
 - i. Any structural control measures (that affect industrial storm water discharges, authorized NSWDs, and run-on);
 - j. All impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;
 - k. Locations where materials are directly exposed to precipitation;
 - l. Locations where significant spills or leaks identified (Section X.G.1.d of this General Permit) have occurred;
 - m. Areas of industrial activity subject to this General Permit;
 - n. All storage areas and storage tanks;
 - o. Shipping and receiving areas;
 - p. Fueling areas;

PERMIT REGISTRATION DOCUMENTS (PRDS)

- q. Vehicle and equipment storage/maintenance areas;
 - r. Material handling and processing areas;
 - s. Waste treatment and disposal areas;
 - t. Dust or particulate generating areas;
 - u. Cleaning and material reuse areas; and,
 - v. Any other areas of industrial activity which may have potential pollutant sources.
3. The Storm Water Pollution Prevention Plan (SWPPP) must be prepared in accordance with Section X of this General Permit.
 4. A NOI Certification by the Discharger that all PRDs submitted are correct and true.
 5. SMARTS Electronic Authorization Form (Signed by any user authorized to certify and submit data electronically).

G. PRD Requirements for NEC Coverage

1. No Exposure Certification and Signed Electronic Authorization Form.
2. No Exposure Certification Checklist Consistent with Requirements in Section XVII.F.2 of this General Permit.
3. Current Site Map Consistent with Requirements in Section X.E of this General Permit.

H. Description of PRDs for NEC Coverage

1. The No Exposure Certification requires the following information:
 - a. Operator/Owner Information
 - Operator/Owner Name
 - Contact First Name
 - Contact Last Name
 - Title

PERMIT REGISTRATION DOCUMENTS (PRDS)

Street Address
 Address Line 2
 City/State/Zip
 Phone Ex (999-999-9999)
 E-mail (abc@xyz.com)
 Federal Tax ID

b. Facility Information

Facility Name
 Contact First Name
 Contact Last Name
 Title
 Street Address
 Address Line 2
 City
 County
 Phone Ex (999-999-9999)
 Emergency Phone Ex (999-999-9999)
 E-mail (abc@xyz.com)
 State/Zip CA
 Total Site Size (Acres)
 Latitude (Decimal degrees only, minimum 5 significant digits, Ex 99.99999)
 Longitude (Decimal degrees only, minimum 5 significant digits, Ex 99.99999)
 Percent of Site Imperviousness (%)
 Primary SIC Code
 Secondary SIC Code
 Tertiary SIC Code
 Regional Water Board

c. Billing Information

Billing Name (if different than Operator/Owner)
 Contact First Name
 Contact Last Name
 Title
 Street Address
 Address Line 2
 City/State/Zip
 Phone E.g. (999-999-9999)
 E-mail (e.g. abc@xyz.com)

d. SMARTS Electronic Authorization Form - Signed by any user authorized to certify and submit data electronically.

PERMIT REGISTRATION DOCUMENTS (PRDS)

- e. Certification by the Discharger that all PRDs submitted are correct and true and that the conditions of no-exposure have been met.
2. The NEC Checklist (Section XVII.F.2 of this General Permit) must be prepared to demonstrate that, based upon a facility inspection and evaluation, none of the following industrial materials or activities are, or will be in the foreseeable future, exposed to precipitation:
 - a. Activities such as using, storing, or cleaning industrial machinery or equipment, and areas with materials or residuals from these activities;
 - b. Materials or residuals on the ground or in storm water inlets from spills/leaks;
 - c. Materials or products from past industrial activity;
 - d. Material handling equipment (except adequately maintained vehicles);
 - e. Materials or products during loading/unloading or transporting activities;
 - f. Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);
 - g. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;
 - h. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;
 - i. Waste material (except waste in covered, non-leaking containers, e.g., dumpsters). Application or disposal of processed wastewater (unless already covered by an NPDES permit); and,
 - j. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.
 3. The Site Map(s) shall include the following information (see Section X.E of this General Permit):
 - a. The facility boundary;
 - b. Storm water drainage areas within the facility boundary;
 - c. Portions of any drainage area impacted by discharges from surrounding areas and flow direction of each drainage area;

PERMIT REGISTRATION DOCUMENTS (PRDS)

- d. On-facility surface water bodies;
- e. Areas of soil erosion;
- f. Location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.);
- g. Location(s) of municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized NSWDs;
- h. Locations of storm water collection and conveyance systems and associated points of discharge, and direction of flow;
- i. Any structural control measures (that affect industrial storm water discharges, authorized NSWDs, and run-on);
- j. All impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;
- k. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified (Section X.G.1.d of this General Permit) have occurred;
- l. Areas of industrial activity subject to this General Permit;
- m. All storage areas and storage tanks;
- n. Shipping and receiving areas;
- o. Fueling areas;
- p. Vehicle and equipment storage/maintenance areas;
- q. Material handling and processing areas;
- r. Waste treatment and disposal areas;
- s. Dust or particulate generating areas;
- t. Cleaning and material reuse areas; and,
- u. Any other areas of industrial activity which may have potential pollutant sources.

PERMIT REGISTRATION DOCUMENTS (PRDS)**I. Obtaining Coverage**

To obtain coverage under this General Permit PRDs must be included and completed. If any of the required items are missing, the PRD submittal is considered incomplete and will be rejected. Upon receipt of a complete PRD submittal, the State Water Board will process the application package in the order received and assign a (WDID) number.

J. Additional Information

The Water Board may require the submittal of additional information in SMARTS if required to determine the appropriate fee for the facility as specified by the fee regulations.

K. Questions

If you have any questions on completing the PRDs or about SMARTS, please email stormwater@waterboards.ca.gov or call (866) 563-3107.

ATTACHMENT E

LIST OF TOTAL MAXIMUM DAILY LOADS (TMDLS) APPLICABLE TO INDUSTRIAL STORM WATER DISCHARGERS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

The following table contains a list of Regional Water Board adopted and/or U.S. EPA established/approved TMDLs, as of the adoption date of this General Permit, that are applicable to industrial storm water Dischargers. TMDLs adopted/established after the effective date of the General Permit may, at the Water Boards discretion, be included in this General Permit. This General Permit may be reopened to amend TMDL-specific permit requirements in this Attachment E, or to incorporate new TMDLs adopted during the term of this General Permit that include requirements applicable to Dischargers covered by this General Permit.

Water Body	Pollutant
<u>San Francisco Bay Regional Water Quality Control Board</u>	
Napa River	Sediment
Sonoma Creek	Sediment
<u>Los Angeles Regional Water Quality Control Board</u>	
Santa Clara River Reach 3	Chloride
Santa Clara River	Nutrients
Los Angeles River	Metals
Los Angeles River	Nutrients
San Gabriel River	Metals and Selenium
Santa Monica Bay	Nearshore Debris
Machado Lake	Nutrient
Harbor Beaches of Ventura	Bacteria
Ballona Creek	Metals
Ballona Creek Estuary	Toxic Pollutants
Los Angeles Harbor	Bacteria
Marina del Rey Back Basins	Bacteria
Santa Clara River	Bacteria
Walker Creek,	Mercury
Oxnard Drain No. 3	Pesticides, PCBs ¹ and Sediment Toxicity
Long Beach City Beaches and Los Angeles River Estuary	Indicator Bacteria
Los Angeles and Long Beach Harbors	Toxic and Metals

¹ Polychlorinated biphenyls

**LIST OF TOTAL MAXIMUM DAILY LOADS (TMDLS) APPLICABLE TO
INDUSTRIAL STORM WATER DISCHARGERS**

Los Angeles Area Lakes	Nitrogen, Phosphorus, Mercury, Trash, Organochlorine Pesticides and PCBs
Santa Monica Bay	DDTs and PCBs
Machado Lake	Toxics
Colorado Lagoon	Pesticides, Polycyclic aromatic hydrocarbons, PCBs, and Metals
Calleguas Creek Watershed	Salts
Calleguas Creek Watershed	Metals and Selenium
Ballona Creek, Ballona Estuary, and Sepulveda Channel	Bacteria
Marina Del Rey Harbor-Back Basins	Copper, Lead, Zinc, and Chlordane, and Total PCBs
Los Cerritos Channel	Metals
<u>Santa Ana Regional Water Quality Control Board</u>	
San Diego Creek and Newport Bay	Toxic Pollutants
<u>San Diego Regional Water Quality Control Board</u>	
Chollas Creek	Diazinon
Chollas Creek	Copper, Lead, and Zinc
Los Peñasquitos Lagoon	Sediment
Rainbow Creek	Total Nitrogen and Total Phosphorus
Shelter Island Yacht Basin	Dissolved Copper
Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in SD Bay	Indicator Bacteria
Twenty Beaches and Creeks	Indicator Bacteria

ATTACHMENT F

EFFLUENT LIMITATION GUIDELINES (ELGs)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

The following Parts of federal regulations at 40 Code of Federal Regulations Chapter I Subchapter N (Subchapter N) contain ELGs approved by US EPA for specific categories of industrial storm water discharges:

Point Source Category	ELGs ¹
Part 411 - Cement Manufacturing	 411.pdf
Part 418 - Fertilizer Manufacturing	 418.pdf
Part 419 - Petroleum Refining	 419.pdf
Part 422 - Phosphate Manufacturing	 422.pdf
Part 423 - Steam Electric Power Generating	 423.pdf

¹ The applicable ELGs are attached to this Attachment F. To view the attachments from an electronic (pdf) version of this Attachment F, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icons of the attached pdf files. The attachments are also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (www.waterboards.ca.gov).

EFFLUENT LIMITATION GUIDELINES (ELGs)

Point Source Category	ELGs ²
Part 429 - Wetting of logs at wet deck storage areas	 429.pdf
Part 434 - Coal Mining	 434.pdf
Part 436 - Mineral Mining And Processing	 436.pdf
Part 440 - Ore Mining And Dressing	 440.pdf
Part 443 - Paving And Roofing Materials (Tars And Asphalt)	 443.pdf
Part 445 - Landfills	 445.pdf
Part 449 - Airport Deicing	 449.pdf

² The applicable ELGs are attached to this Attachment F. To view the attachments from an electronic (pdf) version of this Attachment F, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icons of the attached pdf files. The attachments are also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (www.waterboards.ca.gov).

EFFLUENT LIMITATION GUIDELINES (ELGs)

New Source Performance Standards

New source performance standards (NSPS) represent the best available demonstrated control technology standards. US EPA has established NSPS guidelines for the industries found in the Table below. The intent of NSPS guidelines is to set effluent limitations that represent state-of-the-art treatment technology for new sources.³

Table 1 - Storm Water Specific NSPS Effluent Limitation Guidelines

Regulated Discharge	40 CFR Section	Multi Sector General Permit Sector	NSPS	Date New Source Data Established
Discharge resulting from spray down or intentional wetting of logs as wet deck storage areas	Part 429, Subpart I	A	Yes	1/26/81
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished products, by-products or waste products (SIC 2874)	Part 418, Subpart A	C	Yes	4/8/74
Runoff from asphalt emulsion facilities	Part 443, Subpart A	D	Yes	7/28/75
Runoff from materials storage piles at cement manufacturing facilities	Part 411, Subpart C	E	Yes	2/20/74
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, D	J	No	N/A
Runoff from hazardous waste and non-hazardous waste landfills	Part 445, Subparts A and B	K, L	Yes	2/2/00
Runoff from coal storage piles at steam electric generating facilities	Part 423	O	Yes	11/19/82 & 10/8/74
Discharges from primary airports with over 1,000 annual jet departures that conduct deicing operations.	Part 449, Subpart A	S	Yes	NA

³ New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced: (1) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or (2) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal as defined in 40 C.F.R section 122.26.

ATTACHMENT G

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

A. Areas of Special Biological Significance (ASBS)

1. ASBS are defined in the California Ocean Plan as “those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable.”
2. The California Ocean Plan prohibits the discharge of waste to ASBS.
3. The California Ocean Plan authorizes the State Water Board to grant an exception to Ocean Plan provisions where the board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.
4. On March 20, 2012, the State Water Board adopted Resolution 2012-0012 (amended by Resolution 2012-0031 on June 19, 2012) which contained a general exception to the California Ocean Plan for discharges of storm water and non-point sources (ASBS Exception). This resolution also contains the Special Protections that are to be implemented for direct discharges to ASBS. Resolution 2012-0012 is hereby incorporated by reference and its requirements must be complied with by industrial storm water Dischargers discharging directly to ASBS.
5. This General Permit requires Dischargers who have been granted an Ocean Plan exception for discharges to ASBS to comply with the requirements contained in the Special Protections. These requirements are contained below.

B. ASBS Non-Storm Water Discharges

1. The term “ASBS Non-Storm Water Discharges” means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not comprised entirely of storm water.
2. Only the following ASBS Non-Storm Water Discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

- a. Discharges associated with emergency fire fighting operations.
 - b. Foundation and footing drains.
 - c. Water from crawl space or basement pumps.
 - d. Hillside dewatering.
 - e. Naturally occurring groundwater seepage via a storm drain.
 - f. Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.
3. Authorized ASBS Non- Storm Water Discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.
 4. At the San Clemente Island ASBS, discharges incidental to military training and research, development, test, and evaluation operations are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed in the two military closure areas in the vicinity of Wilson Cove and Castle Rock. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.
 5. At the San Nicolas Island and Begg Rock ASBS, discharges incidental to military research, development, testing, and evaluation of, and training with, guided missile and other weapons systems, fleet training exercises, small-scale amphibious warfare training, and special warfare training are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.

C. ASBS Compliance Plan

1. State Water Board Resolution 2012-0012 grants an exception to the Ocean Plan's prohibition on discharges to ASBS (ASBS Exception) to applicants who were identified as Dischargers of industrial storm water to ASBS (ASBS Dischargers). Each ASBS Discharger shall specifically address the prohibition of ASBS Non-Storm Water Discharges and the requirement to maintain natural water quality for industrial storm water discharges to an ASBS in an ASBS Compliance Plan to be included in the ASBS Discharger's SWPPP. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board. The ASBS Compliance Plan shall include:

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN
OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

- a. A map of surface drainage of storm water runoff, showing areas of sheet runoff and priority discharges, and a description of any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified as requiring installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable. The SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.
- b. A description of the measures by which all unauthorized ASBS Non-Storm Water Discharges (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.
- c. A description of how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the Discharger can document to the satisfaction of the Executive Director that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:
 - 1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
 - 2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline date for the reduction is March 20, 2012 (the effective date of the ASBS Exception), except for those structural BMPs installed between January 1, 2005 and the adoption of these special protections. The reductions must be achieved and documented by March 20, 2018.
- d. A description of how the ASBS Discharger will address erosion and the prevention of anthropogenic sedimentation in the ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.
- e. A description of the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, ASBS Dischargers must first consider using LID practices to infiltrate, use, or evapotranspiration storm water runoff on-site. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.

D. Reporting

If the results of the receiving water monitoring described in Section F. below (Sampling and Analysis Requirements) indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the ASBS Discharger shall submit a report to the State Water Board within 30 days of receiving the results.

1. The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.
2. The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWPPP for future implementation, and any additional BMPs that may be added to the SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.
3. Within 30 days of the approval of the report by the Executive Director, the ASBS Discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.
4. As long as the ASBS Discharger has complied with the procedures described above and is implementing the revised SWPPP, the Discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.
5. Compliance with this section does not excuse violations of any term, prohibition, or special condition contained in the Special Protections of the ASBS Exception.

E. Compliance Schedule

1. As of March 20, 2012, all unauthorized ASBS Non-Storm Water Discharges (e.g., dry weather flow) were effectively prohibited.
2. By September 20, 2013, the Discharger shall submit a draft written ASBS Compliance Plan to the Executive Director that describes its strategy to comply with these special conditions, including the requirement to maintain natural water

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

quality in the affected ASBS. The ASBS Compliance Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls (implementation schedule) to comply with these special conditions for inclusion in the Discharger's SWPPP.

3. By September 20, 2014, the Discharger shall submit the final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring.
4. By September 20, 2013, any non-structural controls that are necessary to comply with these special conditions shall be implemented.
5. By March 20, 2018, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.
6. By March 20, 2018, all Dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the Discharger must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See Flowchart at the end of this Attachment.
7. The Executive Director may only authorize additional time to comply with the special conditions 5 and 6, above if good cause exists to do so. Good cause means a physical impossibility or lack of funding

If a Discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in 5. or 6. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of these requirements. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The Discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

**REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN
OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS**

- a. for municipalities, a demonstration of significant hardship to Discharger ratepayers, by showing the relationship of storm water fees to annual household income for residents within the Discharger's jurisdictional area, and the Discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
- b. for other governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

F. Additional Requirements – Waterfront and Marine Operations

In addition to the above provisions, a Discharger with waterfront and marine operations shall comply with the following:

- 1. For discharges related to waterfront and marine operations, the Discharger shall develop a Waterfront and Marine Operations Management Plan (Waterfront Plan). This plan shall contain appropriate Management Measures/Practices to address nonpoint source pollutant discharges to the affected ASBS.
 - a. The Waterfront Plan shall contain appropriate Management Measures/Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.
 - b. For discharges from marinas and recreational boating activities, the Waterfront Plan shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.
 - c. The Waterfront Plan shall include Management Practices to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The management practices shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.
 - d. The Waterfront Plan shall include Management Practices to address the prohibition against trash discharges to ASBS. The Management Practices shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate Management Practices to ensure that the receptacles are

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- adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate Management Practices include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.
- e. The Discharger shall submit its Waterfront Plan to the State Water Board Executive Director by September 20, 2012. The Waterfront Plan is subject to approval by the State Water Board Executive Director. The plan must be fully implemented within by September 20, 2013.
2. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.
 3. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.
 4. If the Discharger anticipates that the Discharger will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the Discharger shall submit a technical report as soon as practicable to the Executive Director. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.
 5. The State Water Board may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.

If a Discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in Section F.1.e above. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Attachment. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The Discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

- a. a demonstration of significant hardship by showing that the Discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.
- b. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

G. Sampling and Analysis Requirements

1. Monitoring is mandatory for all ASBS Dischargers to assure compliance with the Ocean Plan. Monitoring requirements include both: (1) Core Discharge Monitoring and (2) Ocean Receiving Water Monitoring (see Sections H. and I. below). The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).
2. Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notifying the Executive Director that hazardous conditions prevail.
3. Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

H. Core Discharge Monitoring Program

1. General sampling requirements for timing and storm size:

Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples as described in Section I. below.

2. Runoff flow measurements

- a. For industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be

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- measured or calculated, using a method acceptable to and approved by the Executive Director.
- b. This will be reported annually for each precipitation season to the Executive Director.
3. Runoff samples – storm events
- a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width:
 - 1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, if within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination; and 2) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.
 - b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:
 - 1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, if within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination; and
 - 2) samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates); and
 - 3) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.
 - 4) if an ASBS Discharger has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).
 - c. For an applicant not participating in a regional integrated monitoring program [see below in Section I.3.] in addition to the sampling requirements in Section H.3.a. and b. above, a minimum of the two largest outfalls or 20 percent of the

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents (Table A and B constituents are provided at the end of this Attachment) for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

- d. The Executive Director may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

I. Ocean Receiving Water and Reference Area Monitoring Program

1. In addition to performing the Core Discharge Monitoring Program in Section H. above, all ASBS Dischargers must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, ASBS Dischargers may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.
2. Individual Monitoring Program: The requirements listed below are for those ASBS Dischargers who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:
 - a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in Section H.3. above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents (Table A and B constituents are provided at the end of this Attachment) for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm), and during (or immediately after) the same storm (post-storm). Post-storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

- sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).
- b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents (provided at the end of this Attachment) for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.
 - c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.
 - d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.
 - e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the ASBS Discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.
 - f. The monitoring requirements of the Individual Monitoring Program in this Section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point

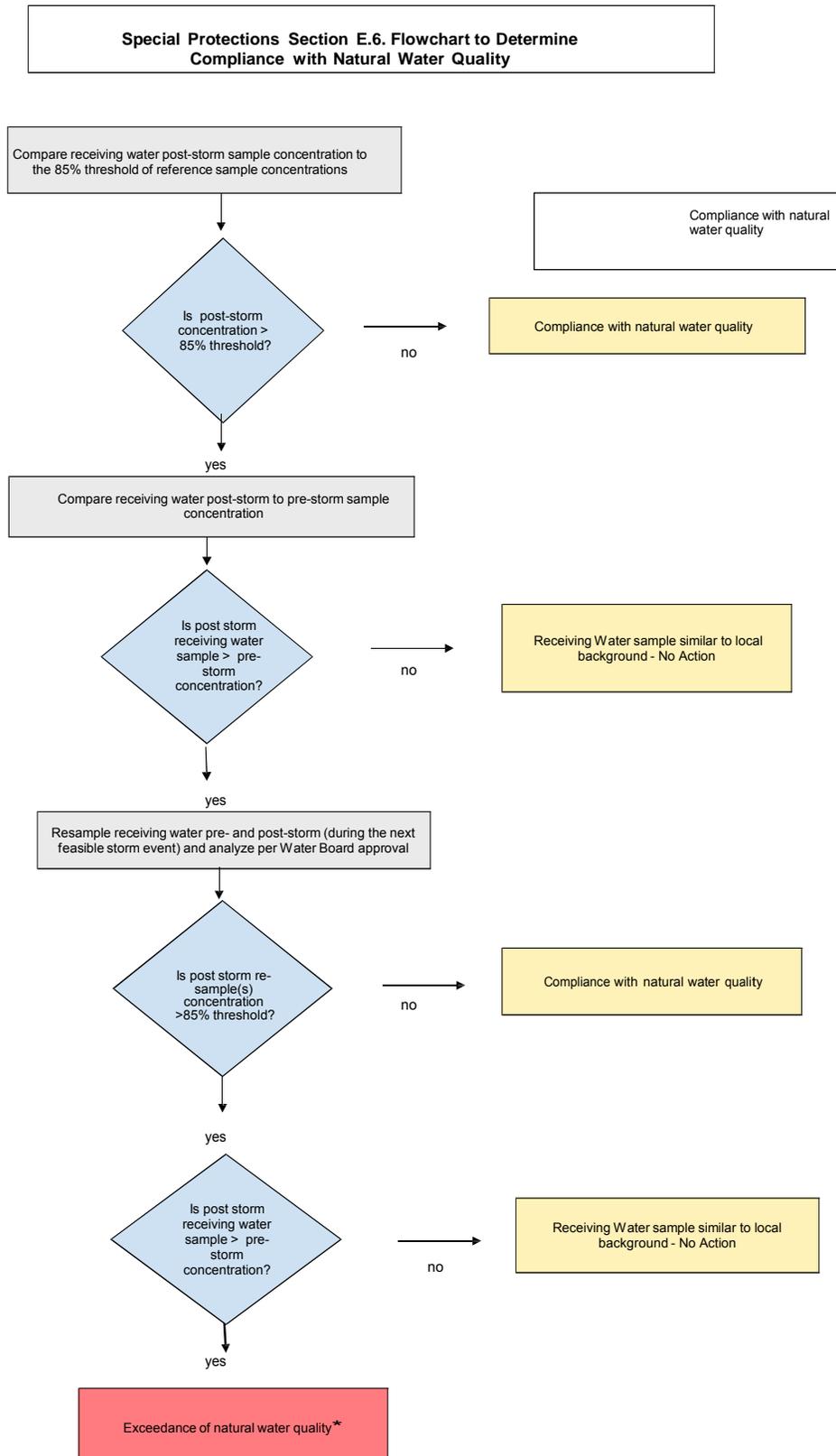
REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

- after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.
3. Regional Integrated Monitoring Program: ASBS Dischargers may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section I.2.) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.
 - a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non-storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional integrated monitoring program, the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.
 - b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than 18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate

**REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN
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- storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.
- c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS Dischargers that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.
 - d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS



* When an exceedance of natural water quality occurs, the Discharger must comply with Section D. Note, when sampling data is available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.

ASBS Monitoring

TABLE A
Monitoring Constituent List
(excerpted from California Ocean Plan dated 2009)

Constituent	Units
Grease and Oil	mg/L
Suspended Solids	Mg/L
Settleable Solids	mL/L
Turbidity	NTU
PH	

TABLE B
Monitoring Constituent List
(Excerpted from California Ocean Plan dated 2009)

Constituent	Units
Arsenic	µg/L
Cadmium	µg/L
Chromium	µg/L
Copper	µg/L
Lead	µg/L
Mercury	µg/L
Nickel	µg/L
Selenium	µg/L
Silver	µg/L
Zinc	µg/L
Cyanide	µg/L
Total Chlorine Residual	µg/L
Ammonia (as N)	µg/L
Acute Toxicity	TUa
Chronic Toxicity	TUc
Phenolic Compounds (non-chlorinated)	µg/L
Chlorinated Phenolics	µg/L
Endosulfan	µg/L
Endrin	µg/L
HCH	µg/L

Analytical Chemistry Methods: All constituents shall be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, shall be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

ATTACHMENT H

SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

For more detailed guidance, Dischargers should refer to the U.S. EPA's "Industrial Stormwater Monitoring and Sampling Guide," dated March 2009, available at: http://www.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf and the "NPDES Storm Water Sampling Guidance Document," dated July 1992, available at: <http://www.epa.gov/npdes/pubs/owm0093.pdf>.

1. Identify the sampling parameters required to be tested and the number of storm water discharge points that will be sampled. Request the analytical testing laboratory to provide the appropriate number and type of sample containers, sample container labels, blank chain of custody forms, and sample preservation instructions.
2. Determine how samples will be transported to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The Discharger may either deliver the samples to the laboratory, arrange for the laboratory to pick up the samples, or overnight ship the samples to the laboratory. All sample analysis shall be done in accordance with 40 Code of Federal Regulations part 136. Samples for pH have a holding time of 15 minutes.¹
3. Qualified Combined Samples shall be combined by the laboratory and not by the Discharger. Sample bottles must be appropriately labeled to instruct the laboratory on which samples to combine.
4. Unless the Discharger can provide flow weighted information, all combined samples shall be volume weighted.
5. For grab samples, use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers may contaminate samples.
6. For automatic samplers that are not compatible with bottles provided by the laboratory, the Discharger is required to send the sample container included with the automatic sampler to the laboratory for analysis.

¹ 40 C.F.R. section 136.3, Table II - Required Containers, Preservation Techniques, and Holding Times.

SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

7. The Discharger can only use automatic sampling device to sample parameters that the device is designed to. For pH, Dischargers can only use automatic sampling devices with the ability to read pH within 15 minutes of sample collection.
8. The Discharger is prohibited from using an automatic sampling device for Oil and Grease, unless the automatic sampling device is specifically designed to sample for Oil and Grease.
9. To prevent contamination, do not touch inside of sample container or cap or put anything into the sample containers before collecting storm water samples.
10. Do not overfill sample containers. Overfilling can change the analytical results.
11. Tightly screw on the cap of each sample container without stripping the threads of the cap.
12. Complete and attach a label for each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.
13. Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into shipping containers. Samples should be kept as close to 4 degrees Celsius (39 degrees Fahrenheit) as possible until arriving to the laboratory. Do not freeze samples.
14. Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the Discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.
15. Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers.
16. Dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the sample protocols and laboratory practices.
17. Refer to Table 1 in the General Permit for test methods, detection limits, and reporting units.
18. All sampling and sample preservation shall be in accordance with 40 Code of Federal Regulations part 136 and the current edition of "Standard Methods for

SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

the Examination of Water and Wastewater” (American Public Health Association). All monitoring instruments and equipment (including Discharger field instruments for measuring pH or specific conductance if identified as an additional sampling parameter) shall be calibrated and maintained in accordance with manufacturers’ specifications to ensure accurate measurements. All laboratory analyses shall be conducted according to approved test procedures under 40 Code of Federal Regulations part 136, unless other test procedures have been specified by the Regional Water Quality Control Board. All metals shall be reported as total metals. Dischargers may conduct their own field analysis of pH (or specific conductance if identified as an additional sampling parameter) if the Discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis. With the exception of field analysis conducted by Dischargers for pH (or specific conductance if identified as an additional sampling parameter), all analyses shall be sent to and conducted at a laboratory certified for such analyses by the California Department of Public Health. Dischargers are required to report to the Water Board any sampling data collected more frequently than required in this General Permit (Section XXI.J.2)

APPENDIX 1

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

FACILITY NAME: _____

Waste Discharge Identification (WDID) #: _____

	FACILITY CONTACT	Consultant/Qualified Industrial Storm Water Practitioner (QISP)
Name		
Title		
Company		
Street Address		
City, State		
Zip		

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Signed Certification (Section II.A)			
Pollution Prevention Team (Section X.D.1)			
Existing Facility Plans (Section X.D.2)			
Site Map(s) (Section X.E)			
Facility boundaries (Section X.E.3.a)			
Drainage areas (Section X.E.3.a)			
Direction of flow (Section X.E.3.a)			
On-facility water bodies (Section X.E.3.a)			

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Areas of soil erosion (Section X.E.3.a)			
Nearby water bodies (Section X.E.3.a)			
Municipal storm drain inlets (Section X.E.3.a)			
Points of discharge (Section X.E.3.b)			
Sampling Locations (Section X.E.3.b)			
Structural control measures (Section X.E.3.c)			
Impervious areas (Section X.E.3.d)			
Location of Directly Exposed Materials (Section X.E.3.e)			
Locations of significant spills and leaks (Section X.E.3.e)			
Areas of Industrial Activity (Section X.E.3.f)			
Areas of industrial activity (Section X.E.3.f)			
Storage areas/storage tanks (Section X.E.3.f)			
Shipping and receiving areas (Section X.E.3.f)			
Fueling areas (Section X.E.3.f)			
Vehicle and equipment storage/maintenance (Section X.E.3.f)			
Material handling/processing (Section X.E.3.f)			
Waste treatment/disposal (Section X.E.3.f)			
Dust or particulate generation (Section X.E.3.f)			
Cleaning and material reuse (Section X.E.3.f)			

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Other areas of industrial activities (Section X.E.3.f)			
List of Industrial Materials (Section X.F)			
Storage location			
Quantity			
Frequency			
Receiving and shipping location			
Quantity			
Frequency			
Handling location			
Quantity			
Frequency			
Potential Pollution Sources (Section X.G)			
Description of Potential Pollution Sources (Section X.G.1)			
Industrial processes (Section X.G.1.a)			
Material handling and storage areas (Section X.G.1.b)			
Dust & particulate generating activities (Section X.G.1.c)			
Significant spills and leaks (Section X.G.1.d)			
Non-storm water discharges (Section X.G.1.e)			
Erodible surfaces (Section X.G.1.f)			
Assessment of Potential Pollutant Sources (Section X.G.2)			
Narrative assessment of likely sources of pollutants (Section X.G.2.a)			
Narrative assessment of likely pollutants present in storm water discharges (Section X.G.2.a)			
Identification of additional BMPs Section X.G.2.b)			

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Identification of drainage areas with no exposure (Section X.G.2.c)			
Identification of additional parameters (Section X.G.2.d)			
Storm Water Best Management Practices (Section X.H)			
Minimum BMPs (Section X.H.1)			
Good housekeeping (Section X.H.1.a)			
Preventative maintenance (Section X.H.1.b)			
Spill response (Section X.H.1.c)			
Material handling and waste management (Section X.H.1.d)			
Erosion and sediment controls (Section X.H.1.e)			
Employee training program (Section X.H.1.f)			
Quality assurance and record keeping (Section X.H.1.g)			
Advanced BMPs (Section X.H.2)			
Implement advanced BMPs at the facility (Section X.H.2.a)			
Exposure Minimization BMPs (Section X.H.2.b.i)			
Storm Water containment and discharge reduction BMPS (Section X.H.2.b.ii)			
Treatment Control BMPs (Section X.H.2.b.iii)			
Other advance BMPs (Section X.H.2.b.iv)			
Temporary Suspension of Activities (Section X.H.3)			
BMPs necessary for stabilization of the facility (Section X.H.3)			

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
BMP Descriptions (Section X.H.4)			
Pollutant that a BMP reduces or prevents (Section X.H.4.a.i)			
Frequency of BMP implementation (Section X.H.4.a.ii)			
Location of BMP (Section X.H.4.a.iii)			
Person implementing BMP (Section X.H.4.a.iv)			
Procedures/maintenance/ instructions for BMP implementation (Section X.H.4.a.v)			
Equipment and tools for BMP implementation (Section X.H.4.a.vi)			
BMPs needing more frequent inspections (Section X.H.4.a.vii)			
Minimum BMP/applicable advanced BMPs not implemented at the facility (Section X.H.4.b)			
BMPs implemented in lieu of minimum or applicable advanced BMPs (Section X.H.4.c)			
BMP Summary Table (Section X.H.5)			
Monitoring Implementation Plan (Section X.I)			
Team members assisting in developing the MIP (Section X.I.1)			
Summary of visual observation procedures, locations, and details (Section X.I.2)			
Justifications if applicable for: Alternative discharge locations, Representative Sampling Reduction or, Qualified Combined Samples (Section X.I.3)			
Procedures for field instrument calibration (Section X.I.4)			

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Example of Chain of Custody (Section X.I.5)			
Annual Comprehensive Facility Compliance Evaluation (Section XV)			
Review of all visual inspection and monitoring records and sampling and analysis results conducted during the previous reporting year (Section XV.A)			
Visual inspection of all areas of industrial activity and associated potential pollutant sources (Section XV.B)			
Visual inspection of all drainage areas previously identified as having no-exposure to industrial activities and materials in accordance with the definitions in Section XVII (Section XV.C)			
Visual inspection of equipment needed to implement the BMPs (Section XV.D)			
Visual inspection of any structural and/or treatment control BMPs (Section XV.E)			
Review and assessment of all BMPs for each area of industrial activity and associated potential pollutant sources (Section XV.F)			
Assessment of other factors needed to complete the information described in Section XVI.B (Section XV.G)			

APPENDIX 2

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

This Attachment provides general guidance instructions and guidance for obtaining NEC coverage. The actual NEC requirements are primarily contained in Section XVII of this General Permit.

A. INSTRUCTIONS:

Who May File for NEC Coverage

Sections 301 and 402(p) of the Clean Water Act (CWA), and Sections 1311 and 1342(p) of 33 United States Code prohibit the discharge of storm water associated with industrial activity to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit. However, NPDES permit coverage is “conditionally excluded” for discharges of storm water associated with industrial activities (industrial storm water discharges) if the Discharger can certify that a condition of “No Exposure” exists at the industrial facility. A condition of “No Exposure” means that a Discharger’s industrial activities and materials are not exposed to storm water. Industrial storm water discharges from construction and land disturbance activities are ineligible for the NEC coverage. Dischargers who file valid NECs in accordance with these instructions are not required to implement Best Available Technology Economically Achievable /Best Conventional Pollutant Control Technology and comply with the Storm Water Pollution Prevention Plan (SWPPP) and monitoring requirements of this General Permit.

Obtaining and Maintaining NEC Coverage

A Discharger must electronically certify and submit NEC Permit Registration Documents (PRDs) via State Water Resources Control Board’s (State Water Board’s) Storm Water Multi-Application and Report Tracking System (SMARTS) to obtain NEC coverage. This conditional exclusion does not become effective until the PRDs are submitted and the annual fee is paid. Upon receipt of the annual fee, the Discharger will electronically receive an NEC acceptance notification via SMARTS, which will include a Waste Discharge Identification (WDID) number. A Discharger must maintain a condition of “No Exposure” at the facility for the conditional exclusion to remain applicable. The Discharger must annually electronically re-certify the NEC via SMARTS to confirm that the conditions of “no exposure” are being maintained. If conditions change resulting in the exposure of materials and activities to storm water, the Discharger must electronically certify and submit PRDs via SMARTS for Notice of Intent (NOI) coverage under the General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit).

Fees

First time NEC coverage PRDs and the annual re-certification require a fee. Fees may be changed by State Water Board regulation, independent of this General Permit.

How to Prepare and Submit PRDs for NEC Coverage

A Discharger must electronically certify and submit PRDs for NEC coverage in accordance with the instructions provided at the State Water Board web site for SMARTS:

<https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp>

A Discharger with multiple facilities that satisfy the conditions of “No Exposure” must certify and submit PRDs for each facility. The Discharger is required to inspect and evaluate each individual facility to determine the condition of No-Exposure. The Discharger must retain an electronic or paper copy of the NEC coverage acceptance notification for their records.

The following information is required in the PRDs:

Discharger Information

1. The legal business name of the business entity, public organization, or any other entity that operates the facility described in the certification. The name of the operator may or may not be the same as the name of the facility. The operator is the legal entity that controls the facility operations, not the plant or site manager.
2. The mailing address of the facility operator, including the city, state, and zip code.
3. The facility operator contact person, telephone number and e-mail address.

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

Facility Information

4. The legal business name of the facility.
5. The total acreage of the facility associated with industrial activity. (Facility size in acres is calculated by taking the square feet and dividing by 43,560.)
6. The complete physical street address (e.g. the street address used for express deliveries), including the city, State, and zip code. Do not use a P.O. Box number. If a physical street address does not exist, describe the location or provide the latitude and longitude of a point within the facility boundary. Latitude and longitude are available from United States Geological Survey quadrangle or topographic maps, or may be found using a mapping site on the internet.
7. The facility contact person, telephone number, and e-mail address.
8. The 4-digit Standard Industrial Classification (SIC) code that represents the facility primary industrial activity. Provide a brief description of the primary industrial activity. If applicable, enter other significant SIC codes and descriptions. To obtain these codes, see the 1987 SIC Manual or the Occupational Health and Safety Administration's site:

<http://www.osha.gov/pls/imis/sicsearch.html>
9. If the facility is currently covered under the General Permit, include the WDID number. The WDID number will be used at a later date to terminate the facility's coverage under the General Permit as necessary.

Facility Mailing or Billing Address

Completion of this item is required the facility mailing address or billing address differs from the physical facility address provided above. The Discharger must indicate which address the annual fee invoice must be sent to if the State Water Board is unable to transmit the invoice electronically.

Site Maps

Site maps must be prepared and submitted in accordance with the requirements in Section X.E of this General Permit.

NEC Checklist

The Discharger must evaluate the eleven major areas that storm water exposure may occur, per the listing at the end of this appendix. The Discharger must be able to certify

that none of these major areas have potential for exposure. If the Discharger cannot certify that every one of the eleven major areas do not have exposure, a potential for exposure exists at the facility and the facility is not eligible for NEC coverage. The Discharger must obtain (or continue) NOI coverage under this General Permit if the facility is not eligible for NEC coverage. After obtaining NOI coverage, the Discharger may implement facility modifications to eliminate the potential for a discharge of storm water exposed to industrial activity, and then change their NOI coverage to NEC coverage by certifying the conditions of "No Exposure" are met.

Certification

Federal and state statutes provide for severe penalties for Dischargers that submit false information on the PRDs. Dischargers shall certify and submit PRDs via SMARTS for NEC coverage in accordance with Electronic Signature and Certification Requirements in Section XXI.K of this General Permit.

B. GUIDANCE:

Contact your local Regional Water Quality Control Board (Regional Water Board) office with questions regarding this guidance.

1. Who is Eligible to Qualify for the No Exposure Certification (NEC) - Conditional Exclusion?

All industrial categories listed in Attachment A of this General Permit (excluding construction) are eligible to apply for the NEC coverage.

2. Limitations on Eligibility for NEC coverage

In addition to construction projects not being eligible, the following situations limit the applicability of NEC coverage:

- a. NEC coverage is available on a facility-wide basis only, not for individual drainage areas or discharge locations. Generally, if any exposed industrial materials or activities exist, or have a potential to exist, anywhere at a facility, NEC coverage is not applicable to the facility. If the Regional Water Board determines that a facility does have exposure or the facility's storm water discharges have a reasonable potential to cause or contribute to an exceedance of applicable water quality objectives/standards, the Regional Water Board can deny NEC coverage.
- b. If changes at a facility result in potential exposure of industrial activities or materials, the facility is no longer eligible for NEC coverage. Dischargers

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

shall register for NOI coverage under this General Permit prior to a planned facility change that will cause exposure, or within seven (7) calendar days after unplanned exposure occurs. If an unplanned exposure occurs due to an emergency response or one-time event that is unlikely to re-occur, a Discharger may contact the Regional Water Board to discuss whether the requirement to obtain NOI coverage can be waived. Unless the Discharger receives a written waiver from the Regional Water Board, the Discharger shall electronically certify and submit PRDs to obtain NOI coverage.

- c. Current contamination resulting from historic industrial practices at the facility (e.g., soil contamination, groundwater contamination, etc.) represents a condition of exposure to waters of the United State; therefore a facility with historic contamination is not eligible for NEC coverage.

3. What is the Definition of No Exposure?

- a. No Exposure means all industrial materials and activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt and/or runoff.
- b. Industrial materials and activities include, but are not limited to, material-handling equipment or activities; industrial machinery; raw materials, intermediate products, by-products, and final products; or waste products.
- c. Material handling activities include storage, loading and unloading, transport, or conveyance of any raw material, intermediate product, by-product, final product, or waste product.
- d. Final products intended to be used outdoors (e.g., automobiles) typically pose little risk of polluting storm water since not typically contaminated with pollutants that become mobilized by contact with storm water. Final products are exempt from the requirement for protection by a storm-resistant shelter to qualify for no exposure. Similarly, containers, racks, and other transport platforms (e.g., wooden pallets) used for the storage or conveyance of final products may also be stored outside if pollutant-free or pollutants do not mobilize via contact with storm water.
- e. Storm-resistant shelters include: (1) completely roofed and walled buildings or structures, (2) structures with only a top cover (no side coverings) supported by permanent supports, provided material within the structure is not subject to wind dispersion (sawdust, powders, etc.) or being

tracked out of the facility, and is not a source of pollutants in the industrial storm water discharges.

4. Industrial Materials/Activities Not Requiring a Storm-Resistant Shelter

The intent of the “No Exposure” exclusion is to maintain a condition of permanent “No Exposure”. A storm-resistant shelter is not required for the following industrial materials and activities:

- a. Drums, Barrels, Tanks, and Similar Containers that are sealed (“sealed” means banded or otherwise secured and without operational taps or valves), are not exposed provided those containers are not deteriorated, do not contain residual materials on the outside surfaces, and do not leak. Drums, barrels, etc., that are not opened while outdoors, or are not deteriorated or leaking, and that do not pose a risk of contaminating storm water runoff. Consider the following when making a “No Exposure” determination:
 - i. Materials shall not be added or withdrawn to/from containers while outdoors
 - ii. Simply moving containers while outside does not create exposure unless exposure occurs when pollutants are “tracked out” by the container handling equipment or vehicles.
 - iii. All outdoor containers shall be inspected to ensure they are not open, deteriorated, or leaking. When an outdoor container is observed as opened, deteriorated, or leaking, the container must immediately be closed, replaced, or sheltered. Frequent detection of open, deteriorated, or leaking containers, or failure to immediately close, replace, or shelter opened, deteriorated or leaking containers will cause a condition of exposure.
 - iv. Containers, racks, and other transport platforms (e.g., wooden pallets) used with drums, barrels, etc., can be stored outside providing they are contaminant-free and in good repair.
- b. Above Ground Storage Tanks (ASTs) In addition to generally being considered as not exposed, ASTs may also be exempt from the prohibition against adding or withdrawing material to/from external containers. ASTs typically use transfer valves to dispense materials that support facility operations (e.g., heating oil, propane, butane, chemical feedstock) or fuel for delivery vehicles (gasoline, diesel, compressed natural gas). For operational

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

ASTs to qualify for “No Exposure”, the following must be satisfied:

- i. The tank(s) shall be physically separated from and not associated with vehicle maintenance operations.
 - ii. There shall be no leaks from piping, pumps, or other equipment that has the potential to come in contact with storm water.
 - iii. Wherever feasible, the tank(s) shall have secondary containment (e.g., an impervious dike, berm or concrete retaining structure) to prevent runoff in the event of a structural failure or leaking transfer valve. Note: any resulting unpermitted discharge is in violation of the CWA.
- c. Lidded Dumpsters. Lidded dumpsters containing waste materials, providing the containers are completely covered and nothing can drain out holes in the bottom, spilled when loaded into the dumpster, or spilled in loading into a garbage truck. Industrial waste materials and trash that is stored uncovered is considered exposed.
- d. Adequately maintained vehicles, such as trucks, automobiles, forklifts, trailers or other general-purpose vehicles found onsite - but not industrial machinery that are not leaking, are in good repair or are not otherwise a potential source of contaminants:
- i. Vehicles passing between buildings may be exposed to storm water, however if the vehicles are adequately maintained, a condition of exposure may not exist. Similarly, non-leaking vehicles awaiting maintenance at vehicle maintenance facilities are not considered as potential exposure. However, vehicles that have been washed or rinsed that are not completely dry prior to outside exposure have the potential to cause a condition of exposure. Vehicles that track materials out of the facility are considered to be mobilizing pollutants. Vehicles that exit maintenance bays are also considered to cause exposure.
 - ii. The mere conveyance between buildings of materials / products that are otherwise not allowed to be stored outdoors, does not create a condition of exposure, provided the materials/products are adequately protected from storm water and do not have the potential to be released as a result of a leak or spill.
- e. Final products built and intended for use outdoors (e.g., new cars), provided the final products have not deteriorated, are not contaminated, or are not otherwise potential sources of contaminants.
- Types of final products not qualifying for a certification of “No Exposure”:
- i. Products that may be mobilized in storm water discharges (e.g., rock salt).
 - ii. Products, which may, when exposed, oxidize, deteriorate, leak, or otherwise be a potential source of contaminants (e.g., junk cars, stockpiled train rails).
 - iii. “Final” products that are, in actuality, “intermediate” products. Intermediate products are those used in the composition of yet another product (i.e., sheet metal, tubing, and paint used in making tractors).
 - iv. Even if the intermediate product is “final” for a manufacturer and destined for incorporation in a “final product intended for use outdoors,” the product is not allowed to be exposed because they may be chemically treated or are insufficiently impervious to weathering.
- f. Special Conditions for Construction Activities
Permanent, uninterrupted sheltering of industrial activities or materials may not always be possible during facility renovation or construction. When such circumstances exist, the Discharger is not required to obtain coverage under an NPDES permit as long as the following conditions are met:
- i. Materials and activities are protected with temporary covers or shelters (i.e. tarpaulins);
 - ii. Temporary covers or shelters prevent the contact of storm water to materials and activities;
 - iii. Materials are subject to wind dispersion are not stored under temporary sheltering;
 - iv. Temporary shelters are only used when necessary during facility renovation or construction and until permanent storm-resistant shelters as described above are available; and,
 - v. Temporary shelters are only used for a single period of ninety days or less. (Facilities with construction and renovation projects that will need the use of temporary shelters beyond 90 days, or that will require multiple periods of ninety

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

days or less, are required to be covered by an NPDES permit.)

5. Other Potential Sources of Contaminants

- a. Particulate Emissions from Roof Stacks and/or Vents: Deposits of particles or residuals from roof stacks/vents that have the potential to be mobilized by storm water runoff are considered exposed.
- b. Pollutants Potentially Mobilized by Wind Windblown materials cause a condition of exposure. Materials sheltered from precipitation are be deemed exposed if the materials has a potential to be mobilized by wind.

6. Certifying a Condition of “No Exposure”

To obtain the NEC coverage, the Discharger must electronically certify and submit PRDs via SMARTS that the facility meets the definition of “No Exposure” and pay an annual fee. The Discharger must **submit PRDs for NEC coverage even if the Discharger was not previously required to file for NEC coverage under the previous General Permit**. These PRDs include a checklist requiring the Discharger to evaluate eleven major areas to determine whether there is exposure of industrial activities and materials at the facility. To qualify for NEC coverage the Discharger must satisfy all the NEC coverage conditions in this General Permit and certify that there is “No Exposure”. The checklist: 1) aids the Discharger in determining if its facility is eligible for NEC coverage, and 2) furnishes the necessary documentation supporting relief from the General Permit’s requirement of NOI coverage. Additionally, Dischargers with NEC coverage are not required to develop and implement SWPPPs or comply with the monitoring requirements.

If a Discharger cannot certify that there is “No Exposure” at the facility, the Discharger must make appropriate changes at the facility to eliminate exposure prior to registering for future NEC coverage. Facility changes must remove all potential for pollutant exposure to storm water.

An annual inspection and evaluation, re-certification and fee are required thereafter.

7. Other NEC coverage Facts:

- a. NEC coverage is only valid if the condition of “No Exposure” exists and is reasonably expected to continue to exist. Dischargers shall electronically certify and submit PRDs for NOI coverage when the condition of “No Exposure” is no longer expected to exist.
- b. Dischargers must file PRDs for NEC coverage for each qualifying facility.
- c. An NEC must be submitted for each separate facility qualifying for the “No Exposure” conditional exclusion.
- d. An NEC is non-transferable. If a new operator takes over facility operations, the new operator shall electronically certify and submit PRDs and applicable fees for new NEC coverage via SMARTS prior to the operations transfer. NEC coverage cannot be transferred from one physical location to another regardless of ownership.

8. Operators May Be Required to Obtain NOI Coverage Based on the Protection Of Water Quality?

Operators who certified that their facilities qualify for NEC coverage may, nonetheless, be required by the Regional Water Board to obtain NOI coverage if the Regional Water Board determines that the facility’s discharge has the potential to cause or contribute to an exceedance of applicable water quality objectives/standards or determines that exposure exists at the facility. The Regional Water Board may request information and/or inspect the facility to assess potential water quality impacts and to determine if NOI coverage is required. The Discharger shall take appropriate actions to ensure compliance with the General Permit.

9. Steps to Obtain NEC coverage

This section will walk you through the process of obtaining NEC coverage.

Step 1: Determine if your facility is subject to this General Permit (refer to Attachment A of this General Permit). If yes, proceed to Step 2. If not, stop here.

If your facility is included in Attachment A and conducts industrial activities, you are required to **either** register for NOI coverage or NEC coverage.

Step 2: Determine if your regulated industrial activity meets the definition of “No Exposure” and qualifies for the exclusion from permitting. If yes, proceed to Step 3. If no, stop here and obtain NOI coverage. An

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

evaluation of the facility must be conducted by facility personnel familiar with the facility and its operations. Inspect all facility areas and potential pollutant sources to determine whether the facility satisfies the “No Exposure” conditions.

Step 3: Electronically certify and submit the PRDs for NEC coverage via SMARTS and mail the annual fee to the State Water Board at the following address:

SWRCB
Surface Water Permitting Section
PO Box 1977
Sacramento, CA 95812-1977

To maintain NEC coverage, the NEC must re-certify and pay a fee annually. This may only be done if the condition of “No Exposure” continues to exist at the facility.

Step 4: If requested, staff from the Water Boards, local Municipal Separate Storm Sewer System (MS4), or United States Environmental Protection Agency must be allowed to inspect your facility. All inspection reports will be made publicly available.

Step 5: Maintain a condition of “No Exposure”.

- NEC coverage is not a blanket exemption. Therefore, if facility physical or operational changes occur which cause exposure of industrial activities or materials to storm water, the Discharger must then immediately comply with all the requirements of this General Permit, including obtaining NOI coverage as applicable.
- To maintain the condition of “No Exposure”, the Discharger shall annually evaluate the facility to assure that the conditions of “No Exposure” still exist. More frequent evaluations may be necessary in circumstances when facility operations are rapidly changing.
- Failure to maintain the condition of “No Exposure” or otherwise obtain NOI coverage may lead to the unauthorized discharge of storm water associated with industrial activity to waters of the United States, resulting in penalties under the CWA and Water Code.

C. Frequently Asked Questions:

Q1. Who is eligible for NEC Coverage?

- A. Any Discharger operating a facility described in Attachment A may register for NEC coverage if their facility has a condition of “No Exposure”.

Q2. How does an eligible Discharger file for NEC coverage and where is the annual fee sent?

- A. The PRDs for NEC coverage shall be electronically certified and submitted in accordance with the instructions provided in SMARTS at the State Water Board website at: <https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp>. The fee is currently \$242, but may be changed by regulation. Once NEC coverage is accepted, an invoice will be electronically sent to the Discharger. The annual fee and invoice shall be sent to:
- State Water Resources Control Board
Division of Water Quality
Attention: Industrial Storm Water Unit
P.O. Box 1977
Sacramento, CA 95812-1977

Q3. If my facility’s storm water discharges are covered by an individual permit, can I file for NEC coverage?

- A. Yes. Storm water discharges covered by an individual permit are eligible for NEC coverage if the conditions at the facility satisfy the definition of “No Exposure” and you obtain approval to terminate individual permit coverage from the local Regional Water Board prior to PRD submittal. Approval from the Regional Water Board is mandatory. Many individual permits, for example, contain numeric storm water effluent limitations (“antibacksliding” provisions may prevent these facilities from qualifying for the “No Exposure” conditional exclusion).

Q4. My facility was originally excluded from the Phase I regulations because it was classified as a "light industrial facility". The facility has never had any exposure to storm water runoff. Do I now need to certify that the facility meets the No Exposure Exclusion from NPDES Storm Water Permitting?

- A. Yes. See answer provided to question number 9, “What is the exclusion “conditional” upon?”

Q5. Do I have to file a Notice of Termination (NOT) and a register for NEC coverage if my facility has NOI coverage and qualifies for NEC coverage?

- A. No. You are only required to register for NEC coverage. You must provide the WDID# in your NEC coverage PRDs in order for the State Water Board to change permit coverage status.

Q6. When and how often is a NEC coverage re-certification required?

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

- A.** Re-certification of NEC coverage is required annually (assuming the facility maintains its “No Exposure” status). The State Water Board will electronically transmit an NEC re-certification and annual fee notification to each facility operator who has filed for NEC coverage.

public documents and will be available for public review via SMARTS.

Q10. Can secondary containment around an outdoor exposed area qualify for a condition of “No Exposure”?

- A.** If secondary containment is engineered to always prevent a discharge of collected rainfall (based on the historical rainfall record) and a simultaneous spill of any other industrial materials or liquids, the “No Exposure” condition may be claimed. Note that there must be proper disposal of any water or liquids collected from the containment (i.e., discharged in compliance with another NPDES permit, treated and discharged to the sanitary sewer, or trucked offsite to an appropriate disposal/treatment facility).

D. NEC Checklist

An NEC Checklist must be prepared by the Discharger demonstrating that: (1) the facility has been evaluated, (2) none of the following materials or activities are, or will be in the foreseeable future, exposed to precipitation, and (3) all unauthorized NSWDS have been eliminated:

1. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed;
2. Materials or residuals on the ground or in storm water inlets from spills/leaks;
3. Materials or products from past industrial activity;
4. Material handling equipment (except adequately maintained vehicles);
5. Materials or products during loading/unloading or transporting activities;
6. Materials or products stored outdoors (except final products intended for outside use, i.e., new cars, where exposure to storm water does not result in the discharge of pollutants);
7. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;
8. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;
9. Waste material (except waste in covered, non-leaking containers, i.e., dumpsters);

New Dischargers must register for NEC coverage before the commencement of facility operations. Dischargers that fail to file for NEC coverage or apply for NOI coverage before the commencement of facility operations will be out of compliance and subject to enforcement.

Existing Dischargers have two options for submitting NECs:

1. Facility operators of “light industrial” facilities who have been operating under their original, no-certification-required permitting exemption must submit the NEC at any time prior to October 1, 2015. Dischargers who have not submitted an NEC or applied for permit coverage by this due date will be considered out of compliance and subject to Water Board enforcement.
2. Dischargers who have NOI coverage may register for NEC coverage at any time following completion of facility changes that result in the condition of “No Exposure”.

Q7. What happens if I know of changes that may cause exposure?

- A.** If exposure has the potential to occur in the near future due to some anticipated change at the facility, the Discharger must obtain NOI coverage to avoid potential enforcement for violations of this General Permit.

Q8. Is the NEC coverage transferable to a new Discharger?

- A.** No. If a new operator takes over your facility, the new operator must register for new NEC coverage prior to the transfer. A new application fee is required.

Q9. What is the exclusion “conditional” upon?

- A.** The exclusion from permit coverage requirements is “conditional” upon the certification of the Discharger that the facility does not have exposure of materials or activities to storm water. PRDs for NEC coverage shall be electronically submitted to the State Water Board and will not be accepted if incomplete. The Regional Water Board may review the information, contact and/or inspect the facility, and invalidate the NEC and require the Discharger to obtain NOI coverage. PRDs are

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

10. Application or disposal of processed wastewater (unless already covered by an NPDES permit); and
11. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.

APPENDIX 3

WATERBODIES WITH CLEAN WATER ACT SECTION 303(D) LISTED IMPAIRMENTS

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

The 303(d) impairments below are sourced from the 2010 Integrated Report. The rows in red are impairments for which industrial storm water Dischargers subject to this General Permit are not required to analyze for additional parameters unless directed by the Regional Water Board, because these parameters are typically not associated with industrial storm water. Test methods with substantially similar or more stringent method detection limits may be used if approved by the staff of the State Water Board prior to sampling and analysis and upon approval, will be added into SMARTS. The rows that are not in red are impairments for which Dischargers in the 303(d) impaired watershed are required to analyze for additional parameters, if applicable, because these parameters are more likely to be associated with industrial storm water. See General Permit Section XI.B.6.e. In the event that any of the impairments in this appendix are subsequently delisted, the Dischargers with discharges to that watershed are no longer required to analyze for the additional parameters for those impairments, and the provisions for new Dischargers with discharges to 303(d) impaired water bodies contained in Section VII.B of this General Permit no longer apply for those impairments.

The Excel spreadsheet containing the water bodies with 303(d) impairments is an attachment to this Appendix 3. To view the attachment from an electronic (pdf) version of this Appendix 3, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icon of an Excel spreadsheet. The Excel spreadsheet is also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (<http://www.waterboards.ca.gov/>).

Appendix C: Construction General Permit (CGP)

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Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

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I. BACKGROUND

A. History

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that established storm water permit application requirements for specified categories of industries. The regulations provide that discharges of storm water to waters of the United States from construction projects that encompass five or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. Regulations (Phase II Rule) that became final on December 8, 1999 lowered the permitting threshold from five acres to one acre.

While federal regulations allow two permitting options for storm water discharges (Individual Permits and General Permits), the State Water Board has elected to adopt only one statewide General Permit at this time that will apply to most storm water discharges associated with construction activity.

On August 19, 1999, the State Water Board reissued the General Construction Storm Water Permit (Water Quality Order 99-08-DWQ). On December 8, 1999 the State Water Board amended Order 99-08-DWQ to apply to sites as small as one acre.

The General Permit accompanying this fact sheet regulates storm water runoff from construction sites. Regulating many storm water discharges under one permit will greatly reduce the administrative burden associated with permitting individual storm water discharges. To obtain coverage under this General Permit, dischargers shall electronically file the Permit Registration Documents (PRDs), which includes a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other compliance related documents required by this General Permit and mail the appropriate permit fee to the State Water Board. It is expected that as the storm water program develops, the Regional Water Quality Control Boards (Regional Water Boards) may issue General Permits or Individual Permits containing more specific permit provisions. When this occurs, this General Permit will no longer regulate those dischargers.

B. Legal Challenges and Court Decisions

1. Early Court Decisions

Shortly after the passage of the CWA, the USEPA promulgated regulations exempting most storm water discharges from the NPDES permit requirements. (See [40 C.F.R. § 125.4 \(1975\)](#); see also *Natural Resources Defense Council v. Costle* (D.C. Cir. 1977) 568 F.2d 1369, 1372 (*Costle*); *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1163 (*Defenders of Wildlife*)). When environmental groups challenged this exemption in federal court, the District of Columbia Court of Appeals invalidated the regulation, holding that the USEPA “does not have authority to exempt categories of point sources from the permit requirements of [CWA] § 402.” (*Costle*, 568 F.2d at 1377.) The *Costle* court rejected the USEPA’s argument that effluent-based storm sewer regulation was administratively infeasible because of the variable nature of storm water pollution and the number of affected storm sewers throughout the country. (*Id.* at 1377-82.) Although the court acknowledged the practical problems relating to storm sewer regulation, the court found the USEPA had the flexibility under the CWA to design regulations that would overcome these problems. (*Id.* at 1379-83.) In particular, the court pointed to general permits and permits based on requiring best management practices (BMPs).

During the next 15 years, the USEPA made numerous attempts to reconcile the statutory requirement of point source regulation with the practical problem of regulating possibly millions of diverse point source discharges of storm water. (See *Defenders of Wildlife*, 191 F.3d at 1163; see also Gallagher, Clean Water Act in Environmental Law Handbook (Sullivan, edit., 2003) p. 300 (Environmental Law Handbook); Eisen, *Toward a Sustainable Urbanism: Lessons from Federal Regulation of Urban Storm Water Runoff* (1995) 48 Wash. U.J. Urb. & Contemp. L.1, 40-41 [Regulation of Urban Storm Water Runoff].)

In 1987, Congress amended the CWA to require NPDES permits for storm water discharges. (See CWA § 402(p), 33 U.S.C. § 1342(p); *Defenders of Wildlife*, 191 F.3d at 1163; *Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1296.) In these amendments, enacted as part of the Water Quality Act of 1987, Congress distinguished between industrial and municipal storm water discharges. With respect to industrial storm water discharges, Congress provided that NPDES permits "shall meet all applicable provisions of this section and section 1311 [requiring the USEPA to establish effluent limitations under specific timetables]." (CWA § 402(p)(3)(A), 33 U.S.C. § 1342(p)(3)(A); see also *Defenders of Wildlife*, 191 F.3d at 1163-64.)

In 1990, USEPA adopted regulations specifying what activities were considered "industrial" and thus required discharges of storm water associated with those activities to obtain coverage under NPDES permits. (55 Fed. Reg. 47,990 (1990); 40 C.F.R. § 122.26(b)(14).) Construction activities, deemed a subset of the industrial activities category, must also be regulated by an NPDES permit. (40 C.F.R. § 122.26(b)(14)(x)). In 1999, USEPA issued regulations for "Phase II" of storm water regulation, which required most small construction sites (1-5 acres) to be regulated under the NPDES program. (64 Fed. Reg. 68,722; 40 C.F.R. § 122.26(b)(15)(i).)

2. Court Decisions on Public Participation

Two recent federal court opinions have vacated USEPA rules that denied meaningful public review of NPDES permit conditions. On January 14, 2003, the Ninth Circuit Court of Appeals held that certain aspects of USEPA's Phase II regulations governing MS4s were invalid primarily because the general permit did not contain express requirements for public participation. (*Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832.) Specifically, the court determined that applications for general permit coverage (including the Notice of Intent (NOI) and Storm Water Management Program (SWMP)) must be made available to the public, the applications must be reviewed and determined to meet the applicable standard by the permitting authority before coverage commences, and there must be a process to accommodate public hearings. (*Id.* at 852-54.) Similarly, on February 28, 2005, the Second Circuit Court of Appeals held that the USEPA's confined animal feeding operation (CAFO) rule violated the CWA because it allowed dischargers to write their own nutrient management plans without public review. (*Waterkeeper Alliance v. USEPA* (2d Cir. 2005) 399 F.3d 486.) Although neither decision involved the issuance of construction storm water permits, the State Water Board's Office of Chief Counsel has recommended that the new General Permit address the courts' rulings where feasible¹.

¹ In *Texas Independent Producers and Royalty Owners Assn. v. USEPA* (7th Cir. 2005) 410 F.3d 964, the Seventh Circuit Court of Appeals held that the USEPA's construction general permit was not required to provide the public with the opportunity for a public hearing on the Notice of Intent or Storm Water Pollution Prevention Plan. The Seventh Circuit briefly discussed why it agreed with the Ninth Circuit's dissent in *Environmental Defense Center*, but

The CWA and the USEPA's regulations provide states with the discretion to formulate permit terms, including specifying best management practices (BMPs), to achieve strict compliance with federal technology-based and water quality-based standards. (*Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308.) Accordingly, this General Permit has developed specific BMPs as well as numeric action levels (NALs) in order to achieve these minimum federal standards. In addition, the General Permit requires a SWPPP and REAP (another dynamic, site-specific plan) to be developed but has removed all language requiring the discharger to implement these plans – instead, the discharger is required to comply with specific requirements. By requiring the dischargers to implement these specific BMPs and NALs, this General Permit ensures that the dischargers do not “write their own permits.” As a result this General Permit does not require each discharger's SWPPP and REAP to be reviewed and approved by the Regional Water Boards.

This General Permit also requires dischargers to electronically file all permit-related compliance documents. These documents include, but are not limited to, NOIs, SWPPPs, annual reports, Notice of Terminations (NOTs), and numeric action level (NAL) exceedance reports. Electronically submitted compliance information is immediately available to the public, as well as the Regional Water Quality Control Board (Regional Water Board) offices, via the Internet. In addition, this General Permit enables public review and hearings on permit applications when appropriate. Under this General Permit, the public clearly has a meaningful opportunity to participate in the permitting process.

generally did not discuss the substantive holdings in *Environmental Defense Center and Waterkeeper Alliance*, because neither court addressed the initial question of whether the plaintiffs had standing to challenge the permits at issue. However, notwithstanding the Seventh Circuit's decision, it is not binding or controlling on the State Water Board because California is located within the Ninth Circuit.

C. Blue Ribbon Panel of Experts and Feasibility of Numeric Effluent Limitations

In 2005 and 2006, the State Water Board convened an expert panel (panel) to address the feasibility of numeric effluent limitations (NELs) in California's storm water permits. Specifically, the panel was asked to address:

"Is it technically feasible to establish numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits? How would such limitations or criteria be established, and what information and data would be required?"

"The answers should address industrial general permits, construction general permits, and area-wide municipal permits. The answers should also address both technology-based limitations or criteria and water quality-based limitations or criteria. In evaluating establishment of any objective criteria, the panel should address all of the following:

The ability of the State Water Board to establish appropriate objective limitations or criteria;

How compliance determinations would be made;

The ability of dischargers and inspectors to monitor for compliance; and

The technical and financial ability of dischargers to comply with the limitations or criteria."

Through a series of public participation processes (State Water Board meetings, State Water Board workshops, and the solicitation of written comments), a number of water quality, public process and overall program effectiveness problems were identified. Some of these problems are addressed through this General Permit.

D. Summary of Panel Findings on Construction Activities

The panel's final report can be downloaded and viewed through links at www.waterboards.ca.gov or by clicking [here](#)².

The panel made the following observations:

"Limited field studies indicate that traditional erosion and sediment controls are highly variable in performance, resulting in highly variable turbidity levels in the site discharge."

"Site-to-site variability in runoff turbidity from undeveloped sites can also be quite large in many areas of California, particularly in more arid regions with less natural vegetative cover and steep slopes."

² http://www.waterboards.ca.gov/stormwtr/docs/numeric/swpanel_final_report.pdf

“Active treatment technologies involving the use of polymers with relatively large storage systems now exist that can provide much more consistent and very low discharge turbidity. However, these technologies have as yet only been applied to larger construction sites, generally five acres or greater. Furthermore, toxicity has been observed at some locations, although at the vast majority of sites, toxicity has not occurred. There is also the potential for an accidental large release of such chemicals with their use.”

“To date most of the construction permits have focused on TSS and turbidity, but have not addressed other, potentially significant pollutants such as phosphorus and an assortment of chemicals used at construction sites.”

“Currently, there is no required training or certification program for contractors, preparers of soil erosion and sediment control Storm Water Pollution Prevention Plans, or field inspectors.”

“The quality of storm water discharges from construction sites that effectively employ BMPs likely varies due to site conditions such as climate, soil, and topography.”

“The States of Oregon and Washington have recently adopted similar concepts to the Action Levels described earlier.”

In addition, the panel made the following conclusions:

“It is the consensus of the Panel that active treatment technologies make Numeric Limits technically feasible for pollutants commonly associated with storm water discharges from construction sites (e.g. TSS and turbidity) for larger construction sites. Technical practicalities and cost-effectiveness may make these technologies less feasible for smaller sites, including small drainages within a larger site, as these technologies have seen limited use at small construction sites. If chemical addition is not permitted, then Numeric Limits are not likely feasible.”

“The Board should consider Numeric Limits or Action Levels for other pollutants of relevance to construction sites, but in particular pH. It is of particular concern where fresh concrete or wash water from cement mixers/equipment is exposed to storm water.”

“The Board should consider the phased implementation of Numeric Limits and Action Levels, commensurate with the capacity of the dischargers and support industry to respond.”

E. How the Panel’s Findings are Used in this General Permit

The State Water Board carefully considered the findings of the panel and related public comments. The State Water Board also reviewed and considered the comments regarding statewide storm water policy and the reissuance of the Industrial General Permit. From the input received the State Water Board identified some permit and program performance gaps that are addressed in this General Permit. The Summary of Significant Changes (below) in this General Permit are a direct result of this process.

F. Summary of Significant Changes in This General Permit

The State Water Board has significant changes to Order 99-08-DWQ. This General Permit differs from Order 99-08-DWQ in the following significant ways:

Rainfall Erosivity Waiver: this General Permit includes the option allowing a small construction site (>1 and <5 acres) to self-certify if the rainfall erosivity value (R value) for their site's given location and time frame compute to be less than or equal to 5.

Technology-Based Numeric Action Levels: this General Permit includes NALs for pH and turbidity.

Risk-Based Permitting Approach: this General Permit establishes three levels of risk possible for a construction site. Risk is calculated in two parts: 1) Project Sediment Risk, and 2) Receiving Water Risk.

Minimum Requirements Specified: this General Permit imposes more minimum BMPs and requirements that were previously only required as elements of the SWPPP or were suggested by guidance.

Project Site Soil Characteristics Monitoring and Reporting: this General Permit provides the option for dischargers to monitor and report the soil characteristics at their project location. The primary purpose of this requirement is to provide better risk determination and eventually better program evaluation.

Effluent Monitoring and Reporting: this General Permit requires effluent monitoring and reporting for pH and turbidity in storm water discharges. The purpose of this monitoring is to evaluate whether NALs and NELs for Active Treatment Systems included in this General Permit are exceeded.

Receiving Water Monitoring and Reporting: this General Permit requires some Risk Level 3 and LUP Type 3 dischargers to monitor receiving waters and conduct bioassessments.

Post-Construction Storm Water Performance Standards: this General Permit specifies runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 NPDES permit, to avoid, minimize and/or mitigate post-construction storm water runoff impacts.

Rain Event Action Plan: this General Permit requires certain sites to develop and implement a Rain Event Action Plan (REAP) that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.

Annual Reporting: this General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and public information.

Certification/Training Requirements for Key Project Personnel: this General Permit requires that key personnel (e.g., SWPPP preparers, inspectors, etc.) have specific training or certifications to ensure their level of knowledge and skills are adequate to ensure their ability to design and evaluate project specifications that will comply with General Permit requirements.

Linear Underground/Overhead Projects: this General Permit includes requirements for all Linear Underground/Overhead Projects (LUPs).

II. RATIONALE

A. General Permit Approach

A general permit for construction activities is an appropriate permitting approach for the following reasons:

1. A general permit is an efficient method to establish the essential regulatory requirements for a broad range of construction activities under differing site conditions;
2. A general permit is the most efficient method to handle the large number of construction storm water permit applications;
3. The application process for coverage under a general permit is far less onerous than that for individual permit and hence more cost effective;
4. A general permit is consistent with USEPA's four-tier permitting strategy, the purpose of which is to use the flexibility provided by the CWA in designing a workable and efficient permitting system; and
5. A general permit is designed to provide coverage for a group of related facilities or operations of a specific industry type or group of industries. It is appropriate when the discharge characteristics are sufficiently similar, and a standard set of permit requirements can effectively provide environmental protection and comply with water quality standards for discharges. In most cases, the general permit will provide sufficient and appropriate management requirements to protect the quality of receiving waters from discharges of storm water from construction sites.

There may be instances where a general permit is not appropriate for a specific construction project. A Regional Water Board may require any discharger otherwise covered under the General Permit to apply for and obtain an Individual Permit or apply for coverage under a more specific General Permit. The Regional Water Board must determine that this General Permit does not provide adequate assurance that water quality will be protected, or that there is a site-specific reason why an individual permit should be required.

B. Construction Activities Covered

1. Construction activity subject to this General Permit:

Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.

Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or sale of one or more acres of disturbed land surface.

Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to USEPA regulations, such as dairy barns or food processing facilities.

Construction activity associated with LUPs including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete

and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.³

Storm water discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction⁴ (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. Construction projects that intend to disturb one or more acres of land within the jurisdictional boundaries of a CWA § 404 permit should contact the appropriate Regional Water Board to determine whether this permit applies to the project.

2. Linear Underground/Overhead Projects (LUPs) subject to this General Permit:

Underground/overhead facilities typically constructed as LUPs include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

Water Quality Order 2003-0007-DWQ regulated construction activities associated with small LUPs that resulted in land disturbances greater than one acre, but less than five acres. These projects were considered non-traditional construction projects. Attachment A of this Order now regulates all construction activities from LUPs resulting in land disturbances greater than one acre.

3. Common Plan of Development or Sale

USEPA regulations include the term “common plan of development or sale” to ensure that acreage within a common project does not artificially escape the permit requirements because construction activities are phased, split among smaller parcels, or completed by different owners/developers. In the absence of an

³ Pursuant to the Ninth Circuit Court of Appeals' decision in *NRDC v. EPA* (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the USEPA's petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

⁴ A construction site that includes a dredge and/or fill discharge to any water of the United States (e.g., wetland, channel, pond, or marine water) requires a CWA Section 404 permit from the U.S. Army Corps of Engineers and a CWA Section 401 Water Quality Certification from the Regional Water Board or State Water Board.

exact definition of “common plan of development or sale,” the State Water Board is required to exercise its regulatory discretion in providing a common sense interpretation of the term as it applies to construction projects and permit coverage. An overbroad interpretation of the term would render meaningless the clear “one acre” federal permitting threshold and would potentially trigger permitting of almost any construction activity that occurs within an area that had previously received area-wide utility or road improvements.

Construction projects generally receive grading and/or building permits (Local Permits) from local authorities prior to initiating construction activity. These Local Permits spell out the scope of the project, the parcels involved, the type of construction approved, etc. Referring to the Local Permit helps define “common plan of development or sale.” In cases such as tract home development, a Local Permit will include all phases of the construction project including rough grading, utility and road installation, and vertical construction. All construction activities approved in the Local Permit are part of the common plan and must remain under the General Permit until construction is completed. For custom home construction, Local Permits typically only approve vertical construction as the rough grading, utilities, and road improvements were already independently completed under the a previous Local Permit. In the case of a custom home site, the homeowner must submit plans and obtain a distinct and separate Local Permit from the local authority in order to proceed. It is not the intent of the State Water Board to require permitting for an individual homeowner building a custom home on a private lot of less than one acre if it is subject to a separate Local Permit. Similarly, the installation of a swimming pool, deck, or landscaping that disturbs less than one acre that was not part of any previous Local Permit are not required to be permitted.

The following are several examples of construction activity of less than one acre that would require permit coverage:

- a. A landowner receives a building permit(s) to build tract homes on a 100-acre site split into 200 one-third acre parcels, (the remaining acreage consists of streets and parkways) which are sold to individual homeowners as they are completed. The landowner completes and sells all the parcels except for two. Although the remaining two parcels combined are less than one acre, the landowner must continue permit coverage for the two parcels.
- b. One of the parcels discussed above is sold to another owner who intends to complete the construction as already approved in the Local Permit. The new landowner must file Permit Registration Documents (PRDs) to complete the construction even if the new landowner is required to obtain a separate Local Permit.
- c. Landowner in (1) above purchases 50 additional one half-acre parcels adjacent to the original 200-acre project. The landowner seeks a Local Permit (or amendment to existing Local permit) to build on 20 parcels while leaving the remaining 30 parcels for future development. The landowner must amend PRDs to include the 20 parcels 14 days prior to commencement of construction activity on those parcels.

C. Construction Activities Not Covered

1. Traditional Construction Projects Not Covered

This General Permit does not apply to the following construction activity:

- a. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

- b. Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.
- c. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.
- d. Discharges of storm water within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Board has adopted its own permit to regulate storm water discharges from construction activity in the Lake Tahoe Hydrologic Unit (Regional Water Board 6SLT). Owners of construction projects in this watershed must apply for the Lahontan Regional Water Board permit rather than the statewide Construction General Permit. Construction projects within the Lahontan region must also comply with the Lahontan Region Project Guideline for Erosion Control (R6T-2005-0007 Section), which can be found at http://www.waterboards.ca.gov/lahontan/Adopted_Orders/2005/r6t_2005_0007.pdf
- e. Construction activity that disturbs less than one acre of land surface, unless part of a larger common plan of development or the sale of one or more acres of disturbed land surface.
- f. Construction activity covered by an individual NPDES Permit for storm water discharges.
- g. Landfill construction activity that is subject to the Industrial General Permit.
- h. Construction activity that discharges to Combined Sewer Systems.
- i. Conveyances that discharge storm water runoff combined with municipal sewage.
- j. Discharges of storm water identified in CWA § 402(l)(2), 33 U.S.C. § 1342(l)(2).

2. Linear Projects Not Covered

- a. LUP construction activity does not include linear routine maintenance projects. Routine maintenance projects are projects associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-way, easements, franchise agreements, or other legally binding agreements of the discharger. Routine maintenance projects include, but are not limited to projects that are conducted to:
 - i. Maintain the original purpose of the facility or hydraulic capacity.
 - ii. Update existing lines⁵ and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
 - iii. Repairing leaks.

⁵Update existing lines includes replacing existing lines with new materials or pipes.

Routine maintenance does not include construction of new⁶ lines or facilities resulting from compliance with applicable codes, standards, and regulations.

Routine maintenance projects do not include those areas of maintenance projects that are outside of an existing right-of-way, franchise, easements, or agreements. When a project must secure new areas, those areas may be subject to this General Permit based on the area of disturbed land outside the original right-of-way, easement, or agreement.

- b. LUP construction activity does not include field activities associated with the planning and design of a project (e.g., activities associated with route selection).
- c. Tie-ins conducted immediately adjacent to “energized” or “pressurized” facilities by the discharger are not considered construction activities where all other LUP construction activities associated with the tie-in are covered by an NOI and SWPPP of a third party or municipal agency.

3. EPA’s Small Construction Rainfall Erosivity Waiver

EPA’s Storm Water Phase II Final Rule provides the option for a Small Construction Rainfall Erosivity Waiver. This waiver applies to small construction sites between 1 and 5 acres, and allows permitting authorities to waive those sites that do not have adverse water quality impacts.

Dischargers eligible for this waiver are exempt from Construction General Permit Coverage. In order to obtain the waiver, the discharger must certify to the State Water Board that small construction activity will occur only when the rainfall erosivity factor is less than 5 (“R” in the Revised Universal Soil Loss Equation). The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a practice that provides interim non-vegetative stabilization can be used for the end of the construction period. The operator must agree (as a condition waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization as defined in the General Permit have been met. If use of this interim stabilization eligibility condition was relied on to qualify for the waiver, signature on the waiver with a certification statement constitutes acceptance of and commitment to complete the final stabilization process. The discharger must submit a waiver certification to the State Board prior to commencing construction activities.

USEPA funded a cooperative agreement with Texas A&M University to develop an online rainfall erosivity calculator. Dischargers can access the calculator from EPA’s website at: www.epa.gov/npdes/stormwater/cgp. Use of the calculator allows the discharger to determine potential eligibility for the rainfall erosivity waiver. It may also be useful in determining the time periods during which construction activity could be waived from permit coverage.

⁶New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

D. Obtaining and Terminating Permit Coverage

The appropriate Legally Responsible Person (LRP) must obtain coverage under this General Permit. To obtain coverage, the LRP or the LRP's Approved Signatory must file Permit Registration Documents (PRDs) prior to the commencement of construction activity. Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the CWA and the California Water Code.

To obtain coverage under this General Permit, LRPs must electronically file the PRDs, which include a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other documents required by this General Permit, and mail the appropriate permit fee to the State Water Board. It is expected that as the storm water program develops, the Regional Water Boards may issue General Permits or Individual Permits that contain more specific permit provisions. When this occurs, this General Permit will no longer regulate those dischargers that obtain coverage under Individual Permits.

Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

The application requirements of the General Permit establish a mechanism to clearly identify the responsible parties, locations, and scope of operations of dischargers covered by the General Permit and to document the discharger's knowledge of the General Permit's requirements.

This General Permit provides a grandfathering exception to existing dischargers subject to Water Quality Order No. 99-08-DWQ. Construction projects covered under Water Quality Order No. 99-08-DWQ shall obtain permit coverage at Risk Level 1. LUP projects covered under Water Quality Order No. 2003-0007-DWQ shall obtain permit coverage at LUP Type 1. The Regional Water Boards have the authority to require Risk Determination to be performed on projects currently covered under Water Quality Order No. 99-08-DWQ and 2003-0007-DWQ where they deem necessary.

LRPs must file a Notice of Termination (NOT) with the Regional Water Board when construction is complete and final stabilization has been reached or ownership has been transferred. The discharger must certify that all State and local requirements have been met in accordance with this General Permit. In order for construction to be found complete, the discharger must install post-construction storm water management measures and establish a long-term maintenance plan. This requirement is intended to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream and downstream. Specifically, the discharger must demonstrate compliance with the post-construction standards set forth in this General Permit (Section XIII). The discharger is responsible for all compliance issues including all annual fees until the NOT has been filed and approved by the local Regional Water Board.

E. Discharge Prohibitions

This General Permit authorizes the discharge of storm water to surface waters from construction activities that result in the disturbance of one or more acres of land, provided that the discharger satisfies all permit conditions set forth in the Order. This General Permit prohibits the discharge of pollutants other than storm water and non-storm water discharges authorized by this General Permit or another NPDES permit. This General Permit also prohibits all discharges which contain a hazardous substance in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges. In addition, this General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the nine Regional Water Boards. Discharges to Areas of Special Biological Significance (ASBS) are prohibited unless covered by an exception that the State Water Board has approved.

Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction must be addressed through structural as well as non-structural BMPs. The State Water Board recognizes, however, that certain non-storm water discharges may be necessary for the completion of construction projects. Authorized non-storm water discharges may include those from de-chlorinated potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, uncontaminated ground water dewatering, and other discharges not subject to a separate general NPDES permit adopted by a region. Therefore this General Permit authorizes such discharges provided they meet the following conditions.

These authorized non-storm water discharges must:

1. be infeasible to eliminate;
2. comply with BMPs as described in the SWPPP;
3. filter or treat, using appropriate technology, all dewatering discharges from sedimentation basins;
4. meet the NALs for pH and turbidity; and
5. not cause or contribute to a violation of water quality standards.

Additionally, authorized non-storm water discharges must not be used to clean up failed or inadequate construction or post-construction BMPs designed to keep materials onsite. Authorized non-storm water dewatering discharges may require a permit because some Regional Water Boards have adopted General Permits for dewatering discharges.

This General Permit prohibits the discharge of storm water that causes or threatens to cause pollution, contamination, or nuisance.

F. Effluent Standards for All Types of Discharges

1. Technology-Based Effluent Limitations

Permits for storm water discharges associated with construction activity must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require controls of pollutant discharges that utilize best available technology economically achievable (BAT) for toxic pollutants and non conventional pollutants and best conventional pollutant control technology (BCT) for conventional pollutants. Additionally, these provisions require controls of pollutant discharges to reduce pollutants and any more stringent controls necessary to meet water quality standards. The USEPA has already established such limitations, known as effluent limitation guidelines (ELGs), for some industrial categories. This is not the case with construction discharges. In instances where there are no ELGs the permit writer is to use best professional judgment (BPJ) to establish requirements that the discharger must meet using BAT/BCT technology. This General Permit contains only narrative effluent limitations and does not contain numeric effluent limitations, except for Active Treatment Systems (ATS).

Order No. 2009-0009-DWQ, as originally adopted by the State Water Board on September 2, 2009, contained numeric effluent limitations for pH (within the range of 6.0 and 9.0 pH units) and turbidity (500 NTU) that applied only to Risk Level 3 and LUP Type 3 construction sites. The State Water Board adopted the numeric effluent limitations as technology-based effluent limitations based upon its best professional judgment. The California Building Industry Association, the Building Industry Legal Defense

Foundation, and the California Business Properties Association (petitioners) challenged Order No. 2009-0009-DWQ in *California Building Industry Association et al. v. State Water Resources Control Board*. On December 27, 2011, the Superior Court issued a judgment and writ of mandamus. The Superior Court ruled in favor of the State Water Board on almost all of the issues the petitioners raised, but the Superior Court invalidated the numeric effluent limitations for pH and turbidity for Risk Level 3 and LUP Type 3 sites because it determined that the State Water Board did not have sufficient BMP performance data to support those numeric effluent limitations. Therefore, the Superior Court concluded that the State Water Board did not comply with the federal regulations that apply to the use of best professional judgment. In invalidating the numeric effluent limitations, the Superior Court also suspended two ancillary requirements (a compliance storm event provision and receiving water monitoring at Risk Level 3 and LUP Type 3 sites that violated the numeric effluent limitations) that related solely to the invalidated numeric effluent limitations.

As a result of the Superior Court's writ of mandamus, this Order no longer contains numeric effluent limitations for pH and turbidity, except for ATS. In addition, as a result of the Superior Court's writ of mandamus, the receiving water monitoring requirements for Risk Level 3 and LUP Type 3 sites were suspended until the State Water Board amended this Order to restore the receiving water monitoring requirements. As amended, this Order now requires Risk Level 3 and LUP Type 3 Dischargers with direct discharges to surface waters to conduct receiving water monitoring whenever their effluent exceeds specified receiving water monitoring triggers. The receiving water monitoring triggers were established at the same levels as the previous numeric effluent limitations (effluent pH outside the range of 6.0 and 9.0 pH units or turbidity exceeding 500 NTU). In restoring the receiving water monitoring requirements, the State Water Board determined that it was appropriate to require receiving water monitoring for these types of sites with direct discharges to surface waters that exceeded the receiving water monitoring triggers under any storm event scenarios, because these sites represent the highest threat to receiving water quality. An exceedance of a receiving water monitoring trigger does not constitute a violation of this General Permit. These receiving water monitoring requirements take effect on the effective date of the amendment to this Order.

BAT/BCT technologies not only include passive systems such as conventional runoff and sediment control, but also treatment systems such as coagulation/flocculation using sand filtration, when appropriate. Such technologies allow for effective treatment of soil particles less 0.02 mm (medium silt) in diameter. The discharger must install structural-controls, as necessary, such as erosion and sediment controls that meet BAT and BCT to achieve compliance with water quality standards. The narrative effluent limitations constitute compliance with the requirements of the CWA.

Because the permit is an NPDES permit, there is no legal requirement to address the factors set forth in Water Code sections 13241 and 13263, unless the permit is more stringent than what federal law requires. (See *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 618, 627.) None of the requirements in this permit are more stringent than the minimum federal requirements, which include technology-based requirements achieving BAT/BCT and strict compliance with water quality standards. The inclusion of numeric effluent limitations (NELs) in the permit for Active Treatment Systems does not cause the permit to be more stringent than current federal law. NELs and best management practices are simply two different methods of achieving the same federal requirement: strict compliance with state water quality standards. Federal law authorizes both narrative and numeric effluent limitations to meet state water quality standards. The use of NELs to achieve compliance with water quality standards is not a more stringent requirement than the use of BMPs. (State Water Board Order No. WQ 2006-0012 (*Boeing*)). Accordingly, the State Water Board does not need to take into account the factors in Water Code sections 13241 and 13263.

The State Water Board has concluded that the establishment of BAT/BCT will not create or aggravate other environmental problems through increases in air pollution, solid waste generation, or energy consumption.—While there may be a slight increase in non-water quality impacts due to the implementation of additional monitoring or the construction of additional BMPs, these impacts will be negligible in comparison with the construction activities taking place on site and would be justified by the water quality benefits associated with compliance.

pH Receiving Water Monitoring Trigger

Given the potential contaminants, the minimum standard method for control of pH in runoff requires the use of preventive measures such as avoiding concrete pours during rainy weather, covering concrete and directing flow away from fresh concrete if a pour occurs during rain, covering scrap drywall and stucco materials when stored outside and potentially exposed to rain, and other housekeeping measures. If necessary, pH-impaired storm water from construction sites can be treated in a filter or settling pond or basin, with additional natural or chemical treatment required to meet pH limits set forth in this permit. The basin or pond acts as a collection point and holds storm water for a sufficient period for the contaminants to be settled out, either naturally or artificially, and allows any additional treatment to take place. The State Water Board considers these techniques to be equivalent to BCT. In determining the pH concentration trigger for discharges, the State Water Board used BPJ to set these limitations.

The chosen trigger was established by calculating three standard deviations above and below the mean pH of runoff from highway construction sites⁷ in California. Proper implementation of BMPs should result in discharges that are within the range of 6.0 to 9.0 pH Units.

Turbidity Receiving Water Monitoring Trigger

The Turbidity receiving water monitoring trigger of 500 NTU is a technology-based trigger and was developed using three different analyses aimed at finding the appropriate threshold to set the technology-based limit to ensure environmental protection, effluent quality and cost-effectiveness. The analyses fell into three, main types: (1) an ecoregion-specific dataset developed by Simon et. al. (2004)⁸; (2) Statewide Regional Water Quality Control Board enforcement data; and (3) published, peer-reviewed studies and reports on in-situ performance of best management practices in terms of erosion and sediment control on active construction sites.

A 1:3 relationship between turbidity (expressed as NTU) and suspended sediment concentration (expressed as mg/L) is assumed based on a review of suspended sediment and turbidity data from three gages used in the USGS National Water Quality Assessment Program:

USGS 11074000 SANTA ANA R BL PRADO DAM CA
USGS 11447650 SACRAMENTO R A FREEPORT CA
USGS 11303500 SAN JOAQUIN R NR VERNALIS CA

The receiving water monitoring trigger represents staff determination that the trigger value is the most practicable based on available data. The turbidity receiving water monitoring trigger represents a bridge between the narrative effluent limitations and receiving water limitations. To support this receiving water monitoring trigger, State Water Board staff analyzed construction site discharge information (monitoring data, estimates) and receiving water monitoring information.

Since the turbidity receiving water monitoring trigger represents an appropriate threshold level expected at a site, compliance with this value does not necessarily represent compliance with either the narrative effluent limitations (as enforced through the BAT/BCT standard) or the receiving water limitations. In the San Diego region, some inland surface waters have a receiving water objective for turbidity equal to 20 NTU. Obviously a discharge up to, but not exceeding, the turbidity receiving water monitoring trigger of

⁷ Caltrans Construction Sites Runoff Characterization Study, 2002. Available at: <http://www.dot.ca.gov/hq/env/stormwater/pdf/CTSW-RT-02-055.pdf>.

500 NTU may still cause or contribute to the exceedance of the 20 NTU standard. Most of the waters of the State are protected by turbidity objectives based on background conditions.

Table 1 - Regional Water Board Basin Plans, Water Quality Objectives for Turbidity

REGIONAL WATER BOARD	WQ Objective	Background/Natural Turbidity	Maximum Increase
1	Based on background	All levels	20%
2	Based on background	> 50 NTU	10%
3	Based on background	0-50 JTU 50-100 JTU > 100 JTU	20% 10 NTU 10%
4	Based on background	0-50 NTU > 50 NTU	20% 10%
5	Based on background	0-5 NTU 5-50 NTU 50-100 NTU >100 NTU	1 NTU 20% 10 NTU 10%
6	Based on background	All levels	10%
7	Based on background	N/A	N/A
8	Based on background	0-50 NTU 50-100 NTU >100 NTU	20% 10 NTU 10%
9	Inland Surface Waters, 20 NTU All others, based on background	 0-50 NTU 50-100 NTU >100 NTU	 20% 10 NTU 10%

Table 2 shows the suspended sediment concentrations at the 1.5 year flow recurrence interval for the 12 ecoregions in California from Simon et. al (2004).

Table 2 - Results of Ecoregion Analysis

Ecoregion	Percent of California Land Area	Median Suspended Sediment Concentration (mg/L)
1	9.1	874
4	0.2	120
5	8.8	35.6
6	20.7	1530
7	7.7	122
8	3.0	47.4
9	9.4	284
13	5.2	143
14	21.7	5150
78	8.1	581
80	2.4	199
81	3.7	503
Area-weighted average		1633

If a 1:3 relationship between turbidity and suspended sediment is assumed, the median turbidity is 544 NTU.

The following table is composed of turbidity readings measured in NTUs from administrative civil liability (ACL) actions for construction sites from 2003 - 2009. This data was derived from the complete listing of construction-related ACLs for the six year period. All ACLs were reviewed and those that included turbidimeter readings at the point of storm water discharge were selected for this dataset.

Table 3 – ACL Sampling Data taken by Regional Water Board Staff

WDID#	Region	Discharger	Turbidity (NTU)
5S34C331884	5S	Bradshaw Interceptor Section 6B	1800
5S05C325110	5S	Bridalwood Subdivision	1670
5S48C336297	5S	Cheyenne at Browns Valley	1629
5R32C314271	5R	Grizzly Ranch Construction	1400
6A090406008	6T	El Dorado County Department of Transportation, Angora Creek	97.4
5S03C346861	5S	TML Development, LLC	1600
6A31C325917	6T	Northstar Village	See Subdata Set

Subdata Set - Turbidity for point of storm water runoff discharge at Northstar Village

Date	Turbidity (NTU)	Location
10/5/2006	900	Middle Martis Creek
11/2/2006	190	Middle Martis Creek
01/04/2007	36	West Fork, West Martis Creek
02/08/2007	180	Middle Martis Creek
02/09/2007	130	Middle Martis Creek
02/09/2007	290	Middle Martis Creek
02/09/2007	100	West Fork, West Martis Creek
02/10/2007	28	Middle Martis Creek
02/10/2007	23	Middle Martis Creek
02/10/2007	32	Middle Martis Creek
02/10/2007	12	Middle Martis Creek
02/10/2007	60	West Fork, West Martis Creek
02/10/2007	34	West Fork, West Martis Creek

A 95% confidence interval for mean turbidity in an ACL order was constructed. The data set used was a small sample size, so the 500 NTU (the value derived as the receiving water monitoring trigger for this General Permit) needed to be verified as a possible population mean. In this case, the population refers to a hypothetical population of turbidity measurements of which our sample of 20 represents. A t-distribution was assumed due to the small sample size:

<p>Mean: 512.23 NTU Standard Deviation: 686.85 Margin of Error: 321.45 Confidence Interval: 190.78 NTU (Low) 833.68 NTU (High)</p>
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Based on a constructed 95% confidence interval, an ACL order turbidity measurement will be between 190.78 – 833.68 NTU. 500 NTU falls within this range. Using the same data set, a small-sample hypothesis test was also performed to test if the ACL turbidity data set contains enough information to cast doubt on choosing a 500 NTU as a mean. 500 NTU was again chosen due to its proposed use as an acceptable value. The test was carried out using a 95% confidence interval. Results indicated that the ACL turbidity data set *does not* contain significant sample evidence to reject the claim of 500 NTU as an acceptable mean for the ACL turbidity population.

There are not many published, peer-reviewed studies and reports on in-situ performance of best management practices in terms of erosion and sediment control on active construction sites. The most often cited study is a report titled, “Improving the Cost Effectiveness of Highway Construction Site Erosion and Pollution Control” (Horner, Guedry, and Korten Hof 1990, <http://www.wsdot.wa.gov/Research/Reports/200/200.1.htm>). In a comment letter summarizing this report sent to the State Water Board, the primary author, Dr. Horner, states:

“The most effective erosion control product was wood fiber mulch applied at two different rates along with a bonding agent and grass seed in sufficient time before the tests to achieve germination. Plots treated in this way reduced influent turbidity by more than 97 percent and discharged effluent exhibiting mean and maximum turbidity values of 21 and 73 NTU, respectively. Some other mulch and blanket materials performed nearly as well. These tests demonstrated the control ability of widely available BMPs over a very broad range of erosion potential.”

Other technologies studied in this report produced effluent quality at or near 100 NTU. It is the BPJ of the State Water Board staff that erosion control, while preferred, is not always an option on construction sites and that technology performance in a controlled study showing effluent quality directly leaving a BMP is always easier and cheaper to control than effluent being discharged from the project (edge of property, etc.). As a result, it is the BPJ of the State Water Board staff that it is not cost effective or feasible, at this time, for all risk level and type 3 sites in California to achieve effluent discharges with turbidity values that are less than 100 NTU.

To summarize, the analysis showed that: (1) results of the Simon et. al dataset reveals turbidity values in background receiving water in California’s ecoregions range from 16 NTU to 1716 NTU (with a mean of 544 NTU); (2) based on a constructed 95% confidence interval, construction sites will be subject to administrative civil liability (ACL) when their turbidity measurement falls between 190.78 – 833.68 NTU; and (3) sites with highly controlled discharges employing and maintaining good erosion control practices can discharge effluent from the BMP with turbidity values less than 100 NTU. State Water Board staff has determined, using its BPJ, that it is most cost effective to set the receiving water monitoring trigger for turbidity at 500 NTU.

i. Compliance Storm Event

While this General Permit no longer contains “compliance storm event” exceptions from technology-based NELs, the “compliance storm event” exception from the ATS NELs remain in effect. See Section K of this Fact Sheet, and Attachment F of this General Permit for more information.

a. TMDLs and Waste Load Allocations

Dischargers located within the watershed of a CWA § 303(d) impaired water body, for which a TMDL for sediment has been adopted by the Regional Water Board or USEPA, must comply with the approved TMDL if it identifies “construction activity” or land disturbance as a source of sediment. If it does, the

TMDL should include a specific waste load allocation for this activity/source. The discharger, in this case, may be required by a separate Regional Water Board order to implement additional BMPs, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule. If a specific waste load allocation has been established that would apply to a specific discharge, the Regional Water Board may adopt an order requiring specific implementation actions necessary to meet that allocation. In the instance where an approved TMDL has specified a general waste load allocation to construction storm water discharges, but no specific requirements for construction sites have been identified in the TMDL, dischargers must consult with the state TMDL authority⁹ to confirm that adherence to a SWPPP that meets the requirements of the General Permit will be consistent with the approved TMDL.

2. Determining Compliance with Effluent Standards

a. Technology-Based Numeric Action Levels (NALs)

This General Permit contains technology-based NALs for pH and turbidity, and requirements for effluent monitoring at all Risk level 2 & 3, and LUP Type 2 & 3 sites. Numeric action levels are essentially numeric benchmark values for certain parameters that, if exceeded in effluent sampling, trigger the discharger to take actions. Exceedance of an NAL does not itself constitute a violation of the General Permit. If the discharger fails to take the corrective action required by the General Permit, though, that may constitute a violation.

The primary purpose of NALs is to assist dischargers in evaluating the effectiveness of their on-site measures. Construction sites need to employ many different systems that must work together to achieve compliance with the permit's requirements. The NALs chosen should indicate whether the systems are working as intended.

Another purpose of NALs is to provide information regarding construction activities and water quality impacts. This data will provide the State and Regional Water Boards and the rest of the storm water community with more information about levels and types of pollutants present in runoff and how effective the dischargers BMPs are at reducing pollutants in effluent. The State Water Board also hopes to learn more about the linkage between effluent and receiving water quality. In addition, these requirements will provide information on the mechanics needed to establish compliance monitoring programs at construction sites in future permit deliberations.

i. *pH*

The chosen limits were established by calculating one standard deviation above and below the mean pH of runoff from highway construction sites¹⁰ in California. Proper implementation of BMPs should result in discharges that are within the range of 6.5 to 8.5 pH Units.

⁹ <http://www.waterboards.ca.gov/tmdl/tmdl.html>.

¹⁰ Caltrans Construction Sites Runoff Characterization Study, 2002. Available at: <http://www.dot.ca.gov/hq/env/stormwater/pdf/CTSW-RT-02-055.pdf>.

The Caltrans study included 33 highway construction sites throughout California over a period of four years, which included 120 storm events. All of these sites had BMPs in place that would be generally implemented at all types of construction sites in California.

ii. *Turbidity*

BPJ was used to develop an NAL that can be used as a learning tool to help dischargers improve their site controls, and to provide meaningful information on the effectiveness of storm water controls. A statewide turbidity NAL has been set at 250 NTU.

G. Receiving Water Limitations

Construction-related activities that cause or contribute to an exceedance of water quality standards must be addressed. The dynamic nature of construction activity gives the discharger the ability to quickly identify and monitor the source of the exceedances. This is because when storm water mobilizes sediment, it provides visual cues as to where corrective actions should take place and how effective they are once implemented.

This General Permit requires that storm water discharges and authorized non-storm water discharges must not contain pollutants that cause or contribute to an exceedance of any applicable water quality objective or water quality standards. The monitoring requirements in this General Permit for sampling and analysis procedures will help determine whether BMPs installed and maintained are preventing pollutants in discharges from the construction site that may cause or contribute to an exceedance of water quality standards.

Water quality standards consist of designated beneficial uses of surface waters and the adoption of ambient criteria necessary to protect those uses. When adopted by the State Water Board or a Regional Water Board, the ambient criteria are termed “water quality objectives.” If storm water runoff from construction sites contains pollutants, there is a risk that those pollutants could enter surface waters and cause or contribute to an exceedance of water quality standards. For that reason, dischargers should be aware of the applicable water quality standards in their receiving waters. (The best method to ensure compliance with receiving water limitations is to implement BMPs that prevent pollutants from contact with storm water or from leaving the construction site in runoff.)

In California, water quality standards are published in the Basin Plans adopted by each Regional Water Board, the California Toxics Rule (CTR), the National Toxics Rule (NTR), and the Ocean Plan.

Dischargers can determine the applicable water quality standards by contacting Regional Water Board staff or by consulting one of the following sources. The actual Basin Plans that contain the water quality standards can be viewed at the website of the appropriate Regional Water Board. (<http://www.waterboards.ca.gov/regions.html>), the State Water Board site for statewide plans (<http://www.waterboards.ca.gov/plnspols/index.html>), or the USEPA regulations for the NTR and CTR (40 C.F.R. §§ 131.36-38). Basin Plans and statewide plans are also available by mail from the appropriate Regional Water Board or the State Water Board. The USEPA regulations are available at <http://www.epa.gov/>. Additional information concerning water quality standards can be accessed through http://www.waterboards.ca.gov/stormwtr/gen_const.html.

H. Training Qualifications and Requirements

The Blue Ribbon Panel (BRP) made the following observation about the lack of industry-specific training requirements:

“Currently, there is no required training or certification program for contractors, preparers of soil erosion and sediment control Storm Water Pollution Prevention Plans, or field inspectors.”

Order 99-08-DWQ required that all dischargers train their employees on how to comply with the permit, but it did not specify a curriculum or certification program. This has resulted in inconsistent implementation by all affected parties - the dischargers, the local governments where the construction activity occurs, and the regulators required to enforce 99-08-DWQ. This General Permit requires Qualified SWPPP Developers and practitioners to obtain appropriate training, and makes this curriculum mandatory two years after adoption, to allow time for course completion. The State and Regional Water Board are working with many stakeholders to develop the curriculum and mechanisms needed to develop and deliver the courses.

To ensure that the preparation, implementation, and oversight of the SWPPP is sufficient for effective pollution prevention, the Qualified SWPPP Developer and Qualified SWPPP Practitioners responsible for creating, revising, overseeing, and implementing the SWPPP must attend a State Water Board-sponsored or approved Qualified SWPPP Developer and Qualified SWPPP Practitioner training course.

I. Sampling, Monitoring, Reporting and Record Keeping

1. Traditional Construction Monitoring Requirements

This General Permit requires visual monitoring at all sites, and effluent water quality at all Risk Level 2 & 3 sites. It requires receiving water monitoring at some Risk Level 3 sites. All sites are required to submit annual reports, which contain various types of information, depending on the site characteristics and events. A summary of the monitoring and reporting requirements is found in Table 4.

Table 4 - Required Monitoring Elements for Risk Levels

	Visual	Non-visible Pollutant	Effluent	Receiving Water
Risk Level 1			where applicable	not required
Risk Level 2			pH, turbidity	not required
Risk Level 3	three types required for all Risk Levels: non-storm water, pre-rain and post-rain	As needed for all Risk Levels (see below)	pH, turbidity	(if Receiving Water Monitoring Trigger exceeded) pH, turbidity and SSC. Bioassessment for sites 30 acres or larger.

a. Visual

All dischargers are required to conduct quarterly, non-storm water visual inspections. For these inspections, the discharger must visually observe each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources. For storm-related inspections, dischargers must visually observe storm water discharges at all discharge locations within two business days after a qualifying event. For this requirement, a qualifying rain event is one producing precipitation of ½ inch or more of discharge. Dischargers must conduct a post-storm event inspection to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify any additional BMPs necessary and revise the SWPPP accordingly. Dischargers must maintain on-site records of all visual observations, personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

b. Non-Visible Pollutant Monitoring

This General Permit requires that all dischargers develop a sampling and analysis strategy for monitoring pollutants that are not visually detectable in storm water. Monitoring for non-visible pollutants must be required at any construction site when the exposure of construction materials occurs and where a discharge can cause or contribute to an exceedance of a water quality objective.

Of significant concern for construction discharges are the pollutants found in materials used in large quantities at construction sites throughout California and exposed throughout the rainy season, such as cement, flyash, and other recycled materials or by-products of combustion. The water quality standards that apply to these materials will depend on their composition. Some of the more common storm water pollutants from construction activity are not CTR pollutants. Examples of non-visible pollutants include glyphosate (herbicides), diazinon and chlorpyrifos (pesticides), nutrients (fertilizers), and molybdenum (lubricants). The use of diazinon and chlorpyrifos is a common practice among landscaping professionals and may trigger sampling and analysis requirements if these materials come into contact with storm water. High pH values from cement and gypsum, high pH and SSC from wash waters, and chemical/fecal contamination from portable toilets, also are not CTR pollutants. Although some of these constituents do have numeric water quality objectives in individual Basin Plans, many do not and are subject only to narrative water quality standards (i.e. not causing toxicity). Dischargers are encouraged to discuss these issues with Regional Water Board staff and other storm water quality professionals.

The most effective way to avoid the sampling and analysis requirements, and to ensure permit compliance, is to avoid the exposure of construction materials to precipitation and storm water runoff. Materials that are not exposed do not have the potential to enter storm water runoff, and therefore receiving waters sampling is not required. Preventing contact between storm water and construction materials is one of the most important BMPs at any construction site.

Preventing or eliminating the exposure of pollutants at construction sites is not always possible. Some materials, such as soil amendments, are designed to be used in a manner that will result in exposure to storm water. In these cases, it is important to make sure that these materials are applied according to the manufacturer's instructions and at a time when they are unlikely to be washed away. Other construction materials can be exposed when storage, waste disposal or the application of the material is done in a manner not protective of water quality. For these situations, sampling is required unless there is capture and containment of all storm water that has been exposed. In cases where construction materials may be exposed to storm water, but the storm water is contained and is not allowed to run off the site, sampling will only be required when inspections show that the containment failed or is breached, resulting in potential exposure or discharge to receiving waters.

The discharger must develop a list of potential pollutants based on a review of potential sources, which will include construction materials soil amendments, soil treatments, and historic contamination at the site. The discharger must review existing environmental and real estate documentation to determine the potential for pollutants that could be present on the construction site as a result of past land use activities.

Good sources of information on previously existing pollution and past land uses include:

- i. Environmental Assessments;
- ii. Initial Studies;
- iii. Phase 1 Assessments prepared for property transfers; and
- iv. Environmental Impact Reports or Environmental Impact Statements prepared under the requirements of the National Environmental Policy Act or the California Environmental Quality Act.

In some instances, the results of soil chemical analyses may be available and can provide additional information on potential contamination.

The potential pollutant list must include all non-visible pollutants that are known or should be known to occur on the construction site including, but not limited to, materials that:

- i. are being used in construction activities;
- ii. are stored on the construction site;
- iii. were spilled during construction operations and not cleaned up;
- iv. were stored (or used) in a manner that created the potential for a release of the materials during past land use activities;
- v. were spilled during previous land use activities and not cleaned up; or
- vi. were applied to the soil as part of past land use activities.

C. Effluent Monitoring

Federal regulations¹¹ require effluent monitoring for discharges subject to NALs. Subsequently, all Risk Level 2 and 3 dischargers must perform sampling and analysis of effluent discharges to characterize discharges associated with construction activity from the entire area disturbed by the project. Dischargers must collect samples of stored or contained storm water that is discharged subsequent to a storm event producing precipitation of ½ inch or more at the time of discharge.

Table 5 - Storm Water Effluent Monitoring Requirements by Risk Level

	Frequency	Effluent Monitoring (Section E, below)
Risk Level 1	when applicable	non-visible pollutant parameters (if applicable)
Risk Level 2	Minimum of 3 samples per day during qualifying rain event characterizing discharges associated with construction activity from the entire project disturbed area.	pH, turbidity, and non-visible pollutant parameters (if applicable)
Risk Level 3	Minimum of 3 samples per day during qualifying rain event characterizing discharges associated with construction activity from the entire project disturbed area.	pH, turbidity, and non-visible pollutant parameters if applicable

Risk Level 1 dischargers must analyze samples for:

- i. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment C contained in the General Permit.

¹¹ 40 C.F.R. § 122.44.

Risk Level 2 dischargers must analyze samples for:

- i. pH and turbidity;
- ii. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment D contained in the General Permit, and
- iii. any additional parameters for which monitoring is required by the Regional Water Board.

Risk Level 3 dischargers must analyze samples for:

- i. pH, turbidity;
- ii. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment E contained in the General Permit, and
- iii. any additional parameters for which monitoring is required by the Regional Water Board.

2. Linear Monitoring and Sampling Requirements

Attachment A, establishes minimum monitoring and reporting requirements for all LUPs. It establishes different monitoring requirements depending on project complexity and risk to water quality. The monitoring requirements for Type 1 LUPs are less than Type 2 & 3 projects because Type 1 projects have a lower potential to impact water quality.

A discharger shall prepare a monitoring program prior to the start of construction and immediately implement the program at the start of construction for LUPs. The monitoring program must be implemented at the appropriate level to protect water quality at all times throughout the life of the project.

a. Type 1 LUP Monitoring Requirements

A discharger must conduct daily visual inspections of Type 1 LUPs during working hours while construction activities are occurring. Inspections are to be conducted by qualified personnel and can be conducted in conjunction with other daily activities. Inspections will be conducted to ensure the BMPs are adequate, maintained, and in place at the end of the construction day. The discharger will revise the SWPPP, as appropriate, based on the results of the daily inspections. Inspections can be discontinued in non-active construction areas where soil disturbing activities have been completed and final stabilization has been achieved (e.g., trench has been paved, substructures have been installed, and successful final vegetative cover or other stabilization criteria have been met).

A discharger shall implement the monitoring program for inspecting Type 1 LUPs. This program requires temporary and permanent stabilization BMPs after active construction is completed. Inspection activities will continue until adequate permanent stabilization has been established and will continue in areas where re-vegetation is chosen until minimum vegetative coverage has been established. Photographs shall be taken during site inspections and submitted to the State Water Board.

b. Type 2 & 3 LUP Monitoring Requirements

A discharger must conduct daily visual inspections of Type 2 & 3 LUPs during working hours while construction activities are occurring. Inspections are to be conducted by qualified personnel and can be in conjunction with other daily activities.

All dischargers of Type 2 & 3 LUPs are required to conduct inspections by qualified personnel of the construction site during normal working hours prior to all anticipated storm events and after actual storm events. During extended storm events, the discharger shall conduct inspections during normal working hours for each 24-hour period. Inspections can be discontinued in non-active construction areas where soil disturbing activities have been completed and final stabilization has been achieved (e.g., trench has been paved, substructures installed, and successful vegetative cover or other stabilization criteria have been met).

The goals of these inspections are (1) to identify areas contributing to a storm water discharge; (2) to evaluate whether measures to reduce pollutant loadings identified in the SWPPP are adequate and properly installed and functioning in accordance with the terms of the General Permit; and (3) to determine whether additional control practices or corrective maintenance activities are needed. Equipment, materials, and workers must be available for rapid response to failures and emergencies. All corrective maintenance to BMPs shall be performed as soon as possible, depending upon worker safety.

All dischargers shall develop and implement a monitoring program for inspecting Type 2 & 3 LUPs that require temporary and permanent stabilization BMPs after active construction is completed. Inspections will be conducted to ensure the BMPs are adequate and maintained. Inspection activities will continue until adequate permanent stabilization has been established and will continue in areas where revegetation is chosen until minimum vegetative coverage has been established.

A log of inspections conducted before, during, and after the storm events must be maintained in the SWPPP. The log will provide the date and time of the inspection and who conducted the inspection. Photographs must be taken during site inspections and submitted to the State Water Board.

C. Sampling Requirements for all LUP Project Types

LUPs are also subject to sampling and analysis requirements for visible pollutants (i.e., sedimentation/siltation, turbidity) and for non-visible pollutants.

Sampling for visible pollutants is required for Type 2 & 3 LUPs.

Non-visible pollutant monitoring is required for pollutants associated with construction sites and activities that (1) are not visually detectable in storm water discharges, and (2) are known or should be known to occur on the construction site, and (3) could cause or contribute to an exceedance of water quality objectives in the receiving waters. Sample collection for non-visible pollutants must only be required (1) during a storm event when pollutants associated with construction activities may be discharged with storm water runoff due to a spill, or in the event there was a breach, malfunction, failure, and/or leak of any BMP, and (2) when the discharger has failed to adequately clean the area of material and pollutants. Failure to implement appropriate BMPs will trigger the same sampling requirements as those required for a breach, malfunction and/or leak, or when the discharger has failed to implement appropriate BMPs prior to the next storm event.

Additional monitoring parameters may be required by the Regional Water Boards.

It is not anticipated that many LUPs will be required to collect samples for pollutants not visually detected in runoff due to the nature and character of the construction site and activities as previously described in this fact sheet. Most LUPs are constructed in urban areas with public access (e.g., existing roadways, road shoulders, parking areas, etc.). This raises a concern regarding the potential contribution of pollutants from vehicle use and/or from normal activities of the public (e.g., vehicle washing, landscape fertilization, pest spraying, etc.) in runoff from the project site. Since the dischargers are not the land owners of the project area and are not able to control the presence of these pollutants in the storm water that runs through their projects, it is not the intent of this General Permit to require dischargers to sample for these pollutants. This General Permit does not require the discharger to sample for these types of pollutants except where the discharger has brought materials onsite that contain these pollutants and when a condition (e.g., breach, failure, etc.) described above occurs.

3. Receiving Water Monitoring

In order to ensure that receiving water limitations are met, discharges subject to receiving water monitoring triggers (i.e., Risk Level 3 and LUP Type 3 sites) or numeric effluent limitations (i.e., Risk Level 3 and LUP Type 3 sites utilizing ATS with direct discharges into receiving waters) must also monitor the downstream receiving water(s) for turbidity, SSC, and pH (if applicable) when a receiving water monitoring trigger or NEL is exceeded.

a. Bioassessment Monitoring

This General Permit requires a bioassessment of receiving waters for dischargers of Risk Level 3 or LUP Type 3 construction projects equal to or larger than 30 acres with direct discharges into receiving waters. Benthic macroinvertebrate samples will be taken upstream and downstream of the site's discharge point in the receiving water. Bioassessments measure the quality of the stream by analyzing the aquatic life present. Higher levels of appropriate aquatic species tend to indicate a healthy stream; whereas low levels of organisms can indicate stream degradation. Active construction sites have the potential to discharge large amounts of sediment and pollutants into receiving waters. Requiring a bioassessment for large project sites, with the most potential to impact water quality, provides a snapshot of the health of the receiving water prior to initiation of construction activities. This snapshot can be used in comparison to the health of the receiving water after construction has commenced.

Each ecoregion (biologically and geographically related area) in the State has a specific yearly peak time where stream biota is in a stable and abundant state. This time of year is called an Index Period. The bioassessment requirements in this General Permit, requires benthic macroinvertebrate sampling within a sites index period. The State Water Board has developed a map designating index periods for the ecoregions in the State (see State Water Board Website).

This General Permit requires the bioassessment methods to be in accordance with the Surface Water Ambient Monitoring Program (SWAMP) in order to provide data consistency within the state as well as generate useable biological stream data.

Table 6 - Receiving Water Monitoring Requirements

	Receiving Water Monitoring Parameters
Risk Level 1 /LUP Type 1	not required
Risk Level 2 / LUP Type 2	not required
Risk Level 3 / LUP Type 3	If Receiving Water Monitoring Trigger exceeded: pH (if applicable), turbidity, and SSC. Bioassessment for sites 30 acres or larger.

4. Reporting Requirements

a. NAL Exceedance Report

All Risk Level 3 and LUP Type 3 dischargers must electronically submit all storm event sampling results to the State And Regional Boards, via the electronic data system, no later than 10 days after the conclusion of the storm event.

b. Annual Report

All dischargers must prepare and electronically submit an annual report no later than September 1 of each year using the Storm water Multi-Application Reporting and Tracking System (SMARTS). The

Annual Report must include a summary and evaluation of all sampling and analysis results, original laboratory reports, chain of custody forms, a summary of all corrective actions taken during the compliance year, and identification of any compliance activities or corrective actions that were not implemented.

5. Record Keeping

According to 40 C.F.R. Parts 122.21(p) and 122.41(j), the discharger is required to retain paper or electronic copies of all records required by this General Permit for a period of at least three years from the date generated or the date submitted to the State Water Board or Regional Water Boards. A discharger must retain records for a period beyond three years as directed by Regional Water Board.

J. Risk Determination

1. Traditional Projects

a. Overall Risk Determination

There are two major requirements related to site planning and risk determination in this General Permit. The project's overall risk is broken up into two elements – (1) project sediment risk (the relative amount of sediment that can be discharged, given the project and location details) and (2) receiving water risk (the risk sediment discharges pose to the receiving waters).

Project Sediment Risk:

Project Sediment Risk is determined by multiplying the R, K, and LS factors from the Revised Universal Soil Loss Equation (RUSLE) to obtain an estimate of project-related bare ground soil loss expressed in tons/acre. The RUSLE equation is as follows:

$$A = (R)(K)(LS)(C)(P)$$

Where: A = the rate of sheet and rill erosion

R = rainfall-runoff erosivity factor

K = soil erodibility factor

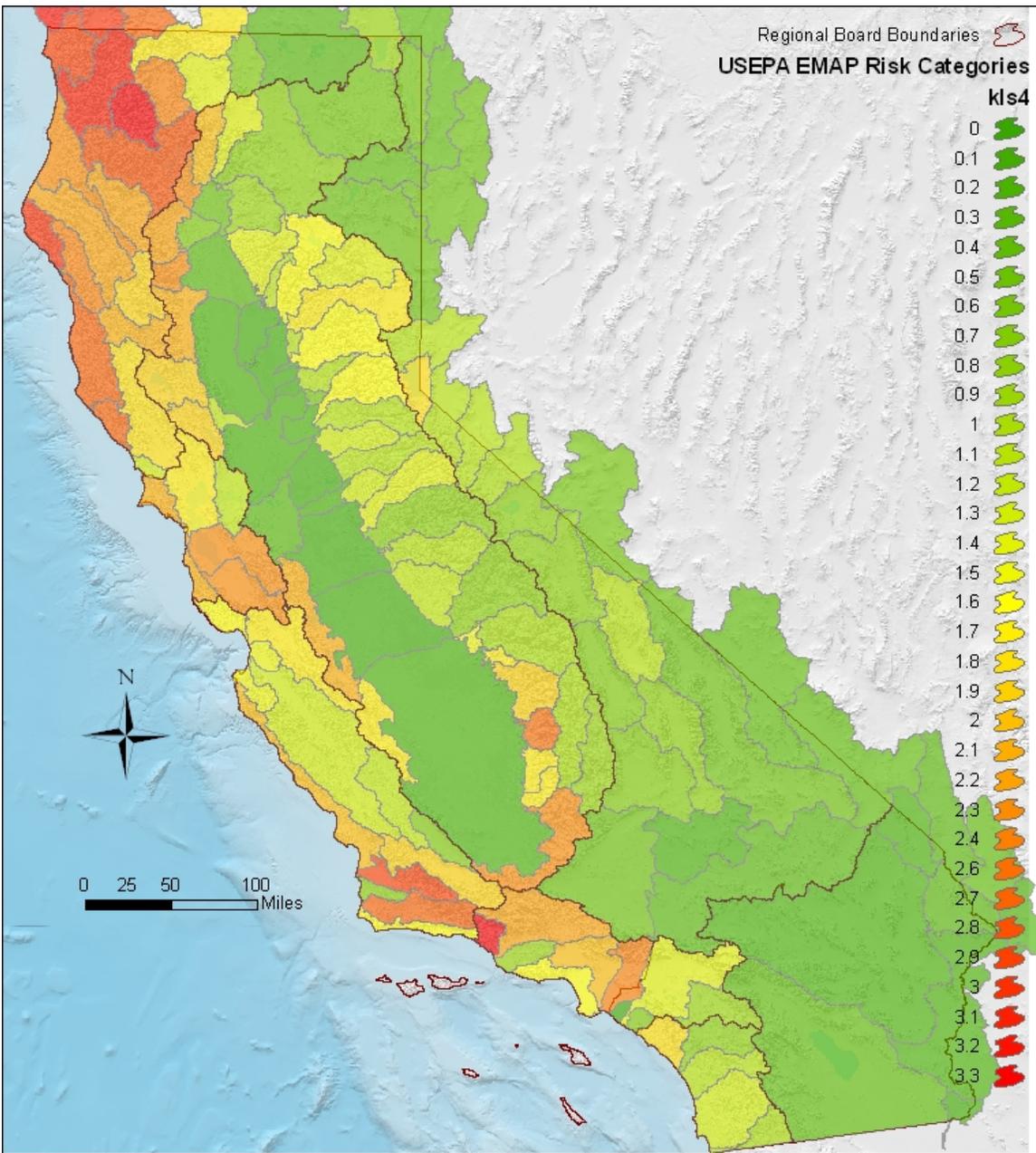
LS = length-slope factor

C = cover factor (erosion controls)

P = management operations and support practices (sediment controls)

The C and P factors are given values of 1.0 to simulate bare ground conditions.

There is a map option and a manual calculation option for determining soil loss. For the map option, the R factor for the project is calculated using the online calculator at <http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm>. The product of K and LS are shown on Figure 1. To determine soil loss in tons per acre, the discharger multiplies the R factor times the value for K times LS from the map.



State Water Resources Control Board, January 15, 2008

Figure 1 -Statewide Map of K * LS

For the manual calculation option, the R factor for the project is calculated using the online calculator at <http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm>. The K and LS factors are determined using Appendix 1.

Soil loss of less than 15 tons/acre is considered **low** sediment risk.
 Soil loss between 15 and 75 tons/acre is **medium** sediment risk.
 Soil loss over 75 tons/acre is considered **high** sediment risk.

The soil loss values and risk categories were obtained from mean and standard deviation RKLS values from the USEPA EMAP program. High risk is the mean RKLS value plus two standard deviations. Low risk is the mean RKLS value minus two standard deviations.

Receiving Water Risk:

Receiving water risk is based on whether a project drains to a sediment-sensitive waterbody. A sediment-sensitive waterbody is either

- on the most recent 303d list for waterbodies impaired for sediment;
- has a USEPA-approved Total Maximum Daily Load implementation plan for sediment; **or**
- has the beneficial uses of COLD, SPAWN, and MIGRATORY.

A project that meets at least one of the three criteria has a high receiving water risk. A list of sediment-sensitive waterbodies will be posted on the State Water Board’s website. It is anticipated that an interactive map of sediment sensitive water bodies in California will be available in the future.

The Risk Levels have been altered by eliminating the possibility of a Risk Level 4, and expanding the constraints for Risk Levels 1, 2, and 3. Therefore, projects with high receiving water risk and high sediment risk will be considered a Risk Level 3 risk to water quality.

In response to public comments, the Risk Level requirements have also been changed such that Risk Level 1 projects will be subject to minimum BMP and visual monitoring requirements, Risk Level 2 projects will be subject to NALs and some additional monitoring requirements, and Risk Level 3 projects will be subject to NALs, and more rigorous monitoring requirements such as receiving water monitoring and in some cases bioassessment.

Table 7 - Combined Risk Level Matrix

Combined Risk Level Matrix			
Receiving Water Risk		Sediment Risk	
		Low	Medium
	Low	Level 1	Level 2
High	Level 2		Level 3

b. Effluent Standards

All dischargers are subject to the narrative effluent limitations specified in the General Permit. The narrative effluent limitations require storm water discharges associated with construction activity to meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require controls of pollutant discharges that utilize BAT and BCT to reduce pollutants and any more stringent controls necessary to meet water quality standards.

Risk Level 2 dischargers that pose a medium risk to water quality are subject to technology-based NALs for pH and turbidity. Risk Level 3 dischargers that pose a high risk to water quality are also subject to technology-based NALs for pH and turbidity.

C. Good Housekeeping

Proper handling and managing of construction materials can help minimize threats to water quality. The discharger must consider good housekeeping measures for: construction materials, waste management, vehicle storage & maintenance, landscape materials, and potential pollutant sources. Examples include; conducting an inventory of products used, implementing proper storage & containment, and properly cleaning all leaks from equipment and vehicles.

d. Non-Storm Water Management

Non-storm water discharges directly connected to receiving waters or the storm drain system have the potential to negatively impact water quality. The discharger must implement measures to control all non-storm water discharges during construction, and from dewatering activities associated with construction. Examples include; properly washing vehicles in contained areas, cleaning streets, and minimizing irrigation runoff.

e. Erosion Control

The best way to minimize the risk of creating erosion and sedimentation problems during construction is to disturb as little of the land surface as possible by fitting the development to the terrain. When development is tailored to the natural contours of the land, little grading is necessary and, consequently, erosion potential is lower.¹⁴ Other effective erosion control measures include: preserving existing vegetation where feasible, limiting disturbance, and stabilizing and re-vegetating disturbed areas as soon as possible after grading or construction activities. Particular attention must be paid to large, mass-graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing storm water contamination, and sediment control techniques should be used to capture any soil that becomes eroded.¹²

Risk Level 3 dischargers pose a higher risk to water quality and are therefore additionally required to ensure that post-construction soil loss is equivalent to or less than the pre-construction levels.

f. Sediment Control

Sediment control BMPs should be the secondary means of preventing storm water contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only

¹² U.S. Environmental Protection Agency. 2007. Developing Your Storm Water Pollution Prevention Plan: A Guide for Construction Sites.

examples of what should be considered and should not preclude new or innovative approaches currently available or being developed.

Because Risk Level 2 and 3 dischargers pose a higher risk to water quality, additional requirements for the application of sediment controls are imposed on these projects. This General Permit also authorizes the Regional Water Boards to require Risk Level 3 dischargers to implement additional site-specific sediment control requirements if the implementation of other erosion or sediment controls are not adequately protecting the receiving waters.

g. Run-on and Runoff Control

Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions.

Risk Level 1 dischargers with lower risks to impact water quality are not subject to the run-on and runoff control requirements unless an evaluation deems them necessary or visual inspections show that such controls are required.

h. Inspection, Maintenance and Repair

All measures must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended.

i. Rain Event Action Plan (REAP)

A Rain Event Action Plan (REAP) is a written document, specific for each rain event. A REAP should be designed that when implemented it protects all exposed portions of the site within 48 hours of any likely precipitation event forecast of 50% or greater probability.

This General Permit requires Risk Level 2 and 3 dischargers to develop and implement a REAP designed to protect all exposed portions of their sites within 48 hours prior to any likely precipitation event. The REAP requirement is designed to ensure that the discharger has adequate materials, staff, and time to implement erosion and sediment control measures that are intended to reduce the amount of sediment and other pollutants generated from the active site. A REAP must be developed when there is likely a forecast of 50% or greater probability of precipitation in the project area. (The National Oceanic and Atmospheric Administration (NOAA) defines a chance of precipitation as a probability of precipitation of 30% to 50% chance of producing precipitation in the project area.¹³ NOAA defines the probability of precipitation (PoP) as the likelihood of occurrence (expressed as a percent) of a measurable amount (0.01 inch or more) of liquid precipitation (or the water equivalent of frozen precipitation) during a specified period of time at any given point in the forecast area.) Forecasts are normally issued for 12-hour time periods. Descriptive terms for uncertainty and aerial coverage are used as follows:

Table 8 -National Oceanic and Atmospheric Administration (NOAA) Definition of Probability of Precipitation (PoP)

¹³ <http://www.crh.noaa.gov/lot/severe/wxterms.php>.

PoP	Expressions of Uncertainty	Aerial Coverage
0%	none used	none used
10%	none used	isolated
20%	slight chance	isolated
30-50%	chance	scattered
60-70%	likely	numerous
80-100%	none used	none used

The discharger must obtain the precipitation forecast information from the National Weather Service Forecast Office (<http://www.srh.noaa.gov/>).

2. Linear Projects

a. Linear Risk Determination

LUPs vary in complexity and water quality concerns based on the type of project. This General Permit has varying application requirements based on the project's risk to water quality. Factors that lead to the characterization of the project include location, sediment risk, and receiving water risk.

Based on the location and complexity of a project area or project section area, LUPs are separated into project types. As described below, LUPs have been categorized into three project types.

i. *Type 1 LUPs*

Type 1 LUPs are those construction projects where:

- (1) 70 percent or more of the construction activity occurs on a paved surface and where areas disturbed during construction will be returned to preconstruction conditions or equivalent protection established at the end of the construction activities for the day, or
- (2) greater than 30 percent of construction activities occur within the non-paved shoulders or land immediately adjacent to paved surfaces, or where construction occurs on unpaved improved roads, including their shoulders or land immediately adjacent to them where:

Areas disturbed during construction will be returned to pre-construction conditions or equivalent protection established at the end of the construction activities for the day to minimize the potential for erosion and sediment deposition, and

Areas where established vegetation was disturbed during construction will be stabilized and re-vegetated by the end of project. When required, adequate temporary stabilization Best Management Practices (BMPs) will be installed and maintained until vegetation is established to meet minimum cover requirements established in this General Permit for final stabilization.

Type 1 LUPs typically do not have a high potential to impact storm water quality because (1) these construction activities are not typically conducted during a rain event, (2) these projects are normally constructed over a short period of time¹⁴, minimizing the duration that pollutants could potentially be exposed to rainfall; and (3) disturbed soils such as those from trench excavation are required to be hauled away, backfilled into the trench, and/or covered (e.g., metal plates, pavement, plastic covers over spoil piles) at the end of the construction day.

Type 1 LUPs are determined during the risk assessment found in Attachment A.1 to be 1) low sediment risk and low receiving water risk; 2) low sediment risk and medium receiving water risk; and 3) medium sediment risk and low receiving water risk.

This General Permit requires the discharger to ensure a SWPPP is developed for these construction activities that is specific to project type, location and characteristics.

ii. Type 2 LUPs:

Type 2 projects are determined to have a combination of High, Medium, and Low project sediment risk along with High, Medium, and Low receiving water risk. Like Type 1 projects, Type 2 projects are typically constructed over a short period of time. However, these projects have a higher potential to impact water quality because they:

- (1) typically occur outside the more urban/developed areas;
- (2) have larger areas of soil disturbance that are not closed or restored at the end of the day;
- (3) may have onsite stockpiles of soil, spoil and other materials;
- (4) cross or occur in close proximity to a wide variety of sensitive resources that may include, but are not limited to, steep topography and/or water bodies; and
- (5) have larger areas of disturbed soils that may be exposed for a longer time interval before final stabilization, cleanup and/or reclamation occurs.

This General Permit requires the discharger to develop and implement a SWPPP for these construction activities that are specific for project type, location and characteristics.

iii. Type 3 LUPs:

¹⁴ Short period of time refers to a project duration of weeks to months, but typically less than one year in duration.

Type 3 projects are determined to have a combination of High and Medium project sediment risk along with High and Medium receiving water risk. Similar to Type 2 projects, Type 3 projects have a higher potential to impact water quality because they:

- (1) typically occur outside of the more urban/developed areas;
- (2) have larger areas of soil disturbance that are not closed or restored at the end of the day;
- (3) may have onsite stockpiles of soil, spoil and other materials;
- (4) cross or occur in close proximity to a wide variety of sensitive resources that may include, but are not limited to, steep topography and/or water bodies; and
- (5) have larger areas of disturbed soils that may be exposed for a longer time interval before final stabilization, cleanup and/or reclamation occurs.

This General Permit requires the discharger to develop and implement a SWPPP for these construction activities that are specific for project type, location, and characteristics.

b. Linear Effluent Standards

All LUPs are subject to the narrative effluent limitations specified in the General Permit.

Type 2 and Type 3 projects are subject to technology-based NALs for pH and turbidity.

c. Linear Good Housekeeping

Improper use and handling of construction materials could potentially cause a threat to water quality. In order to ensure proper site management of these construction materials, all LUP dischargers must comply with a minimum set of Good Housekeeping measures specified in Attachment A of this General Permit.

d. Linear Non-Storm Water Management

In order to ensure control of all non-storm water discharges during construction, all LUP dischargers must comply with the Non-Storm Water Management measures specified in Attachment A of this General Permit.

e. Linear Erosion Control

This General Permit requires all LUP dischargers to implement effective wind erosion control measures, and soil cover for inactive areas. Type 3 LUPs posing a higher risk to water quality are additionally required to ensure the post-construction soil loss is equivalent to or less than the pre-construction levels.

f. Linear Sediment Control

In order to ensure control and containment of all sediment discharges, all LUP dischargers must comply with the general Sediment Control measures specified in Attachment A or this General Permit. Additional requirements for sediment controls are imposed on Type 2 & 3 LUPs due to their higher risk to water quality.

g. Linear Run-on and Runoff Control

Discharges originating outside of a project's perimeter and flowing onto the property can adversely affect the quantity and quality of discharges originating from a project site. In order to ensure proper management of run-on and runoff, all LUPs must comply with the run-on and runoff control measures specified in Attachment A of this General Permit. Due to the lower risk of impacting water quality, Type 1 LUPs are not required to implement run-on and runoff controls unless deemed necessary by the discharger.

h. Linear Inspection, Maintenance and Repair

Proper inspection, maintenance, and repair activities are important to ensure the effectiveness of on-site measures to control water quality. In order to ensure that inspection, maintenance, and repair activities are adequately performed, the all LUP dischargers are required to comply with the Inspection, Maintenance, and Repair requirements specified in Attachment A of this General Permit.

K. ATS¹⁵ Requirements

There are instances on construction sites where traditional erosion and sediment controls do not effectively control accelerated erosion. Under such circumstances, or under circumstances where storm water discharges leaving the site may cause or contribute to an exceedance of a water quality standard, the use of an Active Treatment System (ATS) may be necessary. Additionally, it may be appropriate to use an ATS when site constraints inhibit the ability to construct a correctly sized sediment basin, when clay and/or highly erosive soils are present, or when the site has very steep or long slope lengths.¹⁶

Although treatment systems have been in use in some form since the mid-1990s, the ATS industry in California is relatively young, and detailed regulatory standards have not yet been developed. Many developers are using these systems to treat storm water discharges from their construction sites. The new ATS requirements set forth in this General Permit are based on those in place for small wastewater treatment systems, ATS regulations from the Central Valley Regional Water Quality Control Board (September 2005 memorandum "2005/2006 Rainy Season – Monitoring Requirements for Storm Water Treatment Systems that Utilize Chemical Additives to Enhance Sedimentation"), the Construction Storm Water Program at the State of Washington's Department of Ecology, as well as recent advances in technology and knowledge of coagulant performance and aquatic safety.

The effective design of an ATS requires a detailed survey and analysis of site conditions. With proper planning, ATS performance can provide exceptional water quality discharge and prevent significant impacts to surface water quality, even under extreme environmental conditions.

These systems can be very effective in reducing the sediment in storm water runoff, but the systems that use additives/polymers to enhance sedimentation also pose a potential risk to water quality (e.g., operational failure, equipment failure, additive/polymer release, etc.). The State Water Board is concerned about the potential acute and chronic impacts that the polymers and other chemical additives may have on fish and aquatic organisms if released in sufficient quantities or concentrations. In addition

¹⁵ An ATS is a treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation in order to reduce turbidity caused by fine suspended sediment.

¹⁶ Pitt, R., S. Clark, and D. Lake. 2006. Construction Site Erosion and Sediment Controls: Planning, Design, and Performance. DEStech Publications. Lancaster, PA. 370pp.

to anecdotal evidence of polymer releases causing aquatic toxicity in California, the literature supports this concern.¹⁷ For example, cationic polymers have been shown to bind with the negatively charged gills of fish, resulting in mechanical suffocation.¹⁸ Due to the potential toxicity impacts, which may be caused by the release of additives/polymers into receiving waters, this General Permit establishes residual polymer monitoring and toxicity testing requirements have been established in this General Permit for discharges from construction sites that utilize an ATS in order to protect receiving water quality and beneficial uses.

The primary treatment process in an ATS is coagulation/flocculation. ATS's operate on the principle that the added coagulant is bound to suspended sediment, forming floc, which is gravitationally settled in tanks or a basin, or removed by sand filters. A typical installation utilizes an injection pump upstream from the clarifier tank, basin, or sand filters, which is electronically metered to both flow rate and suspended solids level of the influent, assuring a constant dose. The coagulant mixes and reacts with the influent, forming a dense floc. The floc may be removed by gravitational setting in a clarifier tank or basin, or by filtration. Water from the clarifier tank, basin, or sand filters may be routed through cartridge(s) and/or bag filters for final polishing. Vendor-specific systems use various methods of dose control, sediment/floc removal, filtration, etc., that are detailed in project-specific documentation. The particular coagulant/flocculant to be used for a given project is determined based on the water chemistry of the site because the coagulants are specific in their reactions with various types of sediments. Appropriate selection of dosage must be carefully matched to the characteristics of each site.

ATS's are operated in two differing modes, either Batch or Flow-Through. Batch treatment can be defined as Pump-Treat-Hold-Test-Release. In Batch treatment, water is held in a basin or tank, and is not discharged until treatment is complete. Batch treatment involves holding or recirculating the treated water in a holding basin or tank(s) until treatment is complete or the basin or storage tank(s) is full. In Flow-Through treatment, water is pumped into the ATS directly from the runoff collection system or storm water holding pond, where it is treated and filtered as it flows through the system, and is then directly discharged. "Flow-Through Treatment" is also referred to as "Continuous Treatment."

1. Effluent Standards

This General Permit establishes NELs for discharges from construction sites that utilize an ATS. These systems lend themselves to NELs for turbidity and pH because of their known reliable treatment. Advanced systems have been in use in some form since the mid-1990s. An ATS is considered reliable, can consistently produce a discharge of less than 10 NTU, and has been used successfully at many sites in several states since 1995 to reduce turbidity to very low levels.¹⁹

This General Permit contains "compliance storm event" exceptions from the technology-based NELs for ATS discharges. The rationale is that technology-based requirements are developed assuming a certain design storm. In the case of ATS the industry-standard design storm is 10-year, 24-hour (as stated in

¹⁷ Romøen, K., B. Thu, and Ø. Evensen. 2002. Immersion delivery of plasmid DNA II. A study of the potentials of a chitosan based delivery system in rainbow trout (*Oncorhynchus mykiss*) fry. *Journal of Controlled Release* **85**: 215-225.

¹⁸ Bullock, G., V. Blazer, S. Tsukuda, and S. Summerfelt. 2000. Toxicity of acidified chitosan for cultured rainbow trout (*Oncorhynchus mykiss*). *Aquaculture* **185**:273-280.

¹⁹ Currier, B., G. Minton, R. Pitt, L. Roesner, K. Schiff, M. Stenstrom, E. Strassler, and E. Strecker. 2006. The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.

Attachment F of this General Permit), so the compliance storm event has been established as the 10-year 24-hour event as well to provide consistency.

2. Training

Operator training is critical to the safe and efficient operation and maintenance of the ATS, and to ensure that all State Water Board monitoring and sampling requirements are met. The General Permit requires that all ATS operators have training specific to using ATS's liquid coagulants.

L. Post-Construction Requirements

Under past practices, new and redevelopment construction activities have resulted in modified natural watershed and stream processes. This is caused by altering the terrain, modifying the vegetation and soil characteristics, introducing impervious surfaces such as pavement and buildings, increasing drainage density through pipes and channels, and altering the condition of stream channels through straightening, deepening, and armoring. These changes result in a drainage system where sediment transport capacity is increased and sediment supply is decreased. A receiving channel's response is dependent on dominant channel materials and its stage of adjustment.

Construction activity can lead to impairment of beneficial uses in two main ways. First, during the actual construction process, storm water discharges can negatively affect the chemical, biological, and physical properties of downstream receiving waters. Due to the disturbance of the landscape, the most likely pollutant is sediment, however pH and other non-visible pollutants are also of great concern. Second, after most construction activities are completed at a construction site, the finished project may result in significant modification of the site's response to precipitation. New development and redevelopment projects have almost always resulted in permanent post-construction water quality impacts because more precipitation ends up as runoff and less precipitation is intercepted, evapotranspired, and infiltrated.

General Permit 99-08-DWQ required the SWPPP to include a description of all post-construction BMPs on a site and a maintenance schedule. An effective storm water management strategy must address the full suite of storm events (water quality, channel protection, overbank flood protection, extreme flood protection) (Figure 2).

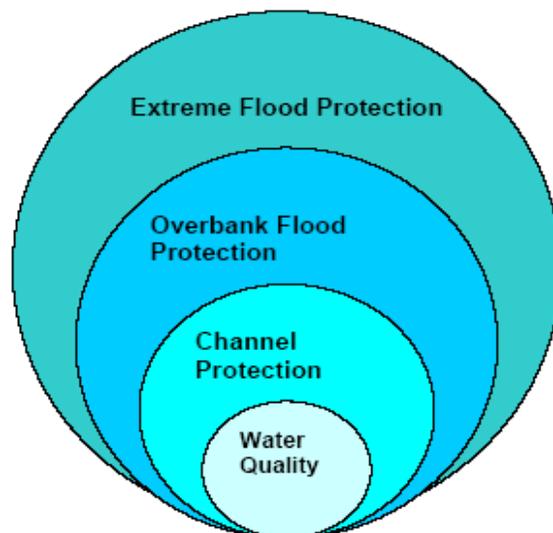


Figure 2 - Suite of Storm Events

The post-construction storm water performance standards in this General Permit specifically address water quality and channel protection events. Overbank flood protection and extreme flood protection events are traditionally dealt with in local drainage and flood protection ordinances. However, measures in this General Permit to address water quality and channel protection also reduce overbank and extreme flooding impacts. This General Permit aims to match post-construction runoff to pre-construction runoff for the 85th percentile storm event, which not only reduces the risk of impact to the receiving water's channel morphology but also provides some protection of water quality.

This General Permit clarifies that its runoff reduction requirements only apply to projects that lie outside of jurisdictions covered by a Standard Urban Storm water Management Plan (SUSMP) (or other more protective) post-construction requirements in either Phase I or Phase II permits.

Figures 3 and 4, below, show the General Permit enrollees (to Order 99-08-DWQ, as of March 10, 2008) overlaid upon a map with SUSMP (or more protective) areas in blue and purple. Areas without blue or purple indicate where the General Permit's runoff reduction requirements would actually apply.

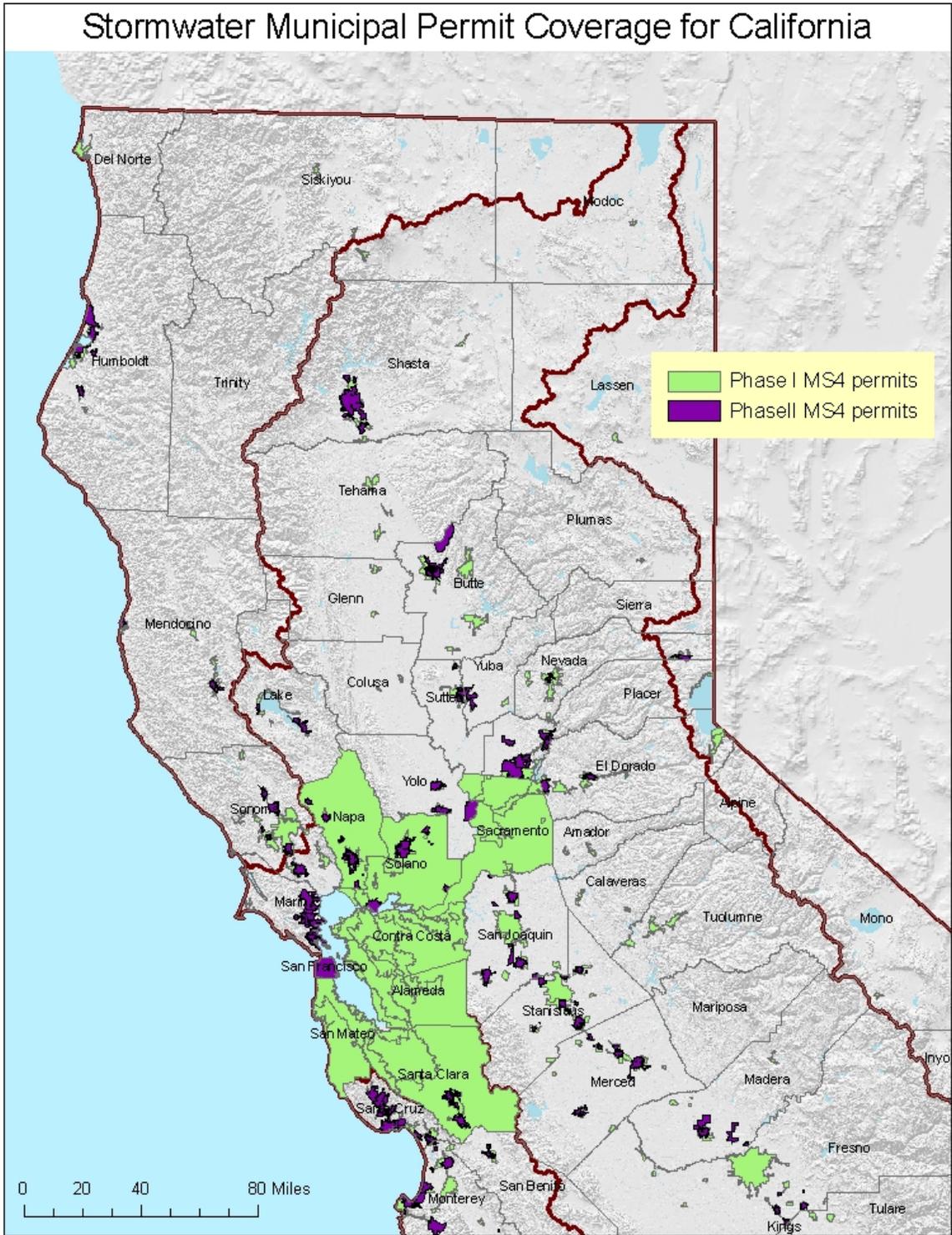


Figure 3 - Northern CA (2009) Counties / Cities With SUSMP-Plus Coverage



Figure 4 - Southern CA (2009) Counties / Cities With SUSMP-Plus Coverage

Water Quality:

This General Permit requires dischargers to replicate the pre-project runoff water balance (defined as the amount of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event, or the smallest storm event that generates runoff, whichever is larger. Contemporary storm water management generally routes these flows directly to the drainage system, increasing pollutant loads and potentially causing adverse effects on receiving waters. These smaller water quality events happen much more frequently than larger events and generate much higher pollutant loads on an annual basis. There are other adverse hydrological impacts that result from not designing according to the site's pre-construction water balance. In Maryland, Klein²⁰ noted that baseflow decreases as the extent of urbanization increases. Ferguson and Suckling²¹ noted a similar relation in watersheds in Georgia. On Long Island, Spinello and Simmons²² noted substantial decreases in base flow in intensely urbanized watersheds.

The permit emphasizes runoff reduction through on-site storm water reuse, interception, evapotranspiration and infiltration through non-structural controls and conservation design measures (e.g., downspout disconnection, soil quality preservation/enhancement, interceptor trees). Employing these measures close to the source of runoff generation is the easiest and most cost-effective way to comply with the pre-construction water balance standard. Using low-tech runoff reduction techniques close to the source is consistent with a number of recommendations in the literature.²³ In many cases, BMPs implemented close to the source of runoff generation cost less than end-of the pipe measures.²⁴ Dischargers are given the option of using Appendix 2 to calculate the required runoff volume or a watershed process-based, continuous simulation model such as the EPA's Storm Water Management Model (SWMM) or Hydrologic Simulation Program Fortran (HSPF). Such methods used by the discharger will be reviewed by the Regional Water Board upon NOT application.

Channel Protection:

In order to address channel protection, a basic understanding of fluvial geomorphic concepts is necessary. A dominant paradigm in fluvial geomorphology holds that streams adjust their channel dimensions (width and depth) in response to long-term changes in sediment supply and bankfull discharge (1.5 to 2 year recurrence interval). The bankfull stage corresponds to the discharge at which channel maintenance is the most effective, that is, the discharge at which the moving sediment, forming or removing bars, forming or changing bends and meanders, and generally doing work that results in the average morphologic characteristics of channels.²⁵ Lane (1955 as cited in Rosgen 1996²⁶) showed the generalized relationship between sediment load, sediment size, stream discharge and stream slope in

²⁰ Klein 1979 as cited in Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.

²¹ Ferguson and Suckling 1990 as cited Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.

²² Center for Watershed Protection (CWP). 2000. The Practice of Watershed Protection: Techniques for protecting our nation's streams, lakes, rivers, and estuaries. Ellicott City, MD. 741 pp.

²³ Bay Area Storm Water Management Agencies Association (BASMAA). 1997. Start at the Source: Residential Site Planning and Design Guidance Manual for Storm Water Quality Protection. Palo Alto, CA;

McCuen, R.H. 2003 Smart Growth: hydrologic perspective. Journal of Professional Issues in Engineering Education and Practice. Vol (129), pp.151-154;

Moglen, G.E. and S. Kim. 2007. Impervious imperviousness-are threshold based policies a good idea? Journal of the American Planning Association, Vol 73 No. 2. pp 161-171.

²⁴ Delaware Department of natural Resources (DDNR). 2004. Green technology: The Delaware urban Runoff Management Approach. Dover, DE. 117 pp.

²⁵ Dunne, T and L.B. Leopold. 1978. Water in Environmental Planning. San Francisco W.H. Freeman and Company

²⁶ Rosgen. D.L. 1996. Applied River Morphology. Pagosa Springs. Wildland Hydrology

Figure 5. A change in any one of these variables sets up a series of mutual adjustments in the companion variables with a resulting direct change in the physical characteristics of the stream channel.

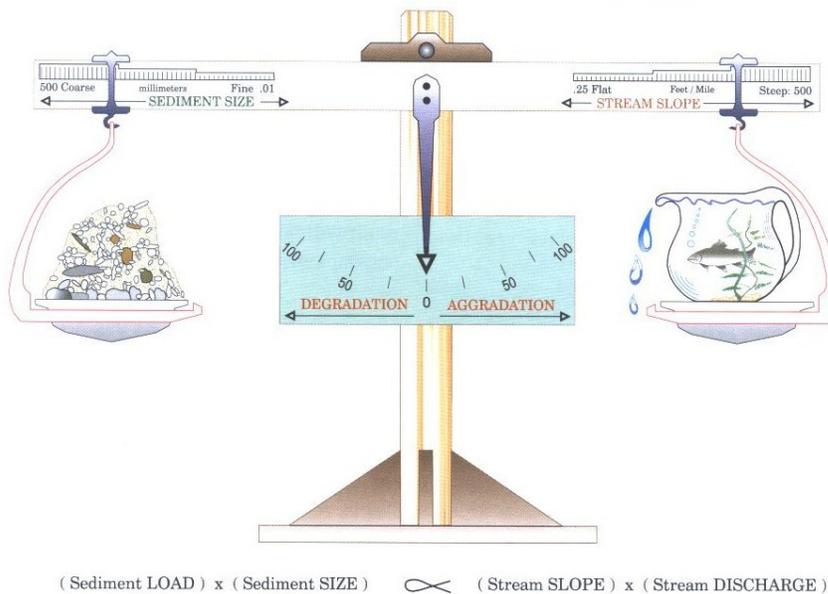


Figure 5 - Schematic of the Lane Relationship
After Lane (1955) as cited in Rosgen (1996)

Stream slope multiplied by stream discharge (the right side of the scale) is essentially an approximation of stream power, a unifying concept in fluvial geomorphology (Bledsoe 1999). Urbanization generally increases stream power and affects the resisting forces in a channel (sediment load and sediment size represented on the left side of the scale).

During construction, sediment loads can increase from 2 to 40,000 times over pre-construction levels.²⁷ Most of this sediment is delivered to stream channels during large, episodic rain events.²⁸ This increased sediment load leads to an initial aggradation phase where stream depths may decrease as sediment fills the channel, leading to a decrease in channel capacity and increase in flooding and overbank deposition. A degradation phase initiates after construction is completed.

Schumm et. al (1984) developed a channel evolution model that describes the series of adjustments from initial downcutting, to widening, to establishing new floodplains at lower elevations (Figure 6).

²⁷ Goldman S.J., K. Jackson, and T.A. Bursztynsky. 1986. Erosion and Sediment Control Handbook. McGraw Hill. San Francisco.

²⁸ Wolman 1967 as cited in Paul, M.P. and J.L. Meyer. 2001. Streams in the Urban Landscape. *Annu. Rev.Ecol. Syst.* 32: 333-365.

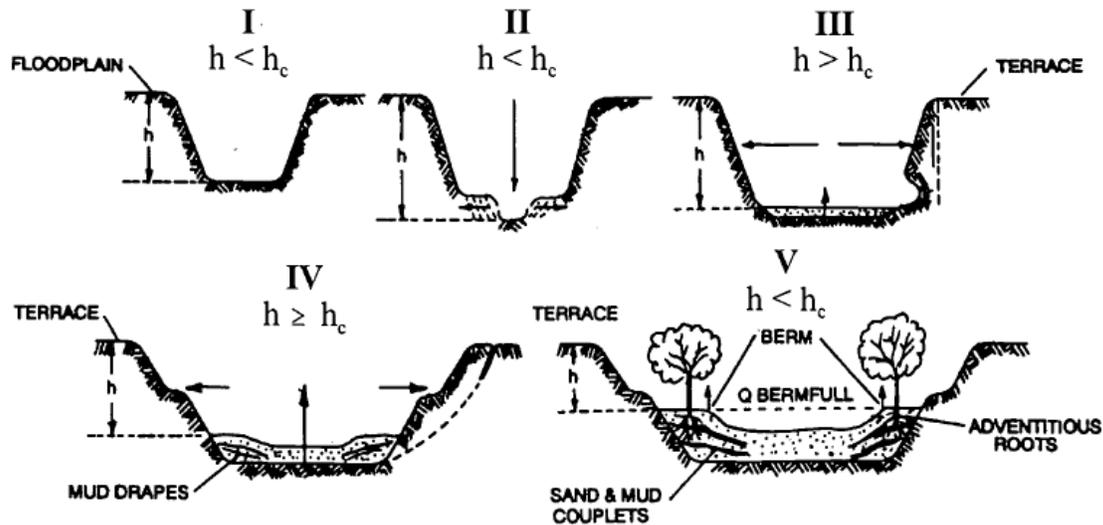


Figure 6 - Channel Changes Associated with Urbanization

After Incised Channel Evolution Sequence in Schumm et. al 1984

Channel incision (Stage II) and widening (Stages III and to a lesser degree, Stage IV) are due to a number of fundamental changes on the landscape. Connected impervious area and compaction of pervious surfaces increase the frequency and volume of bankfull discharges.²⁹ Increased drainage density (miles of stream length per square mile of watershed) also negatively impacts receiving stream channels.³⁰ Increased drainage density and hydraulic efficiency leads to an increase in the frequency and volume of bankfull discharges because the time of concentration is shortened. Flows from engineered pipes and channels are also often “sediment starved” and seek to replenish their sediment supply from the channel.

Encroachment of stream channels can also lead to an increase in stream slope, which leads to an increase in stream power. In addition, watershed sediment loads and sediment size (with size generally represented as the median bed and bank particle size, or d_{50}) decrease during urbanization.³¹ This means

²⁹ Booth, D. B. and C. R. Jackson. 1997. Urbanization of Aquatic Systems: Degradation Thresholds, Storm Water Detection, and the Limits of Mitigation. *Journal of the American Water Resources Association* Vol. 33, No.5, pp. 1077-1089.

³⁰ May, C.W. 1998. Cumulative effects of urbanization on small streams in the Puget Sound Lowland ecoregion. Conference proceedings from Puget Sound Research '98 held March 12, 13 1998 in Seattle, WA;

Santa Clara Valley Urban Runoff Pollution Prevention Program. 2002. Hydromodification Management Plan Literature Review. 80 pp.

³¹ Finkenbine, J.K., D.S. Atwater, and D.S. Mavinic. 2000. Stream health after urbanization. *J. Am. Water Resour. Assoc.* 36:1149-60;

that even if pre- and post-development stream power are the same, more erosion will occur in the post-development stage because the smaller particles are less resistant (provided they are non-cohesive).

As shown in Stages II and III, the channel deepens and widens to accommodate the increased stream power³² and decrease in sediment load and sediment size. Channels may actually narrow as entrained sediment from incision is deposited laterally in the channel. After incised channels begin to migrate laterally (Stage III), bank erosion begins, which leads to general channel widening.³³ At this point, a majority of the sediment that leaves a drainage area comes from within the channel, as opposed to the background and construction related hillslope contribution. Stage IV is characterized by more aggradation and localized bank instability. Stage V represents a new quasi-equilibrium channel morphology in balance with the new flow and sediment supply regime. In other words, stream power is in balance with sediment load and sediment size.

The magnitude of the channel morphology changes discussed above varies along a stream network as well as with the age of development, slope, geology (sand-bedded channels may cycle through the evolution sequence in a matter of decades whereas clay-dominated channels may take much longer), watershed sediment load and size, type of urbanization, and land use history. It is also dependent on a channel's stage in the channel evolution sequence when urbanization occurs. Management strategies

Pizzuto, J.E. W.S. Hession, and M. McBride. 2000. Comparing gravel-bed rivers in paired urban and rural catchments of southeastern Pennsylvania. *Geology* 28:79-82.

³² Hammer 1973 as cited in Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp;

Booth, D.B. 1990. Stream Channel Incision Following Drainage Basin Urbanization. *Water Resour. Bull.* 26:407-417.

³³ Trimble, S.W. 1997. Contribution of Stream Channel Erosion to Sediment Yield from an Urbanizing Watershed. *Science*: Vol. 278 (21), pp. 1442-1444.

must take into account a channel's stage of adjustment and account for future changes in the evolution of channel form (Stein and Zaleski 2005).³⁴

Traditional structural water quality BMPs (e.g. detention basins and other devices used to store volumes of runoff) unless they are highly engineered to provide adequate flow duration control, do not adequately protect receiving waters from accelerated channel bed and bank erosion, do not address post-development increases in runoff volume, and do not mitigate the decline in benthic macroinvertebrate communities in the receiving waters³⁵ suggest that structural BMPs are not as effective in protecting aquatic communities as a continuous riparian buffer of native vegetation. This is supported by the findings of Zucker and White³⁶, where instream biological metrics were correlated with the extent of forested buffers.

This General Permit requires dischargers to maintain pre-development drainage densities and times of concentration in order to protect channels and encourages dischargers to implement setbacks to reduce channel slope and velocity changes that can lead to aquatic habitat degradation.

There are a number of other approaches for modeling fluvial systems, including statistical and physical models and simpler stream power models.³⁷ The use of these models in California is described in Stein and Zaleski (2005).³⁸ Rather than prescribe a specific one-size-fits-all modeling method in this permit, the State Water Board intends to develop a stream power and channel evolution model-based framework to assess channels and develop a hierarchy of suitable analysis methods and management strategies. In time, this framework may become a State Water Board water quality control policy.

Permit Linkage to Overbank and Extreme Flood Protection

Site design BMPs (e.g. rooftop and impervious disconnection, vegetated swales, setbacks and buffers) filter and settle out pollutants and provide for more infiltration than is possible for traditional centralized structural BMPs placed at the lowest point in a site. They provide source control for runoff and lead to a reduction in pollutant loads. When implemented, they also help reduce the magnitude and volume of larger, less frequent storm events (e.g., 10-yr, 24-hour storm and larger), thereby reducing the need for expensive flood control infrastructure. Nonstructural BMPs can also be a landscape amenity, instead of a large isolated structure requiring substantial area for ancillary access, buffering, screening and maintenance facilities.²⁵ The multiple benefits of using non-structural benefits will be critically important as the state's population increases and imposes strains upon our existing water resources.

Maintaining predevelopment drainage densities and times of concentration will help reduce post-development peak flows and volumes in areas not covered under a municipal permit. The most effective way to preserve drainage areas and maximize time of concentration is to implement landform grading,

³⁴ Stein, E.S. and S. Zaleski. 2005. Managing runoff to protect natural stream: the latest developments on investigation and management of hydromodification in California. Southern California Coastal Water Research Project Technical Report 475. 26 pp.

³⁵ Horner, R.R. 2006. Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices (LID) for the San Diego Region. Available at: http://www.projectcleanwater.org/pdf/permit/case-study_lid.pdf.

³⁶ Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.

³⁷ Finlayson, D.P. and D.R. Montgomery. 2003. Modeling large-scale fluvial erosion in geographic information systems. *Geomorphology* (53), pp. 147-164).

³⁸ Stein, E.S. and S. Zaleski. 2005. Managing runoff to protect natural stream: the latest developments on investigation and management of hydromodification in California. Southern California Coastal Water Research Project Technical Report 475. 26 pp.

incorporate site design BMPs and implement distributed structural BMPs (e.g., bioretention cells, rain gardens, rain cisterns).

M. Storm Water Pollution Prevention Plans

USEPA's Construction General Permit requires that qualified personnel conduct inspections. USEPA defines qualified personnel as "a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity."³⁹ USEPA also suggests that qualified personnel prepare SWPPPs and points to numerous states that require certified professionals to be on construction sites at all times. States that currently have certification programs are Washington, Georgia, Florida, Delaware, Maryland, and New Jersey. The Permit 99-08-DWQ did not require that qualified personnel prepare SWPPPs or conduct inspections. However, to ensure that water quality is being protected, this General Permit requires that all SWPPPs be written, amended, and certified by a Qualified SWPPP Developer. A Qualified SWPPP Developer must possess one of the eight certifications and or registrations specified in this General Permit and effective two years after the adoption date of this General Permit, must have attended a State Water Board-sponsored or approved Qualified SWPPP Developer training course. Table 9 provides an overview of the criteria used in determining qualified certification titles for a QSD and QSP.

39 US Environmental Protection Agency. Stormwater Pollution Prevention Plans for Construction Activities. <<http://cfpub.epa.gov/npdes/stormwater/swppp.cfm>> and <http://www.epa.gov/npdes/pubs/sw_swppp_guide.pdf>.

Table 9 - Qualified SWPPP Developer/ Qualified SWPPP Practitioner Certification Criteria

Certification/ Title	Registered By	QSD/QSP	Certification Criteria
Professional Civil Engineer	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Professional Geologist or Engineering Geologist	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Landscape Architect	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Professional Hydrologist	American Institute of Hydrology	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Certified Professional in Erosion and Sediment Control™ (CPESC)	Enviro Cert International Inc.	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Inspector of Sediment and Erosion Control™ (CISEC)	Certified Inspector of Sediment and Erosion Control, Inc.	QSP	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Erosion, Sediment and Storm Water Inspector™ (CESSWI)	Enviro Cert International Inc.	QSP	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Professional in Storm Water Quality™ (CPSWQ)	Enviro Cert International Inc.	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education

The previous versions of the General Permit required development and implementation of a SWPPP as the primary compliance mechanism. The SWPPP has two major objectives: (1) to help identify the sources of sediment and other pollutants that affect the quality of storm water discharges; and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in storm water and non-storm water discharges. The SWPPP must include BMPs that address source control, BMPs that address pollutant control, and BMPs that address treatment control.

This General Permit shifts some of the measures that were covered by this general requirement to specific permit requirements, each individually enforceable as a permit term. This General Permit emphasizes the use of appropriately selected, correctly installed and maintained pollution reduction BMPs. This approach provides the flexibility necessary to establish BMPs that can effectively address source control of pollutants during changing construction activities. These specific requirements also improve both the clarity and the enforceability of the General Permit so that the dischargers understand, and the public can determine whether the discharges are in compliance with, permit requirements.

The SWPPP must be implemented at the appropriate level to protect water quality at all times throughout the life of the project. The SWPPP must remain on the site during construction activities, commencing with the initial mobilization and ending with the termination of coverage under the General Permit. For LUPs the discharger shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio or telephone. Once construction activities are complete, until stabilization is achieved, the SWPPP shall be available from the SWPPP contact listed in the PRDs

A SWPPP must be appropriate for the type and complexity of a project and will be developed and implemented to address project specific conditions. Some projects may have similarities or complexities, yet each project is unique in its progressive state that requires specific description and selection of BMPs needed to address all possible generated pollutants

N. Regional Water Board Authorities

Because this General Permit will be issued to thousands of construction sites across the State, the Regional Water Boards retain discretionary authority over certain issues that may arise from the discharges in their respective regions. This General Permit does not grant the Regional Water Boards any authority they do not otherwise have; rather, it merely emphasizes that the Regional Water Boards can take specific actions related to this General Permit. For example, the Regional Water Boards will be enforcing this General Permit and may need to adjust some requirements for a discharger based on the discharger's compliance history.



Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board



Arnold Schwarzenegger
Governor

Division of Water Quality

1001 I Street • Sacramento, California 95814 • (916) 341-5455
Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100
Fax (916) 341-5463 • <http://www.waterboards.ca.gov>

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE
ACTIVITIES

ORDER NO. 2009-0009-DWQ
NPDES NO. **CAS000002**

This Order was adopted by the State Water Resources Control Board on:	September 2, 2009
This Order shall become effective on:	July 1, 2010
This Order shall expire on:	September 2, 2014

IT IS HEREBY ORDERED, that this Order supersedes Order No. 99-08-DWQ [as amended by Order No. 2010-0014-DWQ] except for enforcement purposes. The Discharger shall comply with the requirements in this Order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on September 2, 2009.

AYE: Vice Chair Frances Spivy-Weber
Board Member Arthur G. Baggett, Jr.
Board Member Tam M. Doduc

NAY: Chairman Charles R. Hoppin

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board



Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board



Arnold Schwarzenegger
Governor

Division of Water Quality

1001 I Street • Sacramento, California 95814 • (916) 341-5455
Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100
Fax (916) 341-5463 • <http://www.waterboards.ca.gov>

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES

**ORDER NO. 2010-0014-DWQ
NPDES NO. CAS000002**

Order No. 2009-0009-DWQ was adopted by the State Water Resources Control Board on:	September 2, 2009
Order No. 2009-0009-DWQ became effective on:	July 1, 2010
Order No. 2009-0009-DWQ shall expire on:	September 2, 2014
This Order, which amends Order No. 2009-0009-DWQ, was adopted by the State Water Resources Control Board on:	November 16, 2010
This Order shall become effective on:	February 14, 2011

IT IS HEREBY ORDERED that this Order amends Order No. 2009-0009-DWQ. Additions to Order No. 2009-0009-DWQ are reflected in [blue-underline](#) text and deletions are reflected in ~~red-strikeout~~ text.

IT IS FURTHER ORDERED that staff are directed to prepare and post a conformed copy of Order No. 2009-0009-DWQ incorporating the revisions made by this Order.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on **November 16, 2010**.

AYE: Chairman Charles R. Hoppin
Vice Chair Frances Spivy-Weber
Board Member Arthur G. Baggett, Jr.
Board Member Tam M. Doduc

NAY: None

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board



State Water Resources Control Board

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES

ORDER NO. 2012-0006-DWQ
NPDES NO. CAS000002

Table with 2 columns: Description of order changes and Effective dates. Rows include adoption of 2009-0009-DWQ, effectiveness of 2009-0009-DWQ, effectiveness of 2010-0014-DWQ, expiration of 2009-0009-DWQ as amended, adoption of the current order, and effectiveness of the current order.

IT IS HEREBY ORDERED that this Order amends Order No. 2009-0009-DWQ. Additions to Order No. 2009-0009-DWQ are reflected in blue-underline text and deletions are reflected in red-strikeout text.

IT IS FURTHER ORDERED that staff are directed to prepare and post a conformed copy of Order No. 2009-000-DWQ incorporating the revisions made by this Order.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on July 17, 2012.

AYE: Chairman Charles R. Hoppin
Vice Chair Frances Spivy-Weber
Board Member Tam M. Doduc
Board Member Steven Moore
Board Member Felicia Marcus

NAY: None

ABSENT: None

ABSTAIN: None

Handwritten signature of Jeanine Townsend
Jeanine Townsend
Clerk to the Board

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Attachment A.2 – LUP Permit Registration Documents
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Attachment F – Active Treatment System (ATS) Requirements

LIST OF APPENDICES

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Appendix 2 – Post-Construction Water Balance Performance Standard
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**STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2009-0009-DWQ
[AS AMENDED BY ORDER NO. 2010-0014-DWQ]
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
GENERAL PERMIT NO. CAS000002**

**WASTE DISCHARGE REQUIREMENTS
FOR
DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH
CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES**

I. FINDINGS

A. General Findings

The State Water Resources Control Board (State Water Board) finds that:

1. The federal Clean Water Act (CWA) prohibits certain discharges of storm water containing pollutants except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit (Title 33 United States Code (U.S.C.) §§ 1311 and 1342(p); also referred to as Clean Water Act (CWA) §§ 301 and 402(p)). The U.S. Environmental Protection Agency (U.S. EPA) promulgates federal regulations to implement the CWA's mandate to control pollutants in storm water runoff discharges. (Title 40 Code of Federal Regulations (C.F.R.) Parts 122, 123, and 124). The federal statutes and regulations require discharges to surface waters comprised of storm water associated with construction activity, including demolition, clearing, grading, and excavation, and other land disturbance activities (except operations that result in disturbance of less than one acre of total land area and which are not part of a larger common plan of development or sale), to obtain coverage under an NPDES permit. The NPDES permit must require implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate pollutants in storm water runoff. The NPDES permit must also include additional requirements necessary to implement applicable water quality standards.
2. This General Permit authorizes discharges of storm water associated with construction activity so long as the dischargers comply with all requirements, provisions, limitations and prohibitions in the permit. In addition, this General Permit regulates the discharges of storm water associated with construction activities from all Linear

Underground/Overhead Projects resulting in the disturbance of greater than or equal to one acre (Attachment A).

3. This General Permit regulates discharges of pollutants in storm water associated with construction activity (storm water discharges) to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface.
4. This General Permit does not preempt or supersede the authority of local storm water management agencies to prohibit, restrict, or control storm water discharges to municipal separate storm sewer systems or other watercourses within their jurisdictions.
5. This action to adopt a general NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21100, et seq.), pursuant to Section 13389 of the California Water Code.
6. Pursuant to 40 C.F.R. § 131.12 and State Water Board [Resolution No. 68-16](#),¹ which incorporates the requirements of § 131.12 where applicable, the State Water Board finds that discharges in compliance with this General Permit will not result in the lowering of water quality standards, and are therefore consistent with those provisions. Compliance with this General Permit will result in improvements in water quality.
7. This General Permit serves as an NPDES permit in compliance with CWA § 402 and will take effect on July 1, 2010 by the State Water Board provided the Regional Administrator of the U.S. EPA has no objection. If the U.S. EPA Regional Administrator objects to its issuance, the General Permit will not become effective until such objection is withdrawn.
8. Following adoption and upon the effective date of this General Permit, the Regional Water Quality Control Boards (Regional Water Boards) shall enforce the provisions herein.
9. Regional Water Boards establish water quality standards in Basin Plans. The State Water Board establishes water quality standards in various statewide plans, including the California Ocean Plan. U.S. EPA establishes water quality standards in the National Toxic Rule (NTR) and the California Toxic Rule (CTR).

¹ Resolution No. 68-16 generally requires that existing water quality be maintained unless degradation is justified based on specific findings.

10. This General Permit does not authorize discharges of fill or dredged material regulated by the U.S. Army Corps of Engineers under CWA § 404 and does not constitute a waiver of water quality certification under CWA § 401.
11. The primary storm water pollutant at construction sites is excess sediment. Excess sediment can cloud the water, which reduces the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas, and impede navigation in our waterways. Sediment also transports other pollutants such as nutrients, metals, and oils and greases.
12. Construction activities can impact a construction site's runoff sediment supply and transport characteristics. These modifications, which can occur both during and after the construction phase, are a significant cause of degradation of the beneficial uses established for water bodies in California. Dischargers can avoid these effects through better construction site design and activity practices.
13. This General Permit recognizes four distinct phases of construction activities. The phases are Grading and Land Development Phase, Streets and Utilities Phase, Vertical Construction Phase, and Final Landscaping and Site Stabilization Phase. Each phase has activities that can result in different water quality effects from different water quality pollutants. This General Permit also recognizes inactive construction as a category of construction site type.
14. Compliance with any specific limits or requirements contained in this General Permit does not constitute compliance with any other applicable requirements.
15. Following public notice in accordance with State and Federal laws and regulations, the State Water Board heard and considered all comments and testimony in a public hearing on 06/03/2009. The State Water Board has prepared written responses to all significant comments.
16. Construction activities obtaining coverage under the General Permit may have multiple discharges subject to requirements that are specific to general, linear, and/or active treatment system discharge types.
17. The State Water Board may reopen the permit if the U.S. EPA adopts a final effluent limitation guideline for construction activities.

B. Activities Covered Under the General Permit

18. Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.
19. Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or the sale of one or more acres of disturbed land surface.
20. Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to U.S. EPA regulations, such as dairy barns or food processing facilities.
21. Construction activity associated with Linear Underground/Overhead Utility Projects (LUPs) including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.
22. Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.²
23. Storm water discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. Construction sites that intend to disturb one or more acres of land within the jurisdictional boundaries of

² Pursuant to the Ninth Circuit Court of Appeals' decision in *NRDC v. EPA* (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the U.S. EPA's petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

a CWA § 404 permit should contact the appropriate Regional Water Board to determine whether this permit applies to the site.

C. Activities Not Covered Under the General Permit

24. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.
25. Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.
26. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.
27. Construction activity and land disturbance involving discharges of storm water within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Board has adopted its own permit to regulate storm water discharges from construction activity in the Lake Tahoe Hydrologic Unit (Regional Water Board 6SLT). Owners of construction sites in this watershed must apply for the Lahontan Regional Water Board permit rather than the statewide Construction General Permit.
28. Construction activity that disturbs less than one acre of land surface, and that is not part of a larger common plan of development or the sale of one or more acres of disturbed land surface.
29. Construction activity covered by an individual NPDES Permit for storm water discharges.
30. Discharges from small (1 to 5 acre) construction activities with an approved Rainfall Erosivity Waiver authorized by U.S. EPA Phase II regulations certifying to the State Board that small construction activity will occur only when the Rainfall Erosivity Factor is less than 5 ("R" in the Revised Universal Soil Loss Equation).
31. Landfill construction activity that is subject to the Industrial General Permit.
32. Construction activity that discharges to Combined Sewer Systems.
33. Conveyances that discharge storm water runoff combined with municipal sewage.
34. Discharges of storm water identified in CWA § 402(l)(2), 33 U.S.C. § 1342(l)(2).

35. Discharges occurring in basins that are not tributary or hydrologically connected to waters of the United States (for more information contact your Regional Water Board).

D. Obtaining and Modifying General Permit Coverage

36. This General Permit requires all dischargers to electronically file all Permit Registration Documents (PRDs), Notices of Termination (NOT), changes of information, annual reporting, and other compliance documents required by this General Permit through the State Water Board's Storm water Multi-Application and Report Tracking System (SMARTS) website.
37. Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.
38. This General Permit grants an exception from the Risk Determination requirements for existing sites covered under Water Quality Orders No. 99-08-DWQ, and [No. 2003-0007-DWQ](#). For certain sites, adding additional requirements may not be cost effective. Construction sites covered under Water Quality Order No. 99-08-DWQ shall obtain permit coverage at the Risk Level 1. LUPs covered under Water Quality Order No. 2003-0007-DWQ shall obtain permit coverage as a Type 1 LUP. The Regional Water Boards have the authority to require Risk Determination to be performed on sites currently covered under Water Quality Orders No. 99-08-DWQ and No. 2003-0007-DWQ where they deem it necessary. The State Water Board finds that there are two circumstances when it may be appropriate for the Regional Water Boards to require a discharger that had filed an NOI under State Water Board Order No. 99-08-DWQ to recalculate the site's risk level. These circumstances are: (1) when the discharger has a demonstrated history of noncompliance with State Water Board Order No. 99-08-DWQ or; (2) when the discharger's site poses a significant risk of causing or contributing to an exceedance of a water quality standard without the implementation of the additional Risk Level 2 or 3 requirements.

E. Prohibitions

39. All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit. Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may

contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction must be addressed through structural as well as non-structural Best Management Practices (BMPs)³. The State Water Board recognizes, however, that certain non-storm water discharges may be necessary for the completion of construction.

40. This General Permit prohibits all discharges which contain a hazardous substance in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
41. This General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the State Water Board and the nine Regional Water Boards.
42. Pursuant to the Ocean Plan, discharges to Areas of Special Biological Significance (ASBS) are prohibited unless covered by an exception that the State Water Board has approved.
43. This General Permit prohibits the discharge of any debris⁴ from construction sites. Plastic and other trash materials can cause negative impacts to receiving water beneficial uses. The State Water Board encourages the use of more environmentally safe, biodegradable materials on construction sites to minimize the potential risk to water quality.

F. Training

44. In order to improve compliance with and to maintain consistent enforcement of this General Permit, all dischargers are required to appoint two positions - the Qualified SWPPP Developer (QSD) and the Qualified SWPPP Practitioner (QSP) - who must obtain appropriate training. Together with the key stakeholders, the State and Regional Water Boards are leading the development of this curriculum through a collaborative organization called The Construction General Permit (CGP) Training Team.
45. The Professional Engineers Act (Bus. & Prof. Code section 6700, et seq.) requires that all engineering work must be performed by a California licensed engineer.

³ BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

⁴ Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

G. Determining and Reducing Risk

46. The risk of accelerated erosion and sedimentation from wind and water depends on a number of factors, including proximity to receiving water bodies, climate, topography, and soil type.
47. This General Permit requires dischargers to assess the risk level of a site based on both sediment transport and receiving water risk. This General Permit contains requirements for Risk Levels 1, 2 and 3, and LUP Risk Type 1, 2, and 3 (Attachment A). Risk levels are established by determining two factors: first, calculating the site's sediment risk; and second, receiving water risk during periods of soil exposure (i.e. grading and site stabilization). Both factors are used to determine the site-specific Risk Level(s). LUPs can be determined to be Type 1 based on the flowchart in Attachment A.1.
48. Although this General Permit does not mandate specific setback distances, dischargers are encouraged to set back their construction activities from streams and wetlands whenever feasible to reduce the risk of impacting water quality (e.g., natural stream stability and habitat function). Because there is a reduced risk to receiving waters when setbacks are used, this General Permit gives credit to setbacks in the risk determination and post-construction storm water performance standards. The risk calculation and runoff reduction mechanisms in this General Permit are expected to facilitate compliance with any Regional Water Board and local agency setback requirements, and to encourage voluntary setbacks wherever practicable.
49. Rain events can occur at any time of the year in California. Therefore, a Rain Event Action Plan (REAP) is necessary for Risk Level 2 and 3 traditional construction projects (LUPs exempt) to ensure that active construction sites have adequate erosion and sediment controls implemented prior to the onset of a storm event, even if construction is planned only during the dry season.
50. Soil particles smaller than 0.02 millimeters (mm) (i.e., finer than medium silt) do not settle easily using conventional measures for sediment control (i.e., sediment basins). Given their long settling time, dislodging these soils results in a significant risk that fine particles will be released into surface waters and cause unacceptable downstream impacts. If operated correctly, an Active Treatment System (ATS⁵) can prevent or reduce the release of fine particles from construction sites.

⁵ An ATS is a treatment system that employs chemical coagulation, chemical flocculation, or electro coagulation in order to reduce turbidity caused by fine suspended sediment.

Use of an ATS can effectively reduce a site's risk of impacting receiving waters.

51. Dischargers located in a watershed area where a Total Maximum Daily Load (TMDL) has been adopted or approved by the Regional Water Board or U.S. EPA may be required by a separate Regional Water Board action to implement additional BMPs, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule. Such dischargers may also be required to obtain an individual Regional Water Board permit specific to the area.

H. Effluent Standards

52. The State Water Board convened a blue ribbon panel of storm water experts that submitted a report entitled, "The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities," dated June 19, 2006. The panel concluded that numeric limits or action levels are technically feasible to control construction storm water discharges, provided that certain conditions are considered. The panel also concluded that numeric effluent limitations (NELs) are feasible for discharges from construction sites that utilize an ATS. The State Water Board has incorporated the expert panel's suggestions into this General Permit, which includes numeric action levels (NALs) for pH and turbidity, and special numeric limits for ATS discharges.

Determining Compliance with Numeric Limitations

53. This General Permit sets a pH NAL of 6.5 to 8.5, and a turbidity NAL of 250 NTU. The purpose of the NAL and its associated monitoring requirement is to provide operational information regarding the performance of the measures used at the site to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges. An exceedance of a NAL does not constitute a violation of this General Permit.
54. This General Permit requires dischargers with NAL exceedances to immediately implement additional BMPs and revise their Storm Water Pollution Prevention Plans (SWPPPs) accordingly to either prevent pollutants and authorized non-storm water discharges from contaminating storm water, or to substantially reduce the pollutants to levels consistently below the NALs. NAL exceedances are reported in the State Water Boards SMARTS system, and the discharger is

required to provide an NAL Exceedance Report when requested by a Regional Water Board.

I. Receiving Water Limitations

55. This General Permit requires all enrolled dischargers to determine the receiving waters potentially affected by their discharges and to comply with all applicable water quality standards, including any more stringent standards applicable to a water body.

J. Sampling, Monitoring, Reporting and Record Keeping

56. Visual monitoring of storm water and non-storm water discharges is required for all sites subject to this General Permit.

57. Records of all visual monitoring inspections are required to remain on-site during the construction period and for a minimum of three years.

58. For all Risk Level 3/LUP Type 3 and Risk Level 2/LUP Type 2 sites, this General Permit requires effluent monitoring for pH and turbidity. Sampling, analysis and monitoring requirements for effluent monitoring for pH and turbidity are contained in this General Permit.

59. Risk Level 3 and LUP Type 3 sites with effluent that exceeds the Receiving Water Monitoring Triggers contained in this General Permit and with direct discharges to receiving water are required to conduct receiving water monitoring. An exceedance of a Receiving Water Monitoring Trigger does not constitute a violation of this General Permit.

60. This General Permit establishes a 5 year, 24 hour (expressed in inches of rainfall) as an exemptions to the receiving water monitoring requirements for Risk Level 3 and LUP Type 3 dischargers.

61. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

62. For Risk Level 3 and LUP Type 3 sites larger than 30 acres and with direct discharges to receiving waters, this General Permit requires bioassessment sampling before and after site completion to determine if significant degradation to the receiving water's biota has occurred. Bioassessment sampling guidelines are contained in this General Permit.

63. A summary and evaluation of the sampling and analysis results will be submitted in the Annual Reports.
64. This General Permit contains sampling, analysis and monitoring requirements for non-visible pollutants at all sites subject to this General Permit.
65. Compliance with the General Permit relies upon dischargers to electronically self-report any discharge violations and to comply with any Regional Water Board enforcement actions.
66. This General Permit requires that all dischargers maintain a paper or electronic copy of all required records for three years from the date generated or date submitted, whichever is last. These records must be available at the construction site until construction is completed. For LUPs, these documents may be retained in a crew member's vehicle and made available upon request.

K. Active Treatment System (ATS) Requirements

67. Active treatment systems add chemicals to facilitate flocculation, coagulation and filtration of suspended sediment particles. The uncontrolled release of these chemicals to the environment can negatively affect the beneficial uses of receiving waters and/or degrade water quality (e.g., acute and chronic toxicity). Additionally, the batch storage and treatment of storm water through an ATS' can potentially cause physical impacts on receiving waters if storage volume is inadequate or due to sudden releases of the ATS batches and improperly designed outfalls.
68. If designed, operated and maintained properly an ATS can achieve very high removal rates of suspended sediment (measured as turbidity), albeit at sometimes significantly higher costs than traditional erosion/sediment control practices. As a result, this General Permit establishes NELs consistent with the expected level of typical ATS performance.
69. This General Permit requires discharges of storm water associated with construction activity that undergo active treatment to comply with special operational and effluent limitations to ensure that these discharges do not adversely affect the beneficial uses of the receiving waters or cause degradation of their water quality.
70. For ATS discharges, this General Permit establishes technology-based NELs for turbidity.

71. This General Permit establishes a 10 year, 24 hour (expressed in inches of rainfall) Compliance Storm Event exemption from the technology-based numeric effluent limitations for ATS discharges. Exceedances of the ATS turbidity NEL constitutes a violation of this General Permit.

L. Post-Construction Requirements

72. This General Permit includes performance standards for post-construction that are consistent with State Water Board [Resolution No. 2005-0006](#), "Resolution Adopting the Concept of Sustainability as a Core Value for State Water Board Programs and Directing Its Incorporation," and [2008-0030](#), "Requiring Sustainable Water Resources Management." The requirement for all construction sites to match pre-project hydrology will help ensure that the physical and biological integrity of aquatic ecosystems are sustained. This "runoff reduction" approach is analogous in principle to Low Impact Development (LID) and will serve to protect related watersheds and waterbodies from both hydrologic-based and pollution impacts associated with the post-construction landscape.

73. LUP projects are not subject to post-construction requirements due to the nature of their construction to return project sites to pre-construction conditions.

M. Storm Water Pollution Prevention Plan Requirements

74. This General Permit requires the development of a site-specific SWPPP. The SWPPP must include the information needed to demonstrate compliance with all requirements of this General Permit, and must be kept on the construction site and be available for review. The discharger shall ensure that a QSD develops the SWPPP.

75. To ensure proper site oversight, this General Permit requires a Qualified SWPPP Practitioner to oversee implementation of the BMPs required to comply with this General Permit.

N. Regional Water Board Authorities

76. Regional Water Boards are responsible for implementation and enforcement of this General Permit. A general approach to permitting is not always suitable for every construction site and environmental circumstances. Therefore, this General Permit recognizes that Regional Water Boards must have some flexibility and authority to alter, approve, exempt, or rescind permit authority granted under this

General Permit in order to protect the beneficial uses of our receiving waters and prevent degradation of water quality.

IT IS HEREBY ORDERED that all dischargers subject to this General Permit shall comply with the following conditions and requirements (including all conditions and requirements as set forth in Attachments A, B, C, D, E and F)⁶:

II. CONDITIONS FOR PERMIT COVERAGE

A. Linear Underground/Overhead Projects (LUPs)

1. Linear Underground/Overhead Projects (LUPs) include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g. telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to, (b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.
2. The Legally Responsible Person is responsible for obtaining coverage under the General Permit where the construction of pipelines, utility lines, fiber-optic cables, or other linear underground/overhead projects will occur across several properties unless the LUP construction activities are covered under another construction storm water permit.
3. Only LUPs shall comply with the conditions and requirements in Attachment A, A.1 & A.2 of this Order. The balance of this Order is not applicable to LUPs except as indicated in Attachment A.

⁶ These attachments are part of the General Permit itself and are not separate documents that are capable of being updated independently by the State Water Board.

B. Obtaining Permit Coverage Traditional Construction Sites

1. The Legally Responsible Person (LRP) (see Special Provisions, Electronic Signature and Certification Requirements, Section IV.I.1) must obtain coverage under this General Permit.
2. To obtain coverage, the LRP must electronically file Permit Registration Documents (PRDs) prior to the commencement of construction activity. Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the CWA and the California Water Code.
3. PRDs shall consist of:
 - a. Notice of Intent (NOI)
 - b. Risk Assessment (Section VIII)
 - c. Site Map
 - d. Storm Water Pollution Prevention Plan (Section XIV)
 - e. Annual Fee
 - f. Signed Certification Statement

Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

Attachment B contains additional PRD information. Dischargers must electronically file the PRDs, and mail the appropriate annual fee to the State Water Board.

4. This permit is effective on July 1, 2010.
 - a. **Dischargers Obtaining Coverage On or After July 1, 2010:** All dischargers requiring coverage on or after July 1, 2010, shall electronically file their PRDs prior to the commencement of construction activities, and mail the appropriate annual fee no later than seven days prior to the commencement of construction activities. Permit coverage shall not commence until the PRDs and the annual fee are received by the State Water Board, and a WDID number is assigned and sent by SMARTS.
 - b. **Dischargers Covered Under 99-08-DWQ and 2003-0007-DWQ:** Existing dischargers subject to State Water Board Order No. 99-08-DWQ (existing dischargers) will continue coverage under 99-08-DWQ until July 1, 2010. After July 1, 2010, all NOIs subject to State Water Board Order No. 99-08-DWQ will be terminated.

Existing dischargers shall electronically file their PRDs no later than July 1, 2010. If an existing discharger's site acreage subject to the annual fee has changed, it shall mail a revised annual fee no less than seven days after receiving the revised annual fee notification, **or else lose permit coverage**. All existing dischargers shall be exempt from the risk determination requirements in Section VIII of this General Permit until two years after permit adoption. All existing dischargers are therefore subject to Risk Level 1 requirements regardless of their site's sediment and receiving water risks. However, a Regional Board retains the authority to require an existing discharger to comply with the Section VIII risk determination requirements.

5. The discharger is only considered covered by this General Permit upon receipt of a Waste Discharger Identification (WDID) number assigned and sent by the State Water Board Storm water Multi-Application and Report Tracking System (SMARTS). In order to demonstrate compliance with this General Permit, the discharger must obtain a WDID number and must present documentation of a valid WDID upon demand.
6. During the period this permit is subject to review by the U.S. EPA, the prior permit (State Water Board Order No. 99-08-DWQ) remains in effect. Existing dischargers under the prior permit will continue to have coverage under State Water Board Order No. 99-08-DWQ until this General Permit takes effect on July 1, 2010. Dischargers who complete their projects and electronically file an NOT prior to July 1, 2010, are not required to obtain coverage under this General Permit.
7. Small Construction Rainfall Erosivity Waiver

EPA's Small Construction Erosivity Waiver applies to sites between one and five acres demonstrating that there are no adverse water quality impacts.

Dischargers eligible for a Rainfall Erosivity Waiver based on low erosivity potential shall complete the electronic Notice of Intent (NOI) and Sediment Risk form through the State Water Board's SMARTS system, certifying that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five. Where the LRP changes or another LRP is added during construction, the new LRP must also submit a waiver certification through the SMARTS system.

If a small construction site continues beyond the projected completion date given on the waiver certification, the LRP shall recalculate the

rainfall erosivity factor for the new project duration and submit this information through the SMARTS system. If the new R factor is below five (5), the discharger shall update through SMARTS all applicable information on the waiver certification and retain a copy of the revised waiver onsite. The LRP shall submit the new waiver certification 30 days prior to the projected completion date listed on the original waiver form to assure exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, the LRP shall be required to apply for coverage under this Order.

8. In the case of a public emergency that requires immediate construction activities, a discharger shall submit a brief description of the emergency construction activity within five days of the onset of construction, and then shall submit all PRDs within thirty days.

C. Revising Permit Coverage for Change of Acreage or New Ownership

1. The discharger may reduce or increase the total acreage covered under this General Permit when a portion of the site is complete and/or conditions for termination of coverage have been met (See Section II.D Conditions for Termination of Coverage); when ownership of a portion of the site is sold to a different entity; or when new acreage, subject to this General Permit, is added to the site.
2. Within 30 days of a reduction or increase in total disturbed acreage, the discharger shall electronically file revisions to the PRDs that include:
 - a. A revised NOI indicating the new project size;
 - b. A revised site map showing the acreage of the site completed, acreage currently under construction, acreage sold/transferred or added, and acreage currently stabilized in accordance with the Conditions for Termination of Coverage in Section II.D below.
 - c. SWPPP revisions, as appropriate; and
 - d. Certification that any new landowners have been notified of applicable requirements to obtain General Permit coverage. The certification shall include the name, address, telephone number, and e-mail address of the new landowner.
 - e. If the project acreage has increased, dischargers shall mail payment of revised annual fees within 14 days of receiving the revised annual fee notification.

3. The discharger shall continue coverage under the General Permit for any parcel that has not achieved “Final Stabilization” as defined in Section II.D.
4. When an LRP with active General Permit coverage transfers its LRP status to another person or entity that qualifies as an LRP, the existing LRP shall inform the new LRP of the General Permit’s requirements. In order for the new LRP to continue the construction activity on its parcel of property, the new LRP, or the new LRP’s approved signatory, must submit PRDs in accordance with this General Permit’s requirements.

D. Conditions for Termination of Coverage

1. Within 90 days of when construction is complete or ownership has been transferred, the discharger shall electronically file a Notice of Termination (NOT), a final site map, and photos through the State Water Boards SMARTS system. Filing a NOT certifies that all General Permit requirements have been met. The Regional Water Board will consider a construction site complete only when all portions of the site have been transferred to a new owner, or all of the following conditions have been met:
 - a. For purposes of “final stabilization,” the site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity;
 - b. There is no potential for construction-related storm water pollutants to be discharged into site runoff;
 - c. Final stabilization has been reached;
 - d. Construction materials and wastes have been disposed of properly;
 - e. Compliance with the Post-Construction Standards in Section XIII of this General Permit has been demonstrated;
 - f. Post-construction storm water management measures have been installed and a long-term maintenance plan⁷ has been established; and
 - g. All construction-related equipment, materials and any temporary BMPs no longer needed are removed from the site.

⁷ For the purposes of this requirement a long-term maintenance plan will be designed for a minimum of five years, and will describe the procedures to ensure that the post-construction storm water management measures are adequately maintained.

2. The discharger shall certify that final stabilization conditions are satisfied in their NOT. Failure to certify shall result in continuation of permit coverage and annual billing.
3. The NOT must demonstrate through photos, RUSLE or RUSLE2, or results of testing and analysis that the site meets all of the conditions above (Section II.D.1) and the final stabilization condition (Section II.D.1.a) is attained by one of the following methods:

- a. "70% final cover method," no computational proof required

OR:

- b. "RUSLE or RUSLE2 method," computational proof required

OR:

- c. "Custom method", the discharger shall demonstrate in some other manner than a or b, above, that the site complies with the "final stabilization" requirement in Section II.D.1.a.

III. DISCHARGE PROHIBITIONS

- A.** Dischargers shall not violate any discharge prohibitions contained in applicable Basin Plans or statewide water quality control plans. Waste discharges to Areas of Special Biological Significance (ASBS) are prohibited by the California Ocean Plan, unless granted an exception issued by the State Water Board.
- B.** All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit.
- C.** Authorized non-storm water discharges may include those from de-chlorinated potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, uncontaminated ground water from dewatering, and other discharges not subject to a separate general NPDES permit adopted by a Regional Water Board. The discharge of non-storm water is authorized under the following conditions:
1. The discharge does not cause or contribute to a violation of any water quality standard;
 2. The discharge does not violate any other provision of this General Permit;
 3. The discharge is not prohibited by the applicable Basin Plan;
 4. The discharger has included and implemented specific BMPs required by this General Permit to prevent or reduce the contact of the non-storm water discharge with construction materials or equipment.
 5. The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;
 6. The discharge is monitored and meets the applicable NALs; and
 7. The discharger reports the sampling information in the Annual Report.

If any of the above conditions are not satisfied, the discharge is not authorized by this General Permit. The discharger shall notify the Regional Water Board of any anticipated non-storm water discharges not already authorized by this General Permit or another NPDES permit, to determine whether a separate NPDES permit is necessary.

- D.** Debris resulting from construction activities are prohibited from being discharged from construction sites.

- E.** When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the discharger shall have those soils sampled and tested to ensure proper handling and public safety measures are implemented. The discharger shall notify the appropriate local, State, and federal agency(ies) when contaminated soil is found at a construction site, and will notify the appropriate Regional Water Board.

IV. SPECIAL PROVISIONS

A. Duty to Comply

1. The discharger shall comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action and/or removal from General Permit coverage.
2. The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

B. General Permit Actions

1. This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.
2. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the dischargers so notified.

C. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

D. Duty to Mitigate

The discharger shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit, which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance

The discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this General Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a discharger when necessary to achieve compliance with the conditions of this General Permit.

F. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

G. Duty to Maintain Records and Provide Information

1. The discharger shall maintain a paper or electronic copy of all required records, including a copy of this General Permit, for three years from the date generated or date submitted, whichever is last. These records shall be available at the construction site until construction is completed.
2. The discharger shall furnish the Regional Water Board, State Water Board, or U.S. EPA, within a reasonable time, any requested information to determine compliance with this General Permit. The discharger shall also furnish, upon request, copies of records that are required to be kept by this General Permit.

H. Inspection and Entry

The discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or, in the case of construction sites which discharge through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the discharger's premises at reasonable times where a regulated construction activity is being conducted or where records must be kept under the conditions of this General Permit;

2. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;
3. Inspect at reasonable times the complete construction site, including any off-site staging areas or material storage areas, and the erosion/sediment controls; and
4. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

I. Electronic Signature and Certification Requirements

1. All Permit Registration Documents (PRDs) and Notices of Termination (NOTs) shall be electronically signed, certified, and submitted via SMARTS to the State Water Board. Either the Legally Responsible Person (LRP), as defined in Appendix 5 – Glossary, or a person legally authorized to sign and certify PRDs and NOTs on behalf of the LRP (the LRP's Approved Signatory, as defined in Appendix 5 - Glossary) must submit all information electronically via SMARTS.
2. Changes to Authorization. If an Approved Signatory's authorization is no longer accurate, a new authorization satisfying the requirements of paragraph (a) of this section must be submitted via SMARTS prior to or together with any reports, information or applications to be signed by an Approved Signatory.
3. All Annual Reports, or other information required by the General Permit (other than PRDs and NOTs) or requested by the Regional Water Board, State Water Board, U.S. EPA, or local storm water management agency shall be certified and submitted by the LRP or the LRP's Approved Signatory.

J. Certification

Any person signing documents under Section IV.I above, shall make the following certification:

"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 assure 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, to the best of my knowledge and belief, the information submitted is, 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."

K. Anticipated Noncompliance

The discharger shall give advance notice to the Regional Water Board and local storm water management agency of any planned changes in the construction activity, which may result in noncompliance with General Permit requirements.

L. Bypass

Bypass⁸ is prohibited. The Regional Water Board may take enforcement action against the discharger for bypass unless:

1. Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;⁹
2. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventative maintenance;
3. The discharger submitted a notice at least ten days in advance of the need for a bypass to the Regional Water Board; or
4. The discharger may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable. The discharger shall submit notice of an unanticipated bypass as required.

M. Upset

1. A discharger that wishes to establish the affirmative defense of an upset¹⁰ in an action brought for noncompliance shall demonstrate,

⁸ The intentional diversion of waste streams from any portion of a treatment facility

⁹ Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

¹⁰ An exceptional incident in which there is unintentional and temporary noncompliance the technology based numeric effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An upset occurred and that the discharger can identify the cause(s) of the upset
 - b. The treatment facility was being properly operated by the time of the upset
 - c. The discharger submitted notice of the upset as required; and
 - d. The discharger complied with any remedial measures required
2. No determination made before an action of noncompliance occurs, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review.
 3. In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof

N. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years or by both.

O. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

P. Severability

The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

Q. Reopener Clause

This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations (CFR) 122.62, 122.63, 122.64, and 124.5.

R. Penalties for Violations of Permit Conditions

1. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed \$37,500¹¹ per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.
2. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA.

S. Transfers

This General Permit is not transferable.

T. Continuation of Expired Permit

This General Permit continues in force and effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those dischargers authorized to discharge under the expiring General Permit are covered by the continued General Permit.

¹¹ May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act.

V. EFFLUENT STANDARDS & RECEIVING WATER MONITORING

A. Narrative Effluent Limitations

1. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
2. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

Table 1- Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level
pH	Field test with calibrated portable instrument	Risk Level 2	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5
		Risk Level 3			lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 2	1	NTU	250 NTU
		Risk Level 3			250 NTU

B. Numeric Action Levels (NALs)

1. For Risk Level 2 and 3 dischargers, the lower storm event average NAL for pH is 6.5 pH units and the upper storm event average NAL for

pH is 8.5 pH units. The discharger shall take actions as described below if the discharge is outside of this range of pH values.

2. For Risk Level 2 and 3 dischargers, the NAL storm event daily average for turbidity is 250 NTU. The discharger shall take actions as described below if the discharge is outside of this range of turbidity values.
3. Whenever the results from a storm event daily average indicate that the discharge is below the lower NAL for pH, exceeds the upper NAL for pH, or exceeds the turbidity NAL (as listed in Table 1), the discharger shall conduct a construction site and run-on evaluation to determine whether pollutant source(s) associated with the site's construction activity may have caused or contributed to the NAL exceedance and shall immediately implement corrective actions if they are needed.
4. The site evaluation shall be documented in the SWPPP and specifically address whether the source(s) of the pollutants causing the exceedance of the NAL:
 - a. Are related to the construction activities and whether additional BMPs are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) determine what corrective action(s) were taken or will be taken and with a description of the schedule for completion.

AND/OR:

- b. Are related to the run-on associated with the construction site location and whether additional BMPs measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) what corrective action(s) were taken or will be taken with a description of the schedule for completion.

C. Receiving Water Monitoring Triggers

1. The receiving water monitoring triggers for Risk Level 3 dischargers with direct discharges to surface waters are triggered when the daily average effluent pH values during any site phase when there is a high risk of pH discharge¹² fall outside of the range of 6.0 and 9.0 pH units, or when the daily average effluent turbidity exceeds 500 NTU.

2. Risk Level 3 dischargers with with direct discharges to surface waters shall conduct receiving water monitoring whenever their effluent monitoring results exceed the receiving water monitoring triggers. If the pH trigger is exceeded, the receiving water shall be monitored for pH for the duration of coverage under this General Permit. If the turbidity trigger is exceeded, the receiving water shall be monitored for turbidity and SSC for the duration of coverage under this general permit.
3. Risk Level 3 dischargers with direct discharges to surfaces waters shall initiate receiving water monitoring when the triggers are exceeded unless the storm event causing the exceedance is determined after the fact to equal to or greater than the 5-year 24-hour storm (expressed in inches of rainfall) as determined by using these maps:

<http://www.wrcc.dri.edu/pcpnfreq/nca5y24.gif>
<http://www.wrcc.dri.edu/pcpnfreq/sca5y24.gif>

Verification of the 5-year 24-hour storm event shall be done by reporting on-site rain gauge readings as well as nearby governmental rain gauge readings.

4. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

¹² A period of high risk of pH discharge is defined as a project's complete utilities phase, complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations of the background pH of the discharges.

VI. RECEIVING WATER LIMITATIONS

- A.** The discharger shall ensure that storm water discharges and authorized non-storm water discharges to any surface or ground water will not adversely affect human health or the environment.
- B.** The discharger shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants in quantities that threaten to cause pollution or a public nuisance.
- C.** The discharger shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards (collectively, WQS) contained in a Statewide Water Quality Control Plan, the California Toxics Rule, the National Toxics Rule, or the applicable Regional Water Board's Water Quality Control Plan (Basin Plan).
- D.** Dischargers located within the watershed of a CWA § 303(d) impaired water body, for which a TMDL has been approved by the U.S. EPA, shall comply with the approved TMDL if it identifies "construction activity" or land disturbance as a source of the pollution.

VII. TRAINING QUALIFICATIONS AND CERTIFICATION REQUIREMENTS

A. General

The discharger shall ensure that all persons responsible for implementing requirements of this General Permit shall be appropriately trained in accordance with this Section. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. Those responsible for preparing and amending SWPPPs shall comply with the requirements in this Section VII.

The discharger shall provide documentation of all training for persons responsible for implementing the requirements of this General Permit in the Annual Reports.

B. SWPPP Certification Requirements

1. **Qualified SWPPP Developer:** The discharger shall ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:
 - a. A California registered professional civil engineer;
 - b. A California registered professional geologist or engineering geologist;
 - c. A California registered landscape architect;
 - d. A professional hydrologist registered through the American Institute of Hydrology;
 - e. A Certified Professional in Erosion and Sediment Control (CPESC)TM registered through Enviro Cert International, Inc.;
 - f. A Certified Professional in Storm Water Quality (CPSWQ)TM registered through Enviro Cert International, Inc.; or
 - g. A professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

2. The discharger shall list the name and telephone number of the currently designated Qualified SWPPP Developer(s) in the SWPPP.
3. **Qualified SWPPP Practitioner:** The discharger shall ensure that all BMPs required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:
 - a. A certified erosion, sediment and storm water inspector registered through Enviro Cert International, Inc.; or
 - b. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

4. The LRP shall list in the SWPPP, the name of any Approved Signatory, and provide a copy of the written agreement or other mechanism that provides this authority from the LRP in the SWPPP.
5. The discharger shall include, in the SWPPP, a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.
6. The discharger shall ensure that the SWPPP and each amendment will be signed by the Qualified SWPPP Developer. The discharger shall include a listing of the date of initial preparation and the date of each amendment in the SWPPP.

VIII. RISK DETERMINATION

The discharger shall calculate the site's sediment risk and receiving water risk during periods of soil exposure (i.e. grading and site stabilization) and use the calculated risks to determine a Risk Level(s) using the methodology in

Appendix 1. For any site that spans two or more planning watersheds,¹³ the discharger shall calculate a separate Risk Level for each planning watershed. The discharger shall notify the State Water Board of the site's Risk Level determination(s) and shall include this determination as a part of submitting the PRDs. If a discharger ends up with more than one Risk Level determination, the Regional Water Board may choose to break the project into separate levels of implementation.

IX. RISK LEVEL 1 REQUIREMENTS

Risk Level 1 Dischargers shall comply with the requirements included in Attachment C of this General Permit.

X. RISK LEVEL 2 REQUIREMENTS

Risk Level 2 Dischargers shall comply with the requirements included in Attachment D of this General Permit.

XI. RISK LEVEL 3 REQUIREMENTS

Risk Level 3 Dischargers shall comply with the requirements included in Attachment E of this General Permit.

XII. ACTIVE TREATMENT SYSTEMS (ATS)

Dischargers choosing to implement an ATS on their site shall comply with all of the requirements in Attachment F of this General Permit.

¹³ Planning watershed: defined by the Calwater Watershed documents as a watershed that ranges in size from approximately 3,000 to 10,000 acres <http://cain.ice.ucdavis.edu/calwater/calwfaq.html>, <http://gis.ca.gov/catalog/BrowseRecord.epl?id=22175> .

XIII. POST-CONSTRUCTION STANDARDS

- A.** All dischargers shall comply with the following runoff reduction requirements unless they are located within an area subject to post-construction standards of an active Phase I or II municipal separate storm sewer system (MS4) permit that has an approved Storm Water Management Plan.
1. This provision shall take effect three years from the adoption date of this permit, or later at the discretion of the Executive Officer of the Regional Board.
 2. The discharger shall demonstrate compliance with the requirements of this section by submitting with their NOI a map and worksheets in accordance with the instructions in Appendix 2. The discharger shall use non-structural controls unless the discharger demonstrates that non-structural controls are infeasible or that structural controls will produce greater reduction in water quality impacts.
 3. The discharger shall, through the use of non-structural and structural measures as described in Appendix 2, replicate the pre-project water balance (for this permit, defined as the volume of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event (or the smallest storm event that generates runoff, whichever is larger). Dischargers shall inform Regional Water Board staff at least 30 days prior to the use of any structural control measure used to comply with this requirement. Volume that cannot be addressed using non-structural practices shall be captured in structural practices and approved by the Regional Water Board. When seeking Regional Board approval for the use of structural practices, dischargers shall document the infeasibility of using non-structural practices on the project site, or document that there will be fewer water quality impacts through the use of structural practices.
 4. For sites whose disturbed area exceeds two acres, the discharger shall preserve the pre-construction drainage density (miles of stream length per square mile of drainage area) for all drainage areas within the area serving a first order stream¹⁴ or larger stream and ensure that post-project time of runoff concentration is equal or greater than pre-project time of concentration.

¹⁴ A first order stream is defined as a stream with no tributaries.

- B.** All dischargers shall implement BMPs to reduce pollutants in storm water discharges that are reasonably foreseeable after all construction phases have been completed at the site (Post-construction BMPs).

XIV. SWPPP REQUIREMENTS

- A.** The discharger shall ensure that the Storm Water Pollution Prevention Plans (SWPPPs) for all traditional project sites are developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:
1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;
 2. Where not otherwise required to be under a Regional Water Board permit, all non-storm water discharges are identified and either eliminated, controlled, or treated;
 3. Site BMPs are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from construction activity to the BAT/BCT standard;
 4. Calculations and design details as well as BMP controls for site run-on are complete and correct, and
 5. Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.
- B.** To demonstrate compliance with requirements of this General Permit, the QSD shall include information in the SWPPP that supports the conclusions, selections, use, and maintenance of BMPs.
- C.** The discharger shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

XV. REGIONAL WATER BOARD AUTHORITIES

- A.** In the case where the Regional Water Board does not agree with the discharger's self-reported risk level (e.g., they determine themselves to be a Level 1 Risk when they are actually a Level 2 Risk site), Regional Water Boards may either direct the discharger to reevaluate the Risk Level(s) for their site or terminate coverage under this General Permit.
- B.** Regional Water Boards may terminate coverage under this General Permit for dischargers who fail to comply with its requirements or where they determine that an individual NPDES permit is appropriate.
- C.** Regional Water Boards may require dischargers to submit a Report of Waste Discharge / NPDES permit application for Regional Water Board consideration of individual requirements.
- D.** Regional Water Boards may require additional Monitoring and Reporting Program Requirements, including sampling and analysis of discharges to sediment-impaired water bodies.
- E.** Regional Water Boards may require dischargers to retain records for more than the three years required by this General Permit.

XVI. ANNUAL REPORTING REQUIREMENTS

- A.** All dischargers shall prepare and electronically submit an Annual Report no later than September 1 of each year.
- B.** The discharger shall certify each Annual Report in accordance with the Special Provisions.
- C.** The discharger shall retain an electronic or paper copy of each Annual Report for a minimum of three years after the date the annual report is filed.
- D.** The discharger shall include storm water monitoring information in the Annual Report consisting of:
 - 1. a summary and evaluation of all sampling and analysis results, including copies of laboratory reports;
 - 2. the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit");
 - 3. a summary of all corrective actions taken during the compliance year;
 - 4. identification of any compliance activities or corrective actions that were not implemented;
 - 5. a summary of all violations of the General Permit;
 - 6. the names of individual(s) who performed the facility inspections, sampling, visual observation (inspections), and/or measurements;
 - 7. the date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge); and
 - 8. the visual observation and sample collection exception records and reports specified in Attachments C, D, and E.
- E.** The discharger shall provide training information in the Annual Report consisting of:
 - 1. documentation of all training for individuals responsible for all activities associated with compliance with this General Permit;

2. documentation of all training for individuals responsible for BMP installation, inspection, maintenance, and repair; and
3. documentation of all training for individuals responsible for overseeing, revising, and amending the SWPPP.

ATTACHMENT A
Linear Underground/ Overhead Requirements

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All Linear Underground/Overhead project dischargers who submit permit registration documents (PRDs) indicating their intention to be regulated under the provisions of this General Permit shall comply with the following:

A. DEFINITION OF LINEAR UNDERGROUND/OVERHEAD PROJECTS

1. Linear Underground/Overhead Projects (LUPs) include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio, or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to, (b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.

2. LUP evaluation shall consist of two tasks:

- a. Confirm that the project or project section(s) qualifies as an LUP. The State Water Board website contains a project determination guidance flowchart.
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constructionpermits.shtml
 - b. Identify which Type(s) (1, 2 or 3 described in Section I below) are applicable to the project or project sections based on project sediment and receiving water risk. (See Attachment A.1)
- 3.** A Legally Responsible Person (LRP) for a Linear Underground/Overhead project is required to obtain CGP coverage under one or more permit registration document (PRD) electronic submittals to the State Water Board's Storm Water Multi-Application and Report Tracking (SMARTs) system. Attachment A.1 contains a flow chart to be used when determining if a linear project qualifies for coverage and to determine LUP Types. Since a LUP may be constructed within both developed and undeveloped locations and portions of LUPs may be constructed by different contractors, LUPs may be broken into logical permit sections. Sections may be determined based on portions of a project conducted by one contractor. Other situations may also occur, such as the time period in which the sections of a project will be constructed (e.g. project phases), for which separate permit coverage is possible. For projects that are broken into separate sections, a description of how each section relates to the overall project and the definition of the boundaries between sections shall be clearly stated.
- 4.** Where construction activities transverse or enter into different Regional Water Board jurisdictions, LRPs shall obtain permit coverage for each Regional Water Board area involved prior to the commencement of construction activities.
- 5.** Small Construction Rainfall Erosivity Waiver

EPA's Small Construction Erosivity Waiver applies to sites between one and five acres demonstrating that there are no adverse water quality impacts.

Dischargers eligible for a Rainfall Erosivity Waiver based on low erosivity potential shall complete the electronic Notice of Intent (NOI) and Sediment Risk form through the State Water Board's SMARTS system, certifying that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five. Where the LRP changes or another LRP is added during construction, the new LRP must also submit a waiver certification through the SMARTS system.

If a small linear construction site continues beyond the projected completion date given on the waiver certification, the LRP shall recalculate the rainfall erosivity factor for the new project duration and submit this information through the SMARTS system. If the new R factor is below five (5), the discharger shall update through SMARTS all applicable information on the waiver certification and retain a copy of the revised waiver onsite. The LRP shall submit the new waiver certification 30 days prior to the projected completion date listed on the original waiver form to assure exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, the LRP shall be required to apply for coverage under this Order.

B. LINEAR PROJECT PERMIT REGISTRATION DOCUMENTS (PRDs)

Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted. PRDs shall consist of the following:

1. Notice of Intent (NOI)

Prior to construction activities, the LRP of a proposed linear underground/overhead project shall utilize the processes and methods provided in Attachment A.2, Permit Registration Documents (PRDs) – General Instructions for Linear Underground/Overhead Projects to comply with the Construction General Permit.

2. Site Maps

LRPs submitting PRDs shall include at least 3 maps. The first map will be a zoomed¹ 1000-1500 ft vicinity map that shows the starting point of the project. The second will be a zoomed map of 1000-1500 ft showing the ending location of the project. The third will be a larger view vicinity map, 1000 ft to 2000 ft, displaying the entire project location depending on the project size, and indicating the LUP type (1, 2 or 3) areas within the total project footprint.

3. Drawings

LRPs submitting PRDs shall include a construction drawing(s) or other appropriate drawing(s) or map(s) that shows the locations of storm drain

¹ An image with a close-up/enhanced detailed view of site features that show minute details such as streets and neighboring structures.

Or: An image with a close-up/enhanced detailed view of the site's surrounding infrastructure.

Or: An image with a close up detailed view of the project and its surroundings.

inlets and waterbodies² that may receive discharges from the construction activities and that shows the locations of BMPs to be installed for all those BMPs that can be illustrated on the revisable drawing(s) or map(s). If storm drain inlets, waterbodies, and/or BMPs cannot be adequately shown on the drawing(s) or map(s) they should be described in detail within the SWPPP.

4. Storm Water Pollution Prevention Plan (SWPPP)

LUP dischargers shall comply with the SWPPP Preparation, Implementation, and Oversight requirements in Section K of this Attachment.

5. Contact information

LUP dischargers shall include contact information for all contractors (or subcontractors) responsible for each area of an LUP project. This should include the names, telephone numbers, and addresses of contact personnel. Specific areas of responsibility of each contact, and emergency contact numbers should also be included.

6. In the case of a public emergency that requires immediate construction activities, a discharger shall submit a brief description of the emergency construction activity within five days of the onset of construction, and then shall submit all PRDs within thirty days.

C. LINEAR PROJECT TERMINATION OF COVERAGE REQUIREMENTS

The LRP may terminate coverage of an LUP when construction activities are completed by submitting an electronic notice of termination (NOT) through the State Water Board's SMARTS system. Termination requirements are different depending on the complexity of the LUP. An LUP is considered complete when: (a) there is no potential for construction-related storm water pollution; (b) all elements of the SWPPP have been completed; (c) construction materials and waste have been disposed of properly; (d) the site is in compliance with all local storm water management requirements; and (e) the LRP submits a notice of termination (NOT) and has received approval for termination from the appropriate Regional Water Board office.

1. LUP Stabilization Requirements

The LUP discharger shall ensure that all disturbed areas of the construction site are stabilized prior to termination of coverage under this General Permit. Final stabilization for the purposes of submitting an NOT

² Includes basin(s) that the MS4 storm sewer systems may drain to for Hydromodification or Hydrological Conditional of Concerns under the MS4 permits.

is satisfied when all soil disturbing activities are completed and one of the following criteria is met:

- a. In disturbed areas that were vegetated prior to construction activities of the LUP, the area disturbed must be re-established to a uniform vegetative cover equivalent to 70 percent coverage of the preconstruction vegetative conditions. Where preconstruction vegetation covers less than 100 percent of the surface, such as in arid areas, the 70 percent coverage criteria is adjusted as follows: if the preconstruction vegetation covers 50 percent of the ground surface, 70 percent of 50 percent ($.70 \times .50 = .35$) would require 35 percent total uniform surface coverage; or
- b. Where no vegetation is present prior to construction, the site is returned to its original line and grade and/or compacted to achieve stabilization; or
- c. Equivalent stabilization measures have been employed. These measures include, but are not limited to, the use of such BMPs as blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, or other erosion resistant soil coverings or treatments.

2. LUP Termination of Coverage Requirements

The LRP shall file an NOT through the State Water Board's SMARTS system. By submitting an NOT, the LRP is certifying that construction activities for an LUP are complete and that the project is in full compliance with requirements of this General Permit and that it is now compliant with soil stabilization requirements where appropriate. Upon approval by the appropriate Regional Water Board office, permit coverage will be terminated.

3. Revising Coverage for Change of Acreage

When the LRP of a portion of an LUP construction project changes, or when a phase within a multi-phase project is completed, the LRP may reduce the total acreage covered by this General Permit. In reducing the acreage covered by this General Permit, the LRP shall electronically file revisions to the PRDs that include:

- a. a revised NOI indicating the new project size;
- b. a revised site map showing the acreage of the project completed, acreage currently under construction, acreage sold, transferred or added, and acreage currently stabilized.
- c. SWPPP revisions, as appropriate; and
- d. certification that any new LRPs have been notified of applicable requirements to obtain General Permit coverage. The certification shall include the name, address, telephone number, and e-mail address (if known) of the new LRP.

If the project acreage has increased, dischargers shall mail payment of revised annual fees within 14 days of receiving the revised annual fee notification.

D. DISCHARGE PROHIBITIONS

1. LUP dischargers shall not violate any discharge prohibitions contained in applicable Basin Plans or statewide water quality control plans. Waste discharges to Areas of Special Biological Significance (ASBS) are prohibited by the California Ocean Plan, unless granted an exception issued by the State Water Board.
2. LUP dischargers are prohibited from discharging non-storm water that is not otherwise authorized by this General Permit. Non-storm water discharges authorized by this General Permit³ may include, fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, street cleaning, dewatering,⁴ uncontaminated groundwater from dewatering, and other discharges not subject to a separate general NPDES permit adopted by a Regional Water Board. Such discharges are allowed by this General Permit provided they are not relied upon to clean up failed or inadequate construction or post-construction BMPs designed to keep materials on site. These authorized non-storm water discharges:

³ Dischargers must identify all authorized non-storm water discharges in the LUP's SWPPP and identify BMPs that will be implemented to either eliminate or reduce pollutants in non-storm water discharges. Regional Water Boards may direct the discharger to discontinue discharging such non-storm water discharges if determined that such discharges discharge significant pollutants or threaten water quality.

⁴Dewatering activities may be prohibited or need coverage under a separate permit issued by the Regional Water Boards. Dischargers shall check with the appropriate Regional Water Boards for any required permit or basin plan conditions prior to initial dewatering activities to land, storm drains, or waterbodies.

- a. Shall not cause or contribute to a violation of any water quality standard;
- b. Shall not violate any other provision of this General Permit;
- c. Shall not violate any applicable Basin Plan;
- d. Shall comply with BMPs as described in the SWPPP;
- e. Shall not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;
- f. Shall be monitored and meets the applicable NALs; and
- g. Shall be reported by the discharger in the Annual Report.

If any of the above conditions are not satisfied, the discharge is not authorized by this General Permit. The discharger shall notify the Regional Water Board of any anticipated non-storm water discharges not authorized by this General Permit to determine the need for a separate NPDES permit.

Additionally, some LUP dischargers may be required to obtain a separate permit if the applicable Regional Water Board has adopted a General Permit for dewatering discharges. Wherever feasible, alternatives, that do not result in the discharge of non-storm water, shall be implemented in accordance with this Attachment's Section K.2 - SWPPP Implementation Schedule.

3. LUP dischargers shall ensure that trench spoils or any other soils disturbed during construction activities that are contaminated⁵ are not discharged with storm water or non-storm water discharges into any storm drain or water body except pursuant to an NPDES permit.

When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the LUP discharger shall have those soils sampled and tested to ensure that proper handling and public safety measures are

⁵ Contaminated soil contains pollutants in concentrations that exceed the appropriate thresholds that various regulatory agencies set for those substances. Preliminary testing of potentially contaminated soils will be based on odor, soil discoloration, or prior history of the site's chemical use and storage and other similar factors. When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the discharger shall have those soils sampled and tested to ensure proper handling and public safety measures are implemented. The legally responsible person will notify the appropriate local, State, or federal agency(ies) when contaminated soil is found at a construction site, and will notify the Regional Water Board by submitting an NOT at the completion of the project.

implemented. The LUP discharger shall notify the appropriate local, State, and federal agency(ies) when contaminated soil is found at a construction site, and will notify the appropriate Regional Water Board.

4. Discharging any pollutant-laden water that will cause or contribute to an exceedance of the applicable Regional Water Board's Basin Plan from a dewatering site or sediment basin into any receiving water or storm drain is prohibited.
5. Debris⁶ resulting from construction activities are prohibited from being discharged from construction project sites.

E. SPECIAL PROVISIONS

1. Duty to Comply

- a. The LUP discharger must comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action and/or removal from General Permit coverage.
- b. The LUP discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

2. General Permit Actions

- a. This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.

⁶ Litter, rubble, discarded refuse, and remains of something destroyed.

- b. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the dischargers so notified.

3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an LUP discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

4. Duty to Mitigate

The LUP discharger shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit, which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

The LUP discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this General Permit and with the requirements of the Storm Water Pollution Prevention Plan (SWPPP). Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a discharger when necessary to achieve compliance with the conditions of this General Permit.

6. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

7. Duty to Maintain Records and Provide Information

- a. The LUP discharger shall maintain a paper or electronic copy of all required records, including a copy of this General Permit, for three years from the date generated or date submitted, whichever is last. These records shall be kept at the construction site or in a crew

member's vehicle until construction is completed, and shall be made available upon request.

- b. The LUP discharger shall furnish the Regional Water Board, State Water Board, or USEPA, within a reasonable time, any requested information to determine compliance with this General Permit. The LUP discharger shall also furnish, upon request, copies of records that are required to be kept by this General Permit.

8. Inspection and Entry

The LUP discharger shall allow the Regional Water Board, State Water Board, USEPA, and/or, in the case of construction sites which discharge through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the discharger's premises at reasonable times where a regulated construction activity is being conducted or where records must be kept under the conditions of this General Permit;
- b. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;
- c. Inspect at reasonable times the complete construction site, including any off-site staging areas or material storage areas, and the erosion/sediment controls; and
- d. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

9. Electronic Signature and Certification Requirements

- a. All Permit Registration Documents (PRDs) and Notices of Termination (NOTs) shall be electronically signed, certified, and submitted via SMARTS to the State Water Board. Either the Legally Responsible Person (LRP), as defined in Appendix 5 – Glossary, or a person legally authorized to sign and certify PRDs and NOTs on behalf of the LRP (the LRP's Approved Signatory, as defined in Appendix 5 - Glossary) must submit all information electronically via SMARTS.
- b. Changes to Authorization. If an Approved Signatory's authorization is no longer accurate, a new authorization satisfying the requirements of paragraph (a) of this section must be submitted via SMARTS prior to or

together with any reports, information or applications to be signed by an Approved Signatory.

- c. All SWPPP revisions, annual reports, or other information required by the General Permit (other than PRDs and NOTs) or requested by the Regional Water Board, State Water Board, USEPA, or local storm water management agency shall be certified and submitted by the LRP or the LRP's Approved Signatory.

10. Certification

Any person signing documents under Section E.9 above, shall make the following certification:

"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 assure 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, to the best of my knowledge and belief, the information submitted is, 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."

11. Anticipated Noncompliance

The LUP discharger shall give advance notice to the Regional Water Board and local storm water management agency of any planned changes in the construction activity, which may result in noncompliance with General Permit requirements.

12. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years or by both.

13. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the LUP discharger is or may be subject to under Section 311 of the CWA.

14. Severability

The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

15. Reopener Clause

This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of USEPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations (CFR) 122.62, 122.63, 122.64, and 124.5.

16. Penalties for Violations of Permit Conditions

- a. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed \$37,500⁷ per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.
- b. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA.

17. Transfers

This General Permit is not transferable. A new LRP of an ongoing construction activity must submit PRDs in accordance with the requirements of this General Permit to be authorized to discharge under this General Permit. An LRP who is a property owner with active General Permit coverage who sells a fraction or all the land shall inform the new property owner(s) of the requirements of this General Permit.

18. Continuation of Expired Permit

This General Permit continues in force and effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those

⁷ May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act

dischargers authorized to discharge under the expiring General Permit are covered by the continued General Permit.

F. EFFLUENT STANDARDS & RECEIVING WATER MONITORING

1. Narrative Effluent Limitations

- a. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges regulated by this General Permit do not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
- b. LUP dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of structural or non-structural controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

Table 1. Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level
pH	Field test with calibrated portable instrument	LUP Type 2	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5
		LUP Type 3			lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	LUP Type 2	1	NTU	250 NTU
		LUP Type 3			250 NTU

2. Numeric Action Levels (NALs)

- a. For LUP Type 2 and 3 dischargers, the lower storm event daily average NAL for pH is 6.5 pH units and the upper storm event daily average NAL for pH is 8.5 pH units. The LUP discharger shall take actions as described below if the storm event daily average discharge is outside of this range of pH values.
- b. For LUP Type 2 and 3 dischargers, the storm event daily average NAL for turbidity is 250 NTU. The discharger shall take actions as described below if the storm event daily average discharge is outside of this range of turbidity values.
- c. Whenever daily average analytical effluent monitoring results indicate that the discharge is below the lower NAL for pH, exceeds the upper NAL for pH, or exceeds the turbidity NAL (as listed in Table 1), the LUP discharger shall conduct a construction site and run-on evaluation to determine whether pollutant source(s) associated with the site's construction activity may have caused or contributed to the NAL exceedance and shall immediately implement corrective actions if they are needed.
- d. The site evaluation will be documented in the SWPPP and specifically address whether the source(s) of the pollutants causing the exceedance of the NAL:
 - i. Are related to the construction activities and whether additional BMPs or SWPPP implementation measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) determine what corrective action(s) were taken or will be taken and with a description of the schedule for completion.

AND/OR:

- ii. Are related to the run-on associated with the construction site location and whether additional BMPs or SWPPP implementation measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) decide what corrective action(s) were taken or will be taken, including a description of the schedule for completion.

3. Receiving Water Monitoring Triggers

- a. The receiving water monitoring triggers for LUP Type 3 dischargers with direct discharges to surface waters are triggered when the daily average effluent pH values during any site phase when there is a high risk of pH discharge⁸ fall outside of the range of 6.0 and 9.0 pH units, or when the daily average effluent turbidity exceeds 500 NTU.
- b. LUP Type 3 dischargers with direct discharges to surface waters shall conduct receiving water monitoring whenever their effluent monitoring results exceed the receiving water monitoring triggers. If the pH trigger is exceeded, the receiving water shall be monitored for pH for the duration of coverage under this General Permit. If the turbidity trigger is exceeded, the receiving water shall be monitored for turbidity and SSC for the duration of coverage under this General Permit.
- c. LUP Type 3 dischargers with direct discharges to surface waters shall initiate receiving water monitoring when the triggers are exceeded unless the storm event causing the exceedance is determined after the fact to equal to or greater than the 5-year 24-hour storm (expressed in inches of rainfall) as determined by using these maps:

<http://www.wrcc.dri.edu/pcpnfreq/nca5y24.gif>
<http://www.wrcc.dri.edu/pcpnfreq/sca5y24.gif>

 Verification of the 5-year 24-hour storm event shall be done by reporting on-site rain gauge readings as well as nearby governmental rain gauge readings.
- d. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

G. RECEIVING WATER LIMITATIONS

1. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges to any surface or ground water will not adversely affect human health or the environment.
2. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants in quantities that threaten to cause pollution or a public nuisance.
3. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants that cause or

⁸ A period of high risk of pH discharge is defined as a project's complete utilities phase, complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations of the background pH of the discharges.

contribute to an exceedance of any applicable water quality objectives or water quality standards (collectively, WQS) contained in a Statewide Water Quality Control Plan, the California Toxics Rule, the National Toxics Rule, or the applicable Regional Water Board's Water Quality Control Plan (Basin Plan).

H. TRAINING QUALIFICATIONS

1. General

All persons responsible for implementing requirements of this General Permit shall be appropriately trained. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. Persons responsible for preparing, amending and certifying SWPPPs shall comply with the requirements in this Section H.

2. SWPPP Certification Requirements

- a. **Qualified SWPPP Developer:** The LUP discharger shall ensure that all SWPPPs be written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:
 - i A California registered professional civil engineer;
 - ii A California registered professional geologist or engineering geologist;
 - iii A California registered landscape architect;
 - iv A professional hydrologist registered through the American Institute of Hydrology;
 - v A certified professional in erosion and sediment control (CPESC)TM registered through Enviro Cert International, Inc;
 - vi A certified professional in storm water quality (CPSWQ)TM registered through Enviro Cert International, Inc.; or
 - vii A certified professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

- b. The LUP discharger shall ensure that the SWPPP is written and amended, as needed, to address the specific circumstances for each construction site covered by this General Permit prior to commencement of construction activity for any stage.
- c. The LUP discharger shall list the name and telephone number of the currently designated Qualified SWPPP Developer(s) in the SWPPP.
- d. **Qualified SWPPP Practitioner:** The LUP discharger shall ensure that all elements of any SWPPP for each project will be implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis, and for ensuring full compliance with the permit and implementation of all elements of the SWPPP. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:
 - i. A certified erosion, sediment and storm water inspector registered through Certified Professional in Erosion and Sediment Control, Inc.; or
 - ii. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

- e. The LUP discharger shall ensure that the SWPPP include a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner, and who is ultimately responsible for implementation of the SWPPP. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.
- f. The LUP discharger shall ensure that the SWPPP and each amendment be signed by the Qualified SWPPP Developer. The LUP discharger shall include a listing of the date of initial preparation and the dates of each amendment in the SWPPP.

I. TYPES OF LINEAR PROJECTS

This attachment establishes three types (Type 1, 2 & 3) of complexity for areas within an LUP or project section based on threat to water quality. Project area Types are determined through Attachment A.1.

The Type 1 requirements below establish the baseline requirements for all LUPs subject to this General Permit. Additional requirements for Type 2 and Type 3 LUPs are labeled.

1. Type 1 LUPs:

LUP dischargers with areas of a LUP designated as Type 1 shall comply with the requirements in this Attachment. Type 1 LUPs are:

- a. Those construction areas where 70 percent or more of the construction activity occurs on a paved surface and where areas disturbed during construction will be returned to preconstruction conditions or equivalent protection established at the end of the construction activities for the day; or
- b. Where greater than 30 percent of construction activities occur within the non-paved shoulders or land immediately adjacent to paved surfaces, or where construction occurs on unpaved improved roads, including their shoulders or land immediately adjacent to them where:
 - i. Areas disturbed during construction will be returned to preconstruction conditions or equivalent protection is established at the end of the construction activities for the day to minimize the potential for erosion and sediment deposition, and
 - ii. Areas where established vegetation was disturbed during construction will be stabilized and re-vegetated by the end of project. When required, adequate temporary stabilization BMPs will be installed and maintained until vegetation is established to meet minimum cover requirements established in this General Permit for final stabilization.
- c. Where the risk determination is as follows:
 - i. Low sediment risk, low receiving water risk, or
 - ii. Low sediment risk, medium receiving water risk, or
 - iii. Medium sediment risk, low receiving water risk

2. Type 2 LUPs:

Type 2 LUPs are determined by the Combined Risk Matrix in Attachment A.1. Type 2 LUPs have the specified combination of risk:

- d. High sediment risk, low receiving water risk, or
- e. Medium sediment risk, medium receiving water risk, or
- f. Low sediment risk, high receiving water risk

Receiving water risk is either considered “Low” for those areas of the project that are not in close proximity to a sensitive receiving watershed, “Medium” for those areas of the project within a sensitive receiving watershed yet outside of the flood plain of a sensitive receiving water body, and “High” where the soil disturbance is within close proximity to a sensitive receiving water body. Project sediment risk is calculated based on the Risk Factor Worksheet in Attachment C of this General Permit.

3. Type 3 LUPs:

Type 3 LUPs are determined by the Combined Risk Matrix in Attachment A.1. Type 3 LUPs have the specified combination of risk:

- a. High sediment risk, high receiving water risk, or
- b. High sediment risk, medium receiving water risk, or
- c. Medium sediment risk, high receiving water risk

Receiving water risk is either considered “Medium” for those areas of the project within a sensitive receiving watershed yet outside of the flood plain of a sensitive receiving water body, or “High” where the soil disturbance is within close proximity to a sensitive receiving water body. Project sediment risk is calculated based on the Risk Factor Worksheet in Attachment C.

J. LUP TYPE-SPECIFIC REQUIREMENTS**1. Effluent Standards**

- a. Narrative – LUP dischargers shall comply with the narrative effluent standards below.

- i Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
 - ii LUP dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.
- b. Numeric – LUP Type 1 dischargers are not subject to a numeric effluent standard
 - c. Numeric –LUP Type 2 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.
 - d. Numeric – LUP Type 3 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

2. Good Site Management "Housekeeping"

- a. LUP dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, the good housekeeping measures shall consist of the following:
 - i Identify the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
 - ii Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).
 - iii Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).
 - iv Minimize exposure of construction materials to precipitation (not applicable to materials designed to be outdoors and exposed to the environment).

- v Implement BMPs to control the off-site tracking of loose construction and landscape materials.
- b. LUP dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:
 - i Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.
 - ii Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.
 - iii Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.
 - iv Cover waste disposal containers at the end of every business day and during a rain event.
 - v Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.
 - vi Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.
 - vii Implement procedures that effectively address hazardous and non-hazardous spills.
 - viii Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:
 - (1) Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and
 - (2) Appropriate spill response personnel are assigned and trained.
 - ix Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

- c. LUP dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:
 - i. Prevent oil, grease, or fuel from leaking into the ground, storm drains or surface waters.
 - ii. Implement appropriate BMPs whenever equipment or vehicles are fueled, maintained or stored.
 - iii. Clean leaks immediately and disposing of leaked materials properly.

- d. LUP dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:
 - i. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.
 - ii. Contain fertilizers and other landscape materials when they are not actively being used.
 - iii. Discontinue the application of any erodible landscape material at least 2 days before a forecasted rain event⁹ or during periods of precipitation.
 - iv. Applying erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.
 - v. Stacking erodible landscape material on pallets and covering or storing such materials when not being used or applied.

- e. LUP dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, LUP dischargers shall do the following:

⁹ 50% or greater chance of producing precipitation.

- i Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.
 - ii Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.
 - iii Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.
 - iv Ensure retention of sampling, visual observation, and inspection records.
 - v Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.
- f. LUP dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations.

3. Non-Storm Water Management

- a. LUP dischargers shall implement measures to control all non-storm water discharges during construction.
- b. LUP dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.
- c. LUP dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

4. Erosion Control

- a. LUP dischargers shall implement effective wind erosion control.
- b. LUP dischargers shall provide effective soil cover for inactive¹⁰ areas and all finished slopes, and utility backfill.

¹⁰ Areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days

- c. LUP dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

5. Sediment Controls

- a. LUP dischargers shall establish and maintain effective perimeter controls as needed, and implement effective BMPs for all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.
- b. On sites where sediment basins are to be used, LUP dischargers shall, at minimum, design sediment basins according to the guidance provided in CASQA’s Construction BMP Handbook.
- c. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths¹¹ in accordance with Table 2 below.

Table 2 – Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet flow length not to exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

- d. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent off-site tracking of sediment.
- e. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.
- f. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall inspect all immediate access roads. At a minimum daily and prior to any rain event, the discharger shall remove any

¹¹ Sheet flow length is the length that shallow, low velocity flow travels across a site.

sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

- g. **Additional LUP Type 3 Requirement:** The Regional Water Board may require LUP Type 3 dischargers to implement additional site-specific sediment control requirements if the implementation of the other requirements in this section are not adequately protecting the receiving waters.

6. Run-on and Run-off Controls

- a. LUP dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this Attachment.
- b. Run-on and runoff controls are not required for Type 1 LUPs unless the evaluation of quantity and quality of run-on and runoff deems them necessary or visual inspections show that the site requires such controls.

7. Inspection, Maintenance and Repair

- a. All inspection, maintenance repair and sampling activities at the discharger's LUP location shall be performed or supervised by a QSP representing the discharger. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.
- b. LUP dischargers shall conduct visual inspections and observations daily during working hours (not recorded). At least once each 24-hour period during extended storm events, **LUP Type 2 & 3 dischargers** shall conduct visual inspections to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.
- c. Upon identifying failures or other shortcomings, as directed by the QSP, LUP dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.
- d. For each pre- and post-rain event inspection required, LUP dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format that includes the information described below.

- e. The LUP discharger shall ensure that the checklist remains on-site or with the SWPPP. At a minimum, an inspection checklist should include:
 - i Inspection date and date the inspection report was written.
 - ii Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.
 - iii Site information, including stage of construction, activities completed, and approximate area of the site exposed.
 - iv A description of any BMPs evaluated and any deficiencies noted.
 - v If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.
 - vi Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.
 - vii Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.
 - viii Photographs taken during the inspection, if any.
 - ix Inspector's name, title, and signature.

K. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

1. Objectives

SWPPPs for all LUPs shall be developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:

- a. All pollutants and their sources, including sources of sediment, associated with construction activities associated with LUP activity are controlled;
- b. All non-storm water discharges are identified and either eliminated, controlled, or treated;
- c. BMPs are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from LUPs during construction; and
- d. Stabilization BMPs installed to reduce or eliminate pollutants after construction is completed are effective and maintained.

2. SWPPP Implementation Schedule

- a. LUPs for which PRDs have been submitted to the State Water Board shall develop a site/project location SWPPP prior to the start of land-disturbing activity in accordance with this Section and shall implement the SWPPP concurrently with commencement of soil-disturbing activities.
- b. For an ongoing LUP involving a change in the LRP, the new LRP shall review the existing SWPPP and amend it, if necessary, or develop a new SWPPP within 15 calendar days to conform to the requirements set forth in this General Permit.

3. Availability

The SWPPP shall be available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

L. REGIONAL WATER BOARD AUTHORITIES

1. Regional Water Boards shall administer the provisions of this General Permit. Administration of this General Permit may include, but is not limited to, requesting the submittal of SWPPPs, reviewing SWPPPs, reviewing monitoring and sampling and analysis reports, conducting compliance inspections, gathering site information by any medium including sampling, photo and video documentation, and taking enforcement actions.
2. Regional Water Boards may terminate coverage under this General Permit for dischargers who fail to comply with its requirements or where they determine that an individual NPDES permit is appropriate.
3. Regional Water Boards may issue separate permits for discharges of storm water associated with construction activity to individual dischargers, categories of dischargers, or dischargers in a geographic area. Upon issuance of such permits by a Regional Water Board, dischargers subject to those permits shall no longer be regulated by this General Permit.
4. Regional Water Boards may direct the discharger to reevaluate the LUP Type(s) for the project (or elements/areas of the project) and impose the appropriate level of requirements.
5. Regional Water Boards may terminate coverage under this General Permit for dischargers who negligently or with willful intent incorrectly determine or report their LUP Type (e.g., they determine themselves to be a LUP Type 1 when they are actually a Type 2).
6. Regional Water Boards may review PRDs and reject or accept applications for permit coverage or may require dischargers to submit a Report of Waste Discharge / NPDES permit application for Regional Water Board consideration of individual requirements.
7. Regional Water Boards may impose additional requirements on dischargers to satisfy TMDL implementation requirements or to satisfy provisions in their Basin Plans.
8. Regional Water Boards may require additional Monitoring and Reporting Program Requirements, including sampling and analysis of discharges to sediment-impaired water bodies.
9. Regional Water Boards may require dischargers to retain records for more than the three years required by this General Permit.

- 10.** Based on an LUP's threat to water quality and complexity, the Regional Water Board may determine on a case-by-case basis that an LUP, or a portion of an LUP, is not eligible for the linear project requirements contained in this Attachment, and require that the discharger comply with all standard requirements in this General Permit.
- 11.** The Regional Water Board may require additional monitoring and reporting program requirements including sampling and analysis of discharges to CWA § 303(d)-listed water bodies. Additional requirements imposed by the Regional Water Board shall be consistent with the overall monitoring effort in the receiving waters.

M. MONITORING AND REPORTING REQUIREMENTS

Table 3. LUP Summary of Monitoring Requirements

LUP Type	Visual Inspections				Sample Collection		
	Daily Site BMP	Pre-storm Event	Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water	Non-Visible (when applicable)
		Baseline					
1	X						X
2	X	X	X	X	X		X
3	X	X	X	X	X	X	X

1. Objectives

LUP dischargers shall prepare a monitoring and reporting program (M&RP) prior to the start of construction and immediately implement the program at the start of construction for LUPs. The monitoring program must be implemented at the appropriate level to protect water quality at all times throughout the life of the project. The M&RP must be a part of the SWPPP, included as an appendix or separate SWPPP chapter.

2. M&RP Implementation Schedule

- a. LUP dischargers shall implement the requirements of this Section at the time of commencement of construction activity. LUP dischargers are responsible for implementing these requirements until construction activity is complete and the site is stabilized.
- b. LUP dischargers shall revise the M&RP when:
 - i. Site conditions or construction activities change such that a change in monitoring is required to comply with the requirements and intent of this General Permit.
 - ii. The Regional Water Board requires the discharger to revise its M&RP based on its review of the document. Revisions may include, but not be limited to, conducting additional site inspections, submitting reports, and certifications. Revisions shall be submitted via postal mail or electronic e-mail.

- iii The Regional Water Board may require additional monitoring and reporting program requirements including sampling and analysis of discharges to CWA § 303(d)-listed water bodies. Additional requirements imposed by the Regional Water Board shall be consistent with the overall monitoring effort in the receiving waters.

3. LUP Type 1 Monitoring and Reporting Requirements

a. LUP Type 1 Inspection Requirements

- i LUP Type 1 dischargers shall ensure that all inspections are conducted by trained personnel. The name(s) and contact number(s) of the assigned inspection personnel should be listed in the SWPPP.
- ii LUP Type 1 dischargers shall ensure that all visual inspections are conducted daily during working hours and in conjunction with other daily activities in areas where active construction is occurring.
- iii LUP Type 1 dischargers shall ensure that photographs of the site taken before, during, and after storm events are taken during inspections, and submitted through the State Water Board's SMARTS website once every three rain events.
- iv LUP Type 1 dischargers shall conduct daily visual inspections to verify that:
 - (1) Appropriate BMPs for storm water and non-storm water are being implemented in areas where active construction is occurring (including staging areas);
 - (2) Project excavations are closed, with properly protected spoils, and that road surfaces are cleaned of excavated material and construction materials such as chemicals by either removing or storing the material in protective storage containers at the end of every construction day;
 - (3) Land areas disturbed during construction are returned to pre-construction conditions or an equivalent protection is used at the end of each workday to eliminate or minimize erosion and the possible discharge of sediment or other pollutants during a rain event.
- v Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures

are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met).

- vi Inspection programs are required for LUP Type 1 projects where temporary and permanent stabilization BMPs are installed and are to be monitored after active construction is completed. Inspection activities shall continue until adequate permanent stabilization is established and, in areas where re-vegetation is chosen, until minimum vegetative coverage is established in accordance with Section C.1 of this Attachment.

b. LUP Type 1 Monitoring Requirements for Non-Visible Pollutants

LUP Type 1 dischargers shall implement sampling and analysis requirements to monitor non-visible pollutants associated with (1) construction sites; (2) activities producing pollutants that are not visually detectable in storm water discharges; and (3) activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters.

- i Sampling and analysis for non-visible pollutants is only required where the LUP Type 1 discharger believes pollutants associated with construction activities have the potential to be discharged with storm water runoff due to a spill or in the event there was a breach, malfunction, failure and/or leak of any BMP. Also, failure to implement BMPs may require sample collection.
 - (1) Visual observations made during the monitoring program described above will help the LUP Type 1 discharger determine when to collect samples.
 - (2) The LUP Type 1 discharger is not required to sample if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.
- ii LUP Type 1 dischargers shall collect samples down-gradient from all discharge locations where the visual observations were made triggering the monitoring, and which can be safely accessed. For sites where sampling and analysis is required, personnel trained in water quality sampling procedures shall collect storm water samples.
- iii If sampling for non-visible pollutant parameters is required, LUP Type 1 dischargers shall ensure that samples be analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment required in Section J.2.a.i.

- iv LUP Type 1 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.
 - v LUP Type 1 dischargers shall ensure that a sufficiently large sample of storm water that has not come into contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample¹²) will be collected for comparison with the discharge sample. Samples shall be collected during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.
 - vi LUP Type 1 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS).
 - vii For laboratory analyses, all sampling, sample preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136. LUP Type 1 dischargers shall ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed. Portable meters shall be calibrated according to manufacturer's specification.
 - viii LUP Type 1 dischargers shall ensure that all field and/or analytical data are kept in the SWPPP document.
- c. LUP Type 1 Visual Observation Exceptions
- i LUP Type 1 dischargers shall be prepared to collect samples and conduct visual observation (inspections) to meet the minimum visual observation requirements of this Attachment. The Type 1 LUP discharger is not required to physically collect samples or conduct visual observation (inspections) under the following conditions:
 - (1) During dangerous weather conditions such as flooding and electrical storms;
 - (2) Outside of scheduled site business hours.
 - (3) When access to the site is unsafe due to storm events.

¹² Sample collected at a location unaffected by construction activities.

- ii If the LUP Type 1 discharger does not collect the required samples or visual observation (inspections) due to these exceptions, an explanation why the sampling or visual observation (inspections) were not conducted shall be included in both the SWPPP and the Annual Report.
- d. Particle Size Analysis for Risk Justification

LUP Type 1 dischargers utilizing justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

4. LUP Type 2 & 3 Monitoring and Reporting Requirements

- a. LUP Type 2 & 3 Inspection Requirements
- i LUP Type 2 & 3 dischargers shall ensure that all inspections are conducted by trained personnel. The name(s) and contact number(s) of the assigned inspection personnel should be listed in the SWPPP.
 - ii LUP Type 2 & 3 dischargers shall ensure that all visual inspections are conducted daily during working hours and in conjunction with other daily activities in areas where active construction is occurring.
 - iii LUP Type 2 & 3 dischargers shall ensure that photographs of the site taken before, during, and after storm events are taken during inspections, and submitted through the State Water Board's SMARTS website once every three rain events.
 - iv LUP Type 2 & 3 dischargers shall conduct daily visual inspections to verify that appropriate BMPs for storm water and non-storm water are being implemented and in place in areas where active construction is occurring (including staging areas).
 - v LUP Type 2 & 3 dischargers shall conduct inspections of the construction site prior to anticipated storm events, during extended storm events, and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity. Pre-storm inspections are to ensure that BMPs are properly installed and maintained; post-storm inspections are to assure that BMPs have functioned adequately. During

extended storm events, inspections shall be required during normal working hours for each 24-hour period.

- vi Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met).
- vii LUP Type 2 & 3 dischargers shall implement a monitoring program for inspecting projects that require temporary and permanent stabilization BMPs after active construction is complete. Inspections shall ensure that the BMPs are adequate and maintained. Inspection activities shall continue until adequate permanent stabilization is established and, in vegetated areas, until minimum vegetative coverage is established in accordance with Section C.1 of this Attachment.
- viii If possible, LUP Type 2 & 3 dischargers shall install a rain gauge on-site at an accessible and secure location with readings made during all storm event inspections. When readings are unavailable, data from the closest rain gauge with publically available data may be used.
- ix LUP Type 2 & 3 dischargers shall include and maintain a log of the inspections conducted in the SWPPP. The log will provide the date and time of the inspection and who conducted the inspection.

b. LUP Type 2 & 3 Storm Water Effluent Monitoring Requirements

Table 4. LUP Type 2 & 3 Effluent Monitoring Requirements

LUP Type	Frequency	Effluent Monitoring
2	Minimum of 3 samples per day characterizing discharges associated with construction activity from the project active areas of construction.	Turbidity, pH, and non-visible pollutant parameters (if applicable)
3	Minimum of 3 samples per day characterizing discharges associated with construction activity from the project active areas of construction.	turbidity, pH, and non-visible pollutant parameters (if applicable)

- i LUP Type 2 & 3 dischargers shall collect storm water grab samples from sampling locations characterizing discharges associated with activity from the LUP active areas of construction. At a minimum, 3 samples shall be collected per day of discharge.

- ii LUP Type 2 & 3 dischargers shall collect samples of stored or contained storm water that is discharged subsequent to a storm event producing precipitation of ½ inch or more at the time of discharge.
 - iii LUP Type 2 & 3 dischargers shall ensure that storm water grab sample(s) obtained be representative of the flow and characteristics of the discharge.
 - iv LUP Type 2 & 3 dischargers shall analyze their effluent samples for:
 - (1) pH and turbidity
 - (2) Any additional parameter for which monitoring is required by the Regional Water Board.
- c. LUP Type 2 & 3 Storm Water Effluent Sampling Locations
- i LUP Type 2 & 3 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire disturbed project or area.
 - ii LUP Type 2 & 3 dischargers may monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to exceedance of NALs.
 - iii LUP Type 2 & 3 dischargers shall select analytical test methods from the list provided in Table 5 below.
 - iv LUP Type 2 & 3 dischargers shall ensure that all storm water sample collection preservation and handling shall be conducted in accordance with the “Storm Water Sample Collection and Handling Instructions” below.
- d. LUP Type 3 Receiving Water Monitoring Requirements
- i In the event that an LUP Type 3 discharger’s effluent exceeds the receiving water monitoring triggers of 500 NTU turbidity or pH range of 6.0-9.0, contained in this General Permit and has a direct discharge to receiving waters, the LUP discharger shall subsequently sample Receiving Waters (RWs) for turbidity, pH (if applicable) and SSC for the duration of coverage under this General Permit. In the event that an LUP Tupe 3 discharger utilizing ATS with direct discharges into receiving waters discharges effluent that exceeds the NELs in this permit, the discharger shall

subsequently sample RWs for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit.

- ii LUP Type 3 dischargers that meet the project criteria in Appendix 3 of this General Permit and have more than 30 acres of soil disturbance in the project area or project section area designated as Type 3, shall comply with the Bioassessment requirements prior to commencement of construction activity.
 - iii LUP Type 3 dischargers shall obtain RW samples in accordance with the requirements of the Receiving Water Sampling Locations section (Section M.4.c. of this Attachment).
- e. LUP Type 3 Receiving Water Sampling Locations
- i **Upstream/up-gradient RW samples:** LUP Type 3 dischargers shall obtain any required upstream/up-gradient receiving water samples from a representative and accessible location as close as possible to and upstream from the effluent discharge point.
 - ii **Downstream/down-gradient RW samples:** LUP Type 3 dischargers shall obtain any required downstream/down-gradient receiving water samples from a representative and accessible location as close as possible to and downstream from the effluent discharge point.
 - iii If two or more discharge locations discharge to the same receiving water, LUP Type 3 dischargers may sample the receiving water at a single upstream and downstream location.

f. LUP Type 2 & 3 Monitoring Requirements for Non-Visible Pollutants

LUP Type 2 & 3 dischargers shall implement sampling and analysis requirements to monitor non-visible pollutants associated with (1) construction sites; (2) activities producing pollutants that are not visually detectable in storm water discharges; and (3) activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters.

- i Sampling and analysis for non-visible pollutants is only required where LUP Type 2 & 3 dischargers believe pollutants associated with construction activities have the potential to be discharged with storm water runoff due to a spill or in the event there was a breach, malfunction, failure and/or leak of any BMP. Also, failure to implement BMPs may require sample collection.

- (1) Visual observations made during the monitoring program described above will help LUP Type 2 & 3 dischargers determine when to collect samples.
 - (2) LUP Type 2 & 3 dischargers are not required to sample if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.
- ii LUP Type 2 & 3 dischargers shall collect samples down-gradient from the discharge locations where the visual observations were made triggering the monitoring and which can be safely accessed. For sites where sampling and analysis is required, personnel trained in water quality sampling procedures shall collect storm water samples.
 - iii If sampling for non-visible pollutant parameters is required, LUP Type 2 & 3 dischargers shall ensure that samples be analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment required in Section J.2.a.i.
 - iv LUP Type 2 & 3 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.
 - v LUP Type 2 & 3 dischargers shall ensure that a sufficiently large sample of storm water that has not come into contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample¹³) will be collected for comparison with the discharge sample. Samples shall be collected during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.
 - vi LUP Type 2 & 3 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS).
 - vii For laboratory analyses, all sampling, sample preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136. LUP Type 2 & 3 dischargers shall ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed.

¹³ Sample collected at a location unaffected by construction activities

Portable meters shall be calibrated according to manufacturer's specification.

viii LUP Type 2 & 3 dischargers shall ensure that all field and/or analytical data are kept in the SWPPP document.

g. LUP Type 2 & 3 Visual Observation and Sample Collection Exceptions

i LUP Type 2 & 3 dischargers shall be prepared to collect samples and conduct visual observation (inspections) to meet the minimum visual observation requirements of this Attachment. Type 2 & 3 LUP dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

(1) During dangerous weather conditions such as flooding and electrical storms;

(2) Outside of scheduled site business hours.

(3) When access to the site is unsafe due to storm events.

ii If the LUP Type 2 or 3 discharger does not collect the required samples or visual observation (inspections) due to these exceptions, an explanation why the sampling or visual observation (inspections) were not conducted shall be included in both the SWPPP and the Annual Report.

h. LUP Type 2 & 3 Storm Water Sample Collection and Handling Instructions

LUP Type 2 & 3 dischargers shall refer to Table 5 below for test Methods, detection Limits, and reporting Units. During storm water sample collection and handling, the LUP Type 2 & 3 discharger shall:

i Identify the parameters required for testing and the number of storm water discharge points that will be sampled. Request the laboratory to provide the appropriate number of sample containers, types of containers, sample container labels, blank chain of custody forms, and sample preservation instructions.

ii Determine how to ship the samples to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The options are to either deliver the samples to the laboratory, arrange to have the laboratory pick them up, or ship them overnight to the laboratory.

- iii Use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers could contaminate your samples.
- iv Prevent sample contamination, by not touching, or putting anything into the sample containers before collecting storm water samples.
- v Not overfilling sample containers. Overfilling can change the analytical results.
- vi Tightly screw the cap of each sample container without stripping the threads of the cap.
- vii Complete and attach a label to each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.
- viii Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into the shipping container. Samples should be kept as close to 4° C (39° F) as possible until arriving at the laboratory. Do not freeze samples.
- ix Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.
- x Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers.
- xi Designate and train personnel to collect, maintain, and ship samples in accordance with the above sample protocols and good laboratory practices.
- xii Refer to the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP) for more

information on sampling collection and analysis. See http://www.waterboards.ca.gov/water_issues/programs/swamp/¹⁴

Table 5. Test Methods, Detection Limits, Reporting Units and Applicable NALs

Parameter	Test Method	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Levels	(LUP Type 3) Receiving Water Monitoring Trigger
pH	Field test with calibrated portable instrument	Type 2 & 3	0.2	pH units	Lower = 6.5 upper = 8.5	Lower = 6.0 upper = 9.0
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Type 2 & 3	1	NTU	250 NTU	500 NTU
SSC	ASTM Method D 3977-97 ¹⁵	Type 3 if Receiving Water Monitoring Trigger is exceeded	5	Mg/L	N/A	N/A
Bioassessment	(STE) Level I of (SAFIT), ¹⁶ fixed-count of 600 org/sample	Type 3 LUPs > 30 acres	N/A	N/A	N/A	N/A

i. LUP Type 2 & 3 Monitoring Methods

i The LUP Type 2 or 3 discharger’s project M&RP shall include a description of the following items:

- (1) Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

¹⁴ Additional information regarding SWAMP’s QAPrP can be found at: http://www.waterboards.ca.gov/water_issues/programs/swamp/.

¹⁵ ASTM, 1999, Standard Test Method for Determining Sediment Concentration in Water Samples: American Society of Testing and Materials, D 3977-97, Vol. 11.02, pp. 389-394

¹⁶ The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board’s SWAMP website.

- (2) Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program a copy of the Chain of Custody form used when handling and shipping samples.
 - (3) Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section M.4.f above.
- ii LUP Type 2 & 3 dischargers shall ensure that all sampling and sample preservation be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses shall be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses shall be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services (SSC exception). The LUP discharger shall conduct its own field analysis of pH and may conduct its own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.
- j. LUP Type 2 & 3 Analytical Methods

LUP Type 2 & 3 dischargers shall refer to Table 5 above for test Methods, detection Limits, and reporting Units.

- i **pH:** LUP Type 2 & 3 dischargers shall perform pH analysis on-site with a calibrated pH meter or pH test kit. The LUP discharger shall record pH monitoring results on paper and retain these records in accordance with Section M.4.o, below.
- ii **Turbidity:** LUP Type 2 & 3 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results shall

be recorded in the site log book in Nephelometric Turbidity Units (NTU).

- iii **Suspended sediment concentration (SSC):** LUP Type 3 dischargers exceeding the turbidity Receiving Water Monitoring Trigger, shall perform SSC analysis using ASTM Method D3977-97.
- iv **Bioassessment:** LUP Type 3 dischargers shall perform bioassessment sampling and analysis according to Appendix 3 of this General Permit.

k. Watershed Monitoring Option

If an LUP Type 2 or 3 discharger is part of a qualified regional watershed-based monitoring program the LUP Type 2 or 3 discharger may be eligible for relief from the monitoring requirements in this Attachment. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program if it determines that the watershed-based monitoring program will provide information to determine each discharger's compliance with the requirements of this General Permit.

l. Particle Size Analysis for Risk Justification

LUP Type 2 & 3 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

m. NAL Exceedance Report

- i In the event that any effluent sample exceeds an applicable NAL, the Regional Water Boards may require LUP Type 2 & 3 dischargers to submit NAL Exceedance Reports.
- ii LUP Type 2 & 3 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.
- iii LUP Type 2 & 3 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the exceedance report is filed.
- iv LUP Type 2 & 3 dischargers shall include in the NAL Exceedance Report:

- (1) the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”); and
- (2) the date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.
- (3) Description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

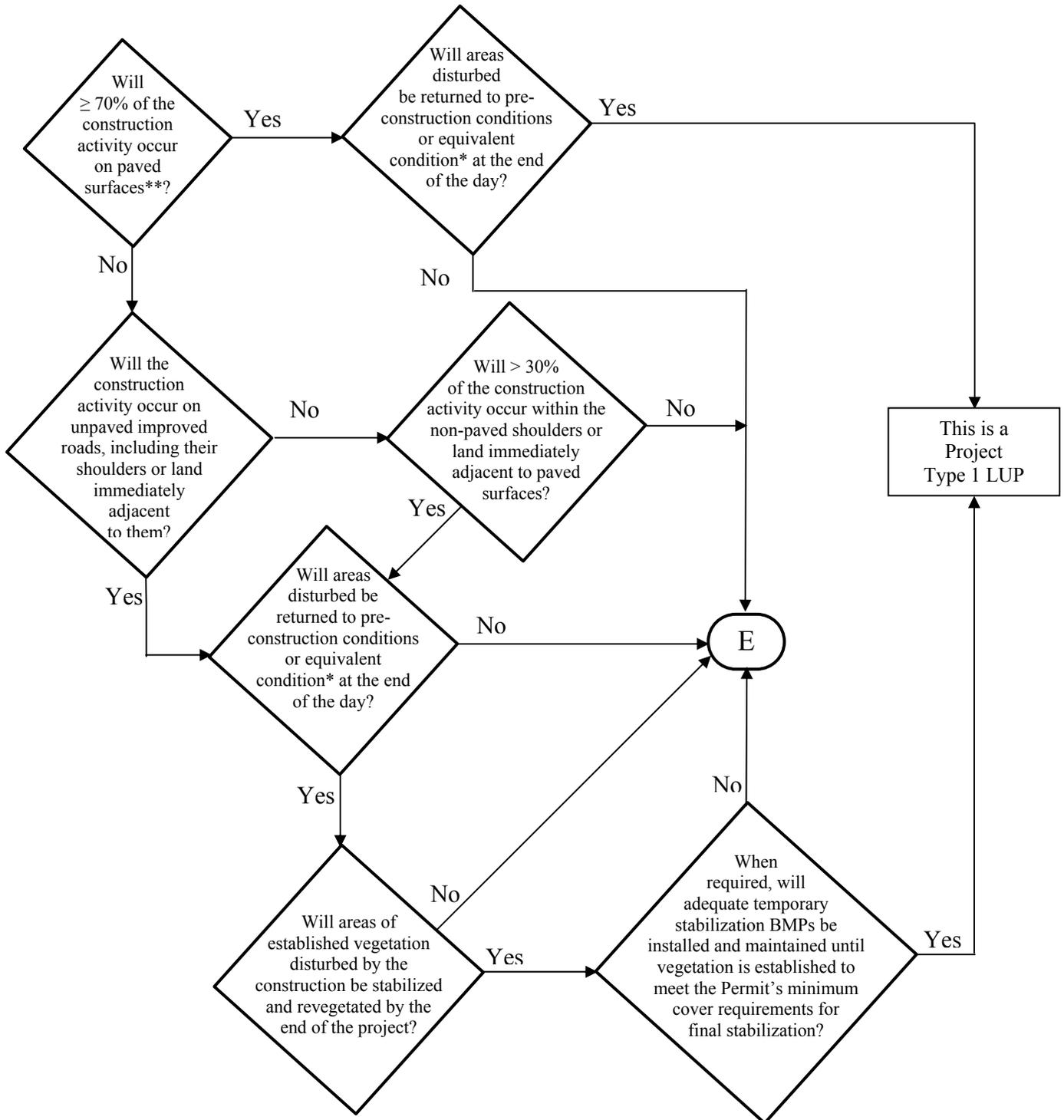
n. Monitoring Records

LUP Type 2 & 3 dischargers shall ensure that records of all storm water monitoring information and copies of all reports (including Annual Reports) required by this General Permit be retained for a period of at least three years. LUP Type 2 & 3 dischargers may retain records off-site and make them available upon request. These records shall include:

- i The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge);
- ii The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements;
- iii The date and approximate time of analyses;
- iv The individual(s) who performed the analyses;
- v A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and all chain of custody forms;
- vi Quality assurance/quality control records and results;
- vii Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Section M.4.a above);
- viii Visual observation and sample collection exception records (see Section M.4.g above); and

- ix The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

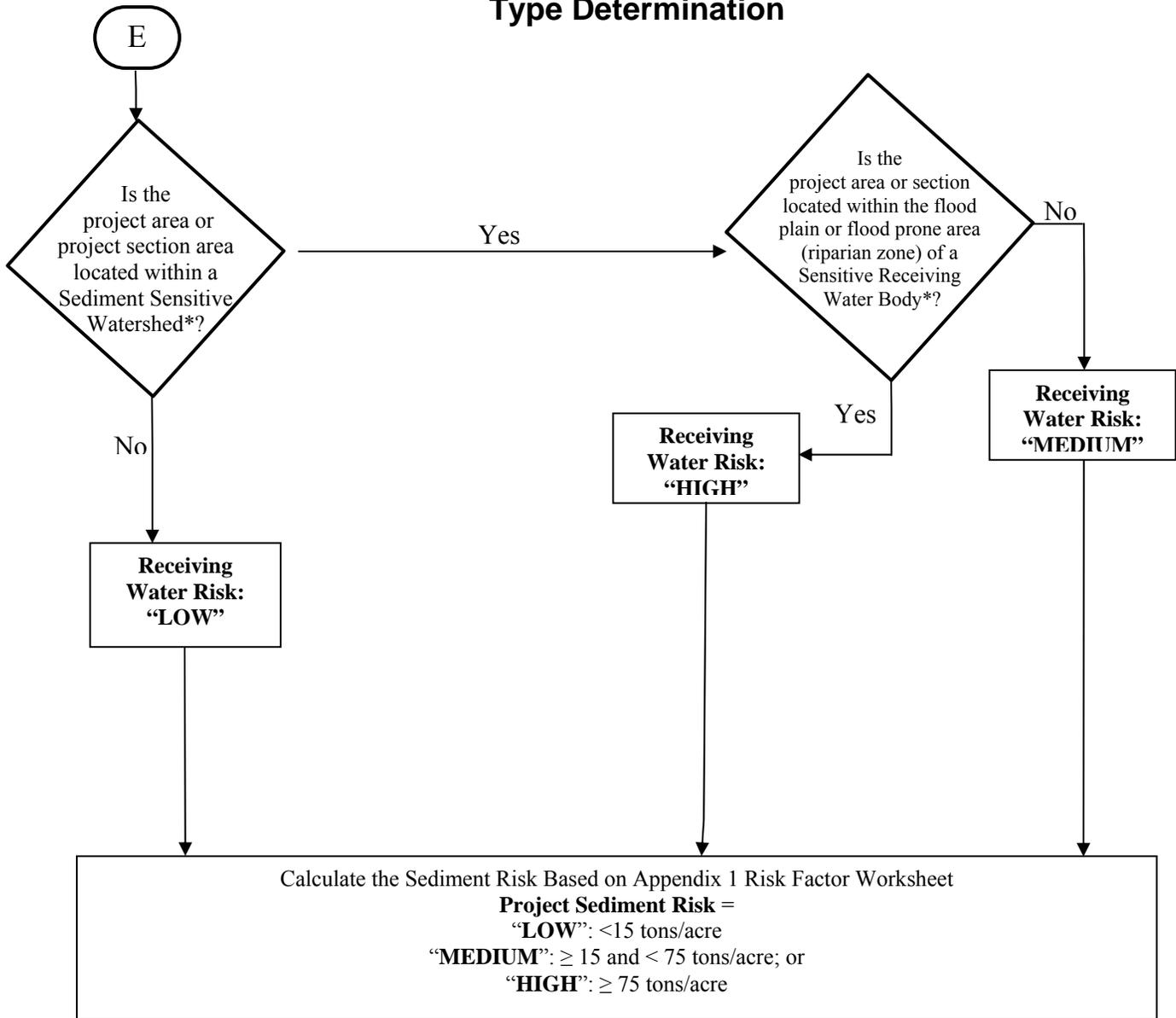
ATTACHMENT A.1 LUP Project Area or Project Section Area Type Determination



*See Definition of Terms

** Or: "Will < 30% of the soil disturbance occur on unpaved surfaces?"

ATTACHMENT A.1 LUP Project Area or Project Section Area Type Determination



* See Definition of Terms

PROJECT SEDIMENT RISK

RECEIVING WATER RISK

	LOW	MEDIUM	HIGH
LOW	Type 1	Type 1	Type 2
MEDIUM	Type 1	Type 2	Type 3
HIGH	Type 2	Type 3	Type 3

ATTACHMENT A.1 Definition of Terms

1. **Equivalent Condition** – Means disturbed soils such as those from trench excavation are required to be hauled away, backfilled into the trench, and/or covered (e.g., metal plates, pavement, plastic covers over spoil piles) at the end of the construction day.
2. **Linear Construction Activity** – Linear construction activity consists of underground/ overhead facilities that typically include, but are not limited to, any conveyance, pipe or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/ tower pad and cable/ wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/ borrow locations.
3. **Sediment Sensitive Receiving Water Body** – Defined as a water body segment that is listed on EPA's approved CWA 303(d) list for sedimentation/siltation, turbidity, or is designated with beneficial uses of SPAWN, MIGRATORY, and COLD.
4. **Sediment Sensitive Watershed** – Defined as a watershed draining into a receiving water body listed on EPA's approved CWA 303(d) list for sedimentation/siltation, turbidity, or a water body designated with beneficial uses of SPAWN, MIGRATORY, and COLD.

**ATTACHMENT A.2
PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS FOR LINEAR UNDERGROUND/OVERHEAD PROJECTS TO
COMPLY WITH THE CONSTRUCTION GENERAL PERMIT**

GENERAL INSTRUCTIONS

Who Must Submit

This permit is effective on July 1, 2010.

The Legally Responsible Person (LRP) for construction activities associated with linear underground/overhead project (LUP) must electronically apply for coverage under this General Permit on or after July 1, 2010. If it is determined that the LUP construction activities require an NPDES permit, the Legally Responsible Person¹ (LRP) shall submit PRDs for this General Permit in accordance with the following:

LUPs associated with Private or Municipal Development Projects

1. For LUPs associated with pre-development and pre-redevelopment construction activities:

The LRP must obtain coverage² under this General Permit for its pre-development and pre-redevelopment construction activities where the total disturbed land area of these construction activities is greater than 1 acre.

2. For LUPs associated with new development and redevelopment construction projects:

The LRP must obtain coverage under this General Permit for LUP construction activities associated with new development and redevelopment projects where the total disturbed land area of the LUP is greater than 1 acre. Coverage under this permit is not required where the same LUP construction activities are covered by another NPDES permit.

LUPs not associated with private or municipal new development or redevelopment projects:

The LRP must obtain coverage under this General Permit on or after July 1, 2010 for its LUP construction activities where the total disturbed land area is greater than 1 acre.

PRD Submittal Requirements

Prior to the start of construction activities a LRP must submit PRDs and fees to the State Water Board for each LUP.

New and Ongoing LUPs

Dischargers of new LUPs that commence construction activities after the adoption date of this General Permit shall file PRDs prior to the commencement of construction and implement the SWPPP upon the start of construction.

¹ person possessing the title of the land on which the construction activities will occur for the regulated site

² obtain coverage means filing PRDs for the project.

PERMIT REGISTRATION DOCUMENTS (PRDs) GENERAL INSTRUCTIONS (CONTINUED)

Dischargers of ongoing LUPs that are currently covered under State Water Board Order No. 2003-0007 (Small LUP General Permit) shall electronically file Permit Registration Documents no later than July 1, 2010. After July 1, 2010, all NOIs subject to State Water Board Order No. 2003-0007-DWQ will be terminated. All existing dischargers shall be exempt from the risk determination requirements in Attachment A. All existing dischargers are therefore subject to LUP Type 1 requirements regardless of their project's sediment and receiving water risks. However, a Regional Board retains the authority to require an existing discharger to comply with the risk determination requirements in Attachment A.

Where to Apply

The Permit Registration Documents (PRDs) can be found at www.waterboards.ca.gov/water_issues/programs/stormwater/

Fees

The annual fee for storm water permits are established through the State of California Code of Regulations.

When Permit Coverage Commences

To obtain coverage under the General Permit, the LRP must include the complete PRDs and the annual fee. All PRDs deemed incomplete will be rejected with an explanation as to what is required to complete submittal. Upon receipt of complete PRDs and associated fee, each discharger will be sent a waste discharger's identification (WDID) number.

Projects and Activities Not Defined As Construction Activity

1. LUP construction activity does not include routine maintenance projects to maintain original line and grade, hydraulic capacity, or original purpose of the facility. Routine maintenance projects are projects associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-way, easements, franchise agreements or other legally binding agreements of the discharger. Routine maintenance projects include, but are not limited to projects that are conducted to:
 - Maintain the original purpose of the facility, or hydraulic capacity.
 - Update existing lines³ and facilities to comply with applicable codes, standards and regulations regardless if such projects result in increased capacity.
 - Repairing leaks.

Routine maintenance does not include construction of new⁴ lines or facilities resulting from compliance with applicable codes, standards and regulations.

³ Update existing lines includes replacing existing lines with new materials or pipes.

⁴ New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

**PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS (CONTINUED)**

Routine maintenance projects do not include those areas of maintenance projects that are outside of an existing right-of-way, franchise, easements, or agreements. When a project must acquire new areas, those areas may be subject to this General Permit based on the area of disturbed land outside the original right-of-way, easement, or agreement.

2. LUP construction activity does not include field activities associated with the planning and design of a project (e.g., activities associated with route selection).
3. Tie-ins conducted immediately adjacent to “energized” or “pressurized” facilities by the discharger are not considered small construction activities where all other LUP construction activities associated with the tie-in are covered by a NOI and SWPPP of a third party or municipal agency.

Calculating Land Disturbance Areas of LUPs

The total land area disturbed for LUPs is the sum of the:

- Surface areas of trenches, laterals and ancillary facilities, plus
- Area of the base of stockpiles on unpaved surfaces, plus
- Surface area of the borrow area, plus
- Areas of paved surfaces constructed for the project, plus
- Areas of new roads constructed or areas of major reconstruction to existing roads (e.g. improvements to two-track surfaces or road widening) for the sole purpose of accessing construction activities or as part of the final project, plus
- Equipment and material storage, staging, and preparation areas (laydown areas) not on paved surfaces, plus
- Soil areas outside the surface area of trenches, laterals and ancillary facilities that will be graded, and/or disturbed by the use of construction equipment, vehicles and machinery during construction activities.

Stockpiling Areas

Stockpiling areas, borrow areas and the removal of soils from a construction site may or may not be included when calculating the area of disturbed soil for a site depending on the following conditions:

- For stockpiling of soils onsite or immediately adjacent to a LUP site and the stockpile is not on a paved surface, the area of the base of the stockpile is to be included in the disturbed area calculation.
- The surface area of borrow areas that are onsite or immediately adjacent to a project site are to be included in the disturbed area calculation.
- For soil that is hauled offsite to a location owned or operated by the discharger that is not a paved surface, the area of the base of the stockpile is to be included in the disturbed area calculation except when the offsite location is already subject to a separate storm water permit.

**PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS (CONTINUED)**

- For soil that is brought to the project from an off-site location owned or operated by the discharger the surface area of the borrow pit is to be included in the disturbed area calculation except when the offsite location is already subject to a separate storm water permit.
- Trench spoils on a paved surface that are either returned to the trench or excavation or hauled away from the project daily for disposal or reuse will not be included in the disturbed area calculation.

If you have any questions concerning submittal of PRDs, please call the State Water Board at (866) 563-3107.

**ATTACHMENT B
PERMIT REGISTRATION DOCUMENTS (PRDs) TO COMPLY WITH THE TERMS
OF THE GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH CONSTRUCTION ACTIVITY**

GENERAL INSTRUCTIONS

- A.** All Linear Construction Projects shall comply with the PRD requirements in Attachment A.2 of this Order.

B. Who Must Submit

Discharges of storm water associated with construction that results in the disturbance of one acre or more of land must apply for coverage under the General Construction Storm Water Permit (General Permit). Any construction activity that is a part of a larger common plan of development or sale must also be permitted, regardless of size. (For example, if 0.5 acre of a 20-acre subdivision is disturbed by the construction activities of discharger A and the remaining 19.5 acres is to be developed by discharger B, discharger A must obtain a General Storm Water Permit for the 0.5 acre project).

Other discharges from construction activities that are covered under this General Permit can be found in the General Permit Section II.B.

It is the LRP's responsibility to obtain coverage under this General Permit by electronically submitting complete PRDs (Permit Registration Documents).

In all cases, the proper procedures for submitting the PRDs must be completed before construction can commence.

C. Construction Activity Not Covered By This General Permit

Discharges from construction that are not covered under this General Permit can be found in the General Permit Sections II.A & B..

D. Annual Fees and Fee Calculation

Annual fees are calculated based upon the total area of land to be disturbed not the total size of the acreage owned. However, the calculation includes all acres to be disturbed during the duration of the project. For example, if 10 acres are scheduled to be disturbed the first year and 10 in each subsequent year for 5 years, the annual fees would be based upon 50 acres of disturbance. The State Water Board will evaluate adding acreage to an existing Permit Waste Discharge Identification (WDID) number on a case-by-case basis. In general, any acreage to be considered must be contiguous to the permitted land area and the existing

SWPPP must be appropriate for the construction activity and topography of the acreage under consideration. As acreage is built out and stabilized or sold, the Change of Information (COI) form enables the applicant to remove those acres from inclusion in the annual fee calculation. Checks should be made payable to: State Water Board.

The Annual fees are established through regulations adopted by the State Water Board. The total annual fee is the current base fee plus applicable surcharges for all construction sites submitting an NOI, based on the total acreage to be disturbed during the life of the project. Annual fees are subject to change by regulation.

Dischargers that apply for and satisfy the Small Construction Erosivity Waiver requirements shall pay a fee of \$200.00 plus an applicable surcharge, see the General Permit Section II.B.7.

E. When to Apply

LRP's proposing to conduct construction activities subject to this General Permit must submit their PRDs prior to the commencement of construction activity.

F. Requirements for Completing Permit Registration Documents (PRDs)

All dischargers required to comply with this General Permit shall electronically submit the required PRDs for their type of construction as defined below.

G. Standard PRD Requirements (All Dischargers)

1. Notice of Intent
2. Risk Assessment (Standard or Site-Specific)
3. Site Map
4. SWPPP
5. Annual Fee
6. Certification

H. Additional PRD Requirements Related to Construction Type

1. Discharger in unincorporated areas of the State (not covered under an adopted Phase I or II SUSMP requirements) and that are not a linear project shall also submit a completed:
 - a. Post-Construction Water Balance Calculator (Appendix 2).
2. Dischargers who are proposing to implement ATS shall submit:
 - a. Complete ATS Plan in accordance with Attachment F at least 14 days prior to the planned operation of the ATS and a paper copy shall be available onsite during ATS operation.

- b. Certification proof that design done by a professional in accordance with Attachment F.
- 3. Dischargers who are proposing an alternate Risk Justification:
 - a. Particle Size Analysis.

I. Exceptions to Standard PRD Requirements

Construction sites with an R value less than 5 as determined in the Risk Assessment are not required to submit a SWPPP.

J. Description of PRDs

1. Notice of Intent (NOI)
2. Site Map(s) Includes:
 - a. The project's surrounding area (vicinity)
 - b. Site layout
 - c. Construction site boundaries
 - d. Drainage areas
 - e. Discharge locations
 - f. Sampling locations
 - g. Areas of soil disturbance (temporary or permanent)
 - h. Active areas of soil disturbance (cut or fill)
 - i. Locations of all runoff BMPs
 - j. Locations of all erosion control BMPs
 - k. Locations of all sediment control BMPs
 - l. ATS location (if applicable)
 - m. Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
 - n. Locations of all post-construction BMPs
 - o. Locations of storage areas for waste, vehicles, service, loading/unloading of materials, access (entrance/exits) points to construction site, fueling, and water storage, water transfer for dust control and compaction practices
3. **SWPPPs**
A site-specific SWPPP shall be developed by each discharger and shall be submitted with the PRDs.
4. **Risk Assessment**
All dischargers shall use the Risk Assessment procedure as describe in the General Permit Appendix 1.
 - a. The Standard Risk Assessment includes utilization of the following:
 - i. Receiving water Risk Assessment interactive map

- ii. EPA Rainfall Erosivity Factor Calculator Website
 - iii. Sediment Risk interactive map
 - iv. Sediment sensitive water bodies list
- b. The Site-Specific Risk Assessment includes the completion of the hand calculated R value Risk Calculator
5. **Post-Construction Water Balance Calculator**
All dischargers subject to this requirement shall complete the Water Balance Calculator (in Appendix 2) in accordance with the instructions.
6. **ATS Design Document and Certification**
All dischargers using ATS must submit electronically their system design (as well as any supporting documentation) and proof that the system was designed by a qualified ATS design professional (See Attachment F).

To obtain coverage under the General Permit PRDs must be included and completed. If any of the required items are missing, the PRD submittal is considered incomplete and will be rejected. Upon receipt of a complete PRD submittal, the State Water Board will process the application package in the order received and assign a (WDID) number.

Questions?

If you have any questions on completing the PRDs please email stormwater@waterboards.ca.gov or call (866) 563-3107.

ATTACHMENT C RISK LEVEL 1 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 1 dischargers shall comply with the narrative effluent standards listed below:
 - a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
 - b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.
2. Numeric – Risk Level 1 dischargers are not subject to a numeric effluent standard.

B. Good Site Management "Housekeeping"

1. Risk Level 1 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 1 dischargers shall implement the following good housekeeping measures:
 - a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
 - b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

- c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).
 - d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
 - e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.
2. Risk Level 1 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:
- a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.
 - b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.
 - c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.
 - d. Cover waste disposal containers at the end of every business day and during a rain event.
 - e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.
 - f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.
 - g. Implement procedures that effectively address hazardous and non-hazardous spills.
 - h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:
 - i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

- ii. Appropriate spill response personnel are assigned and trained.
 - i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.
3. Risk Level 1 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:
- a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.
 - b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.
 - c. Clean leaks immediately and disposing of leaked materials properly.
4. Risk Level 1 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:
- a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.
 - b. Contain fertilizers and other landscape materials when they are not actively being used.
 - c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.
 - d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.
 - e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.
5. Risk Level 1 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 1 dischargers shall do the following:

- a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.
 - b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.
 - c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.
 - d. Ensure retention of sampling, visual observation, and inspection records.
 - e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.
6. Risk Level 1 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

C. Non-Storm Water Management

1. Risk Level 1 dischargers shall implement measures to control all non-storm water discharges during construction.
2. Risk Level 1 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.
3. Risk Level 1 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 1 dischargers shall implement effective wind erosion control.
2. Risk Level 1 dischargers shall provide effective soil cover for inactive¹ areas and all finished slopes, open space, utility backfill, and completed lots.
3. Risk Level 1 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 1 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.
2. On sites where sediment basins are to be used, Risk Level 1 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

F. Run-on and Runoff Controls

Risk Level 1 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 1 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.
2. Risk Level 1 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended

¹ Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.

storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 1 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.
4. For each inspection required, Risk Level 1 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.
5. Risk Level 1 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:
 - a. Inspection date and date the inspection report was written.
 - b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.
 - c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.
 - d. A description of any BMPs evaluated and any deficiencies noted.
 - e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.
 - f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.
 - g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.
 - h. Photographs taken during the inspection, if any.
 - i. Inspector's name, title, and signature.

H. Rain Event Action Plan

Not required for Risk Level 1 dischargers.

I. Risk Level 1 Monitoring and Reporting Requirements

Table 1- Summary of Monitoring Requirements

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-storm Water Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
1	X	X		X	X		

1. Construction Site Monitoring Program Requirements

- a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.
- b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Programs to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.
- c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. Objectives

The CSMP shall be developed and implemented to address the following objectives:

- a. To demonstrate that the site is in compliance with the Discharge Prohibitions;

- b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
 - c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges; and
 - d. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.
- 3. Risk Level 1 - Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**
- a. Risk Level 1 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.
 - b. Risk Level 1 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of $\frac{1}{2}$ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.
 - c. Risk Level 1 dischargers shall conduct visual observations (inspections) during business hours only.
 - d. Risk Level 1 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.
 - e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 1 dischargers shall visually observe (inspect):
 - i. All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.
 - ii. All BMPs to identify whether they have been properly implemented in accordance with the SWPPP. If needed, the discharger shall implement appropriate corrective actions.

- iii. Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.
- f. For the visual observations (inspections) described in e.i and e.iii above, Risk Level 1 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.
- g. Within two business days (48 hours) after each qualifying rain event, Risk Level 1 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.
- h. Risk Level 1 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. Risk Level 1 – Visual Observation Exemptions

- a. Risk Level 1 dischargers shall be prepared to conduct visual observation (inspections) until the minimum requirements of Section I.3 above are completed. Risk Level 1 dischargers are not required to conduct visual observation (inspections) under the following conditions:
 - i. During dangerous weather conditions such as flooding and electrical storms.
 - ii. Outside of scheduled site business hours.
- b. If no required visual observations (inspections) are collected due to these exceptions, Risk Level 1 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the visual observations (inspections) were not conducted.

5. Risk Level 1 – Monitoring Methods

Risk Level 1 dischargers shall include a description of the visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures in the CSMP.

6. Risk Level 1 – Non-Storm Water Discharge Monitoring Requirements

- a. Visual Monitoring Requirements:
 - i. Risk Level 1 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.
 - ii. Risk Level 1 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).
 - iii. Risk Level 1 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 1 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

7. Risk Level 1 – Non-Visible Pollutant Monitoring Requirements

- a. Risk Level 1 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.
- b. Risk Level 1 dischargers shall ensure that water samples are large enough to characterize the site conditions.
- c. Risk Level 1 dischargers shall collect samples at all discharge locations that can be safely accessed.
- d. Risk Level 1 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.
- e. Risk Level 1 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the

presence of pollutants identified in the pollutant source assessment required (Risk Level 1 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

- f. Risk Level 1 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.
- g. Risk Level 1 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.²
- h. Risk Level 1 dischargers shall keep all field /or analytical data in the SWPPP document.

8. Risk Level 1 – Particle Size Analysis for Project Risk Justification

Risk Level 1 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

9. Risk Level 1 – Records

Risk Level 1 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 1 dischargers shall retain all records on-site while construction is ongoing. These records include:

- a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.
- b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.
- c. The date and approximate time of analyses.
- d. The individual(s) who performed the analyses.

² For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

- e. A summary of all analytical results from the last three years, the method detection limits and reporting units, and the analytical techniques or methods used.
- f. Rain gauge readings from site inspections.
- g. Quality assurance/quality control records and results.
- h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.6 above).
- i. Visual observation and sample collection exception records (see Section I.4 above).
- j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

ATTACHMENT D RISK LEVEL 2 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 2 dischargers shall comply with the narrative effluent standards listed below:
 - a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
 - b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.
2. Numeric – Risk level 2 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

B. Good Site Management "Housekeeping"

1. Risk Level 2 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 2 dischargers shall implement the following good housekeeping measures:
 - a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
 - b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

- c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).
 - d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
 - e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.
2. Risk Level 2 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:
- a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.
 - b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.
 - c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.
 - d. Cover waste disposal containers at the end of every business day and during a rain event.
 - e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.
 - f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.
 - g. Implement procedures that effectively address hazardous and non-hazardous spills.
 - h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require:
 - i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly.

- ii. Appropriate spill response personnel are assigned and trained.
 - i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.
3. Risk Level 2 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:
 - a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.
 - b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.
 - c. Clean leaks immediately and disposing of leaked materials properly.
4. Risk Level 2 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:
 - a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.
 - b. Contain all fertilizers and other landscape materials when they are not actively being used.
 - c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.
 - d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.
 - e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.
5. Risk Level 2 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 2 dischargers shall do the following:

- a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.
 - b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.
 - c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.
 - d. Ensure retention of sampling, visual observation, and inspection records.
 - e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.
6. Risk Level 2 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.
7. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall document all housekeeping BMPs in the SWPPP and REAP(s) in accordance with the nature and phase of the construction project. Construction phases at traditional land development projects include Grading and Land Development Phase, Streets and Utilities, or Vertical Construction for traditional land development projects.

C. Non-Storm Water Management

1. Risk Level 2 dischargers shall implement measures to control all non-storm water discharges during construction.
2. Risk Level 2 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 2 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 2 dischargers shall implement effective wind erosion control.
2. Risk Level 2 dischargers shall provide effective soil cover for inactive¹ areas and all finished slopes, open space, utility backfill, and completed lots.
3. Risk Level 2 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 2 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.
2. On sites where sediment basins are to be used, Risk Level 2 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.
3. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active² construction.
4. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths³ in accordance with Table 1.

¹ Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.

² Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage.

³ Sheet flow length is the length that shallow, low velocity flow travels across a site.

Table 1 - Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet flow length not to exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

5. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.
6. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.
7. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall inspect on a daily basis all immediate access roads daily. At a minimum daily (when necessary) and prior to any rain event, the discharger shall remove any sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

F. Run-on and Run-off Controls

Risk Level 2 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 2 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee appropriately trained to do the task(s).
2. Risk Level 2 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 2 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.
4. For each inspection required, Risk Level 2 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.
5. Risk Level 2 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:
 - a. Inspection date and date the inspection report was written.
 - b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.
 - c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.
 - d. A description of any BMPs evaluated and any deficiencies noted.
 - e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.
 - f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.
 - g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.
 - h. Photographs taken during the inspection, if any.
 - i. Inspector's name, title, and signature.

H. Rain Event Action Plan

1. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop a Rain Event Action Plan (REAP) 48 hours prior to any

likely precipitation event. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The discharger shall ensure a QSP obtain a printed copy of precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at <http://www.srh.noaa.gov/forecast>).

2. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop the REAPs for all phases of construction (i.e., Grading and Land Development, Streets and Utilities, Vertical Construction, Final Landscaping and Site Stabilization).
3. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP ensure that the REAP include, at a minimum, the following site information:
 - a. Site Address
 - b. Calculated Risk Level (2 or 3)
 - c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number
 - d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number
 - e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number
4. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP include in the REAP, at a minimum, the following project phase information:
 - a. Activities associated with each construction phase
 - b. Trades active on the construction site during each construction phase
 - c. Trade contractor information
 - d. Suggested actions for each project phase
5. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop additional REAPs for project sites where construction activities are indefinitely halted or postponed (Inactive Construction). At a minimum, Inactive Construction REAPs must include:
 - a. Site Address
 - b. Calculated Risk Level (2 or 3)
 - c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number

- d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number
 - e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number
 - f. Trades active on site during Inactive Construction
 - g. Trade contractor information
 - h. Suggested actions for inactive construction sites
6. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP begin implementation and make the REAP available onsite no later than 24 hours prior to the likely precipitation event.
7. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP maintain onsite a paper copy of each REAP onsite in compliance with the record retention requirements of the Special Provisions in this General Permit.

I. Risk Level 2 Monitoring and Reporting Requirements

Table 2- Summary of Monitoring Requirements

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-storm Water Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
2	X	X	X	X	X	X	

1. Construction Site Monitoring Program Requirements

- a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.
- b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Program to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.
- c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. Objectives

The CSMP shall be developed and implemented to address the following objectives:

- a. To demonstrate that the site is in compliance with the Discharge Prohibitions and applicable Numeric Action Levels (NALs).

- b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.
 - c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.
 - d. To determine whether BMPs included in the SWPPP/Rain Event Action Plan (REAP) are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.
- 3. Risk Level 2 – Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**
- a. Risk Level 2 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.
 - b. Risk Level 2 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.
 - c. Risk Level 2 dischargers shall conduct visual observations (inspections) during business hours only.
 - d. Risk Level 2 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.
 - e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 2 dischargers shall visually observe (inspect):
 - i. all storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.
 - ii. all BMPs to identify whether they have been properly implemented in accordance with the SWPPP/REAP. If needed, the discharger shall implement appropriate corrective actions.

- iii. any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.
- f. For the visual observations (inspections) described in c.i and c.iii above, Risk Level 2 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.
- g. Within two business days (48 hours) after each qualifying rain event, Risk Level 2 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.
- h. Risk Level 2 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. Risk Level 2 – Water Quality Sampling and Analysis

- a. Risk Level 2 dischargers shall collect storm water grab samples from sampling locations, as defined in Section I.5. The storm water grab sample(s) obtained shall be representative of the flow and characteristics of the discharge.
- b. At minimum, Risk Level 2 dischargers shall collect 3 samples per day of the qualifying event.
- c. Risk Level 2 dischargers shall ensure that the grab samples collected of stored or contained storm water are from discharges subsequent to a qualifying rain event (producing precipitation of $\frac{1}{2}$ inch or more at the time of discharge).

Storm Water Effluent Monitoring Requirements

- d. Risk Level 2 dischargers shall analyze their effluent samples for:
 - i. pH and turbidity.
 - ii. Any additional parameters for which monitoring is required by the Regional Water Board.

5. Risk Level 2 – Storm Water Discharge Water Quality Sampling Locations

Effluent Sampling Locations

- a. Risk Level 2 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.
- b. Risk Level 2 dischargers shall collect effluent samples at all discharge points where storm water is discharged off-site.
- c. Risk Level 2 dischargers shall ensure that storm water discharge collected and observed represent⁴ the effluent in each drainage area based on visual observation of the water and upstream conditions.
- d. Risk Level 2 dischargers shall monitor and report site run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.
- e. Risk Level 2 dischargers who deploy an ATS on their site, or a portion on their site, shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.
- f. Risk Level 2 dischargers shall select analytical test methods from the list provided in Table 3 below.
- g. All storm water sample collection preservation and handling shall be conducted in accordance with Section I.7 “Storm Water Sample Collection and Handling Instructions” below.

6. Risk Level 2 – Visual Observation and Sample Collection Exemptions

- a. Risk Level 2 dischargers shall be prepared to collect samples and conduct visual observation (inspections) until the minimum requirements of Sections I.3 and I.4 above are completed. Risk Level 2 dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

⁴ For example, if there has been concrete work recently in an area, or drywall scrap is exposed to the rain, a pH sample shall be taken of drainage from the relevant work area. Similarly, if sediment laden water is flowing through some parts of a silt fence, samples shall be taken of the sediment-laden water even if most water flowing through the fence is clear.

- i. During dangerous weather conditions such as flooding and electrical storms.
 - ii. Outside of scheduled site business hours.
- b. If no required samples or visual observation (inspections) are collected due to these exceptions, Risk Level 2 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the sampling or visual observation (inspections) were not conducted.
- 7. Risk Level 2 – Storm Water Sample Collection and Handling Instructions**

- a. Risk Level 2 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.
- b. Risk Level 2 dischargers shall ensure that testing laboratories will receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory), and shall use only the sample containers provided by the laboratory to collect and store samples.
- c. Risk Level 2 dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP).⁵

8. Risk Level 2 – Monitoring Methods

- a. Risk Level 2 dischargers shall include a description of the following items in the CSMP:
 - i. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.
 - ii. Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program

⁵ Additional information regarding SWAMP's QAPrP can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/.
QAPrP:http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/swamp_qapp_master090108a.pdf.

an example Chain of Custody form used when handling and shipping samples.

- iii. Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section I.4 above.
- b. Risk Level 2 dischargers shall ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. Risk Level 2 dischargers shall ensure that all laboratory analyses are conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services. Risk Level 2 dischargers shall conduct their own field analysis of pH and may conduct their own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

9. Risk Level 2 – Analytical Methods

- a. Risk Level 2 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.
- b. **pH:** Risk Level 2 dischargers shall perform pH analysis on-site with a calibrated pH meter or a pH test kit. Risk Level 2 dischargers shall record pH monitoring results on paper and retain these records in accordance with Section I.14, below.
- c. **Turbidity:** Risk Level 2 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results will be recorded in the site log book in Nephelometric Turbidity Units (NTU).

10. Risk Level 2 - Non-Storm Water Discharge Monitoring Requirements

- a. Visual Monitoring Requirements:
 - i. Risk Level 2 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.
 - ii. Risk Level 2 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).
 - iii. Risk Level 2 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 2 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.
- b. Effluent Sampling Locations:
 - i. Risk Level 2 dischargers shall sample effluent at all discharge points where non-storm water and/or authorized non-storm water is discharged off-site.
 - ii. Risk Level 2 dischargers shall send all non-storm water sample analyses to a laboratory certified for such analyses by the State Department of Health Services.
 - iii. Risk Level 2 dischargers shall monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

11. Risk Level 2 – Non-Visible Pollutant Monitoring Requirements

- a. Risk Level 2 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual

inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

- b. Risk Level 2 dischargers shall ensure that water samples are large enough to characterize the site conditions.
- c. Risk Level 2 dischargers shall collect samples at all discharge locations that can be safely accessed.
- d. Risk Level 2 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.
- e. Risk Level 2 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the presence of pollutants identified in the pollutant source assessment required (Risk Level 2 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).
- f. Risk Level 2 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.
- g. Risk Level 2 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.⁶
- h. Risk Level 2 dischargers shall keep all field /or analytical data in the SWPPP document.

12. Risk Level 2 – Watershed Monitoring Option

Risk Level 2 dischargers who are part of a qualified regional watershed-based monitoring program may be eligible for relief from the requirements in Sections I.5. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program by determining if the watershed-based monitoring program will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of this General Permit.

⁶ For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

13. Risk Level 2 – Particle Size Analysis for Project Risk Justification

Risk Level 2 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

14. Risk Level 2 – Records

Risk Level 2 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 2 dischargers shall retain all records on-site while construction is ongoing. These records include:

- a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.
- b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.
- c. The date and approximate time of analyses.
- d. The individual(s) who performed the analyses.
- e. A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and the chain of custody forms.
- f. Rain gauge readings from site inspections;
- g. Quality assurance/quality control records and results.
- h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.10 above).
- i. Visual observation and sample collection exception records (see Section I.6 above).
- j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

15. Risk Level 2 – NAL Exceedance Report

- a. In the event that any effluent sample exceeds an applicable NAL, Risk Level 2 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event. The Regional Boards have the authority to require the submittal of an NAL Exceedance Report.
- b. Risk Level 2 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.
- c. Risk Level 2 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the annual report is filed.
- d. Risk Level 2 dischargers shall include in the NAL Exceedance Report:
 - i. The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”).
 - ii. The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.
 - iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

Table 3 – Risk Level 2 Test Methods, Detection Limits, Reporting Units and Applicable NALs/NELs

Parameter	Test Method / Protocol	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Level
pH	Field test with calibrated portable instrument	Risk Level 2 Discharges	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 2 Discharges other than ATS	1	NTU	250 NTU
		For ATS discharges	1	NTU	N/A

ATTACHMENT E RISK LEVEL 3 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 3 dischargers shall comply with the narrative effluent standards listed below:
 - a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
 - b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.
2. Numeric – Risk Level 3 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

B. Good Site Management "Housekeeping"

1. Risk Level 3 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 3 dischargers shall implement the following good housekeeping measures:
 - a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
 - b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

- c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).
 - d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
 - e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.
2. Risk Level 3 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:
- a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.
 - b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.
 - c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.
 - d. Cover waste disposal containers at the end of every business day and during a rain event.
 - e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.
 - f. Contain and securely protecting stockpiled waste material from wind and rain at all times unless actively being used.
 - g. Implement procedures that effectively address hazardous and non-hazardous spills.
 - h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:
 - i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

- ii. Appropriate spill response personnel are assigned and trained.
 - i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.
3. Risk Level 3 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:
- a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.
 - b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.
 - c. Clean leaks immediately and disposing of leaked materials properly.
4. Risk Level 3 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:
- a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.
 - b. Contain fertilizers and other landscape materials when they are not actively being used.
 - c. Discontinuing the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.
 - d. Applying erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.
 - e. Stacking erodible landscape material on pallets and covering or storing such materials when not being used or applied.
5. Risk Level 3 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 3 dischargers shall do the following:

- a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.
 - b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.
 - c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.
 - d. Ensure retention of sampling, visual observation, and inspection records.
 - e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.
6. Risk Level 3 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.
 7. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall document all housekeeping BMPs in the SWPPP and REAP(s) in accordance with the nature and phase of the construction project. Construction phases at traditional land development projects include Grading and Land Development Phase, Streets and Utilities, or Vertical Construction for traditional land development projects.

C. Non-Storm Water Management

1. Risk Level 3 dischargers shall implement measures to control all non-storm water discharges during construction.
2. Risk Level 3 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 3 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 3 dischargers shall implement effective wind erosion control.
2. Risk Level 3 dischargers shall provide effective soil cover for inactive¹ areas and all finished slopes, open space, utility backfill, and completed lots.
3. Dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 3 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.
2. On sites where sediment basins are to be used, Risk Level 3 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.
3. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active² construction.
4. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths³ in accordance with Table 1.

¹ Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.

² Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage

³ Sheet flow length is the length that shallow, low velocity flow travels across a site.

Table 1 - Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet flow length not to exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

5. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.
6. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.
7. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall inspect on a daily basis all immediate access roads daily. At a minimum daily (when necessary) and prior to any rain event, the discharger shall remove any sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).
8. **Additional Risk Level 3 Requirement:** The Regional Water Board may require Risk Level 3 dischargers to implement additional site-specific sediment control requirements if the implementation of the other requirements in this section are not adequately protecting the receiving waters.

F. Run-on and Run-off Controls

Risk Level 3 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 3 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee appropriately trained to do the task(s).

2. Risk Level 3 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.
3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 3 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.
4. For each inspection required, Risk Level 3 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.
5. Risk Level 3 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:
 - a. Inspection date and date the inspection report was written.
 - b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.
 - c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.
 - d. A description of any BMPs evaluated and any deficiencies noted.
 - e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.
 - f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.
 - g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.
 - h. Photographs taken during the inspection, if any.

- i. Inspector's name, title, and signature.

H. Rain Event Action Plan

1. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP develop a Rain Event Action Plan (REAP) 48 hours prior to any likely precipitation event. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The QSP shall obtain a printed copy of precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at <http://www.srh.noaa.gov/forecast>).
2. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP develop the REAPs for all phases of construction (i.e., Grading and Land Development, Streets and Utilities, Vertical Construction, Final Landscaping and Site Stabilization).
3. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP ensure that the REAP include, at a minimum, the following site information:
 - a. Site Address.
 - b. Calculated Risk Level (2 or 3).
 - c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number.
 - d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number.
 - e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number.
4. **Additional Risk Level 3 Requirement:** The QSP shall include in the REAP, at a minimum, the following project phase information:
 - a. Activities associated with each construction phase.
 - b. Trades active on the construction site during each construction phase.
 - c. Trade contractor information.
 - d. Suggested actions for each project phase.
5. **Additional Risk Level 3 Requirement:** The QSP shall develop additional REAPs for project sites where construction activities are indefinitely halted or postponed (Inactive Construction). At a minimum, Inactive Construction REAPs must include:

- a. Site Address.
 - b. Calculated Risk Level (2 or 3).
 - c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number.
 - d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number.
 - e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number.
 - f. Trades active on site during Inactive Construction.
 - g. Trade contractor information.
 - h. Suggested actions for inactive construction sites.
6. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP begin implementation and make the REAP available onsite no later than 24 hours prior to the likely precipitation event.
7. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP maintain onsite a paper copy of each REAP onsite in compliance with the record retention requirements of the Special Provisions in this General Permit.

I. Risk Level 3 Monitoring and Reporting Requirements

Table 2- Summary of Monitoring Requirements

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-storm Water Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
3	X	X	X	X	X	X	X⁴

1. Construction Site Monitoring Program Requirements

- a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.
- b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Program to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Program in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.
- c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. Objectives

The CSMP shall be developed and implemented to address the following objectives:

⁴ When receiving water monitoring trigger is exceeded

- a. To demonstrate that the site is in compliance with the Discharge Prohibitions and applicable Numeric Action Levels (NALs) of this General Permit.
 - b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.
 - c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.
 - d. To determine whether BMPs included in the SWPPP/Rain Event Action Plan (REAP) are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.
- 3. Risk Level 3 – Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**
- a. Risk Level 3 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.
 - b. Risk Level 3 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.
 - c. Risk Level 3 dischargers shall conduct visual observations (inspections) during business hours only.
 - d. Risk Level 3 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.
 - e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 3 dischargers shall visually observe (inspect):
 - i. all storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

- ii. all BMPs to identify whether they have been properly implemented in accordance with the SWPPP/REAP. If needed, the discharger shall implement appropriate corrective actions.
 - iii. any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.
- f. For the visual observations (inspections) described in c.i. and c.iii above, Risk Level 3 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.
 - g. Within two business days (48 hours) after each qualifying rain event, Risk Level 3 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.
 - h. Risk Level 3 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. Risk Level 3 – Water Quality Sampling and Analysis

- a. Risk Level 3 dischargers shall collect storm water grab samples from sampling locations, as defined in Section I.5. The storm water grab sample(s) obtained shall be representative of the flow and characteristics of the discharge.
- b. At minimum, Risk Level 3 dischargers shall collect 3 samples per day of the qualifying event.
- c. Risk Level 3 dischargers shall ensure that the grab samples collected of stored or contained storm water are from discharges subsequent to a qualifying rain event (producing precipitation of ½ inch or more at the time of discharge).

Storm Water Effluent Monitoring Requirements

- d. Risk Level 3 dischargers shall analyze their effluent samples for:
 - i. pH and turbidity.

- ii. Any additional parameters for which monitoring is required by the Regional Water Board.
- e. Risk 3 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event.

Receiving Water Monitoring Requirements

- f. In the event that a Risk Level 3 discharger's effluent exceeds the daily average receiving water monitoring trigger of 500 NTU turbidity or the daily average pH range 6.0-9.0 contained in this General Permit and has a direct discharge into receiving waters, the Risk Level 3 discharger shall subsequently sample receiving waters (RWs) for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit. If a Risk Level 3 discharger utilizing ATS with direct discharges into receiving waters discharges effluent that exceeds the NELs in this permit, the discharger shall subsequently sample RWs for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit.
- g. Risk Level 3 dischargers disturbing 30 acres or more of the landscape and with direct discharges into receiving waters shall conduct or participate in benthic macroinvertebrate bioassessment of RWs prior to commencement of construction activity (See Appendix 3).
- h. Risk Level 3 dischargers shall obtain RW samples in accordance with the Receiving Water sampling location section (Section I.5), below.

5. Risk Level 3 – Storm Water Discharge Water Quality Sampling Locations

Effluent Sampling Locations

- a. Risk Level 3 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.
- b. Risk Level 3 dischargers shall collect effluent samples at all discharge points where storm water is discharged off-site.

- c. Risk Level 3 dischargers shall ensure that storm water discharge collected and observed represent⁵ the effluent in each drainage area based on visual observation of the water and upstream conditions.
- d. Risk Level 3 dischargers shall monitor and report site run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.
- e. Risk Level 3 dischargers who deploy an ATS on their site, or a portion on their site, shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.
- f. Risk Level 3 dischargers shall select analytical test methods from the list provided in Table 3 below.
- g. All storm water sample collection preservation and handling shall be conducted in accordance with Section 1.7 “Storm Water Sample Collection and Handling Instructions” below.

Receiving Water Sampling Locations

- h. **Upstream/up-gradient RW samples:** Risk Level 3 dischargers shall obtain any required upstream/up-gradient receiving water samples from a representative and accessible location as close as possible and upstream from the effluent discharge point.
- i. **Downstream/down-gradient RW samples:** Risk Level 3 dischargers shall obtain any required downstream/down-gradient receiving water samples from a representative and accessible location as close as possible and downstream from the effluent discharge point.
- j. If two or more discharge locations discharge to the same receiving water, Risk Level 3 dischargers may sample the receiving water at a single upstream and downstream location.

⁵ For example, if there has been concrete work recently in an area, or drywall scrap is exposed to the rain, a pH sample shall be taken of drainage from the relevant work area. Similarly, if sediment-laden water is flowing through some parts of a silt fence, samples shall be taken of the sediment laden water even if most water flowing through the fence is clear.

6. Risk Level 3 – Visual Observation and Sample Collection Exemptions

- a. Risk Level 3 dischargers shall be prepared to collect samples and conduct visual observation (inspections) until the minimum requirements of Sections I.3 and I.4 above are completed. Risk Level 3 dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:
 - i. During dangerous weather conditions such as flooding and electrical storms.
 - ii. Outside of scheduled site business hours.
- b. If no required samples or visual observation (inspections) are collected due to these exceptions, Risk Level 3 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the sampling or visual observation (inspections) were not conducted.

7. Risk Level 3 – Storm Water Sample Collection and Handling Instructions

- a. Risk Level 3 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.
- b. Risk Level 3 dischargers shall ensure that testing laboratories will receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory), and shall use only the sample containers provided by the laboratory to collect and store samples.
- c. Risk Level 3 dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP).⁶

⁶ Additional information regarding SWAMP's QAPrP can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/.

QAPrP:http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/swamp_qapp_master090108a.pdf

8. Risk Level 3 – Monitoring Methods

- a. Risk Level 3 dischargers shall include a description of the following items in the CSMP:
 - i. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.
 - ii. Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program an example Chain of Custody form used when handling and shipping samples.
 - iii. Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section I.4 above.
- b. Risk Level 3 dischargers shall ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. Risk Level 3 dischargers shall ensure that all laboratory analyses are conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services (SSC exception). Risk Level 3 dischargers shall conduct their own field analysis of pH and may conduct their own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

9. Risk Level 3 – Analytical Methods

- a. Risk Level 3 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

- b. **pH:** Risk Level 3 dischargers shall perform pH analysis on-site with a calibrated pH meter or a pH test kit. Risk Level 3 dischargers shall record pH monitoring results on paper and retain these records in accordance with Section I.14, below.
- c. **Turbidity:** Risk Level 3 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results will be recorded in the site log book in Nephelometric Turbidity Units (NTU).
- d. **Suspended sediment concentration (SSC):** Risk Level 3 dischargers that exceed the turbidity Receiving Water Monitoring Trigger shall perform SSC analysis using ASTM Method D3977-97.
- e. **Bioassessment:** Risk Level 3 dischargers shall perform bioassessment sampling and analysis according to Appendix 3 of this General Permit.

10. Risk Level 3 - Non-Storm Water Discharge Monitoring Requirements

- a. Visual Monitoring Requirements:
 - i. Risk Level 3 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.
 - ii. Risk Level 3 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).
 - iii. Risk Level 3 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 3 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to

reduce or prevent pollutants from contacting non-storm water discharges.

- b. Effluent Sampling Locations:
 - i. Risk Level 3 dischargers shall sample effluent at all discharge points where non-storm water and/or authorized non-storm water is discharged off-site.
 - ii. Risk Level 3 dischargers shall send all non-storm water sample analyses to a laboratory certified for such analyses by the State Department of Health Services.
 - iii. Risk Level 3 dischargers shall monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

11. Risk Level 3 – Non-Visible Pollutant Monitoring Requirements

- a. Risk Level 3 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.
- b. Risk Level 3 dischargers shall ensure that water samples are large enough to characterize the site conditions.
- c. Risk Level 3 dischargers shall collect samples at all discharge locations that can be safely accessed.
- d. Risk Level 3 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.
- e. Risk Level 3 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the presence of pollutants identified in the pollutant source assessment required (Risk Level 3 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).
- f. Risk Level 3 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

- g. Risk Level 3 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.⁷
- h. Risk Level 3 dischargers shall keep all field /or analytical data in the SWPPP document.

12. Risk Level 3 – Watershed Monitoring Option

Risk Level 3 dischargers who are part of a qualified regional watershed-based monitoring program may be eligible for relief from the requirements in Sections I.5. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program by determining if the watershed-based monitoring program will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of this General Permit.

13. Risk Level 3 – Particle Size Analysis for Project Risk Justification

Risk Level 3 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

14. Risk Level 3 – Records

Risk Level 3 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 3 dischargers shall retain all records on-site while construction is ongoing. These records include:

- a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.
- b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.
- c. The date and approximate time of analyses.

⁷ For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

- d. The individual(s) who performed the analyses.
- e. A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and the chain of custody forms.
- f. Rain gauge readings from site inspections.
- g. Quality assurance/quality control records and results.
- h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.10 above).
- i. Visual observation and sample collection exception records (see Section I.6 above).
- j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

15. Risk Level 3 – NAL Exceedance Report

- a. Risk Level 3 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event. The Regional Boards have the authority to require the submittal of an NAL Exceedance Report.
- b. Risk Level 3 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity In this General Permit.
- c. Risk Level 3 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the annual report is filed.
- d. Risk Level 3 dischargers shall include in the NAL Exceedance Report:
 - i. The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”).

- ii. The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.
- iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

16. Risk Level 3 – Bioassessment

- a. Risk Level 3 dischargers with a total project-related ground disturbance exceeding 30 acres shall:
 - i. Conduct bioassessment monitoring, as described in Appendix 3.
 - ii. Include the collection and reporting of specified in stream biological data and physical habitat.
 - iii. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California’s Surface Water Ambient Monitoring Program (SWAMP).⁸
 - b. Risk Level 3 dischargers qualifying for bioassessment, where construction commences out of an index period for the site location shall:
 - i. Receive Regional Board approval for the sampling exception.
 - ii. Conduct bioassessment monitoring, as described in Appendix 3.
 - iii. Include the collection and reporting of specified instream biological data and physical habitat.
 - iv. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California’s Surface Water Ambient Monitoring Program (SWAMP).
- OR
- v. Make a check payable to: Cal State Chico Foundation (SWAMP Bank Account) or San Jose State Foundation (SWAMP Bank Account) and include the WDID# on the check for the amount calculated for the exempted project.

⁸ http://www.waterboards.ca.gov/water_issues/programs/swamp/.

- vi. Send a copy of the check to the Regional Water Board office for the site's region.
- vii. Invest **\$7,500.00 X The number of samples required** into the SWAMP program as compensation (upon regional board approval).

Table 3 – Risk Level 3 Test Methods, Detection Limits, Reporting Units and Applicable NALs

Parameter	Test Method / Protocol	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Level	Numeric Effluent Limitation	Receiving Water Monitoring Trigger
pH	Field test with calibrated portable instrument	Risk Level 3 Discharges	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5	N/A	lower limit = 6.0 upper limit = 9.0
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 3 Discharges other than ATS	1	NTU	250 NTU	N/A	500 NTU
		For ATS discharges	1	NTU	N/A	10 NTU for Daily Weighted Average & 20 NTU for Any Single Sample	10 NTU for Daily Weighted Average & 20 NTU for Any Single Sample
SSC	ASTM Method D 3977-97 ⁹	Risk Level 3 (if Receiving Water Monitoring Trigger exceeded)	5	mg/L	N/A	N/A	N/A
Bioassessment	(STE) Level I of (SAFIT), ¹⁰ fixed-count of 600 org/sample	Risk Level 3 projects > 30 acres	N/A	N/A	N/A	N/A	N/A

⁹ ASTM, 1999, Standard Test Method for Determining Sediment Concentration in Water Samples: American Society of Testing and Materials, D 3977-97, Vol. 11.02, pp. 389-394.

¹⁰ The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

ATTACHMENT F: Active Treatment System (ATS) Requirements

Table 1 – Numeric Effluent Limitations, Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level	Numeric Effluent Limitation
Turbidity	EPA 0180.1 and/or field test with a calibrated portable instrument	For ATS discharges	1	NTU	N/A	10 NTU for Daily Flow-Weighted Average & 20 NTU for Any Single Sample

A. Dischargers choosing to implement an Active Treatment System (ATS) on their site shall comply with all of the requirements in this Attachment.

B. The discharger shall maintain a paper copy of each ATS specification onsite in compliance with the record retention requirements in the Special Provisions of this General Permit.

C. ATS Design, Operation and Submittals

1. The ATS shall be designed and approved by a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Storm Water Quality (CPSWQ); a California registered civil engineer; or any other California registered engineer.
2. The discharger shall ensure that the ATS is designed in a manner to preclude the accidental discharge of settled floc¹ during floc pumping or related operations.
3. The discharger shall design outlets to dissipate energy from concentrated flows.
4. The discharger shall install and operate an ATS by assigning a lead person (or project manager) who has either a minimum of five years construction storm

¹ Floc is defined as a clump of solids formed by the chemical action in ATS systems.

water experience or who is a licensed contractors specifically holding a California Class A Contractors license.²

5. The discharger shall prepare an ATS Plan that combines the site-specific data and treatment system information required to safely and efficiently operate an ATS. The ATS Plan shall be electronically submitted to the State Water Board at least 14 days prior to the planned operation of the ATS and a paper copy shall be available onsite during ATS operation. At a minimum, the ATS Plan shall include:
 - a. ATS Operation and Maintenance Manual for All Equipment.
 - b. ATS Monitoring, Sampling & Reporting Plan, including Quality Assurance/Quality Control (QA/QC).
 - c. ATS Health and Safety Plan.
 - d. ATS Spill Prevention Plan.
6. The ATS shall be designed to capture and treat (within a 72-hour period) a volume equivalent to the runoff from a 10-year, 24-hour storm event using a watershed runoff coefficient of 1.0.

D. Treatment – Chemical Coagulation/Flocculation

1. Jar tests shall be conducted using water samples selected to represent typical site conditions and in accordance with ASTM D2035-08 (2003).
2. The discharger shall conduct, at minimum, six site-specific jar tests (per polymer with one test serving as a control) for each project to determine the proper polymer and dosage levels for their ATS.
3. Single field jar tests may also be conducted during a project if conditions warrant, for example if construction activities disturb changing types of soils, which consequently cause change in storm water and runoff characteristics.

E. Residual Chemical and Toxicity Requirements

1. The discharger shall utilize a residual chemical test method that has a method detection limit (MDL) of 10% or less than the maximum allowable threshold

² Business and Professions Code Division 3, Chapter 9, Article 4, Class A Contractor: A general engineering contractor is a contractor whose principal contracting business is in connection with fixed works requiring specialized engineering knowledge and skill. [<http://www.cslb.ca.gov/General-Information/library/licensing-classifications.asp>].

concentration³ (MATC) for the specific coagulant in use and for the most sensitive species of the chemical used.

2. The discharger shall utilize a residual chemical test method that produces a result within one hour of sampling.
3. The discharger shall have a California State certified laboratory validate the selected residual chemical test. Specifically the lab will review the test protocol, test parameters, and the detection limit of the coagulant. The discharger shall electronically submit this documentation as part of the ATS Plan.
4. If the discharger cannot utilize a residual chemical test method that meets the requirements above, the discharger shall operate the ATS in Batch Treatment⁴ mode.
5. A discharger planning to operate in Batch Treatment mode shall perform toxicity testing in accordance with the following:
 - a. The discharger shall initiate acute toxicity testing on effluent samples representing effluent from each batch prior to discharge⁵. All bioassays shall be sent to a laboratory certified by the Department of Health Services (DHS) Environmental Laboratory Accreditation Program (ELAP). The required field of testing number for Whole Effluent Toxicity (WET) testing is E113.⁶
 - b. Acute toxicity tests shall be conducted with the following species and protocols. The methods to be used in the acute toxicity testing shall be those outlined for a 96-hour acute test in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, USEPA-841-R-02-012" for Fathead minnow, *Pimephales promelas* (fathead minnow). Acute toxicity for *Oncorhynchus mykiss* (Rainbow Trout) may be used as a substitute for testing fathead minnows.
 - c. All toxicity tests shall meet quality assurance criteria and test acceptability criteria in the most recent versions of the EPA test method for WET testing.
 - d. The discharger shall electronically report all acute toxicity testing.

³ The Maximum Allowable Threshold Concentration (MATC) is the allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity testing conducted by an independent, third-party laboratory. A typical MATC would be:

The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

⁴ Batch Treatment mode is defined as holding or recirculating the treated water in a holding basin or tank(s) until treatment is complete or the basin or storage tank(s) is full.

⁵ This requirement only requires that the test be initiated prior to discharge.

⁶ http://www.dhs.ca.gov/ps/ls/elap/pdf/FOT_Desc.pdf.

F. Filtration

1. The ATS shall include a filtration step between the coagulant treatment train and the effluent discharge. This is commonly provided by sand, bag, or cartridge filters, which are sized to capture suspended material that might pass through the clarifier tanks.
2. Differential pressure measurements shall be taken to monitor filter loading and confirm that the final filter stage is functioning properly.

G. Residuals Management

1. Sediment shall be removed from the storage or treatment cells as necessary to ensure that the cells maintain their required water storage (i.e., volume) capability.
2. Handling and disposal of all solids generated during ATS operations shall be done in accordance with all local, state, and federal laws and regulations.

H. ATS Instrumentation

1. The ATS shall be equipped with instrumentation that automatically measures and records effluent water quality data and flow rate.
2. The minimum data recorded shall be consistent with the Monitoring and Reporting requirements below, and shall include:
 - a. Influent Turbidity
 - b. Effluent Turbidity
 - c. Influent pH
 - d. Effluent pH
 - e. Residual Chemical
 - f. Effluent Flow rate
 - g. Effluent Flow volume
3. Systems shall be equipped with a data recording system, such as data loggers or webserver-based systems, which records each measurement on a frequency no longer than once every 15 minutes.

4. Cumulative flow volume shall be recorded daily. The data recording system shall have the capacity to record a minimum of seven days continuous data.
5. Instrumentation systems shall be interfaced with system control to provide auto shutoff or recirculation in the event that effluent measurements exceed turbidity or pH.
6. The system shall also assure that upon system upset, power failure, or other catastrophic event, the ATS will default to a recirculation mode or safe shut down.
7. Instrumentation (flow meters, probes, valves, streaming current detectors, controlling computers, etc.) shall be installed and maintained per manufacturer's recommendations, which shall be included in the QA/QC plan.
8. The QA/QC plan shall also specify calibration procedures and frequencies, instrument method detection limit or sensitivity verification, laboratory duplicate procedures, and other pertinent procedures.
9. The instrumentation system shall include a method for controlling coagulant dose, to prevent potential overdosing. Available technologies include flow/turbidity proportional metering, periodic jar testing and metering pump adjustment, and ionic charge measurement controlling the metering pump.

I. ATS Effluent Discharge

1. ATS effluent shall comply with all provisions and prohibitions in this General Permit, specifically the NELs.
2. NELs for discharges from an ATS:
 - a. Turbidity of all ATS discharges shall be less than 10 NTU for daily flow-weighted average of all samples and 20 NTU for any single sample.
 - b. Residual Chemical shall be < 10% of MATC⁷ for the most sensitive species of the chemical used.

⁷ The Maximum Allowable Threshold Concentration (MATC) is the allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity testing conducted by an independent, third-party laboratory. The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

3. If an analytical effluent sampling result exceeds the turbidity NEL (as listed in Table 1), the discharger is in violation of this General Permit and shall electronically file the results in violation within 24-hours of obtaining the results.
4. If ATS effluent is authorized to discharge into a sanitary sewer system, the discharger shall comply with any pre-treatment requirements applicable for that system. The discharger shall include any specific criteria required by the municipality in the ATS Plan.
5. Compliance Storm Event:

Discharges of storm water from ATS shall comply with applicable NELs (above) unless the storm event causing the discharges is determined after the fact to be equal to or larger than the Compliance Storm Event (expressed in inches of rainfall). The Compliance Storm Event for ATS discharges is the 10 year, 24 hour storm, as determined using these maps:

<http://www.wrcc.dri.edu/pcpnfreq/nca10y24.gif>
<http://www.wrcc.dri.edu/pcpnfreq/sca10y24.gif>

This exemption is dependent on the submission of rain gauge data verifying the storm event is equal to or larger than the Compliance Storm.

J. Operation and Maintenance Plan

1. Each Project shall have a site-specific Operation and Maintenance (O&M) Manual covering the procedures required to install, operate and maintain the ATS.⁸
2. The O&M Manual shall only be used in conjunction with appropriate project-specific design specifications that describe the system configuration and operating parameters.
3. The O&M Manual shall have operating manuals for specific pumps, generators, control systems, and other equipment.

K. Sampling and Reporting Quality Assurance/ Quality Check (QA/QC) Plan

4. A project-specific QA/QC Plan shall be developed for each project. The QA/QC Plan shall include at a minimum:
 - a. Calibration – Calibration methods and frequencies for all system and field instruments shall be specified.

⁸ The manual is typically in a modular format covering generalized procedures for each component that is utilized in a particular system.

- b. Method Detection Limits (MDLs) – The methods for determining MDLs shall be specified for each residual coagulant measurement method. Acceptable minimum MDLs for each method, specific to individual coagulants, shall be specified.
- c. Laboratory Duplicates – Requirements for monthly laboratory duplicates for residual coagulant analysis shall be specified.

L. Personnel Training

- 1. Operators shall have training specific to using an ATS and liquid coagulants for storm water discharges in California.
- 2. The training shall be in the form of a formal class with a certificate and requirements for testing and certificate renewal.
- 3. Training shall include a minimum of eight hours classroom and 32 hours field training. The course shall cover the following topics:
 - a. Coagulation Basics –Chemistry and physical processes
 - b. ATS System Design and Operating Principles
 - c. ATS Control Systems
 - d. Coagulant Selection – Jar testing, dose determination, etc.
 - e. Aquatic Safety/Toxicity of Coagulants, proper handling and safety
 - f. Monitoring, Sampling, and Analysis
 - g. Reporting and Recordkeeping
 - h. Emergency Response

M. Active Treatment System (ATS) Monitoring Requirements

Any discharger who deploys an ATS on their site shall conduct the following:

- 1. Visual Monitoring
 - a. A designated responsible person shall be on site daily at all times during treatment operations.

- b. Daily on-site visual monitoring of the system for proper performance shall be conducted and recorded in the project data log.
 - i. The log shall include the name and phone number of the person responsible for system operation and monitoring.
 - ii. The log shall include documentation of the responsible person's training.

2. Operational and Compliance Monitoring

- a. Flow shall be continuously monitored and recorded at not greater than 15-minute intervals for total volume treated and discharged.
- b. Influent and effluent pH must be continuously monitored and recorded at not greater than 15-minute intervals.
- c. Influent and effluent turbidity (expressed in NTU) must be continuously monitored and recorded at not greater than 15-minute intervals.
- d. The type and amount of chemical used for pH adjustment, if any, shall be monitored and recorded.
- e. Dose rate of chemical used in the ATS system (expressed in mg/L) shall be monitored and reported 15-minutes after startup and every 8 hours of operation.
- f. Laboratory duplicates – monthly laboratory duplicates for residual coagulant analysis must be performed and records shall be maintained onsite.
- g. Effluent shall be monitored and recorded for residual chemical/additive levels.
- h. If a residual chemical/additive test does not exist and the ATS is operating in a batch treatment mode of operation refer to the toxicity monitoring requirements below.

3. Toxicity Monitoring

A discharger operating in batch treatment mode shall perform toxicity testing in accordance with the following:

- a. The discharger shall initiate acute toxicity testing on effluent samples representing effluent from each batch prior to discharge.⁹ All bioassays shall be sent to a laboratory certified by the Department of Health Services (DHS)

⁹ This requirement only requires that the test be initiated prior to discharge.

Environmental Laboratory Accreditation Program (ELAP). The required field of testing number for Whole Effluent Toxicity (WET) testing is E113.¹⁰

- b. Acute toxicity tests shall be conducted with the following species and protocols. The methods to be used in the acute toxicity testing shall be those outlined for a 96-hour acute test in “Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, USEPA-841-R-02-012” for Fathead minnow, *Pimephales promelas* or Rainbow trout *Oncorhynchus mykiss* may be used as a substitute for fathead minnow.
- c. All toxicity tests shall meet quality assurance criteria and test acceptability criteria in the most recent versions of the EPA test method for WET testing.¹¹

4. Reporting and Recordkeeping

At a minimum, every 30 days a LRP representing the discharger shall access the State Water Boards Storm Water Multi-Application and Report Tracking system (SMARTS) and electronically upload field data from the ATS. Records must be kept for three years after the project is completed .

5. Non-compliance Reporting

- a. Any indications of toxicity or other violations of water quality objectives shall be reported to the appropriate regulatory agency as required by this General Permit.
- b. Upon any measurements that exceed water quality standards, the system operator shall immediately notify his supervisor or other responsible parties, who shall notify the Regional Water Board.
- c. If any monitoring data exceeds any applicable NEL in this General Permit, the discharger shall electronically submit a NEL Violation Report to the State Water Board within 24 hours after the NEL exceedance has been identified.
 - i. ATS dischargers shall certify each NEL Violation Report in accordance with the Special Provisions for Construction Activity in this General Permit.
 - ii. ATS dischargers shall retain an electronic or paper copy of each NEL Violation Report for a minimum of three years after the date the annual report is filed.
 - iii. ATS dischargers shall include in the NEL Violation Report:

¹⁰ http://www.dhs.ca.gov/ps/ls/elap/pdf/FOT_Desc.pdf.

¹¹ <http://www.epa.gov/waterscience/methods/wet/>.

- (1) The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”);
 - (2) The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation; and
 - (3) A description of the current onsite BMPs, and the proposed corrective actions taken to manage the NEL exceedance.
- iv. Compliance Storm Exemption - In the event that an applicable NEL has been exceeded during a storm event equal to or larger than the Compliance Storm Event, ATS dischargers shall report the on-site rain gauge reading and nearby governmental rain gauge readings for verification.

	A	B	C
1	Sediment Risk Factor Worksheet		Entry
2	A) R Factor		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
5		R Factor Value	0
6	B) K Factor (weighted average, by area, for all site soils)		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.		
8	Site-specific K factor guidance		
9		K Factor Value	0
10	C) LS Factor (weighted average, by area, for all slopes)		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	LS Table		
13		LS Factor Value	0
14			
15	Watershed Erosion Estimate (=R_xK_xLS) in tons/acre		0
16	Site Sediment Risk Factor		Low
17	Low Sediment Risk: < 15 tons/acre		
18	Medium Sediment Risk: >=15 and <75 tons/acre		
19	High Sediment Risk: >= 75 tons/acre		
20			
21			
22			
23	GIS Map Method:		
24	1. The R factor for the project is calculated using the online calculator at:		
25	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
26			
27	2. The K and LS factors may be obtained by accessing the GIS maps located on the State Water Board FTP website at:		
28	ftp://swrcb2a.waterboards.ca.gov/pub/swrcb/dwq/cgp/Risk/		
29			

Receiving Water (RW) Risk Factor Worksheet	Entry	Score
A. Watershed Characteristics	yes/no	
A.1. Does the disturbed area discharge (either directly or indirectly) to a 303(d)-listed waterbody impaired by sediment (For help with impaired waterbodies please visit the link below) or has a USEPA approved TMDL implementation plan for sediment ? http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml	no	Low
OR		
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan)		
http://www.waterboards.ca.gov/waterboards_map.shtml		
Region 1 Basin Plan Region 2 Basin Plan Region 3 Basin Plan Region 4 Basin Plan Region 5 Basin Plan Region 6 Basin Plan Region 7 Basin Plan Region 8 Basin Plan Region 9 Basin Plan		

Combined Risk Level Matrix

		<u>Sediment Risk</u>		
		Low	Medium	High
<u>Receiving Water Risk</u>	Low	Level 1	Level 2	
	High	Level 2		Level 3

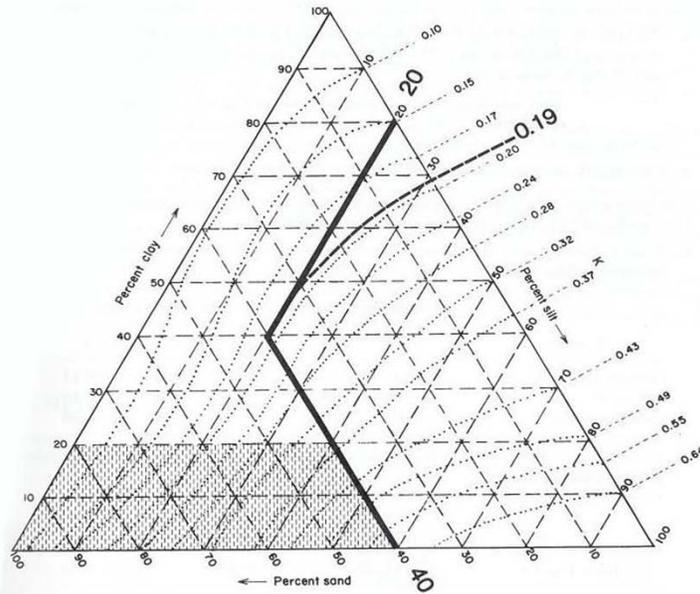
Project Sediment Risk: **Low**

Project RW Risk: **Low**

Project Combined Risk: **Level 1**

Soil Erodibility Factor (K)

The K factor can be determined by using the nomograph method, which requires that a particle size analysis (ASTM D-422) be done to determine the percentages of sand, very fine sand, silt and clay. Use the figure below to determine appropriate K value.



Erickson triangular nomograph used to estimate soil erodibility (K) factor.

The figure above is the USDA nomograph used to determine the K factor for a soil, based on its texture (% silt plus very fine sand, % sand, % organic matter, soil structure, and permeability). *Nomograph from Erickson 1977 as referenced in Goldman et. al., 1986.*

Sheet Flow Length (ft)	Average Watershed Slope (%)																		
	0.2	0.5	1.0	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0	25.0	30.0	40.0	50.0	60.0
<3	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.35	0.36	0.38	0.39	0.41	0.45	0.48	0.53	0.58	0.63
6	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.37	0.41	0.45	0.49	0.56	0.64	0.72	0.85	0.97	1.07
9	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.38	0.45	0.51	0.56	0.67	0.80	0.91	1.13	1.31	1.47
12	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.39	0.47	0.55	0.62	0.76	0.93	1.08	1.37	1.62	1.84
15	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.40	0.49	0.58	0.67	0.84	1.04	1.24	1.59	1.91	2.19
25	0.05	0.07	0.10	0.16	0.21	0.26	0.31	0.36	0.45	0.57	0.71	0.85	0.98	1.24	1.56	1.86	2.41	2.91	3.36
50	0.05	0.08	0.13	0.21	0.30	0.38	0.46	0.54	0.70	0.91	1.15	1.40	1.64	2.10	2.67	3.22	4.24	5.16	5.97
75	0.05	0.08	0.14	0.25	0.36	0.47	0.58	0.69	0.91	1.20	1.54	1.87	2.21	2.86	3.67	4.44	5.89	7.20	8.37
100	0.05	0.09	0.15	0.28	0.41	0.55	0.68	0.82	1.10	1.46	1.88	2.31	2.73	3.57	4.59	5.58	7.44	9.13	10.63
150	0.05	0.09	0.17	0.33	0.50	0.68	0.86	1.05	1.43	1.92	2.51	3.09	3.68	4.85	6.30	7.70	10.35	12.75	14.89
200	0.06	0.10	0.18	0.37	0.57	0.79	1.02	1.25	1.72	2.34	3.07	3.81	4.56	6.04	7.88	9.67	13.07	16.16	18.92
250	0.06	0.10	0.19	0.40	0.64	0.89	1.16	1.43	1.99	2.72	3.60	4.48	5.37	7.16	9.38	11.55	15.67	19.42	22.78
300	0.06	0.10	0.20	0.43	0.69	0.98	1.28	1.60	2.24	3.09	4.09	5.11	6.15	8.23	10.81	13.35	18.17	22.57	26.51
400	0.06	0.11	0.22	0.48	0.80	1.14	1.51	1.90	2.70	3.75	5.01	6.30	7.60	10.24	13.53	16.77	22.95	28.60	33.67
600	0.06	0.12	0.24	0.56	0.96	1.42	1.91	2.43	3.52	4.95	6.67	8.45	10.26	13.94	18.57	23.14	31.89	39.95	47.18
800	0.06	0.12	0.26	0.63	1.10	1.65	2.25	2.89	4.24	6.03	8.17	10.40	12.69	17.35	23.24	29.07	40.29	50.63	59.93
1000	0.06	0.13	0.27	0.69	1.23	1.86	2.55	3.30	4.91	7.02	9.57	12.23	14.96	20.57	27.66	34.71	48.29	60.84	72.15

LS Factors for Construction Sites. *Table from Renard et. al., 1997.*

APPENDIX 2: Post-Construction Water Balance Performance Standard Spreadsheet

The discharger shall submit with their Notice of Intent (NOI) the following information to demonstrate compliance with the New and Re-Development Water Balance Performance Standard.

Map Instructions

The discharger must submit a small-scale topographic map of the site to show the existing contour elevations, pre- and post-construction drainage divides, and the total length of stream in each watershed area. Recommended scales include 1 in. = 20 ft., 1 in. = 30 ft., 1 in. = 40 ft., or 1 in. = 50 ft. The suggested contour interval is usually 1 to 5 feet, depending upon the slope of the terrain. The contour interval may be increased on steep slopes. Other contour intervals and scales may be appropriate given the magnitude of land disturbance.

Spreadsheet Instructions

The intent of the spreadsheet is to help dischargers calculate the project-related increase in runoff volume and select impervious area and runoff reduction credits to reduce the project-related increase in runoff volume to pre-project levels.

The discharger has the option of using the spreadsheet (**Appendix 2.1**) or a more sophisticated, watershed process-based model (e.g. Storm Water Management Model, Hydrological Simulation Program Fortran) to determine the project-related increase in runoff volume.

In Appendix 4.1, you must complete the worksheet for each land use/soil type combination for each project sub-watershed.

Steps 1 through 9 pertain specifically to the Runoff Volume Calculator:

Step 1: Enter the county where the project is located in cell H3.

Step 2: Enter the soil type in cell H6.

Step 3: Enter the existing pervious (dominant) land use type in cell H7.

Step 4: Enter the proposed pervious (dominant) land use type in cell H8.

Step 5: Enter the total project site area in cell H11 or J11.

Step 6: Enter the sub-watershed area in cell H12 or J12.

- Step 7: Enter the existing rooftop area in cell H17 or J17, the existing non-rooftop impervious area in cell H18 or J18, the proposed rooftop area in cell H19 or J19, and the proposed non-rooftop impervious area in cell H20 or J20
- Step 8: Work through each of the impervious area reduction credits and claim credits where applicable. Volume that cannot be addressed using non-structural practices must be captured in structural practices and approved by the Regional Water Board.
- Step 9: Work through each of the impervious volume reduction credits and claim credits where applicable. Volume that cannot be addressed using non-structural practices must be captured in structural practices and approved by the Regional Water Board.

Non-structural Practices Available for Crediting

- ***Porous Pavement***
- ***Tree Planting***
- ***Downspout Disconnection***
- ***Impervious Area Disconnection***
- ***Green Roof***
- ***Stream Buffer***
- ***Vegetated Swales***
- ***Rain Barrels and Cisterns***
- ***Landscaping Soil Quality***

Post-Construction Water Balance Calculator

1	Post-Construction Water Balance Calculator													
2														
3	User may make changes from any cell that is orange or brown in color (similar to the cells to the immediate right). Cells in green are calculated for you.		(Step 1a) If you know the 85th percentile storm event for your location enter it in the box below		(Step 1b) If you can not answer 1a then select the county where the project is located (click on the cell to the right for drop-down): This will determine the average 85th percentile 24 hr. storm event for your site, which will appear under precipitation to left.		SACRAMENTO							
4			(Step 1c) If you would like a more precise value select the location closest to your site. If you do not recognize any of these locations, leave this drop-down menu at location. The average value for the County will be used.		SACRAMENTO FAA ARPT									
5	Project Information				Runoff Calculations									
6	Project Name:		Optional		(Step 2) Indicate the Soil Type (dropdown menu to right):		Group C Soils		Low infiltration. Sandy clay loam. Infiltration rate 0.05 to 0.15 inch/hr when wet.					
7	Waste Discharge Identification (WDID):		Optional		(Step 3) Indicate the existing dominant non-built land Use Type (dropdown menu to right):		Wood & Grass: <50% ground cover							
8	Date:		Optional		(Step 4) Indicate the proposed dominant non-built land Use Type (dropdown menu to right):		Lawn, Grass, or Pasture covering more than 75% of the open space							
9	Sub Drainage Area Name (from map):		Optional				Complete Either							
10	Runoff Curve Numbers						Sq Ft		Acres					
11	Existing Pervious Runoff Curve Number		82		(Step 5) Total Project Site Area:		5.00		5.00					
12	Proposed Development Pervious Runoff Curve Number		74		(Step 6) Sub-watershed Area:		5.00		5.00					
13	Design Storm				Percent of total project :		100%							
14	Based on the County you indicated above, we have included the 85 percentile average 24 hr event - P85 (in)^ for your area.		0.62		in									
15	The Amount of rainfall needed for runoff to occur (Existing runoff curve number -P from existing RCN (in)^)		0.44		in		(Step 7) Sub-watershed Conditions		Complete Either					
16	P used for calculations (in) (the greater of the above two criteria)		0.62		in		Sub-watershed Area (acres)		Calculated Acres					
17	^Available at www.cabmphandbooks.com				Existing Rooftop Impervious Coverage		0		0.00					
18					Existing Non-Rooftop Impervious Coverage		0		0.00					
19					Proposed Rooftop Impervious Coverage		0		0.00					
20					Proposed Non-Rooftop Impervious Coverage		0		0.00					
21					Credits		Acres		Square Feet					
22					Porous Pavement		0.00		0					
23					Tree Planting		0.00		0					
24														
25	Pre-Project Runoff Volume (cu ft)		247		Cu.Ft.		Downspout Disconnection		0.00					
26	Project-Related Runoff Volume Increase w/o credits (cu ft)		0		Cu.Ft.		Impervious Area Disconnection		0.00					
27							Green Roof		0.00					
28							Stream Buffer		0.00					
29							Vegetated Swales		0.00					
30	Project-Related Volume Increase with Credits (cu ft)		0		Cu.Ft.		Subtotal		0.00					
31							Subtotal Runoff Volume Reduction Credit		0 Cu. Ft.					
32	You have achieved your minimum requirements													
33							(Step 9) Impervious Volume Reduction Credits		Volume (cubic feet)					
34									Rain Barrels/Cisterns		0		Cu. Ft.	
35									Soil Quality		0		Cu. Ft.	
36									Subtotal Runoff Volume Reduction		0		Cu. Ft.	
37					Total Runoff Volume Reduction Credit		0		Cu. Ft.					
38														
39														

Porous Pavement Credit Worksheet

Please fill out a porous pavement credit worksheet for each project sub-watershed.

For the PROPOSED Development:

Proposed Porous Pavement	Runoff Reduction*	Fill in either Acres or SqFt		Equivalent Acres
		In SqFt.	In Acres	
Area of Brick without Grout on <u>less than 12 inches</u> of base with at least 20% void space over soil	0.45			0.00
Area of Brick without Grout on <u>more than 12 inches</u> of base with at least 20% void space over soil	0.90			0.00
Area of Cobbles <u>less than 12 inches</u> deep and over soil	0.30			0.00
Area of Cobbles <u>less than 12 inches</u> deep and over soil	0.60			0.00
Area of Reinforced Grass Pavement on <u>less than 12 inches</u> of base with at least 20% void space over soil	0.45			0.00
Area of Reinforced Grass Pavement on <u>at least 12 inches</u> of base with at least 20% void space over soil	0.90			0.00
Area of Porous Gravel Pavement on <u>less than 12 inches</u> of base with at least 20% void space over soil	0.38			0.00
Area of Porous Gravel Pavement on <u>at least 12 inches</u> of base with at least 20% void space over soil	0.75			0.00
Area of Poured Porous Concrete or Asphalt Pavement with <u>less than 4 inches</u> of gravel base (washed stone)	0.40			0.00
Area of Poured Porous Concrete or Asphalt Pavement with <u>4 to 8 inches</u> of gravel base (washed stone)	0.60			0.00
Area of Poured Porous Concrete or Asphalt Pavement with <u>8 to 12 inches</u> of gravel base (washed stone)	0.80			0.00
Area of Poured Porous Concrete or Asphalt Pavement with <u>12 or more</u> inches of gravel base (washed stone)	1.00			0.00

*=1-Rv**

[Return to Calculator](#)

**Using Site Design Techniques to meet Development Standards for Stormwater Quality (BASMAA 2003)
 **NCDENR Stormwater BMP Manual (2007)

Tree Planting Credit Worksheet

Please fill out a tree canopy credit worksheet for each project sub-watershed.

Tree Canopy Credit Criteria	Number of Trees Planted	Credit (acres)
Number of proposed evergreen trees to be planted (credit = number of trees x 0.005)*	0	0.00
Number of proposed deciduous trees to be planted (credit = number of trees x 0.0025)*		0.00
	Square feet Under Canopy	
Square feet under an existing tree canopy, that will remain on the property, with an average diameter at 4.5 ft above grade (i.e., diameter at breast height or DBH) is LESS than 12 in diameter.		0.00
Square feet under an existing tree canopy that will remain on the property, with an average diameter at 4.5 ft above grade (i.e., diameter at breast height or DBH) is 12 in diameter or GREATER.		0.00
Please describe below how the project will ensure that these trees will be maintained.		

0

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* credit amount based on credits from Stormwater Quality Design Manual for the Sacramento and South Placer Regions

Downspout Disconnection Credit Worksheet

Please fill out a downspout disconnection credit worksheet for each project subwatershed. If you answer yes to all questions, all rooftop area draining to each downspout will be subtracted from your proposed rooftop impervious coverage.

Downspout Disconnection Credit Criteria					
Do downspouts and any extensions extend at least six feet from a basement and two feet from a crawl space or concrete slab?				<input type="radio"/> Yes	<input checked="" type="radio"/> No
Is the area of rooftop connecting to each disconnected downspout 600 square feet or less?				<input type="radio"/> Yes	<input checked="" type="radio"/> No
Is the roof runoff from the design storm event fully contained in a raised bed or planter box or does it drain as sheet flow to a landscaped area large enough to contain the roof runoff from the design storm event?				<input type="radio"/> Yes	<input checked="" type="radio"/> No
The Stream Buffer and/or Vegetated Swale credits will not be taken in this sub-watershed area?				<input type="radio"/> Yes	<input checked="" type="radio"/> No
Percentage of existing	0.00	Acres	of rooftop surface has disconnected downspouts		
Percentage of the proposed	0.00	Acres	of rooftop surface has disconnected downspouts		
				50	
				Return to Calculator	

Impervious Area Disconnection Credit Worksheet

Please fill out an impervious area disconnection credit worksheet for each project sub-watershed. If you answer yes to all questions, all non-rooftop impervious surface area will be subtracted from your proposed non-rooftop impervious coverage.

Non-Rooftop Disconnection Credit Criteria	Response
Is the maximum contributing impervious flow path length less than 75 feet or, if equal or greater than 75 feet, is a storage device (e.g. French drain, bioretention area, gravel trench) implemented to achieve the required disconnection length?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Is the impervious area to any one discharge location less than 5,000 square feet?	<input checked="" type="radio"/> Yes <input type="radio"/> No
The Stream Buffer credit will not be taken in this sub-watershed area?	<input checked="" type="radio"/> Yes <input type="radio"/> No

Percentage of existing	0.00	Acres non-rooftop surface area disconnected	
Percentage of the proposed	0.00	Acres non-rooftop surface area disconnected	70

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Stream Buffer Credit Worksheet

Please fill out a stream buffer credit worksheet for each project sub-watershed. If you answer yes to all questions, you may subtract all impervious surface draining to each stream buffer that has not been addressed using the Downspout and/or Impervious Area Disconnection credits.

Stream Buffer Credit Criteria				Response
Does runoff enter the floodprone width* or within 500 feet (whichever is larger) of a stream channel as sheet flow**?				<input type="radio"/> Yes <input checked="" type="radio"/> No
Is the contributing overland slope 5% or less, or if greater than 5%, is a level spreader used?				<input type="radio"/> Yes <input checked="" type="radio"/> No
Is the buffer area protected from vehicle or other traffic barriers to reduce compaction?				<input type="radio"/> Yes <input checked="" type="radio"/> No
Will the stream buffer be maintained in an ungraded and uncompacted condition and will the vegetation be maintained in a natural condition?				<input type="radio"/> Yes <input checked="" type="radio"/> No
Percentage of existing	0.00	Acres	impervious surface area draining into a stream buffer:	
Percentage of the proposed	0.00	Acres	impervious surface area that will drain into a stream buffer:	
Please describe below how the project will ensure that the buffer areas will remain in ungraded and uncompacted condition and that the vegetation will be maintained in a natural condition.				

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* floodprone width is the width at twice the bankfull depth.

** the maximum contributing length shall be 75 feet for impervious area

Vegetated Swale Credit Worksheet

Please fill out a vegetated swale worksheet for each project subwatershed. If you answer yes to all questions, you may subtract all impervious surface draining to each stream buffer that has not been addressed using the Downspout Disconnection credit.

Vegetated Swale Credit Criteria

Have all vegetated swales been designed in accordance with Treatment Control BMP 30 (TC-30 - Vegetated Swale) from the California Stormwater BMP Handbook, New Development and Redevelopment (available at www.cabmphandbooks.com)?

<input type="radio"/> Yes <input checked="" type="radio"/> No

Is the maximum flow velocity for runoff from the design storm event less than or equal to 1.0 foot per second?

<input type="radio"/> Yes <input checked="" type="radio"/> No

Percentage of existing	0.00	Acres of impervious area draining to a vegetated swale	
Percentage of the proposed	0.00	Acres of impervious area draining to a vegetated swale	

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Rain Barrel/Cistern Credit Worksheet

Please fill out a rain barrel/cistern worksheet for each project sub-watershed.

Rain Barrel/Cistern Credit Criteria	Response
Total number of rain barrel(s)/cisterns	
Average capacity of rain barrel(s)/cistern(s) (in gallons)	
Total capacity rain barrel(s)/cistern(s) (in cu ft) ¹	0

¹ accounts for 10% loss

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Please fill out a soil quality worksheet for each project sub-watershed.

	Response
Will the landscaped area be lined with an impervious membrane?	
Will the soils used for landscaping meet the ideal bulk densities listed in Table 1 below? ¹	<input type="radio"/> Yes <input checked="" type="radio"/> No
If you answered yes to the question above, and you know the area-weighted bulk density within the top 12 inches for soils used for landscaping (in g/cm ³)*, fill in the cell to the right and skip to cell G11. If not select from the drop-down menu in G10.	1.3
If you answered yes to the question above, but you do not know the exact bulk density, which of the soil types in the drop down menu to the right best describes the top 12 inches for soils used for landscaping (in g/cm ³).	Sandy loams, loams
What is the average depth of your landscaped soil media meeting the above criteria (inches)?	12
What is the total area of the landscaped areas meeting the above criteria (in acres)?	2.97

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Table 1

Sands, loamy sands	<1.6
Sandy loams, loams	<1.4
Sandy clay loams, loams, clay loams	<1.4
Silts, silt loams	<1.3
Silt loams, silty clay loams	<1.1
Sandy clays, silty clays, some clay loams (35-45% clay)	<1.1
Clays (>45% clay)	<1.1

Porosity (%) 50.94%

Mineral grains in many soils are mainly quartz and feldspar, so 2.65 a good average for particle density. To determine percent porosity, use the formula: Porosity (%) = (1-Bulk Density/2.65) X 100

¹ USDA NRCS. "Soil Quality Urban Technical Note No.2-Urban Soil Compaction". March 2000.

http://soils.usda.gov/sqi/management/files/sq_utn_2.pdf

* To determine how to calculate density see:

<http://www.globe.gov/tctg/bulkden.pdf?sectionID=94>

APPENDIX 3

Bioassessment Monitoring Guidelines

Bioassessment monitoring is required for projects that meet all of the following criteria:

1. The project is rated Risk Level 3 or LUP Type 3
2. The project directly discharges runoff to a freshwater wadeable stream (or streams) that is either: (a) listed by the State Water Board or USEPA as impaired due to sediment, and/or (b) tributary to any downstream water body that is listed for sediment; and/or have the beneficial use SPAWN & COLD & MIGRATORY
3. Total project-related ground disturbance exceeds 30 acres.

For all such projects, the discharger shall conduct bioassessment monitoring, as described in this section, to assess the effect of the project on the biological integrity of receiving waters.

Bioassessment shall include:

1. The collection and reporting of specified instream biological data
2. The collection and reporting of specified instream physical habitat data

Bioassessment Exception

If a site qualifies for bioassessment, but construction commences out of an index period for the site location, the discharger shall:

1. Receive Regional Water Board approval for the sampling exception
2. Make a check payable to: Cal State Chico Foundation (SWAMP Bank Account) or San Jose State Foundation (SWAMP Bank Account) and include the WDID# on the check for the amount calculated for the exempted project.
3. Send a copy of the check to the Regional Water Board office for the site's region
4. Invest **7,500.00 X The number of samples required** into the SWAMP program as compensation (upon Regional Water Board approval).
5. Conduct bioassessment monitoring, as described in Appendix 4
6. Include the collection and reporting of specified instream biological data and physical habitat
7. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California's Surface Water Ambient Monitoring Program (SWAMP)

Site Locations and Frequency

Macroinvertebrate samples shall be collected both before ground disturbance is initiated and after the project is completed. The "after" sample(s) shall be collected after at least one winter season resulting in surface runoff has transpired after project-related ground disturbance has ceased. "Before" and "after" samples shall be collected both upstream and downstream of the project's

discharge. Upstream samples should be taken immediately before the sites outfall and downstream samples should be taken immediately after the outfall (when safe to collect the samples). Samples should be collected for each freshwater wadeable stream that is listed as impaired due to sediment, or tributary to a water body that is listed for sediment. Habitat assessment data shall be collected concurrently with all required macroinvertebrate samples.

Index Period (Timing of Sample Collection)

Macroinvertebrate sampling shall be conducted during the time of year (i.e., the “index period”) most appropriate for bioassessment sampling, depending on ecoregion. This map is posted on the State Water Board’s Website: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml

Field Methods for Macroinvertebrate Collections

In collecting macroinvertebrate samples, the discharger shall use the “Reachwide Benthos (Multi-habitat) Procedure” specified in *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California* (Ode 2007).¹

Physical - Habitat Assessment Methods

The discharger shall conduct, concurrently with all required macroinvertebrate collections, the “Full” suite of physical habitat characterization measurements as specified in *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California* (Ode 2007), and as summarized in the Surface Water Ambient Monitoring Program’s *Stream Habitat Characterization Form — Full Version*.

Laboratory Methods

Macroinvertebrates shall be identified and classified according to the Standard Taxonomic Effort (STE) Level I of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT),² and using a fixed-count of 600 organisms per sample.

Quality Assurance

The discharger or its consultant(s) shall have and follow a quality assurance (QA) plan that covers the required bioassessment monitoring. The QA plan shall include, or be supplemented to include, a specific requirement for external QA checks (i.e., verification of taxonomic identifications and correction of data where

¹ This document is available on the Internet at: http://www.swrcb.ca.gov/swamp/docs/phab_sopr6.pdf.
http://swamp.mpsl.mml.calstate.edu/wp-content/uploads/2009/04/swamp_sop_bioassessment_collection_020107.pdf.

² The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf
http://www.safit.org/Docs/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board’s SWAMP website.

errors are identified). External QA checks shall be performed on one of the discharger's macroinvertebrate samples collected per calendar year, or ten percent of the samples per year (whichever is greater). QA samples shall be randomly selected. The external QA checks shall be paid for by the discharger, and performed by the California Department of Fish and Game's Aquatic Bioassessment Laboratory. An alternate laboratory with equivalent or better expertise and performance may be used if approved in writing by State Water Board staff.

Sample Preservation and Archiving

The original sample material shall be stored in 70 percent ethanol and retained by the discharger until: 1) all QA analyses specified herein and in the relevant QA plan are completed; and 2) any data corrections and/or re-analyses recommended by the external QA laboratory have been implemented. The remaining subsampled material shall be stored in 70 percent ethanol and retained until completeness checks have been performed according to the relevant QA plan. The identified organisms shall be stored in 70 percent ethanol, in separate glass vials for each final ID taxon. (For example, a sample with 45 identified taxa would be archived in a minimum of 45 vials, each containing all individuals of the identified taxon.) Each of the vials containing identified organisms shall be labeled with taxonomic information (i.e., taxon name, organism count) and collection information (i.e., site name/site code, waterbody name, date collected, method of collection). The identified organisms shall be archived (i.e., retained) by the discharger for a period of not less than three years from the date that all QA steps are completed, and shall be checked at least once per year and "topped off" with ethanol to prevent desiccation. The identified organisms shall be relinquished to the State Water Board upon request by any State Water Board staff.

Data Submittal

The macroinvertebrate results (i.e., taxonomic identifications consistent with the specified SAFIT STEs, and number of organisms within each taxa) shall be submitted to the State Water Board in electronic format. The State Water Board's Surface Water Ambient Monitoring Program (SWAMP) is currently developing standardized formats for reporting bioassessment data. All bioassessment data collected after those formats become available shall be submitted using the SWAMP formats. Until those formats are available, the biological data shall be submitted in MS-Excel (or equivalent) format.³

The physical/habitat data shall be reported using the standard format titled *SWAMP Stream Habitat Characterization Form — Full Version*.⁴

³ Any version of Excel, 2000 or later, may be used.

⁴ Available at:

http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf

Invasive Species Prevention

In conducting the required bioassessment monitoring, the discharger and its consultants shall take precautions to prevent the introduction or spread of aquatic invasive species. At minimum, the discharger and its consultants shall follow the recommendations of the California Department of Fish and Game to minimize the introduction or spread of the New Zealand mudsnail.⁵

⁵ Instructions for controlling the spread of NZ mudsnails, including decontamination methods, can be found at: <http://www.dfg.ca.gov/invasives/mudsnail/>
More information on AIS More information on AIS
http://www.waterboards.ca.gov/water_issues/programs/swamp/ais/

Appendix 4 Non Sediment TMDLs

Region 1 Lost River-DIN and CBOD

Region 1 Source: Cal Trans Construction TMDL Completion Date: 12 30 2008 TMDL Type: River, Lake Watershed Area= 2996 mi ²	Pollutant Stressors/WLA	
	Dissolved inorganic nitrogen (DIN) (metric tons/yr)	Carbonaceous biochemical oxygen demand (CBOD) (metric tons/yr)
Lost River from the Oregon border to Tule Lake	.1	.2
Tule Lake Refuge	.1	.2
Lower Klamath Refuge	.1	.2

Region 2 San Francisco Bay-Mercury

Region 2 Source: Non-Urban Stormwater Runoff TMDL Type: Bay	Name	Pollutant Stressor/WLA	TMDL Completion Date
	San Francisco Bay	Mercury 25 kg/year	08 09 2006

Region 4 Ballona Creek-Metals and Selenium

Region 4 Source: NPDES General Construction TMDL Completion Date: 12 22 2005 TMDL Type: Creek	Pollutant Stressors/WLA							
	Copper (Cu)		Lead (Pb)		Selenium (Se)		Zinc (Zn)	
	g/day	g/day/acre	g/day	g/day/acre	g/day	g/day/acre	g/day	g/day/acre
Ballona Creek	4.94E-07 x Daily storm volume (L)	2.20E-10 x Daily storm volume (L)	1.62E-06 x Daily storm volume (L)	7.20E-10 x Daily storm volume (L)	1.37E-07 x Daily storm volume (L)	6.10E-11 x Daily storm volume (L)	3.27E-06 x Daily storm volume (L)	1.45E-09 x Daily storm volume (L)

General Construction Storm Water Permits:

Waste load allocations will be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board.

- Dry-weather Implementation Non-storm water flows authorized by the General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order No. 99-08 DWQ), or any successor order, are exempt from the dry-weather waste load allocation equal to zero as long as they comply with the provisions of sections C.3 and A.9 of the Order No. 99-08 DWQ, which state that these authorized non-storm discharges shall be:
 - (1) infeasible to eliminate
 - (2) comply with BMPs as described in the Storm Water Pollution Prevention Plan prepared by the permittee, and
 - (3) not cause or contribute to a violation of water quality standards, or comparable provisions in any successor order.
 Unauthorized non-storm water flows are already prohibited by Order No. 99-08 DWQ.
- Wet-weather Implementation Within seven years of the effective date of the TMDL, the construction industry will submit the results of BMP effectiveness studies to determine BMPs that will achieve compliance with the final waste load allocations assigned to construction storm water permittees.
- Regional Board staff will bring the recommended BMPs before the Regional Board for consideration within eight years of the effective date of the TMDL.
- General construction storm water permittees will be considered in compliance with final waste load allocations if they implement these Regional Board approved BMPs. All permittees must implement the approved BMPs within nine years of the effective date of the TMDL. If no effectiveness studies are conducted and no BMPs are approved by the Regional Board within eight years of the effective date of the TMDL, each general construction storm water permit holder will be subject to site-specific BMPs and monitoring requirements to demonstrate compliance with final waste load allocations.

Region 4 Calleaguas Creek-OC Pesticides, PCBs, and Siltation

Interim Requirements

Region 4 Calleaguas Creek Source: Minor NPDES point sources/WDRs TMDL Completion Date: 3 14 2006 TMDL Type:Creek	Pollutant Stressor	WLA Daily Max (µg/L)	WLA Monthly Ave (µg/L)
	Chlordane	1.2	0.59
	4,4-DDD	1.7	0.84
	4,4-DDE	1.2	0.59
	4,4-DDT	1.2	0.59
	Dieldrin	0.28	0.14
	PCB's	0.34	0.17
	Toxaphene	0.33	0.16

Final WLA (ng/g)							
Region 4 Calleguas Creek Source: Stormwater Permittees TMDL Completion Date: 3 14 2006 TMDL Type:Creek	Chlordane	4,4-DDD	4,4-DDE	4,4-DDT	Dieldrin	PCB's	Toxaphene
Mugu Lagoon*	3.3	2.0	2.2	0.3	4.3	180.0	360.0
Callegaus Creek	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Revolon Slough (SW)*	0.9	2.0	1.4	0.3	0.1	130.0	1.0
Arroyo Las posas(SW)*	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Arroyo Simi	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Conejo Creek	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Interim Requirements (ng/g)							
Mugu Lagoon*	25.0	69.0	300.0	39.0	19.0	180.	22900.0
Callegaus Creek	17.0	66.0	470.0	110.0	3.0	3800.0	260.0
Revolon Slough (SW)*	48.0	400.0	1600.0	690.0	5.7	7600.0	790.0
Arroyo Las posas(SW)*	3.3	290.0	950.0	670.0	1.1	25700.0	230.0
Arroyo Simi	3.3	14.0	170.0	25.0	1.1	25700.0	230.0
Conejo Creek	3.4	5.3	20.0	2.0	3.0	3800.0	260.0

*(SW)=Subwatershed

*Mugu Lagoon includes Duck pond/Agricultural Drain/Mugu/Oxnard Drain #2

Compliance with sediment based WLAs is measured as an instream annual average at the base of each subwatershed where the discharges are located.

Region 4 Calleguas Creek-Salts

Final Dry Weather Pollutant WLA (mg/L)					
Region 4 Calleguas Creek Source Permitted Stormwater Dischargers TMDL Completion Date: 12 2 2008 TMDL Type:Creek	Critical Condition Flow Rate (mgd)	Chloride (lb/day)	TDS (lb/day)	Sulfate (lb/day)	Boron (lb/day)
Simi	1.39	1738.0	9849.0	2897.0	12.0
Las Posas	0.13	157.0	887.0	261.0	N/A
Conejo	1.26	1576.0	8931.0	2627.0	N/A

Camarillo	0.06	72.0	406.0	119.0	N/A
Pleasant Valley (Calleguas)	0.12	150.0	850.0	250.0	N/A
Pleasant Valley (Revolon)	0.25	314.0	1778.0	523.0	2.0
Dry Weather Interim Pollutant WLA (mg/L)					
	Chloride (mg/L)	TDS (mg/L)	Sulfate (mg/L)	Boron (mg/L)	
Simi	230.0	1720.0	1289.0	1.3	
Las Posas	230.0	1720.0	1289.0	1.3	
Conejo	230.0	1720.0	1289.0	1.3	
Camarillo	230.0	1720.0	1289.0	1.3	
Pleasant Valley (Calleguas)	230.0	1720.0	1289.0	1.3	
Pleasant Valley (Revolon)	230.0	1720.0	1289.0	1.3	

- General Construction permittees are assigned a dry weather wasteload allocation equal to the average dry weather critical condition flow rate multiplied by the numeric target for each constituent. Waste load allocations apply in the receiving water at the base of each subwatershed. Dry weather allocations apply when instream flow rates are below the 86th percentile flow and there has been no measurable precipitation in the previous 24 hours.
- Because wet weather flows transport a large mass of salts at low concentrations, these dischargers meet water quality objectives during wet weather.
- Interim limits are assigned for dry weather discharges from areas covered by NPDES stormwater permits to allow time to implement appropriate actions. The interim limits are assigned as concentration based receiving water limits set to the 95th percentile of the discharger data as a monthly average limit except for chloride. The 95th percentile for chloride was 267 mg/L which is higher than the recommended criteria set forth in the Basin Plan for protection of sensitive beneficial uses including aquatic life. Therefore, the interim limit for chloride for Permitted Stormwater Dischargers is set equal to 230 mg/L to ensure protection of sensitive beneficial uses in the Calleguas Creek watershed.

Region 4 San Gabriel River and Tributaries-Metals and Selenium

Region 4 San Gabriel River and Tributaries Source: Construction Stormwater Dischargers TMDL Completion Date: 3 2007 TMDL Type: Creek	Pollutant Stressor	Wet weather Allocations	Dry Weather Allocations	% of Watershed
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San Gabriel Reach 2	Lead (Pb)	0.7% * 166 µg/l * Daily Storm Vol	N/A	0.7%
San Gabriel Reach 2	Lead (Pb) Mass based	0.8 kg/d	N/A	0.7%
Coyote Creek	Copper (Cu)	0.285 kg/d	0	5.0%
Coyote Creek	Lead (Pb)	1.70 kg/d	N/A	5.0%
Coyote Creek	Zinc (Zn)	2.4 kg/d	N/A	5.0%
San Jose Creek Reach 1 and 2	Selenium	5 µg/L	5 µg/L	5.0%

Wet-weather allocations for lead in San Gabriel River Reach 2. Concentration-based allocations apply to non-stormwater NPDES discharges. Stormwater allocations are expressed as a percent of load duration curve. Mass-based values presented in table are based on a flow of 260 cfs (daily storm volume = 6.4×10^8 liters).

There are 1555 acres of water in the entire watershed, 37.4 acres of water in the Reach 1 subwatershed (2.4%), and 269 acres in the Coyote Creek subwatershed (17%).

General Construction Storm Water Permits

Waste load allocations for the general construction storm water permits may be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board. An estimate of direct atmospheric deposition is developed based on the percent area of surface water in the watershed. Approximately 0.4% of the watershed area draining to San Gabriel River Reach 2 is comprised of water and approximately 0.2% of the watershed area draining to Coyote Creek is comprised of water.

Region 4 The Harbor Beaches of Ventura County-Bacteria

The TMDL has a multi-part numeric target based on the bacteriological water quality objectives for marine water to protect the water contact recreation use. These targets are the most appropriate indicators of public health risk in recreational waters. Bacteriological objectives are set forth in Chapter 3 of the Basin Plan. The objectives are based on four bacteria indicators and include both geometric mean limits and single sample limits. The Basin Plan objectives that serve as the numeric targets for this TMDL are:

The General NPDES Construction permit is seen as a minor contributor and is given no allocation

General NPDES permits, individual NPDES permits, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, and WDR permittees in the Channel Islands Harbor subwatershed are assigned WLAs of zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean. Any future enrollees under a general NPDES permit, individual NPDES permit, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, and WDR will also be subject to a WLA of zero (0) days of allowable exceedances.

Region 4 Resolution No. 03-009 Los Angeles River and Tributaries-Nutrients

Minor Point Sources

Waste loads are allocated to minor point sources enrolled under NPDES or WDR permits including but not limited to Tapia WRP, Whittier Narrows WRP, Los Angeles Zoo WRP, industrial and construction stormwater, and municipal storm water and urban runoff from municipal separate storm sewer systems (MS4s)

Region 4 Minor Point Sources for NPDES/WDR Permits TMDL Completion Date: 7 10 2003 TMDL Type: River	Pollutant Stressor/WLA				
	Total Ammonia (NH ₃)		Nitrate-nitrogen (NO ₃ -N)	Nitrite-nitrogen (NO ₂ -N)	NO ₃ -N + NO ₃ -N
	1 Hr Ave mg/l	30 Day Ave mg/l	30 Day Ave mg/l		30 Day Ave mg/l
LA River Above Los Angeles-Glendale WRP (LAG)	4.7	1.6	8.0	1.0	8.0
LA River Below LAG	8.7	2.4	8.0	1.0	8.0
Los Angeles Tributaries	10.1	2.3	8.0	1.0	8.0

Malibu Creek Attachment A to Resolution No. 2004-019R-Bacteria

12 13 2004 The WLAs for permittees under the NPDES General Stormwater Construction Permit are zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean.

Region 4 Marina del Rey Harbor, Mothers' Beach and Back Basins

Attachment A to Resolution No. 2003-012-Bacteria

8 7 2003 As discussed in "Source Analysis", discharges from general NPDES permits, general industrial storm water permits and general construction storm water permits are not expected to be a significant source of bacteria. Therefore, the WLAs for these discharges are zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean. Any future enrollees under a general NPDES permit, general industrial storm water permit or general construction storm water permit within the MdR Watershed will also be subject to a WLA of zero days of allowable exceedances.

Region 4 San Gabriel River and Tributaries-Metals and Selenium**Dry Weather Selenium WLA**

A zero WLA is assigned to the industrial and construction stormwater permits during dry weather. Non-storm water discharges are already prohibited or restricted by existing general permits.

Region 4 General Construction Permittees TMDL Completion Date: 7 13 2006 TMDL Type: River	Total Recoverable Metals (kg/day)		
	Copper (Cu) Kg/day	Lead (Pb) Kg/day	Zinc (Zn) Kg/day
San Gabriel River Reach 2 and upstream reaches/tributaries	XXXX	Daily storm volume x 1.24 µg/L	XXXX
Coyote Creek and Tributaries	Daily storm volume x 0.7 µg/L	Daily storm volume x 4.3 µg/L	Daily storm volume x 6.2 µg/L

Each enrollee under the general construction stormwater permit receives a WLA on a per acre basis

Region 4 General Construction Permittees TMDL Completion Date: 7 13 2006 TMDL Type: River	Total Recoverable Metals (kg/day/acre)		
	Copper (Cu) Kg/acre/day	Lead (Pb) Kg/acre/day	Zinc (Zn) Kg/acre/day
San Gabriel River Reach 2 and upstream reaches/tributaries	XXXX	Daily storm volume x 0.56 µg/L	XXXX

Coyote Creek and Tributaries	Daily storm volume x 0.12 µg/L	Daily storm volume x 0.70 µg/L	Daily storm volume x 1.01 µg/L
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For the general industrial and construction storm water permits, the daily storm volume is measured at USGS station 11085000 for discharges to Reach 2 and above and at LACDPW flow gauge station F354-R for discharges to Coyote Creek.

General construction storm water permits

WLAs will be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board.

Dry-weather implementation

Non-storm water flows authorized by the General Permit for Storm Water Discharges Associated with Construction Activity (NPDES Permit No. CAS000002), or any successor permit, are exempt from the dry-weather WLA equal to zero as long as they comply with the provisions of sections C.3. and A.9 of the Order No. 99-08 DWQ, which state that these authorized non-storm discharges shall be (1) infeasible to eliminate (2) comply with BMPs as described in the Storm Water Pollution Prevention Plan prepared by the permittee, and (3) not cause or contribute to a violation of water quality standards, or comparable provisions in any successor order. Unauthorized non-storm water flows are already prohibited by Permit No. CAS000002.

Upon permit issuance, renewal, or re-opener

Non-storm water flows not authorized by Order No. 99-08 DWQ, or any successor order, shall achieve dry-weather WLAs. WLAs shall be expressed as NPDES water quality-based effluent limitations specified in accordance with federal regulations and state policy on water quality control. Effluent limitations may be expressed as permit conditions, such as the installation, maintenance, and monitoring of Regional Board-approved BMPs.

Six years from the effective date of the TMDL

The construction industry will submit the results of wet-weather BMP effectiveness studies to the Los Angeles Regional Board for consideration. In the event that no effectiveness studies are conducted and no BMPs are approved, permittees shall be subject to site-specific BMPs and monitoring to demonstrate BMP effectiveness.

Seven years from the effective date of the TMDL

The Los Angeles Regional Board will consider results of the wet weather BMP effectiveness studies and consider approval of BMPs.

Eight years from the effective date of the TMDL

All general construction storm water permittees shall implement Regional Board-approved BMPs.

Region 8 RESOLUTION NO. R8-2007- 0024

Total Maximum Daily Loads (TMDLs) for San Diego Creek, Upper and Lower Newport Bay, Orange County, California

Region 8 NPDES Construction Permit TMDL Completion Date: 1 24 1995 TMDL Type: River, Cr, Bay	Organochlorine Compounds							
	Total DDT		Chlordane		Total PCBs		Toxaphene	
	g/day	g/yr	g/day	g/yr	g/day	g/yr	g/day	g/yr
San Diego Creek	.27	99.8	.18*	64.3*	.09*	31.5*	.004	1.5
Upper Newport Bay	.11	40.3	.06	23.4	.06	23.2	X	X
Lower Newport Bay	.04	14.9	.02	8.6	.17	60.7	X	X

*Red= Informational WLA only, not for enforcement purposes

Organochlorine Compounds TMDLs Implementation Tasks and Schedule

Regional Board staff shall develop a SWPPP Improvement Program that identifies the Regional Board’s expectations with respect to the content of SWPPPs, including documentation regarding the selection and implementation of BMPs, and a sampling and analysis plan. The Improvement Program shall include specific guidance regarding the development and implementation of monitoring plans, including the constituents to be monitored, sampling frequency and analytical protocols. The SWPPP Improvement Program shall be completed by *(the date of OAL approval of this BPA)*. **No later than two months** from completion of the Improvement Program, Board staff shall assure that the requirements of the Program are communicated to interested parties, including dischargers with existing authorizations under the General Construction Permit. Existing, authorized dischargers shall revise their project SWPPPs as needed to address the Program requirements as soon as possible but **no later than (three months of completion of the SWPPP Improvement Program)**. Applicable SWPPPs that do not adequately address the Program requirements shall be considered inadequate and enforcement by the Regional Board shall proceed accordingly. The Caltrans and Orange County MS4 permits shall be revised as needed to assure that the permittees communicate the Regional Board’s SWPPP expectations, based on the SWPPP Improvement Program, with the Standard Conditions of Approval.

Appendix 4 Sediment TMDLs

Implemented Sediment TMDLs in California. Construction was listed as a source in all fo these TMDLs in relation to road construction. Although construction was mentioned as a source, it was not given a specific allocation amount. The closest allocation amount would be for the road activity management WLA. **Implementation Phase** – Adoption process by the Regional Board, the State Water Resources Control Board, the Office of Administrative Law, and the US Environmental Protection Agency completed and TMDL being implemented.

A. Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi² yr
1 R1.epa.albionfinaltmdl	R	Albion River	Sedimentation	Road Construction	2001	43 acres	See A (table 6)

B Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi² yr
1 R1.epa.EelR-middle.mainSed.temp	R	Middle Main Eel River and Tributaries (from Dos Rios to the South Fork)	Sedimentation	Road Construction	2005-2006	521 mi ²	100

C Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi² yr
1 R1.epa.EelRsouth.sed.temp	R	South Fork Eel River	Sedimentation	Road Construction	12 1999	See chart	473

D Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi² yr
1 R1.epa.bigfinaltmdl	R	Big River	Sedimentation	Road Construction	12 2001	181 mi ² watershed drainage	TMDL = loading capacity = nonpoint sources + background =

							393 t mi ² yr
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E Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi ² yr
1 R1.epa.EelR-lower.Sed.temp-121807-signed	R	Lower Eel River	Sedimentation	Road Construction	12 2007	300 square-mile watershed	898

F Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi ² yr
1 R1.epa.EelR-middle.Sed.temp-	R	Middle Fork Eel River	Sedimentation	Road Construction	12 2003	753 mi ² (approx. 482,000 acres)	82

G Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres Mi ²	WLA tons mi ² yr
1 R1.epa.EelRnorth-Sed.temp.final-121807-signed	R	North Fork Eel River	Sedimentation	Road Construction	12 30 2002	289 (180,020 acres)	20

H Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres Mi ²	WLA tons mi ² yr
1 R1.epa.EelR-upper.mainSed.temp-	R	Upper Main Eel River and Tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury)	Sedimentation	Road Construction	12 29 2004	688 (approx. 440,384 acres)	14

I Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi ² yr
1 R1.epa.gualalafina ltmdl	R	Gualala River	Sedimentation	Road Construction	Not sure	300 (191,145 acres)	7

J Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi ²	WLA tons mi ² yr
1 R1.epa.Mad- sed.turbidity	R	Mad River	Sedimentation	Road Construction	12 21 2007	480	174

K Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi ²	WLA tons mi ² yr
1 R1.epa.mattole.se diment	R	Mattole River	Sedimentation	Road Construction	12 30 2003	296	27 or 520+27 = 547

L Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi ²	WLA tons mi ² yr
1 R1.epa.navarro.se d.temp	R	Navarro River	Sedimentation	Road Construction	Not sure	315 (201,600 acres).	50

M Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi ²	WLA tons mi ² yr
1 R1.epa.noyo.sedi ment	R	Noyo River	Sedimentation	Road Construction	12 16 1999	113 (72,323 acres)	68 (three areas measured) Table 16 in the TMDL

N Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi²	WLA tons mi² yr
1 R1.epa.RedwoodCk.sed	Cr	Redwood Creek	Sedimentation	Road Construction	12 30 1998	278	1900 Total allocation

O Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi²	WLA – Roads tons mi² yr
1 R1.epa.tenmile.sed	R	Ten Mile River	Sedimentation	Road Construction	2000	120	9

P Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi²	WLA management tons mi² yr
1 R1.epa.trinity.sed	R	Trinity River	Sedimentation	Road Construction	12 20 2001	2000 of 3000 covered in this TMDL	See rows below
1	Cr	Horse Linto Creek	Sedimentation	Road Construction	12 20 2001	64	528
1	Cr	Mill creek and Tish Tang	Sedimentation	Road Construction	12 20 2001	39	210
1	Cr	Willow Creek	Sedimentation	Road Construction	12 20 2001	43	94
1	Cr	Campbell Creek and Supply Creek	Sedimentation	Road Construction	12 20 2001	11	1961
1	Cr	Lower Mainstem and Coon Creek	Sedimentation	Road Construction	12 20 2001	32	63
1	R	Reference	Sedimentation	Road	12 20 2001	434	24

		Subwatershed ¹		Construction			
1	Cr	Canyon Creek	Sedimentation	Road Construction	12 20 2001	64	326
1	R	Upper Tributaries ²	Sedimentation	Road Construction	12 20 2001	72	67
1	R	Middle Tributaries ³	Sedimentation	Road Construction	12 20 2001	54	53
1	R	Lower Tributaries ⁴	Sedimentation	Road Construction	12 20 2001	96	55
1	Cr	Weaver and Rush Creeks	Sedimentation	Road Construction	12 20 2001	72	169
1	Cr	Deadwood Creek Hoadley Gulch Poker Bar	Sedimentation	Road Construction	12 20 2001	47	68
1	L	Lewiston Lake	Sedimentation	Road Construction	12 20 2001	25	49
1	Cr	Grassvalley Creek	Sedimentation	Road Construction	12 20 2001	37	44
1	Cr	Indian Creek	Sedimentation	Road Construction	12 20 2001	34	81
1	Cr	Reading and Browns Creek	Sedimentation	Road Construction	12 20 2001	104	66
1	Cr	Reference Subwatersheds ⁵	Sedimentation	Road Construction	12 20 2001	235	281
1	L, Cr	Westside tributaries ⁶	Sedimentation	Road Construction	12 20 2001	93	105
1	R, Cr, G	Upper trinity ⁷	Sedimentation	Road Construction	12 20 2001	161	690
1	R, Cr, G	East Fork Tributaries ⁸	Sedimentation	Road Construction	12 20 2001	115	65

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1	R, L	Eastside Tributaries ⁹	Sedimentation	Road Construction	12 20 2001	89	60
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- 1 New River, Big French, Manzanita, North Fork, East Fork, North Fork
- 2 Dutch, Soldier, Oregon gulch, Conner Creek
- 3 Big Bar, Prairie Creek, Little French Creek
- 4 Swede, Italian, Canadian, Cedar Flat, Mill, McDonald, Hennessy, Quimby, Hawkins, Sharber
- 5 Stuarts Fork, Swift Creek, Coffee Creek
- 6 Stuart Arm, Stoney Creek, Mule Creek, East Fork, Stuart Fork, West Side Trinity Lake, Hatchet Creek, Buckeye Creek,
- 7 Upper Trinity River, Tangle Blue, Sunflower, Graves, Bear Upper Trinity Mainstream, Ramshorn Creek, Ripple Creek, Minnehaha Creek, Snowslide Gulch, Scorpion Creek
- 8 East Fork Trinity, Cedar Creek, Squirrel Gulch
- 9 East Side Tributaries, Trinity Lake

Q Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi ²	WLA tons mi ² yr
1 R1.epa.trinity.so.sed	R, Cr	South Fork Trinity River and Hayfork Creek	Sedimentation	Road Construction	12 1998	Not given, 19 miles long	33 (road total)

R Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi ²	WLA tons mi ² yr
1 R1.epa.vanduzen.sed	R, Cr	Van Duzen River and Yager Creek	Sedimentation	Various	12 16 1999	429	1353 total allocation
1		Upper Basin	Sedimentation	Road Construction			7
1		Middle Basin	Sedimentation	Road Construction			22
1		Lower Basin	Sedimentation	Road Construction			20

S Region	Type	Name	Pollutant Stressor	Potential	TMDL	Watershed	WLA tons mi ²
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				Sources	Completion Date	Acres mi ²	yr
6	R6.blackwood.sed	Cr	Blackwood Creek (Placer County)	Bedded Sediment	Various	9 2007	11 17272 total

T Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi ²	WLA tons mi ² yr
6	R6.SquawCk.sed	R	Squaw Creek (Placer County)	Sedimentation /controllable sources	Various – basin plan amendment	4 13 2006	8.2 10,900

Adopted TMDLs for Construction Sediment Sources

Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Area mi ²	Waste load Allocation tons mi ² yr
8	R	Newport Bay San Diego Creek Watershed	Sedimentation	Construction Land Development	1999	2.24 (1432 acres)	125,000 tons per Year (no more than 13,000 tons per year from construction sites)

APPENDIX 5: Glossary

Active Areas of Construction

All areas subject to land surface disturbance activities related to the project including, but not limited to, project staging areas, immediate access areas and storage areas. All previously active areas are still considered active areas until final stabilization is complete. [The construction activity Phases used in this General Permit are the Preliminary Phase, Grading and Land Development Phase, Streets and Utilities Phase, and the Vertical Construction Phase.]

Active Treatment System (ATS)

A treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation to aid in the reduction of turbidity caused by fine suspended sediment.

Acute Toxicity Test

A chemical stimulus severe enough to rapidly induce a negative effect; in aquatic toxicity tests, an effect observed within 96 hours or less is considered acute.

Air Deposition

Airborne particulates from construction activities.

Approved Signatory

A person who has been authorized by the Legally Responsible Person to sign, certify, and electronically submit Permit Registration Documents, Notices of Termination, and any other documents, reports, or information required by the General Permit, the State or Regional Water Board, or U.S. EPA. The Approved Signatory must be one of the following:

1. For a corporation or limited liability company: a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation or limited liability company; or (b) the manager of the facility if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
2. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
3. For a municipality, State, Federal, or other public agency: a principal executive officer, ranking elected official, city manager, council president, or any other authorized public employee with managerial responsibility over the

construction or land disturbance project (including, but not limited to, project manager, project superintendent, or resident engineer);

4. For the military: any military officer or Department of Defense civilian, acting in an equivalent capacity to a military officer, who has been designated;
5. For a public university: an authorized university official;
6. For an individual: the individual, because the individual acts as both the Legally Responsible Person and the Approved Signatory; or
7. For any type of entity not listed above (e.g. trusts, estates, receivers): an authorized person with managerial authority over the construction or land disturbance project.

Beneficial Uses

As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Available Technology Economically Achievable (BAT)

As defined by USEPA, BAT is a technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. The BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT)

As defined by USEPA, BCT is a technology-based standard for the discharge from existing industrial point sources of conventional pollutants including biochemical oxygen demand (BOD), total suspended sediment (TSS), fecal coliform, pH, oil and grease.

Best Professional Judgment (BPJ)

The method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data.

Best Management Practices (BMPs)

BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures,

and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Chain of Custody (COC)

Form used to track sample handling as samples progress from sample collection to the analytical laboratory. The COC is then used to track the resulting analytical data from the laboratory to the client. COC forms can be obtained from an analytical laboratory upon request.

Coagulation

The clumping of particles in a discharge to settle out impurities, often induced by chemicals such as lime, alum, and iron salts.

Common Plan of Development

Generally a contiguous area where multiple, distinct construction activities may be taking place at different times under one plan. A plan is generally defined as any piece of documentation or physical demarcation that indicates that construction activities may occur on a common plot. Such documentation could consist of a tract map, parcel map, demolition plans, grading plans or contract documents. Any of these documents could delineate the boundaries of a common plan area. However, broad planning documents, such as land use master plans, conceptual master plans, or broad-based CEQA or NEPA documents that identify potential projects for an agency or facility are not considered common plans of development.

Daily Average Discharge

The discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limitations expressed in other units of measurement (e.g., concentration) the daily discharge is calculated as the average measurement of the pollutant throughout the day (40 CFR 122.2). In the case of pH, the pH must first be converted from a log scale.

Debris

Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

Direct Discharge

A discharge that is routed directly to waters of the United States by means of a pipe, channel, or ditch (including a municipal storm sewer system), or through surface runoff.

Discharger

The Legally Responsible Person (see definition) or entity subject to this General Permit.

Dose Rate (for ATS)

In exposure assessment, dose (e.g. of a chemical) per time unit (e.g. mg/day), sometimes also called dosage.

Drainage Area

The area of land that drains water, sediment, pollutants, and dissolved materials to a common outlet.

Effluent

Any discharge of water by a discharger either to the receiving water or beyond the property boundary controlled by the discharger.

Effluent Limitation

Any numeric or narrative restriction imposed on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean.

Erosion

The process, by which soil particles are detached and transported by the actions of wind, water, or gravity.

Erosion Control BMPs

Vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc., placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution.

Field Measurements

Testing procedures performed in the field with portable field-testing kits or meters.

Final Stabilization

All soil disturbing activities at each individual parcel within the site have been completed in a manner consistent with the requirements in this General Permit.

First Order Stream

Stream with no tributaries.

Flocculants

Substances that interact with suspended particles and bind them together to form flocs.

Good Housekeeping BMPs

BMPs designed to reduce or eliminate the addition of pollutants to construction site runoff through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

Grading Phase (part of the Grading and Land Development Phase)

Includes reconfiguring the topography and slope including; alluvium removals; canyon cleanouts; rock undercuts; keyway excavations; land form grading; and stockpiling of select material for capping operations.

Hydromodification

Hydromodification is the alteration of the hydrologic characteristics of coastal and non-coastal waters, which in turn could cause degradation of water resources. Hydromodification can cause excessive erosion and/or sedimentation rates, causing excessive turbidity, channel aggradation and/or degradation.

Identified Organisms

Organisms within a sub-sample that is specifically identified and counted.

Inactive Areas of Construction

Areas of construction activity that are not active and those that have been active and are not scheduled to be re-disturbed for at least 14 days.

Index Period

The period of time during which bioassessment samples must be collected to produce results suitable for assessing the biological integrity of streams and rivers. Instream communities naturally vary over the course of a year, and sampling during the index period ensures that samples are collected during a time frame when communities are stable so that year-to-year consistency is obtained. The index period approach provides a cost-effective alternative to year-round sampling. Furthermore, sampling within the appropriate index period will yield results that are comparable to the assessment thresholds or criteria for a given region, which are established for the same index period. Because index periods differ for different parts of the state, it is essential to know the index period for your area.

K Factor

The soil erodibility factor used in the Revised Universal Soil Loss Equation (RUSLE). It represents the combination of detachability of the soil, runoff potential of the soil, and the transportability of the sediment eroded from the soil.

Legally Responsible Person

The Legally Responsible Person (LRP) will typically be the project proponent. The categories of persons or entities that are eligible to serve as the LRP are set forth below. For any construction or land disturbance project where multiple persons or entities are eligible to serve as the LRP, those persons or entities

shall select a single LRP. In exceptional circumstances, a person or entity that qualifies as the LRP may provide written authorization to another person or entity to serve as the LRP. In such a circumstance, the person or entity that provides the authorization retains all responsibility for compliance with the General Permit. Except as provided in category 2(d), a contractor who does not satisfy the requirements of any of the categories below is not qualified to be an LRP.

The following persons or entities may serve as an LRP:

1. A person, company, agency, or other entity that possesses a real property interest (including, but not limited to, fee simple ownership, easement, leasehold, or other rights of way) in the land upon which the construction or land disturbance activities will occur for the regulated site.
2. In addition to the above, the following persons or entities may also serve as an LRP:
 - a. For linear underground/overhead projects, the utility company, municipality, or other public or private company or agency that owns or operates the LUP;
 - b. For land controlled by an estate or similar entity, the person who has day-to-day control over the land (including, but not limited to, a bankruptcy trustee, receiver, or conservator);
 - c. For pollution investigation and remediation projects, any potentially responsible party that has received permission to conduct the project from the holder of a real property interest in the land; or
 - d. For U.S. Army Corp of Engineers projects, the U.S. Army Corps of Engineers may provide written authorization to its bonded contractor to serve as the LRP, provided, however, that the U.S. Army Corps of Engineers is also responsible for compliance with the general permit, as authorized by the Clean Water Act or the Federal Facilities Compliance Act.

Likely Precipitation Event

Any weather pattern that is forecasted to have a 50% or greater chance of producing precipitation in the project area. The discharger shall obtain likely precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at <http://www.srh.noaa.gov/forecast>).

Maximum Allowable Threshold Concentration (MATC)

The allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity

testing conducted by an independent, third-party laboratory. A typical MATC would be:

The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

Natural Channel Evolution

The physical trend in channel adjustments following a disturbance that causes the river to have more energy and degrade or aggrade more sediment. Channels have been observed to pass through 5 to 9 evolution types. Once they pass through the suite of evolution stages, they will rest in a new state of equilibrium.

Non-Storm Water Discharges

Discharges are discharges that do not originate from precipitation events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

Non-Visible Pollutants

Pollutants associated with a specific site or activity that can have a negative impact on water quality, but cannot be seen through observation (ex: chlorine). Such pollutants being discharged are not authorized.

Numeric Action Level (NAL)

Level is used as a warning to evaluate if best management practices are effective and take necessary corrective actions. Not an effluent limit.

Original Sample Material

The material (i.e., macroinvertebrates, organic material, gravel, etc.) remaining after the subsample has been removed for identification.

pH

Unit universally used to express the intensity of the acid or alkaline condition of a water sample. The pH of natural waters tends to range between 6 and 9, with neutral being 7. Extremes of pH can have deleterious effects on aquatic systems.

Post-Construction BMPs

Structural and non-structural controls which detain, retain, or filter the release of pollutants to receiving waters after final stabilization is attained.

Preliminary Phase (Pre-Construction Phase - Part of the Grading and Land Development Phase)

Construction stage including rough grading and/or disking, clearing and grubbing operations, or any soil disturbance prior to mass grading.

Project

Qualified SWPPP Developer

Individual who is authorized to develop and revise SWPPPs.

Qualified SWPPP Practitioner

Individual assigned responsibility for non-storm water and storm water visual observations, sampling and analysis, and responsibility to ensure full compliance with the permit and implementation of all elements of the SWPPP, including the preparation of the annual compliance evaluation and the elimination of all unauthorized discharges.

Qualifying Rain Event

Any event that produces 0.5 inches or more precipitation with a 48 hour or greater period between rain events.

R Factor

Erosivity factor used in the Revised Universal Soil Loss Equation (RUSLE). The R factor represents the erosivity of the climate at a particular location. An average annual value of R is determined from historical weather records using erosivity values determined for individual storms. The erosivity of an individual storm is computed as the product of the storm's total energy, which is closely related to storm amount, and the storm's maximum 30-minute intensity.

Rain Event Action Plan (REAP)

Written document, specific for each rain event, that when implemented is designed to protect all exposed portions of the site within 48 hours of any likely precipitation event.

Remaining Sub sampled Material

The material (e.g., organic material, gravel, etc.) that remains after the organisms to be identified have been removed from the subsample for identification. (Generally, no macroinvertebrates are present in the remaining subsampled material, but the sample needs to be checked and verified using a complete Quality Assurance (QA) plan)

Routine Maintenance

Activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Runoff Control BMPs

Measures used to divert runoff from offsite and runoff within the site.

Run-on

Discharges that originate offsite and flow onto the property of a separate project site.

Revised Universal Soil Loss Equation (RUSLE)

Empirical model that calculates average annual soil loss as a function of rainfall and runoff erosivity, soil erodibility, topography, erosion controls, and sediment controls.

Sampling and Analysis Plan

Document that describes how the samples will be collected, under what conditions, where and when the samples will be collected, what the sample will be tested for, what test methods and detection limits will be used, and what methods/procedures will be maintained to ensure the integrity of the sample during collection, storage, shipping and testing (i.e., quality assurance/quality control protocols).

Sediment

Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

Sedimentation

Process of deposition of suspended matter carried by water, wastewater, or other liquids, by gravity. It is usually accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material.

Sediment Control BMPs

Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. They include those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (e.g., silt fence, sediment basin, fiber rolls, etc.).

Settleable Solids (SS)

Solid material that can be settled within a water column during a specified time frame. It is typically tested by placing a water sample into an Imhoff settling cone and then allowing the solids to settle by gravity for a given length of time. Results are reported either as a volume (mL/L) or a mass (mg/L) concentration.

Sheet Flow

Flow of water that occurs overland in areas where there are no defined channels where the water spreads out over a large area at a uniform depth.

Site**Soil Amendment**

Any material that is added to the soil to change its chemical properties, engineering properties, or erosion resistance that could become mobilized by storm water.

Streets and Utilities Phase

Construction stage including excavation and street paving, lot grading, curbs, gutters and sidewalks, public utilities, public water facilities including fire hydrants, public sanitary sewer systems, storm sewer system and/or other drainage improvements.

Structural Controls

Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution

Suspended Sediment Concentration (SSC)

The measure of the concentration of suspended solid material in a water sample by measuring the dry weight of all of the solid material from a known volume of a collected water sample. Results are reported in mg/L.

Total Suspended Solids (TSS)

The measure of the suspended solids in a water sample includes inorganic substances, such as soil particles and organic substances, such as algae, aquatic plant/animal waste, particles related to industrial/sewage waste, etc. The TSS test measures the concentration of suspended solids in water by measuring the dry weight of a solid material contained in a known volume of a sub-sample of a collected water sample. Results are reported in mg/L.

Toxicity

The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Turbidity

The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU).

Vertical Construction Phase

The Build out of structures from foundations to roofing, including rough landscaping.

Waters of the United States

Generally refers to surface waters, as defined by the federal Environmental Protection Agency in 40 C.F.R. § 122.2.¹

Water Quality Objectives (WQO)

Water quality objectives are defined in the California Water Code as limits or levels of water quality constituents or characteristics, which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

¹ The application of the definition of “waters of the United States” may be difficult to determine; there are currently several judicial decisions that create some confusion. If a landowner is unsure whether the discharge must be covered by this General Permit, the landowner may wish to seek legal advice.

APPENDIX 6: Acronym List

ASBS	Areas of Special Biological Significance
ASTM	American Society of Testing and Materials; Standard Test Method for Particle-Size Analysis of Soils
ATS	Active Treatment System
BASMAA	Bay Area Storm water Management Agencies Association
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BPJ	Best Professional Judgment
CAFO	Confined Animal Feeding Operation
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	NPDES General Permit for Storm Water Discharges Associated with Construction Activities
CIWQS	California Integrated Water Quality System
CKD	Cement Kiln Dust
COC	Chain of Custody
CPESC	Certified Professional in Erosion and Sediment Control
CPSWQ	Certified Professional in Storm Water Quality
CSMP	Construction Site Monitoring Program
CTB	Cement Treated Base
CTR	California Toxics Rule
CWA	Clean Water Act
CWC	California Water Code
CWP	Center for Watershed Protection
DADMAC	Diallyldimethyl-ammonium chloride
DDNR	Delaware Department of Natural Resources
DFG	Department of Fish and Game
DHS	Department of Health Services
DWQ	Division of Water Quality
EC	Electrical Conductivity
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
ESC	Erosion and Sediment Control
HSPF	Hydrologic Simulation Program Fortran
JTU	Jackson Turbidity Units
LID	Low Impact Development
LOEC	Lowest Observed Effect Concentration
LRP	Legally Responsible Person
LUP	Linear Underground/Overhead Projects

MATC	Maximum Allowable Threshold Concentration
MDL	Method Detection Limits
MRR	Monitoring and Reporting Requirements
MS4	Municipal Separate Storm Sewer System
MUSLE	Modified Universal Soil Loss Equation
NAL	Numeric Action Level
NEL	Numeric Effluent Limitation
NICET	National Institute for Certification in Engineering Technologies
NOAA	National Oceanic and Atmospheric Administration
NOEC	No Observed Effect Concentration
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NTR	National Toxics Rule
NTU	Nephelometric Turbidity Units
O&M	Operation and Maintenance
PAC	Polyaluminum chloride
PAM	Polyacrylamide
PASS	Polyaluminum chloride Silica/sulfate
POC	Pollutants of Concern
PoP	Probability of Precipitation
POTW	Publicly Owned Treatment Works
PRDs	Permit Registration Documents
PWS	Planning Watershed
QAMP	Quality Assurance Management Plan
QA/QC	Quality Assurance/Quality Control
REAP	Rain Event Action Plan
Regional Board	Regional Water Quality Control Board
ROWD	Report of Waste Discharge
RUSLE	Revised Universal Soil Loss Equation
RW	Receiving Water
SMARTS System	Storm water Multi Application Reporting and Tracking System
SS	Settleable Solids
SSC	Suspended Sediment Concentration
SUSMP	Standard Urban Storm Water Mitigation Plan
SW	Storm Water
SWARM	Storm Water Annual Report Module
SWAMP	Surface Water Ambient Monitoring Program
SWMM	Storm Water Management Model
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
TC	Treatment Control
TDS	Total Dissolved Solids

TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
USACOE	U.S. Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WDID	Waste Discharge Identification Number
WDR	Waste Discharge Requirements
WLA	Waste Load Allocation
WET	Whole Effluent Toxicity
WRCC	Western Regional Climate Center
WQBEL	Water Quality Based Effluent Limitation
WQO	Water Quality Objective
WQS	Water Quality Standard

APPENDIX 7: State and Regional Water Resources Control Board Contacts

NORTH COAST REGION (1)
5550 Skylane Blvd, Ste. A
Santa Rose, CA 95403
(707) 576-2220 FAX: (707)523-0135

SAN FRANCISCO BAY REGION (2)
1515 Clay Street, Ste. 1400
Oakland, CA 94612
(510) 622-2300 FAX: (510) 622-2640

CENTRAL COAST REGION (3)
895 Aerovista Place, Ste 101
San Luis Obispo, CA 93401
(805) 549-3147 FAX: (805) 543-0397

LOS ANGELES REGION (4)
320 W. 4th Street, Ste. 200
Los Angeles, CA 90013
(213) 576-6600 FAX: (213) 576-6640

LAHONTAN REGION (6 SLT)
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
(530) 542-5400 FAX: (530) 544-2271

VICTORVILLE OFFICE (6V)
14440 Civic Drive, Ste. 200
Victorville, CA 92392-2383
(760) 241-6583 FAX: (760) 241-7308

CENTRAL VALLEY REGION (5S)
11020 Sun Center Dr., #200
Rancho Cordova, CA 95670-6114
(916) 464-3291 FAX: (916) 464-4645

FRESNO BRANCH OFFICE (5F)
1685 E St.
Fresno, CA 93706
(559) 445-5116 FAX: (559) 445-5910

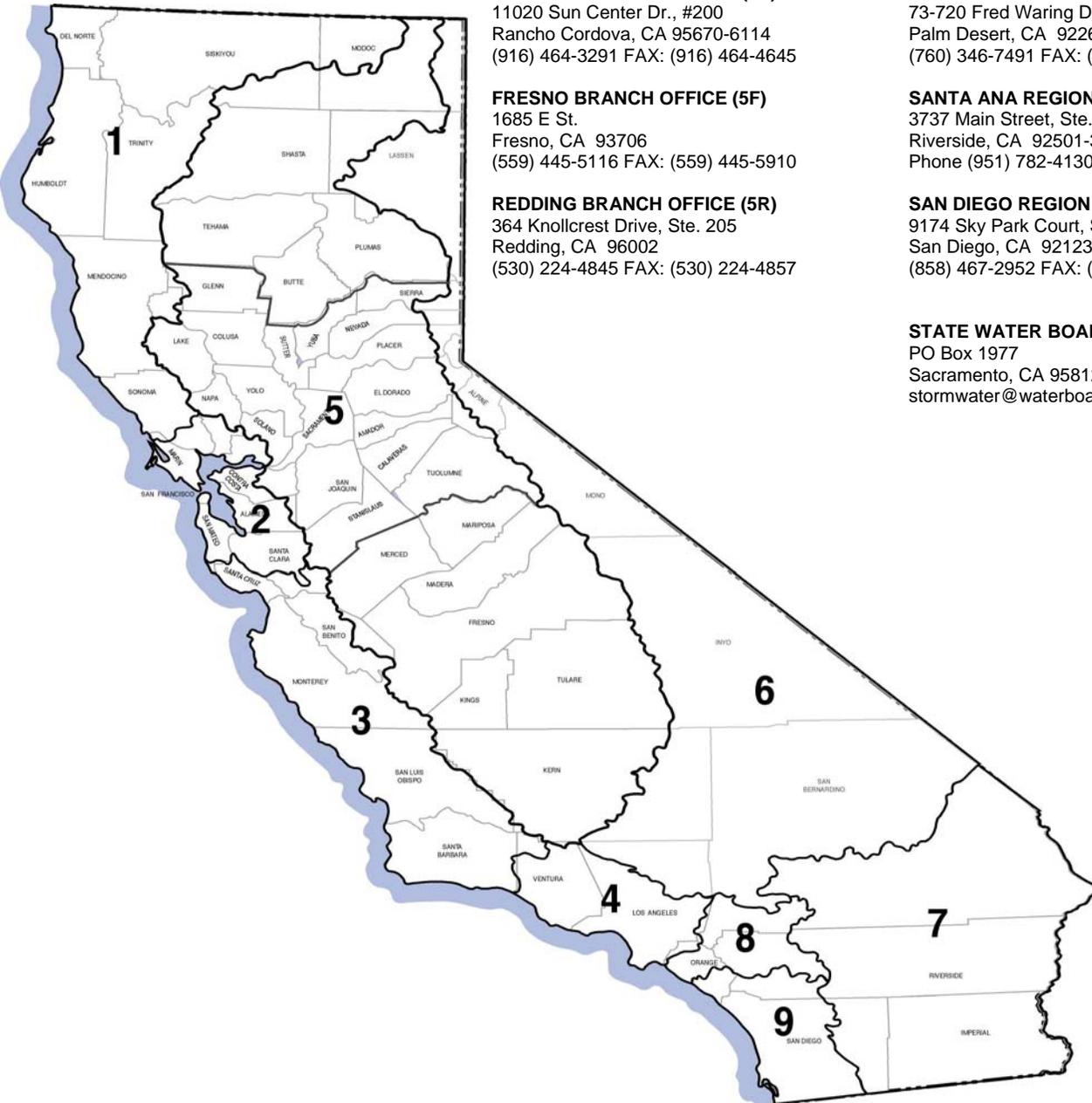
REDDING BRANCH OFFICE (5R)
364 Knollcrest Drive, Ste. 205
Redding, CA 96002
(530) 224-4845 FAX: (530) 224-4857

COLORADO RIVER BASIN REGION (7)
73-720 Fred Waring Dr., Ste. 100
Palm Desert, CA 92260
(760) 346-7491 FAX: (760) 341-6820

SANTA ANA REGION (8)
3737 Main Street, Ste. 500
Riverside, CA 92501-3339
Phone (951) 782-4130 FAX: (951) 781-6288

SAN DIEGO REGION (9)
9174 Sky Park Court, Ste. 100
San Diego, CA 92123-4340
(858) 467-2952 FAX: (858) 571-6972

STATE WATER BOARD
PO Box 1977
Sacramento, CA 95812-1977
stormwater@waterboards.ca.gov



Appendix D: Lake Tahoe Hydrologic Unit Construction General Permit (LTHUCGP)

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

2501 Lake Tahoe Boulevard, South Lake Tahoe, CA 96150
(530) 542-5400 • Fax (530) 544-2271
<http://www.waterboards.ca.gov/lahontan>

ORDER NO. R6T-2011-0019
NPDES NO. CAG616002

GENERAL WASTE DISCHARGE REQUIREMENTS
AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY IN
THE LAKE TAHOE HYDROLOGIC UNIT, COUNTIES OF
ALPINE, EL DORADO, AND PLACER

The following Dischargers are subject to waste discharge requirements as set forth in this Order (as authorized by the Notice of Applicability):

Table 1. Discharger Information

Dischargers	Individuals, public agencies, private businesses, and other legal entities performing construction activities that results in land surface disturbances of greater than one acre, or less than one acre if the construction activity is part of a larger common plan of development in the Lake Tahoe Hydrologic Unit, or as otherwise defined in section II.D of this General Permit.
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Table 2. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	<u>April 14, 2011</u>
This Order shall become effective on:	<u>April 14, 2011</u>
This NPDES Permit shall expire on:	<u>April 13, 2016</u>

I, Harold J. Singer, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on April 14, 2011.

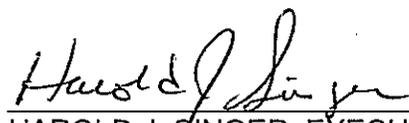

HAROLD J. SINGER, EXECUTIVE OFFICER

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LIST OF ATTACHMENTS

Attachment A -	List of Acronyms
Attachment B -	Glossary
Attachment C -	Construction Site Monitoring and Reporting Plan
Attachment C-1 -	Bioassessment Requirements
Attachment D -	Standard Provisions
Attachment E -	ATS Requirements
Attachment F -	SEZ/Flood Plain Waste Discharge Prohibitions and Exemptions
Attachment G -	Water Quality Objectives For Certain Water Bodies
Attachment H -	Rain Event Action Plan Template
Attachment I -	SWPPP Template

Fact Sheet

I. FINDINGS

The California Regional Water Quality Control Board, Lahontan Region (Lahontan Water Board) finds:

A. Background. In 1972, the Clean Water Act (CWA) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the United States Environmental Protection Agency (USEPA) published final regulations that established storm water permit application requirements for specified categories of industries. The regulations provide that discharges of storm water to waters of the United States from construction projects that encompass five or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. Regulations (Phase II Rule) that became final on December 8, 1999 lowered the permitting threshold from five acres to one acre.

While federal regulations allow two permitting options for storm water discharges (Individual Permits and General Permits), the Lahontan Water Board has elected to adopt this General Permit at this time that will apply to most storm water discharges associated with construction activity in the Lake Tahoe Hydrologic Unit.

On March 10, 2005, the Lahontan Water Board reissued the *General Permit for Discharges of Storm Water Runoff Associated with Construction Activity Involving Land Disturbance in the Lake Tahoe Hydrologic Unit* (Board Order No. R6T-2005-0007). That NPDES Permit must be reissued. Dischargers of storm water runoff in the Lake Tahoe Hydrologic Unit to surface waters must obtain authorization under this reissued General Permit for construction-related discharge to waters of the United States. To obtain authorization for continued and new-project discharges to waters of the United States, Dischargers must submit a complete application, as described in section II of this General Permit.

Regulating many storm water discharges under one permit will greatly reduce the administrative burden associated with permitting individual storm water discharges.

B. Discharge Description. This General Permit regulates discharges of pollutants in storm water associated with construction activity (storm water discharges) to waters of the United States within the Lake Tahoe Hydrologic Unit from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. Construction activity includes demolition that disturbs the land, clearing, grading, excavation, and other land disturbance activities. Waters as used in this General Permit are defined in section 122.2(a) of Title 40 of the Code of Federal Regulations (CFR), and include, but are not limited to, wetlands rivers and streams, either perennial or ephemeral, which flow in natural or artificial watercourses, lakes and

impoundments of waters otherwise defined as Waters of the US within the State of California. Discharges of non-storm water to land may be necessary for the completion of certain construction projects. Such discharges include, but are not limited to, irrigating vegetation for erosion control measures, flushing and testing pipes, dewatering construction excavations, flushing fire hydrants, and watering to control dust. These and other non-storm water discharges are also conditionally covered under this General Permit, provided the discharge is not prohibited and/or is granted a prohibition exemption.

C. Legal Authorities. This Order is issued pursuant to section 402 of the CWA and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit for point source discharges of storm water from construction sites equal to or in excess of one acre to surface waters. This Order also serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

Section 122.28 of Title 40 of the *Code of Federal Regulations* (40 CFR 122.28) authorizes USEPA and approved states to issue general permits to regulate a point source category if the sources:

1. Involve the same or substantially similar types of operations;
2. Discharge the same type of waste;
3. Require the same type of effluent limitations or operating conditions;
4. Require similar monitoring; and
5. Are more appropriately regulated under a general permit rather than individual permits.

On September 22, 1989, USEPA granted the State of California, through the State Water Resources Control Board (State Water Board) and the nine regional Water Boards, the authority to issue general NPDES permits pursuant to 40 CFR Parts 122 and 123. This General Permit meets the criteria of 1 through 5 listed above.

D. Background and Rationale for Requirements. The Lahontan Water Board developed the requirements in this General Permit based on readily available information for several similar discharges, the State-wide General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ) and the requirements contained in Order No. R6T-2005-0007. In addition, requirements of this General Permit are consistent with Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development point source category. The Fact Sheet, which contains background information and rationale for General Permit requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through I are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). This action to adopt a general NPDES permit is exempt from the provisions of Chapter 3 of the California

Environmental Quality Act (CEQA) (Public Resources Code section 21100, et seq.), pursuant to section 13389 of the California Water Code.

F. Technology-based Effluent Limitations. Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (40 CFR 122.44), require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards.

G. Effluent Limitations Guidelines and Standards for the Construction and Development Point Source Category. On December 1, 2009 the USEPA published final regulations establishing CWA technology-based Effluent Limitations Guidelines and New Source Performance Standards (NSPS) for the Construction and Development point source category (hereinafter, ELGs). 40 CFR Part 450 establishes technology-based effluent limitations based on best practicable technology (BPT), best available technology (BAT), best conventional pollutant control technology (BCT), and NSPS reflecting the best available demonstrated control technology.

1. For BPT and BCT, the ELGs establish requirements for erosion and sediment controls, soil stabilization, dewatering, pollution prevention measures, prohibited discharges, and outlet requirements.
2. For BAT and NSPS, the USEPA will be issuing as part of its ELGs for Construction and Development a daily maximum turbidity requirement that will be expected by August 2, 2011 for all dischargers disturbing 20 or more acres of land at one time¹. Dischargers disturbing 10 or more acres of land will be required to meet this effluent limitation by February 2, 2014. In addition, requirements for erosion and sediment controls, soil stabilization, dewatering, pollution prevention measures, prohibited discharges, and surface outlets are also established.

H. Water Quality-Based Effluent Limitations. Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the

¹ In an October 2010 Notice, the EPA acknowledged an error in calculating a turbidity limit of 280 NTU and issued a stay of the limit (75 Fed. Reg. 68215). This General Permit may be modified to incorporate any new turbidity limits adopted by the USEPA in accordance with 122.63, 122.64, and 124.5 of the CFR.

pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi). Waste discharge requirements of this General Permit also include effluent limitations for discharges as specified in the Basin Plan and carried forward from the prior General Permit

I. Storm Water Benchmark Performance Levels. This General Permit also contains concentration-based, pollutant-specific benchmark values for pH in effluent. The benchmarks and related monitoring and reporting requirements contained in this General Permit are consistent with the Basin Plan. The purpose of the benchmarks is to provide a measure of whether a facility's BMPs are meeting performance levels protective of water quality and beneficial uses. This General Permit requires Dischargers to take actions to evaluate excursions from objectives, improve BMP performance if needed when benchmarks are exceeded, and to conduct monitoring and documentation of such actions.

J. Compliance with Effluent Limitations. For purposes of this General Permit, effluent discharges off project boundaries constitute a discharge to surface waters or tributaries to surface waters. This finding is made due to the high degree of surface water connectivity in the Lake Tahoe watershed. Therefore, compliance with effluent limitations is required at specified runoff control points where effluent is discharged off project boundaries or to surface waters, including municipal separate storm sewer systems. Effluent limits for the discharge to surface waters or municipal separate storm sewer systems (MS4) may not apply if the discharger can document that effluent leaving the project boundaries does not reach surface waters or MS4s.

K. Water Quality Control Plans. The Lahontan Water Board adopted a *Water Quality Control Plan for the Lahontan Region* (Basin Plan), which became effective on March 31, 1995 and has been subsequently amended. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Designated beneficial uses of surface waters within the Lake Tahoe Hydrologic Unit include municipal and domestic supply (MUN); agricultural supply (AGR); groundwater recharge (GWR); freshwater replenishment (FRSH); water contact recreation (REC-1); non-contact water recreation (REC-2); cold freshwater habitat (COLD); cold spawning, reproduction, and development (SPWN); commercial and sport fishing (COMM); wildlife habitat (WILD); water quality enhancement (WQE); and flood peak attenuation/flood water storage (FLD). Waters at some locations may also be designated for navigation (NAV); preservation of biological habitats of special significance (BIOL); rare, threatened, or endangered species (RARE); and migration of aquatic organisms (MIGR). Table 5.1-1 in the

Basin Plan may be consulted for the beneficial use designations for any specific surface water body.

In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for MUN. Requirements of this General Permit implement the Basin Plan.

L. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 CFR 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on turbidity, pH, nitrogen (total), phosphorus (total), iron (total), and grease and oil. In addition, the provisions of this General Permit require the implementation of Best Available Technologies/Best Control Technologies (BAT/BCT) and Best Management Practices (BMPs) to control and abate the discharge of pollutants in storm water discharges, and achieve the numerical and narrative standards of this General Permit and those contained in the Basin Plan. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

N. Antidegradation Policy. 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Lake Tahoe is an Outstanding National Resource Water under the federal policy and afforded the highest protections, such that no permanent or long-term reduction in water quality is allowed. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Lahontan Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Discharges in compliance with this General Permit will not result water quality less than that prescribed in policies and standards, and are therefore consistent with those policies and standards.

O. Anti-Backsliding Requirements. Sections 402(0)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(1) prohibit backsliding in NPDES permits. These anti-backsliding provisions require

effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this General Permit are at least as stringent as the effluent limitations in General Permit No. R6T-2005-0007. Therefore, this General Permit is in compliance with the anti-backsliding provisions of 40 CFR 122.44.

P. Endangered Species Act. This General Permit does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This General Permit requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

Q. Monitoring and Reporting. 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Lahontan Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements and is provided in Attachment C.

R. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Lahontan Water Board has also included in this General Permit special provisions applicable to authorized Dischargers. A rationale for the special provisions contained in this General Permit is provided in the attached Fact Sheet.

S. Notification of Interested Parties. The Lahontan Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this General Permit.

T. Consideration of Public Comment. The Lahontan Water Board, in a public meeting, provided an opportunity for a public hearing, and considered all comments pertaining to the discharge. Details are provided in the Fact Sheet of this General Permit.

IT IS HEREBY ORDERED that all Dischargers indicating their intention to be regulated under the provisions of this General Permit, and all heirs, successors, or assigns, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, shall comply with the following:

II. CONDITIONS FOR PERMIT COVERAGE AND NOTIFICATION REQUIREMENTS

A. Legally Responsible Person

To obtain authorization for discharges under this General Permit issued by the Lahontan Water Board, the project must meet the eligibility requirements specified in section II.D of this General Permit, and the legally responsible person (LRP) or LRPs Approved Signatory (see definition in Attachment B – Glossary) must certify and file Permit Registration Documents (PRDs). Applicants must provide PRDs, an appropriate filing fee, and any additional information, as specified in section II.D.4 as application for issuance of NPDES permit requirements. PRDs must be submitted electronically through the State Water Resources Control Board's (State Water Board's) Storm Water Multi-Application and Report Tracking System (SMARTS) at: <https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp>.

B. Permit Effective Date

This General Permit is effective on April 14, 2011.

- 1. Dischargers Obtaining Coverage On or After April 14, 2011:** All dischargers requiring coverage under this General Permit on or after April 14, 2011, shall file the required PRDs and filing fee, and receive prior to commencing land disturbing activities a written Notice of Applicability (NOA) from the Lahontan Water Board indicating the date that the permit coverage begins under the General Permit and the Waste Discharger Identification (WDID) code issued for the project.
- 2. Dischargers Previously Covered Under General Permit R6T-2005-0007:** Previously covered dischargers subject to General Permit No. R6T-2005-0007 must comply with General Permit No. R6T-2005-0007 until the discharger re-enrolls and receives coverage under this General Permit, a notice of termination for the project is filed and processed, or December 1, 2011, whichever occurs first. On and after December, 2011, all coverage under General Permit No. R6T-2005-0007 is terminated. Previously enrolled dischargers failing to file PRDs or other information required to complete an application to renew coverage under this General Permit will lose permit coverage on December 1, 2011, and may be subject to enforcement remedies and liability for construction-related discharges without an NPDES permit.

C. General Permit Coverage

1. The Discharger shall be subject to the requirements of and covered by this General Permit only after a WDID number has been issued by Lahontan Water Board staff. In order to demonstrate compliance with coverage requirements for this General Permit, the Discharger must be able to present documentation of a valid WDID upon request.
2. All Dischargers must implement the Storm Water Pollution Prevention Plan (SWPPP) and the Monitoring and Reporting Program, including their Construction Site Monitoring and Reporting Plan (CSMRP) prior to commencement of construction.
3. This General Permit does not pre-empt or supersede the authority of other agencies to prohibit, restrict, or control storm water discharges to municipal separate storm sewer systems or other watercourses within their jurisdictions.
4. This General Permit does not authorize the discharges of fill or dredged material regulated by the US Army Corps of Engineers under section 404 of the CWA and does not constitute water quality certification under section 401 of the CWA. Enrollment under this General Permit may be required for construction activities involving one or more acres of wetland disturbance in the Lake Tahoe Hydrologic Unit.
5. This General Permit does not authorize land disturbing activities in flood plains or stream environment zones (SEZs) unless an exemption to applicable waste discharge prohibitions is granted in writing.
6. Lahontan Water Board staff is authorized to issue a single WDID to a Discharger proposing multiple discharges at multiple locations within the Lake Tahoe Hydrologic Unit, provided that the nature of the discharges and the locations are reported and included in the application information provided with the PRDs for this General Permit.

D. Eligibility Criteria

1. Discharges covered by this General Permit are limited to storm water discharges to surface waters and to land, and authorized non-storm water discharges to land that are associated with construction activities in the Lake Tahoe Hydrologic Unit (Department of Water Resources Hydrologic Unit No. 634.00) as described in any one of the categories listed below:
 - a. Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than one acre of total land area which are not part of a larger common plan of development or sale.

- b.** Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or sale that disturbs one or more acres.
 - c.** Construction activity that results in land disturbance of equal to or greater than one acre related to residential, commercial, or industrial development on lands currently used for agriculture or silviculture including, but not limited to, the construction of roads and buildings related to agriculture or silviculture that are considered industrial pursuant to USEPA regulations, such as dairy barns or food processing facilities.
 - d.** Construction activity that results in land disturbance of equal to or greater than one acre associated with linear underground/overhead utility projects including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities), underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.
 - e.** Construction activity that results in land disturbance of equal to or greater than one acre associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.²
- 2.** Activities specifically not required or eligible to be covered under this General Permit include:
 - a.** Disturbance to land associated with municipal facilities under an approved NPDES Storm Water Management Program for routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.
 - b.** Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.
 - c.** Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a separate federal permit.
 - d.** Construction activity that disturbs less than one acre of land surface, and that is not part of a larger common plan of development .

² Pursuant to the Ninth Circuit Court of Appeals' decision in NRDC v. EPA (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the USEPA's petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

- e. Construction activity covered by an individual NPDES Permit for storm water discharges.
 - f. Discharges of storm water identified in section 402(l)(2) of the CWA, 33 USC section 1342(l)(2).
- 3. Upon receipt of the appropriate PRDs, Lahontan Water Board staff will determine if such a discharge satisfies all of the following conditions:
 - a. The discharge will be generated from construction activity that does not include any other waste discharge activities, except for those described for authorized non-storm water discharges in section III of this General Permit.
 - b. The project does not include permanent disturbance to lands classified as SEZs as defined in the Basin plan, unless the Lahontan Water Board grants an exemption explicitly in writing.
 - c. The amount of proposed coverage is equal to or less than that allowed by the Basin Plan.
 - d. The project incorporates appropriate BMPs and low-impact development (LID) techniques, as feasible, to infiltrate and/or treat storm water runoff from existing and proposed impervious surfaces on the site as required in this General Permit.
 - e. The project plans include a SWPPP that proposes specific temporary and permanent measures to prevent the discharge of pollutants from the site.
 - f. The project plans include projected dates for:
 - i. Completion of construction;
 - ii. Completion of storm water infiltration and/or treatment facilities; and
 - iii. Completion of any necessary restabilization and revegetation.
- 4. Dischargers are eligible for coverage under this General Permit provided that the Discharger submits PRDs and the proper fee to the State Water Board before starting construction activities. Dischargers previously covered under Permit R6T-2005-0007 must submit their PRDs and receive approval before continuing construction activities after December 1, 2011. PRDs shall include the Notice of Intent (NOI), site maps, and SWPPP. If an Active Treatment System (ATS) is proposed to be used, information required in Attachment E must also be submitted as part of the PRDs. An ATS is distinct from other BMPs in that they include the use of chemical coagulation, chemical flocculation, or electro-coagulation to aid in the reduction of turbidity. For proposed construction activity on easements or on nearby property by agreement or permission, the entity

responsible for the construction activity must submit the PRDs and filing fee, and shall be responsible for development of the SWPPP. The NOI must be signed in accordance with the signatory requirements of the Standard Provisions (Attachment D).

The filing fee shall be submitted to:

State Water Resources Control Board
P.O. Box 1977
Sacramento, CA 95812

Or hand delivered to:

State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

5. Construction activities that involve alteration of a lake bed or stream channel may require prior written agreement with the California Department of Fish and Game. A copy of the written agreement, if any, or agreement waiver must be submitted with the NOI.
6. The Discharger, upon written request, submits additional information necessary to ascertain whether the discharge meets the criteria for coverage under this General Permit.
7. No discharge under this General Permit is authorized until a written WDID is issued from the Lahontan Water Board with the Notice of Applicability.
8. Notwithstanding the provisions of this section, appropriate projects may be brought to the Lahontan Water Board for consideration of adoption of an individual NPDES Permit when the Executive Officer deems it desirable or necessary to do so.

E. Termination of Coverage

1. When an individual NPDES permit is issued to a Discharger for those types of discharges that otherwise would be subject to this General Permit, the applicability of this General Permit to the Discharger is automatically terminated on the effective date of the individual permit.
2. When construction is complete and the lands have been stabilized from erosion, the discharger shall electronically file a Notice of Termination (NOT), a final site map, and photos through the State Water Board's SMARTS as a request to terminate permit coverage. The discharger shall certify through the filing that all General Permit requirements have been met including final stabilization conditions. The Discharger is required to pay the annual fee (as specified in the

annual billing received from the State Water Board) until the permit coverage is officially terminated in writing by the Lahontan Water Board. If the project lands are transferred to new ownership before construction is complete, the owner subject to this General Permit must temporarily stabilize the site, and electronically file an NOT, current site map, and photos through the SMARTS. The new owner must also apply for coverage under this General Permit as described above and may be liable construction related discharges without an NPDES permit for any period when the project is not covered under this General Permit.

- 3.** Prior to the termination of coverage under this General Permit, the following conditions must be met:
 - a.** The construction project is complete and there is no potential for construction related storm water pollution or pollutant discharges.
 - b.** All construction materials and waste have been removed from the project site and disposed of properly.
 - c.** All elements of the SWPPP have been completed.
 - d.** Permanent BMPs have been installed and all disturbed soil areas are stabilized to prevent and control erosion.
 - e.** For stabilization measures that will mature over time (e.g., cut and fill slopes or other mass graded areas that are mulched and seeded), the discharger shall demonstrate that the site will not pose any additional sediment discharge risk than it did prior to the commencement of construction. This condition shall be demonstrated by:
 - i.** Modeling results using the Revised Universal Soil Loss Equation (RUSLE) or RUSLE2 (detailed information may be found at the USDA website <http://www.ars.usda.gov/Research/docs.htm?docid=5971>), including computational proof or
 - ii.** Site-specific evaluation of stability, with consideration of parameters such as percent total cover, percent vegetative cover, vegetation type, soil nutrient and organic matter content, and soil infiltration rate.
- f.** Information required in the Monitoring and Reporting Program has been submitted.
- g.** Lahontan Water Board staff has inspected the site, if necessary.

4. If revocation of coverage under the General Permit is denied, Lahontan Water Board staff will provide written notification with the reasons for denial.

III. DISCHARGE PROHIBITIONS

Non-storm water discharges to surface waters are prohibited unless granted an exemption in accordance with requirements in the Basin Plan for eligible projects (restoration projects and those listed in Attachment F) and must meet the numeric effluent limitations in section IV of this General Permit unless granted an exemption in accordance with Basin Plan policy.

- A. Unless otherwise authorized by a separate NPDES permit, discharges of material other than storm water to a municipal separate storm sewer system or waters of the United States are prohibited.
- B. Discharges of non-storm water to land or land-based treatment systems may be necessary for certain construction projects. Such discharges include, but are not limited to, irrigation of vegetation erosion control measures, pipe flushing and testing, and construction dewatering. These discharges to land are authorized under the following conditions:
 1. The discharge does not violate any other provision of this General Permit.
 2. The discharge is not prohibited by the Basin Plan or does not require a prohibition exemption from the Lahontan Water Board for prohibitions contained in the Basin Plan.
 3. The Discharger has included and implemented specific BMPs required by this General Permit to prevent or reduce the contact of the non-storm water discharge with construction materials or equipment.
 4. The discharge does not contain toxic constituents in toxic amounts.
- C. The removal of vegetation or disturbance of ground surface conditions between October 15 and May 1 is prohibited. Where it can be shown that granting a variance would not cause or contribute to the degradation of water quality, an exception to the dates stated above may be granted in writing by the Executive Officer.
- D. At no time shall surplus or waste earthen materials be placed in surface water drainage courses, within the 100-year flood plain of any surface water, below the high water line of Lake Tahoe, or in such a manner as to allow the discharge of such materials to adjacent undisturbed land or to any surface water or surface water drainage course.
- E. The discharge or threatened discharge, attributable to human activities, of solid or liquid waste materials, including soil, silt, clay, sand and other organic earthen

materials, to lands below the highwater rim of Lake Tahoe or within the 100-year floodplain of any tributary to Lake Tahoe, is prohibited.

- F.** The discharge of threatened discharge, attributable to new development in SEZs, of solid or liquid waste, including soil, silt, sand, clay, rock, metal, plastic, or other organic mineral or earthen materials to SEZs in the Lake Tahoe Basin is prohibited.
- 1.** Section 5.2 of the Basin Plan contains prohibitions against the discharge of non-storm water wastes to surface waters, including SEZs and 100-year floodplains in Lake Tahoe Hydrologic Unit, which are described in Attachment F of this General Permit. The prohibitions in Attachment F apply to discharges from construction activity. (Any discharge proposed where a discharge prohibition may apply must be evaluated on an individual basis prior to issuing General Permit coverage to determine if the discharge would violate the prohibition. In some instances, exemptions may be granted on a case-by-case basis by resolution of the Lahontan Water Board, or by the Executive Officer in accordance with Lahontan Water Board Policy. More detailed information on exemption criteria and processing is presented in Attachment F).

IV. EFFLUENT LIMITATIONS

Storm water runoff generated from land disturbing activities should be infiltrated to the extent possible. Runoff that is allowed to discharge off the project boundaries must meet the following effluent limitations.

- A.** All storm water runoff generated within the project area which is discharged to surface waters or municipal separate storm sewer systems must not contain constituents in excess of the following numeric effluent limitations (NELs):

Table 3. Storm Water Effluent Limitations

Parameter	Units	Maximum Daily Effluent Limitations For Discharge
Total Nitrogen (as N)	mg/L	0.5
Total Phosphorus (as P)	mg/L	0.1
Total Iron	mg/L	0.5
Turbidity	NTU	20*
Grease and Oil	mg/L	2
Note* - For ATS use, 10 NTU as daily average and 20 NTU for any single sample.		

- B.** All waters generated within the project area, or as a result of the development of the project, that are discharged to surface waters or municipal storm sewer systems must not contain the following:

1. Substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or animal life; and
 2. Coliform organisms attributable to human wastes.
- C. For protection of receiving waters the pH of effluent samples should not fall outside of the range of 6.0 to 9.0. This range is set as a numeric benchmark level. If the pH of effluent is outside of the benchmark, the discharger must investigate the cause of the excursion and implement appropriate corrective measures. If the pH levels are determined to be from natural causes, the discharger must provide data (e.g., from run-on) to demonstrate this condition.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The following numerical and/or narrative water quality objectives apply to all surface waters, including wetlands, in the Lahontan Region. Effluent from construction sites must not cause or contribute to the violation of the objectives. The discharge of waste to surface waters must comply with the following limitations:

1. The discharge shall not cause a violation of any applicable water quality standard for receiving water adopted by the Lahontan Water Board or State Water Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. Discharges shall not cause the receiving water quality objectives listed in Attachment G to be exceeded for the specified surface waters and tributaries thereto. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal CWA or amendments thereto, the Lahontan Water Board may revise and modify this General Permit in accordance with such more stringent standards.
2. The discharge of storm water from within the project area to surface waters or municipal separate storm sewer systems must not cause or contribute to a violation of the following water quality objectives applicable to receiving waters for the discharge.
 - a. **Algal Growth Potential.** For Lake Tahoe, the mean algal growth potential at any point in the Lake shall not be greater than twice the mean annual algal growth potential at the limnetic reference station (located in the north central portion of Lake Tahoe)
 - b. **Ammonia.** Ammonia concentrations shall not exceed the values listed for the corresponding conditions in these tables. For temperature and pH values not explicitly in the tables, the most conservative value neighboring

the actual value may be used or criteria can be calculated from numerical formulas developed by the USEPA.

- c. Bacteria, Coliform.** Waters shall not contain concentrations of coliform organisms attributable to anthropogenic sources, including human and livestock wastes. The fecal coliform concentration during any 30-day period shall not exceed a log mean of 20 MPN/100 mL, nor shall more than 10 percent of all samples collected during any 30-day period exceed 40 MPN/100 mL.
- d. Biological Indicators.** For Lake Tahoe, algal productivity and the biomass of phytoplankton, zooplankton, and periphyton shall not be increased beyond the levels recorded in 1967 – 71, based on statistical comparison of seasonal and annual means.
- e. Biostimulatory Substances.** Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses.
- f. Chemical Constituents.** Waters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified by the more restrictive of the California Code of Regulations (CCR), Title 22, Division 4, Chapter 15, or 40 CFR Part 141.
- g. Chlorine, Total Residual.** For the protection of aquatic life, total chlorine residual shall not exceed either a median value of 0.002 mg/L or a maximum value of 0.003 mg/L. Median values shall be based on daily measurements taken within a 6-month period.
- h. Clarity.** For Lake Tahoe, the vertical extinction coefficient shall be less than 0.08 per meter when measured below the first meter. When water is too shallow to determine a reliable extinction coefficient, the turbidity shall not exceed 3 NTU. In addition, turbidity shall not exceed 1 NTU in shallow waters not directly influenced by stream discharges.
- i. Color.** Waters shall be free of coloration that causes nuisance or adversely affects the water for beneficial uses.
- j. Conductive Electrical.** In Lake Tahoe, the mean annual electrical conductivity shall not exceed 95 μ mhos/cm at 50 °C at any location in the Lake.
- k. Dissolved Oxygen.** The dissolved oxygen concentration, as percent saturation, shall not be depressed by more than 10 percent, nor shall the

minimum dissolved oxygen concentration be less than 80 percent of saturation. The minimum dissolved oxygen concentration shall not be less than 7.0 mg/L for Lake Tahoe, or that specified in Table 3-6 of the Basin Plan for other water bodies.

- i. Floating Materials.** Waters shall not contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water for beneficial uses. For natural high quality waters, the concentrations of floating material shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.
- m. Oil and Grease.** Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect the water for beneficial uses. For natural high quality waters, the concentration of oils, greases, or other film or coat generating substances shall not be altered.
- n. Nondegradation of Aquatic Communities and Populations.** All waters shall be free of substances attributable to wastewater or other discharges that produce adverse physiological responses in humans, animals, or plants; or which lead to the presence of undesirable or nuisance aquatic life. All waters shall be free from activities that would substantially impair the biological community as it naturally occurs due to physical, chemical and hydrologic processes.
- o. Pesticides.** For the purposes of this Basin Plan, pesticides are defined to include insecticides, herbicides, rodenticides, fungicides, piscicides and all other economic poisons. An economic poison is any substance intended to prevent, repel, destroy, or mitigate the damage from insects, rodents, predatory animals, bacteria, fungi or weeds capable of infesting or harming vegetation, humans, or animals (CA Agriculture Code 12753).

Pesticide concentrations, individually or collectively, shall not exceed the lowest detectable levels, using the most recent detection procedures available. There shall not be an increase in pesticide concentrations found in bottom sediments. There shall be no detectable increase in bioaccumulation of pesticides in aquatic life.

Waters designated as MUN shall not contain concentrations of pesticides or herbicides in excess of the limiting concentrations set forth in CCR, Title 22, Division 4, Chapter 15.

- p. pH.** In fresh waters with designated beneficial uses of COLD or WARM, changes in normal ambient pH levels shall not exceed 0.5 pH units. In Lake Tahoe, the pH shall not be depressed below 7.0 nor raised above

8.4. Changes in normal ambient pH levels in Lake Tahoe shall not exceed 0.5 pH units.

- q. **Plankton Count.** For Lake Tahoe, the mean seasonal concentration of plankton organisms shall not be greater than 100 per ml and the maximum concentration shall not be greater than 500 per ml at any point in the Lake.
- r. **Radioactivity.** Radionuclides shall not be present in concentrations which are deleterious to human, plant, animal, or aquatic life or which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life.

Waters shall not contain concentrations of radionuclides in excess of the limits specified by the more restrictive of the CCR, Title 22, Division 4, Chapter 15, or 40 CFR Part 141.

- s. **Sediment.** The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses. The suspended sediment concentration shall not exceed a 90th percentile value of 60 mg/L in tributaries to Lake Tahoe.
- t. **Settleable Materials.** Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects the water for beneficial uses. For natural high quality waters, the concentration of settleable materials shall not be raised by more than 0.1 ml/L.
- u. **Suspended Materials.** Waters shall not contain suspended materials in concentrations that cause nuisance or that adversely affect the water for beneficial uses. For natural high quality waters, the concentration of total suspended materials shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.
- v. **Taste and Odor.** Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish or other edible products of aquatic origin, that cause nuisance, or that adversely affect the water for beneficial uses. For naturally high quality waters, the taste and odor shall not be altered.
- w. **Temperature.** The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the Lahontan Water Board that such an alteration in temperature does not adversely affect the water for beneficial uses. For waters designated WARM, water temperature shall not be altered by more than 5 degrees Fahrenheit (5°F) above or below the natural temperature. For waters designated COLD, the temperature shall not be altered.

- x. Toxicity.** All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration and/or other appropriate methods as specified by the Lahontan Water Board.

The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary, for other control water that is consistent with the requirements for “experimental water” as defined in *Standard Methods for the Examination of Water and Wastewater (American Public Health Association, et al. 1998)*.

- y. Transparency.** For Lake Tahoe, the secchi disk transparency shall not be decreased below the levels recorded in 1967 – 71, based on a statistical comparison of seasonal and annual mean values.
- z. Turbidity.** Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D, which are made part of this General Permit.

B. Reopener Provisions

1. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal Water Pollution Control Act or amendments thereto, the Lahontan Water Board may revise and modify this General Permit in accordance with such more stringent standards.
2. The Lahontan Water Board may reopen this General Permit to establish new conditions or effluent limitations should monitoring data or other new information indicate that a constituent is discharged at a level that will do any of the following:
 - a.** Cause, have reasonable potential to cause, or contribute to an in-stream excursion above any water quality criteria or objective, or

VII. TRAINING QUALIFICATIONS AND CERTIFICATIONS REQUIREMENTS

A. General

The discharger shall ensure that persons responsible for developing and implementing storm water pollution controls specified this General Permit shall be appropriately trained and certified in accordance with the requirements below. Additionally, project SWPPP requirements shall be communicated to all contractor and subcontractor personnel conducting activities that could affect storm water runoff quality. Training may be both formal and informal, as appropriate, and shall at a minimum be provided during pre-construction meetings and regular tailgate meetings conducted during the course of the project.

The discharger shall provide documentation of required qualifications and training in the Annual Report for persons responsible for implementing the requirements of this General Permit.

B. SWPPP Certification Requirements

- 1. Qualified SWPPP Developer:** The discharger shall ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:
 - a.** A California registered professional civil engineer
 - b.** A California registered professional geologist or engineering geologist;
 - c.** A California registered landscape architect;
 - d.** A professional hydrologist registered through the American Institute of Hydrology;
 - e.** A Certified Professional in Erosion and Sediment Control (CPESC) TM registered through Enviro Cert International, Inc;
 - f.** A Certified Professional in Storm Water Quality (CPSWQ) TM registered through Enviro Cert International, Inc.; or
 - g.** A professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

2. **Required QSD Training:** Effective on **April 13, 2012**, a QSD shall have attended a State Water Board-sponsored or -approved QSD training course and pass a required examination covering the course material.
3. **Qualified SWPPP Practitioner:** The Discharger shall ensure that all BMPs required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis. Effective **April 13, 2012**, a QSP shall be either a QSD or have one of the following certifications:
 - a. A certified erosion, sediment and storm water inspector registered through Enviro Cert International, Inc.; or
 - b. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.
4. **Required QSP Training:** Effective **April 13, 2012**, a QSP shall have attended a State Water Board-sponsored or -approved QSP training course and pass a required examination covering the course material..

VIII. BEST MANAGEMENT PRACTICES (BMPS)

Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants. Storm water controls and control locations must be described in the SWPPP for the project site. At a minimum, the following types of storm water control measure BMPs must be described in the SWPPP and implemented for the project.

A. Site Management

Dischargers shall implement appropriate site management measures to control pollutants in site runoff for construction materials that are potential threats to water quality if discharged. The control measures shall include, but are not limited to, the following items.

1. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e., poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

- 2.** Identify potential pollutant sources and areas of the site where BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant source list shall identify all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, the discharger shall:

 - a.** Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.
 - b.** Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.
 - c.** Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.
- 3.** Ensure retention of sampling, visual observation, and inspection records.
- 4.** Store chemicals in watertight containers with appropriate secondary containment to prevent any spillage or leakage, and protect from precipitation and surface run-on.
- 5.** Separate snow storage and disposal areas from surface waters to prevent direct discharge and avoid surface runoff. Treatment and retention capacity of storm water basins and similar facilities on the land surface must not be compromised by storage of accumulated snow, other than by direct precipitation. Treatment facilities shall be designed to accommodate snowmelt runoff from designated snow storage and disposal areas.
- 6.** Protect permanent infiltration facilities from receiving turbid discharges or other polluted storm water runoff. If permanent infiltration facilities are used as temporary BMPs, the capacity and functionality of the facilities shall be maintained and/or renovated as needed to ensure pre-project capacity and function prior to requesting General Permit termination.
- 7.** Prevent the discharge of pollutants from sanitation facilities (e.g., portable toilets) to the storm water drainage system or receiving water. Sanitation facilities shall be cleaned/replaced as necessary, and inspected regularly for leaks and spills.

- 8.** Cover waste disposal containers at the end of every business day and during a rain event.
- 9.** Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.
- 10.** Protect all loose piles of soil, silt, clay, sand, debris, or other earthen materials such that sediment is prevented from leaving the site.
- 11.** Prevent ground compaction and disturbance activities in unpaved areas not subject to construction. All non-construction areas shall be protected be identified and protected by fencing or other means to limit access. These control measures shall be inspected periodically and shall be repaired when necessary to maintain effectiveness.
- 12.** Develop a spill response plan prior to commencement of construction activities. The plan shall include:
 - a.** Descriptions of equipment and materials required to be on site for cleanup of spills/leaks, and
 - b.** Descriptions of appropriate spill response procedures, the responsible personnel, and the training records of such personnel.
- 13.** Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.
- 14.** Prevent the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters.
- 15.** Conduct equipment and vehicle fueling, maintenance and repair activities only in designated areas with appropriate BMPs.
- 16.** By October 15 of each year, all disturbed areas shall be permanently stabilized or temporarily winterized. Winterized means to implement appropriate BMPs to prevent and minimize erosion and soil movement from the site in storm water in a manner that will remain effective until May 1 of the following year.

B. Sediment and Erosion/Stabilization Controls

Dischargers shall implement a combination of sediment and erosion controls to prevent or minimize sediment discharges from the site. Control measures shall include, but are not limited to, the following items.

1. Install temporary sediment controls for the down gradient perimeter of the project site, and/or any location where storm water may discharge from the project site, prior to the initiation of any construction related activities.
2. Install temporary gravel bag dikes, fiber rolls, filter fabric fence, or other equivalent measures as necessary to control erosion and runoff.
3. Install temporary check dams such as gravel bag dikes in concentrated flow lines to slow and detain water flows and retain sediment.
4. Protect drain inlets and outfall structures with appropriate controls to minimize and control erosion and sediment discharge.
5. Prevent off-site tracking of earthen materials from the construction site onto adjacent roads and public ways. The Discharger shall control access points, install stabilized entrances/exits for vehicle and equipment traffic operating on the site, and implement sweeping as necessary where tracking prevention is not complete.
6. Provide and maintain natural buffers around surface waters and direct storm water runoff to vegetated areas, unless infeasible.
7. If used, sediment basins must be designed according to the methods provided in California Storm Water Quality Association's (CASQA's) Construction BMP Guidance Handbook or equivalent (<http://www.cabmphandbooks.com/>).
8. Control storm water volume and velocity within the site to minimize soil erosion and offsite discharge.
9. Direct all run-on from offsite, to the maximum extent possible, away from all disturbed areas.
10. Surface flows from the project site shall be controlled to prevent downstream erosion at any point.

11. Control the amount of soil exposed to erosion at any particular time during construction activity.
12. Control soil compaction and preserve topsoil as feasible.
13. Implement an effective combination of temporary sediment and erosion controls on disturbed soil areas (DSAs) prior to the onset of precipitation events.
14. Permanently stabilize from erosion or vegetate all finished graded areas. Vegetated and revegetated areas shall be identified with the specifications for successful vegetation growth and soil cover and maintained as needed to ensure adequate growth and root development until vegetation becomes established. If mulch cover only is used for stabilization from erosion, the Discharger must demonstrate the mulch will provide ongoing effectiveness in preventing soil erosion. The following measures are recommended:
 - a. Depending on the level of disturbance and site conditions, wood chip mulch, pine needle mulch, rock, or other suitable materials may be applied on disturbed surfaces in lieu of vegetation;
 - b. Whenever practical seeds collected from the project site area should be added to the seed mix being applied during revegetation; and
 - c. Whenever practical, natural revegetation and native mulch will be the preferred method of stabilization.
15. Wind erosion shall be controlled to prevent nuisance and to prevent the transport of dust and soil particles into the air, off the project site, into any surface waters, or into any drainage course.

C. Construction Site Dewatering or Diversions

Unless granted an exemption in accordance with the Basin Plan for eligible projects, construction site dewatering waste must not be discharged to surface waters or tributaries thereto, including municipal separate storm sewer systems. Clear water diversions are authorized under this General Permit.

Prior to conducting dewatering or clear water diversion activities, the Discharger must prepare a dewatering/diversion plan as part of the SWPPP. Lahontan Water Board staff may require the Discharger to submit the

dewatering/diversion plan for review prior to commencement of the waste discharges.

The dewatering/diversion plan shall, at a minimum, include the following:

1. The location of the discharge area or outfall and name of receiving water.
2. A description of the discharge or diversion method and plan drawings as necessary.
3. The frequency and estimated volume and rate of discharge.
4. Expected pollutants and concentration in discharge, and control measures to be applied and maintained for pollutant control.
5. Planned effluent and/or receiving water monitoring (visual and other).
Parameters to be monitored for discharges to surface waters or municipal storm sewer systems include turbidity, total nitrogen, and total phosphorus. In addition, receiving water monitoring may be appropriate for dewatering discharges to wetlands, SEZs, and floodplains.

D. Inspection, Maintenance and Repair

Dischargers shall conduct BMPs inspections in accordance with the requirements of the Monitoring and Reporting Program described in Attachment C. Dischargers shall ensure that all inspection, maintenance and repair work is performed or supervised by a QSP representing the Discharger. The QSP may delegate any or all of these activities to an employee appropriately trained to do the tasks.

Upon identifying BMPs failures or shortcomings, as directed by the QSP, dischargers shall conduct maintenance or repair of failed or inadequate BMPs within 72 hours of identification, or before the next predicted rain event, whichever is sooner.

E. Rain Event Action Plan (REAP)

From the dates of May 1 through October 15 of each year, and during periods in which construction activity is conducted under a variance to the land disturbance prohibition of this General Permit, the discharger shall ensure a QSP develops a REAP no later than the calendar day 24 hours prior to any anticipated precipitation event. An anticipated precipitation event is any weather pattern that is forecast to have a 30 percent or greater chance of producing precipitation as rainfall in the project area. During periods when thunderstorm activity is anticipated, the discharger shall monitor weather conditions during the course of the day, and prepare and implement a REAP if the chance of thunderstorms becomes 30 percent or greater, or when visual observations indicate imminent precipitation. The QSP shall obtain, for each day of construction operations, a printed copy of precipitation forecast information from the National Weather Service (NWS) Forecast Office and

keep the copy with the SWPPP monitoring records. Dischargers may access the daily forecasts by entering the zip code of the project's location at the following website: <http://www.srh.noaa.gov/forecast>.

The REAP shall be available onsite, and a QSP shall begin to implement the REAP prior to the onset of an actual precipitation event. The REAP must be checked and updated daily for storms expected to last over a period of several days.

The REAP shall be developed for all phases of construction until the permit coverage is terminated by the Lahontan Water Board. A REAP template is included in Attachment H.

A REAP, at a minimum, shall include:

1. QSP name and contact number;
2. The date(s) rain is predicted to occur, and predicted chance of rain;
3. A description of all DSAs, material storage areas, stockpiles, vehicle and equipment storage and maintenance areas, and waste management areas. These areas must be cross-referenced to BMP plans or DSA maps by sheet or page number;
4. For each area described above, list specific items to review and actions to perform prior to the rain event;
5. A certification by the QSP that the REAP will be carried out as required by this Permit; and
6. A printout of the NWS weather forecast.

F. Active Treatment Systems (ATS)

Dischargers choosing to implement an ATS on a project site shall comply with all of the requirements in Attachment E of this General Permit.

G. Post-Construction Storm Water Control Requirements

Municipal and Public Roadway Storm Water Treatment Requirements:

Municipal jurisdictions and state highway departments must design projects to meet requirements in the respective municipal storm water NPDES permits.

New Development, Redevelopment, and Existing Development Storm Water Treatment Requirements:

For new development, re-development, and existing development retrofit projects, dischargers shall implement low-impact development (LID) techniques and infiltrate stormwater runoff from

impervious surfaces and other developed areas where natural percolation of precipitation is impeded following completion of construction. At a minimum, permanent storm water infiltration facilities must be designed and constructed to infiltrate runoff generated by the 20 year, 1-hour storm which equates to approximately one inch of runoff during a 1-hour period.

Where conditions permit, project proponents are encouraged to consider designing post-construction runoff controls in accordance with LID techniques and infiltration facilities to accommodate runoff volumes in excess of the 20 year, 1-hour storm to provide additional storm water treatment. Additional information on LID can be found at the National LID Clearinghouse website: <http://www.lid-stormwater.net/clearinghouse/index.html>.

Runoff from parking lots, retail and commercial fueling stations, and other similar land uses may contain oil, grease, and other hydrocarbon pollutants. Project proponents designing treatment facilities for these areas must include pre-treatment devices to remove hydrocarbon pollutants prior to infiltration or discharge and contingency plans to prevent spills from polluting groundwater.

Infiltrating runoff volumes generated by the 20 year, 1-hour storm may not be possible in some locations due to shallow depth to seasonal groundwater levels, unfavorable soil conditions, or other site constraints such as existing infrastructure or rock outcroppings. In the event that site conditions do not provide opportunities to infiltrate the runoff volume generated by a 20 year, 1-hour storm, project proponents must either (1) provide information showing how treatment facilities are expected to meet the numeric effluent limits in Table 5.6-1 of the Basin Plan, or (2) document written acceptance by the local municipality or state highway department to demonstrate that the publicly-owned or municipal storm water treatment facilities treating private property storm water discharges are sufficient to provide adequate treatment to meet any average annual fine sediment and/or nutrient load reduction requirements that may be established by the Lahontan Water Board for the municipality.

IX. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

The Discharger must develop and implement a SWPPP to meet the objectives specified below. This General Permit establishes the following requirements for the development and implementation of a SWPPP. Lahontan Water Board staff may require additional information to be added in a SWPPP depending on the nature or complexity of a project. A suggested outline for developing the SWPPP is provided in Attachment I.

A. OBJECTIVES

A SWPPP shall be developed and implemented for each construction site covered by this permit. The SWPPP shall be designed to comply with

requirements to implement BMPs to achieve compliance with effluent limits and receiving water objectives. The SWPPP shall be developed and amended, when necessary, to meet the following objectives:

1. Identify pollutant sources including sediment sources that may affect the quality of storm water discharges associated with construction activity.
2. Identify non-storm water discharges.
3. Identify, construct, implement, and maintain BMPs to reduce or eliminate pollutants in storm water discharges and authorized non storm water discharges from the construction site.
4. Identify all effluent discharge outfall locations, sampling and analysis strategy and protocols, and a sampling schedule for discharges from the identified outfalls for the project area.

B. PERMIT REGISTRATION DOCUMENTS (PRDs)

The SWPPP shall include a copy of the Notice of Intent (NOI).

C. SWPPP CERTIFICATION AND TRAINING REQUIREMENTS

1. The SWPPP must be prepared, signed, and certified by a QSD, who meets the requirements as described in section VII.B. of this General Permit. The SWPPP must also identify the QSP, as defined in section VII.B of this Permit.
2. The SWPPP shall include procedures to ensure that all required inspections, maintenance, and repair activities are consistent with the requirements of this General Permit. These procedures shall include identification of specific personnel and the training required to perform inspections, maintenance, and repair (i.e., by a QSP).

D. AVAILABILITY AND PUBLIC RECORDS ACCESS

The SWPPP and any amendments shall be kept on site during construction activity and made available upon request of a representative of the Regional Water Board or any local storm water management agency which receives the storm water discharge.

The SWPPP is considered a report that shall be available to the public under Section 308(b) of the CWA. Upon request by members of the public, the discharger shall make available for review a copy of the SWPPP directly to the requestor.

E. LIST OF CONTRACTORS/SUBCONTRACTORS

The SWPPP shall contain a list of all contractors and subcontractors responsible for implementing the SWPPP. This information shall be added to the SWPPP once the contractors and subcontractors selected to implement the SWPPP are determined

F. REQUIRED CHANGES

1. The Discharger shall amend the SWPPP whenever there is a change in construction, or operations, which may affect the discharge or pollutants to surface waters, ground waters, or a municipal storm drain system. The Lahontan Water Board may require SWPPP amendments be submitted for review and may require modifications.
2. The Discharger shall maintain the SWPPP such that it reflects the actual site conditions for the duration of the project, including keeping DSA maps current as the project progresses. Changes in BMP implementation features or activities shall be documented and included as amendments to the SWPPP. An amendment log shall be maintained in the SWPPP that summarizes all changes to the SWPPP for the duration of the project.
3. Lahontan Water Board staff, or a local agency with the concurrence of the Lahontan Water Board staff, may require the discharger to amend the SWPPP if it is in violation of any condition of this General Permit.

G. PROJECT INFORMATION

The SWPPP shall include the following information:

1. A copy of the NPDES permit shall be kept and maintained by the Discharger and be available at all times to operating personnel.
2. Project description;
3. WDID;
4. Site address and driving directions;
5. Emergency contact person and 24-hour phone number.
6. Potential construction site pollutants of concern and sources

H. MAPPING REQUIREMENTS

The SWPPP shall include the following maps:

- 1. Project Location Map:** A topographic map extending one-quarter mile beyond the property boundaries of the construction site, clearly showing: the construction site perimeter and surface water boundaries (including drainage channels, springs, SEZs, 100-year floodplain areas, and wetlands), and the designated discharge locations where the effluent will be controlled and monitored. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.
- 2. Map(s) of a scale no smaller than 1 inch equals 50 feet (1:600), showing:**
 - a.** The project's construction limit boundaries;
 - b.** Areas used to store construction materials, equipment, stockpiles, spoils and wastes, including concrete mixing and washout areas;
 - c.** Vehicle and equipment access, fueling, cleaning, storage and service areas;
 - d.** Existing and planned paved areas and buildings;
 - e.** Areas of existing vegetation to be preserved;
 - f.** Surface water locations, including SEZ boundaries mapped according to the criteria in the Lahontan Basin Plan, section 5.7; 100-year floodplain boundaries; ephemeral and intermittent waterways, springs, and wetlands;
 - g.** BMPs: Specific locations of storm water structures and controls used during construction as required by section VIII.C.3 of this Permit. Each control structure shall be represented by a standard symbol as indicated in the site map legend;
 - h.** Existing or pre-construction storm water structures and controls to reduce sediment and other pollutants in storm water discharge;
 - i.** DSAs: All active DSAs shall be delineated on a map as the project progresses. DSA maps must be kept updated to reflect site conditions. Once an area is stabilized or winterized, it should be hatched out or otherwise notated to indicate it is no longer disturbed;
 - j.** Drainage patterns and slopes anticipated after major grading activities;
 - k.** Post-construction storm water structures and controls;
 - l.** The locations designated for storm water discharge sampling. See Attachment C for additional detail regarding sampling requirements.
- 3. Information shown on all maps must be legible (i.e., avoid showing too much information on one map). All maps must include a north arrow, scale (either**

bar or text format), and a legend with symbols legible in black and white print for all required information. Standard symbols for pollution control structures must be included in the legend of applicable maps.

I. CONSTRUCTION AND BMP IMPLEMENTATION SCHEDULE

The SWPPP shall include:

1. The anticipated start and end dates of construction and well as phases of significant grading activities and work in or near drainages or receiving waters.
2. The schedule for deployment of BMPs. BMPs must be implemented, modified, and maintained appropriately for the site and weather conditions encountered during the project.

J. SITE MANAGEMENT

The SWPPP shall include:

1. A description of the measures, controls and practices to meet the requirements of section VIII of this Permit.
2. The location of site management controls shown on a map as described in the Mapping Requirements of this section, if applicable.
3. Standard specifications (including engineered drawings if applicable) for construction and installation of such controls.

K. SEDIMENT AND EROSION/STABILIZATION CONTROLS

The SWPPP shall include:

1. A description of measures, controls and practices to meet the requirements of section VIII of this General Permit.
2. The location of all sediment and erosion/stabilization controls shown on a map as described the Mapping Requirements of this section.
3. Standard specifications (including engineered drawings if applicable) for construction and installation of such controls.

L. NON-STORM WATER MANAGEMENT

The SWPPP shall include:

1. A description of measures, controls and practices to meet the requirements of section VIII of this General Permit.
2. The location of all non-storm water management controls shown on a map as described in the Mapping Requirements of this section.
3. Standard specifications (including engineered drawings if applicable) for construction and installation of such controls.

M. DEWATERING AND DIVERSIONS

The SWPPP shall include a Dewatering or Diversion Plan to meet the requirements of section VIII of this Permit if the Discharger will utilize surface water diversions to bypass natural stream flows, or pumps or siphons for removal or ground water from excavations (dewatering) during construction. A Diversion and/or Dewatering Plan, as required, shall be developed as an attachment to the SWPPP.

N. ACTIVE TREATMENT SYSTEM (ATS) PLAN

If an ATS is used, the discharger shall develop an ATS Plan in compliance with Attachment E of this Permit. The ATS Plan shall be included in the SWPPP.

O. POST-CONSTRUCTION STORM WATER MANAGEMENT

The SWPPP shall include:

1. A description of post-construction storm water management structures and controls to meet the requirements of section VIII of this General Permit.
2. The location of all post-construction storm water controls shown on a map as described in the Mapping Requirements of this section.
3. Standard specifications (including engineered drawings if applicable) for construction and installation of such controls.
4. The operations and maintenance requirements needed to maintain the effectiveness of storm water controls and the responsible party for ensuring that appropriate maintenance is completed.

P. RAIN EVENT ACTION PLAN (REAP)

The SWPPP shall include records of National Weather Service forecasts and a REAP prior to predicted storm events to meet the requirements of section VIII of this General Permit. A REAP template is included in Attachment H.

Q. CONSTRUCTION SITE MONITORING AND REPORTING PLAN (CSMRP)

The SWPPP shall include a CSMRP to meet the requirements of Attachment C.

R. BMP MAINTENANCE AND REPAIR

The SWPPP shall include procedures for conducting maintenance or repair of failed or inadequate BMPs within 72 hours of identification, or before the next predicted rain event, whichever is sooner.

S. OTHER PLANS

This SWPPP may incorporate, by reference, the appropriate elements of other plans required by local, state or Federal agencies. A copy of any requirements incorporated by reference shall be kept at the construction site.

X. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below:

A. Compliance with Effluent Limitations

Dischargers must identify all runoff control points where effluent may be discharged off the project boundaries. Monitoring for compliance with effluent limitations is not required if there is no discharge off the project boundaries (e.g., all precipitation is infiltrated on the project site). Compliance with the NELs in section IV of this General Permit is required for any discharge at designated runoff control points that is generated by non-storm water discharges or storm events that do not exceed the rainfall associated with a 20-year, 1-hour storm, which, for purposes of this General Permit, is equal to an intensity of 1 inch of rainfall in a 1-hour period (compliance storm event).

If constituent concentrations of waters entering the project area (run-on) exceed the numerical limitations specified above, there must be no increase in the constituent concentrations in the waters that are discharged from the project area.

Discharge monitoring results shall not be used by Water Board staff for determining compliance with NELs for storms with intensities in excess of the compliance storm event or where run-on exceeds the NELs and the discharge does not increase the level of the exceedance. The Discharger is required to provide supporting documentation such as run-on monitoring data, on-site rain gauge data, and/or rainfall data provided by the National Oceanic and Atmospheric Administration (NOAA) to the Lahontan Water Board for any claims that an effluent limit excursion or exceedance occurred due to these circumstances. The supporting information shall clearly show when the sample was collected relative to the occurrence of the compliance storm event (i.e., the time of rainfall relative to the time of sample collection must be documented). The information will be evaluated for the merits of any claim for relief from compliance requirements for the NELs.

Additionally, dischargers must provide documentation for any claim that effluent leaving the project boundaries does not reach receiving waters or MS4s for relief from the NELs for discharges to surface waters.

B. Multiple Sample Data

The NELs in this General Permit are evaluated as a maximum daily effluent limitation (MDEL). Pursuant to NPDES regulations (40CFR Part 122.2), *maximum daily discharge* limitation means the highest allowable “daily discharge.” *Daily* discharge means the “discharge or a pollutant” measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of measurement other than mass, the daily discharge is calculated as the average measurement of the pollutant over the day. For purposes of this General Permit, the daily average effluent value is defined as the arithmetic mean of the daily effluent data. When determining compliance when more than one sample result is available due to collection at multiple discharge points and/or multiple times during the calendar day, the Discharger shall compute the arithmetic mean concentration for each day of discharge.

Samples must be representative of the volume and quality of runoff from the site. Sample collection must not be manipulated in such a way as to skew the average daily effluent value. However, the discharger must provide monitoring data to indicate estimates of the proportional area or flow that each discharge point from the site represents when reporting the data.

C. Maximum Daily Effluent Limitation (MDEL)

If the average daily concentration exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period.

D. Sampling by Other Parties

Sampling may be conducted by persons other than the Discharger. Water Board staff, operators of municipal separate storm sewer systems, or others may analyze storm samples. Samples collected by others may be used with other data to determine MDELs and to conduct compliance determinations, as provided above.

ATTACHMENT A – ACRONYM LIST

ATS - Active Treatment System
BAT - Best Available Technology Economically Achievable
BCT - Best Conventional Pollutant Control Technology
BMPs - Best Management Practices
BPT - Best Practicable Technology Economically Achievable
CASQA – California Storm Water Quality Association
CCR - California Code of Regulations
CEQA - California Environmental Quality Act
CFR – Code of Federal Regulations
CPESC - Certified Professional in Erosion and Sediment Control
CPSWQ - Certified Professional in Storm Water Quality
CSMRP - Construction Site Monitoring and Reporting Plan
COC – Chain of Custody
CWA - Clean Water Act
CWC - California Water Code
DNQ - Detected, but Not Quantified
DSA - Disturbed Soil Areas
ELG – Effluent Limitation Guideline
LID – Low Impact Development
LRP – Legally Responsible Person
LUP – Linear Underground/Overhead Project
MATC – Maximum Allowable Threshold Concentration
MCL - Maximum Contaminant Level
MDEL - Maximum Daily Effluent Limitation
MDL – Method Detection Limit
ML - Minimum Level
MRP – Monitoring and Reporting Program
MS4 – Municipal Separate Storm Sewer System
NAL – Numeric Action Level
ND - Not Detected
NEL – Numeric Effluent Limitation
NICET - National Institute for Certification in Engineering Technologies
NOA – Notice of Applicability
NOAA – National Oceanic and Atmospheric Administration
NOT – Notice of Termination
NOI - Notice of Intent
NPDES – National Pollutant Discharge Elimination System
NSPS - New Source Performance Standards
NTU – Nephelometric Turbidity Units
NWS – National Weather Service
PRD - Permit Registration Document
QSD - Qualified SWPPP Developer
QSP - Qualified SWPPP Practitioner
REAP - Rain Event Action Plan

RL – Reporting Limit
RUSLE - Revised Universal Soil Loss Equation
SEZ - Stream Environment Zone
SMARTS - Storm water Multi-Application and Report Tracking System
SWAMP – Surface Water Ambient Monitoring Program
SWPPP - Storm Water Pollution Prevention Plan
USEPA – United States Environmental Protection Agency
WDID - Waste Discharger Identification
WDRs - Waste Discharge Requirements
WQBEL - Water Quality-Based Effluent Limitations
WQO – Water Quality Objective

ATTACHMENT B – GLOSSARY

Active Treatment System (ATS)

A treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation to aid in the reduction of turbidity caused by fine suspended sediment.

Acute Aquatic Toxicity Test

A test to measure the relative severity of chemical toxicity on aquatic life. For aquatic toxicity, an effect observed within 96 hours or less is considered acute.

Anticipated Storm Event

An anticipated storm event is any weather pattern that is forecast to have a 30% or greater chance of producing precipitation in the project area, as determined by the precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at <http://www.srh.noaa.gov/forecast>).

Approved Signatory

A person who has been authorized by the Legally Responsible Person to sign, certify, and electronically submit Permit Registration Documents, Notices of Termination, and any other documents, reports, or information required by the General Permit, the State or Regional Water Board, or USEPA. The Approved Signatory must be one of the following:

1. For a corporation or limited liability company: a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation or limited liability company; or (b) the manager of the facility if authority to sign documents has been assigned or delegated to the manager of the facility if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
2. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
3. For a municipality, State, Federal, or other public agency: a principal executive officer, ranking elected official, city manager, council president, or any other authorized public employee with managerial responsibility over the construction or land disturbance project (including, but not limited to, project manager, project superintendent, or resident engineer);
4. For the military: any military officer or Department of Defense civilian, acting in an equivalent capacity to a military officer, who has been designated;

5. For a public university: an authorized university official;
6. For an individual: the individual, because the individual acts as both the Legally Responsible Person and the Approved Signatory; or
7. For any type of entity not listed above (e.g. trusts, estates, receivers): an authorized person with managerial authority over the construction or land disturbance project.

Arithmetic Mean (μ)

Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

$$\text{Arithmetic mean} = \mu = \Sigma x / n \quad \text{where: } \Sigma x \text{ is the sum of the measured ambient water concentrations, and } n \text{ is the number of samples.}$$

Beneficial Uses

California Water Code defines beneficial uses as those uses of the waters of the state that must be protected against quality degradation as specified in the Basin Plan.

Best Available Technology Economically Achievable (BAT)

As defined by USEPA, BAT is a technology-based standard established by the Clean Water Act as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. The BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT)

As defined by USEPA, BCT is a technology-based standard for the discharge from existing industrial point sources of conventional pollutants including biochemical oxygen demand (BOD), total suspended sediment (TSS), fecal coliform, pH, and oil and grease.

Best Management Practices (BMPs)

Stormwater control measures including schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States.

Chain of Custody (COC)

The form used to track sample handling as samples progress from sample collection through the analysis and reporting process in the laboratory. COC forms can be obtained from an analytical laboratory upon request.

Coagulation

The clumping of particles in a discharge to settle out impurities, often induced by chemicals such as lime, alum, and iron salts.

Common Plan of Development

Generally a contiguous area where multiple, distinct construction activities may be taking place at different times under one plan. A plan is generally defined as any piece of documentation or physical demarcation that indicates that construction activities may occur on a common plot. Such documentation could consist of a tract map, parcel map, demolition plans, grading plans or contract documents. Broad planning documents such as land use master plans, conceptual master plans, or broad-based CEQA or NEPA documents that identify potential projects for an agency or facility are not considered common plans of development.

Compliance Storm Event

The 20-year, 1-hour storm, which is equal to 1 inch of rainfall during a 1-hour period. For ATSS, the compliance storm event is the 10-year, 24-hour storm event as determined by the following precipitation frequency maps (expressed in tenths of inches): <http://www.wrcc.dri.edu/pcpnfreq/nca10y24.gif>.

Daily Average Discharge

The discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily average discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limitations expressed in other units such as concentration, the daily average discharge is calculated as the average measurement of the pollutant throughout the day. The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day from outfalls identified for the project site.

Detected, but Not Quantified (DNQ)

DNQ are those sample results less than the Reporting Limit (RL), but greater than or equal to the laboratory's Method Detection Limit (MDL).

Diversions

Activities taken to route flowing water or groundwater around or away from a work site that does not cause a measurable change in water quality upstream or downstream of the work area.

Dewatering

Activities taken to remove excess water in an excavation or impoundment by pumping or other mechanical means. Dewatering fluids generally contain pollutants such as sediment.

Direct Discharge

The addition of any pollutant to waters of the U.S. from any point source including surface runoff that is collected or channeled by human activity; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person that do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances leading into a privately owned treatment works.

Discharger

The Legally Responsible Person or entity subject to this General Permit.

Effluent

Any discharge of water by a discharger either to the receiving water or beyond the property boundary controlled by the discharger.

Effluent Limitation

Any numeric or narrative restriction imposed on quantities, discharge rates, or concentrations of pollutants that are discharged beyond a project boundary from point sources into waters of the U.S., the waters of the contiguous zone, or the ocean.

Effluent Limitation Guideline (ELG)

ELGs are U.S. national standards for wastewater discharges to surface waters and publicly owned treatment works. The USEPA issues ELGs for categories of industrial sources of water pollution under the Clean Water Act.

Emergency

A sudden, unexpected occurrence involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, essential public services, or the environment.

Estimated Chemical Concentration

The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Index Period

The period of time during which bioassessment samples must be collected to produce results suitable for assessing the biological integrity of streams and rivers. Instream communities naturally vary throughout the seasons and sampling during the index period ensures that samples are collected during a period when communities are stable such that year to year consistency is obtained. The index period for the Lake Tahoe Hydrologic Unit is July 1 through August 15.

Legally Responsible Person

The Legally Responsible Person (LRP) will typically be the project proponent. The categories of persons or entities that are eligible to serve as the LRP are set forth below. For any construction or land disturbance project where multiple persons or entities are eligible to serve as the LRP, those persons or entities shall select a single LRP. In exceptional circumstances, a person or entity that qualifies as the LRP may

provide written authorization to another person or entity to serve as the LRP. In such a circumstance, the person or entity that provides the authorization retains all responsibility for compliance with the General Permit. Except as provided in category 2(d), a contractor who does not satisfy the requirements of any of the categories below is not qualified to be an LRP.

The following persons or entities may serve as an LRP:

1. A person, company, agency, or other entity that possesses a real property interest (including, but not limited to, fee simple ownership, easement, leasehold, or other rights of way) in the land upon which the construction or land disturbance activities will occur for the regulated site.
2. In addition to the above, the following persons or entities may also serve as an LRP:
 - a. For linear underground/overhead projects (LUPs), the utility company, municipality, or other public or private agency that owns or operates the LUP;
 - b. For land controlled by an estate or similar entity, the person who has day-to-day control over the land (including, but not limited to, a bankruptcy trustee, receiver, or conservator);
 - c. For pollution investigation and remediation projects, any potentially responsible party that has received permission to conduct the project from the holder of a real property interest in the land; or
 - d. For U.S. Army Corp of Engineers projects, the U.S. Army Corps of Engineers may provide written authorization to its bonded contractor to serve as the LRP, provided, however, that the U.S. Army Corps of Engineers is also responsible for compliance with the general permit, as authorized by the Clean Water Act or the Federal Facilities Compliance Act.

Maximum Allowable Threshold Concentration (MATC)

For ATS use, the allowable concentration of residual, or dissolved coagulant/flocculant in effluent. The MATC shall be specific to the coagulant/flocculant used, and be based on toxicity testing conducted by an independent, third-party laboratory.

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median

The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL)

MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)

ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Municipal Storm Water Collection System

A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) which is:

1. owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created pursuant to applicable federal and bi-state laws) having jurisdiction, that discharges to waters of the United States; including special districts under State law such as a sewer district or drainage district, flood control district, Indian tribe or an authorized Indian tribal organization or a designated and approved management agency under Section 208 of the CWA;
2. designed or used for collecting or conveying storm water;
3. which is not a combined sewer; and
4. which is not part of a Publicly Owned Treatment Works as defined in 40 CFR 122.2.

New Source Performance Standards

New Source Performance Standards (NSPS) are pollution control standards issued by the USEPA. NSPS under the CWA set the level of allowable wastewater discharges from new industrial facilities.

Non-Storm Water

Any wastewater that is not composed entirely of storm water, as defined below.

Non-Visible Pollutants

Pollutants that cannot be visually observed and are associated with a specific site, material, or activity that can cause a negative impact on water quality. Examples include chlorine, fertilizers, and pesticides/herbicides.

Not Detected (ND)

Sample results which are less than the laboratory's MDL.

Post-Construction BMPs

Structural and non-structural controls that detain, retain, or reduce the discharge of wastewater and pollutants to receiving waters after final stabilization is attained.

Qualified SWPPP Developer (QSD)

Individual who is authorized to develop and revise SWPPPs.

Qualified SWPPP Practitioner (QSP)

Individual assigned responsibility for non-storm water and storm water visual observations, sampling and analysis, and responsibility to ensure full compliance with the permit and implementation of all elements of the SWPPP and CSMRP.

Rain Event Action Plan (REAP)

A written document specific to each storm event, that when implemented, is designed to protect all exposed portions of the site within 24 hours of any likely precipitation.

Reporting Level (RL)

RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Lahontan Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Revised Universal Soil Loss Equation (RUSLE)

Empirical model developed by the USDA that calculates average annual soil loss as a function of rainfall and runoff erosivity, soil erodibility, topography, erosion controls, and sediment controls.

Routine Maintenance

Activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Run-on

Waters that originate offsite and flow onto the project site.

Storm Water Multi-Application and Report Tracking System (SMARTS)

The State Water Board's electronic system to manage administrative aspects of this General Permit, including obtaining and terminating coverage, and submitting required data and reports.

Storm Water

Storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

Structural Controls

Any physical facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution.

Wadeable Stream

A stream that can be crossed safely by wading during an index period.

Water of the United States

Generally refers to surface waters, as defined by the USEPA in 40 CFR 122.2.

Water Quality Objectives (WQOs)

Water quality objectives are defined in the California Water Code as limits or levels of water quality constituents or characteristics that are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

ATTACHMENT C – CONSTRUCTION SITE MONITORING AND REPORTING PROGRAM (CSMRP)

Title 40 of the Code of Federal Regulations at section 122.48 (40 CFR 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Lahontan Water Board to require technical and monitoring reports. This CSMRP establishes minimum monitoring and reporting requirements for this General Permit, which implement the federal and California regulations. Additional monitoring may be required as specified by the Executive Officer.

I. GENERAL MONITORING PROVISIONS

- A.** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall be identified in the CSMRP filed as part of the SWPPP with the NOI. Discharge locations may be updated as necessary if certain phases or project segments are completed and permanently stabilized. The updated sampling locations must be maintained in the SWPPP and made available to Lahontan Water Board staff upon request.
- B.** With the exception of field analysis conducted by dischargers for turbidity and pH, all laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports. Dischargers may conduct their own field analysis of turbidity and pH if the discharger has sufficient capability (qualified trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.
- C.** All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- D.** Dischargers shall ensure that all sampling and sample preservation are in accordance with the current edition of “Standard Methods for the Examination of Water and Wastewater” (American Public Health Associate).
- E.** All sample analyses shall be conducted according to test procedures specified in 40 CFR Part 136, or otherwise stated within this Monitoring and Reporting Program.

- F. Monitoring results, including non-compliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.
- G. All inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all these activities to an employee appropriately trained to do the task(s).
- H. Dischargers are not required to conduct visual inspections or physically collect samples outside of daylight hours, or when conditions exist that would be dangerous to personnel. Winter period (October 16 through April 30) monitoring requirements are also waived if significant environmental impacts would result from road system use to access the activity area, or if worker safety would be compromised. An explanation of the missed monitoring requirements due to these exceptions shall be recorded in writing and provided to Lahontan Water Board with the Annual Report.

II. CONSTRUCTION SITE MONITORING AND REPORTING PLAN REQUIREMENTS

- A. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring and Reporting Plan (CSMRP) in accordance with the requirements of this Section. The CSMRP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMRP shall be part of the Storm Water Pollution Prevention Plan (SWPPP).
- B. Dischargers electing to operate an Active Treatment System (ATS) shall develop and implement a supplemental monitoring program for these systems in accordance with the requirements established in Attachment E of this General Permit.
- C. The CSMRP shall be developed and implemented to include the monitoring and reporting requirements specified in this CSMRP and shall at a minimum address the following objectives:
 - 1. Demonstrate that the site is in compliance with the discharge prohibitions and applicable effluent limitations.
 - 2. Determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.

3. Determine whether immediate corrective actions, additional BMPs, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.
4. Determine whether BMPs included in the SWPPP/REAP are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.
5. Demonstrate that appropriate sample collection, handling, and analyses procedures are implemented.

III. VISUAL INSPECTIONS

A. Visual Inspections

1. During the active construction season (defined as May 1 through October 15 for purposes of this General Permit), an inspection of the construction site shall be made at the end of each work day. Dischargers working (under an approved variance) during the period from October 16 through April 30 of the following year shall also conduct inspections on a daily basis. During the Winter or inactive period (defined as October 16 through April 30 for purposes of this permit), Dischargers must conduct inspections at least once per month during daylight hours.
2. During both active and inactive periods, a construction site inspection shall also be performed within 24 hours prior to an anticipated precipitation event (chance of precipitation is forecasted at 30 percent or greater), daily during extended storm events, and within 24 hours after actual storm events. This requirement does not apply during snow events. If the discharger cannot complete an inspection within the specified time frames, the reason for the delay shall be recorded in writing and maintained with the next inspection report.
3. Inspections shall be performed periodically, in accordance with this General Permit, from the commencement of construction activities until termination of coverage under this General Permit. The purpose of the inspections is to discover potential water quality problems at the construction site so the Discharger can implement corrective measures immediately. The inspections will also be used to document compliance with the conditions of the General Permit and the SWPPP and to evaluate the effectiveness of the SWPPP and the REAP.
4. Inspection procedures shall be specified in the CSMRP. Observations at all designated effluent outfalls and other locations where storm water may discharge from the project boundaries to surface waters or municipal storm sewer systems must be included in the specified

procedures. Inspections shall be conducted to identify and report the compliance status for following items, as a minimum:

- a. Damage to containment dikes or erosion control fencing.
 - b. Improperly installed or ineffective erosion control fencing.
 - c. Unauthorized vehicle access, or vehicle access into designated non-construction areas not subject to disturbance.
 - d. Boundary fence damage or removal.
 - e. Disturbed areas with inadequate erosion prevention and sediment control protection.
 - f. Evidence of any sediment leakage through erosion control fencing or containment dikes.
 - g. Soil piles and other earthen materials which are unprotected or located in a drainage way.
 - h. Spilled and improperly stored chemicals, paint, fuel, oil, solvents, sealants, etc.
 - i. Upstream runoff diversion structures (are in place and operational).
 - j. Any evidence of sediment tracking from construction equipment.
 - k. Any signs of soil erosion or deposition down gradient from runoff discharges.
 - l. Sediment accumulation within onsite storm water drainage control facilities, and facilities in need of maintenance to ensure effectiveness.
 - m. Any evidence of non-storm water discharges from the project site. The inspection report shall note whether any such discharges are authorized, or are illicit and not authorized. If authorized, the condition of the applicable BMPs must be indicated.
 - n. Any observed impacts to the receiving water.
5. All inspections shall be recorded and maintained on a construction site inspection form provided as part of the CSMRP. Inspection forms shall be maintained and made available to the Lahontan Water Board, State Water Board, or USEPA staff, or designated representative, upon request. At a minimum the following information shall be recorded:

- a. Weather conditions at the time of the inspection, including presence or absence of precipitation, estimated time of beginning of storm event, duration of storm event, time elapsed since last storm event, and approximate amount of rainfall in inches.
- b. Site information, including stage of construction, activities completed, and approximate area of the site exposed to storm water runoff.
- c. A description of BMPs evaluated (i.e., erosion controls, sediment controls, chemical and waste controls, and non-storm water controls) including the locations and any deficiencies noted.
- d. Observations of any storm water containment areas to detect leaks and ensure maintenance of adequate freeboard.
- e. A description of any non-storm water discharges and spills/leaks observed.
- f. Observations at all relevant discharge points and downstream locations in the receiving water, including the presence or absence of floating and suspended materials, sheens, discolorations, turbidity, and odors.
- g. Any corrective actions required, including any necessary changes to the SWPPP or REAP and the associated implementation dates.
- h. Photographs taken during the inspection, if any.
- i. Inspector's name, title, and signature.
- j. A space shall be provided to record follow up corrective actions that have been completed in response to the inspection report. A summary of the completed corrective actions shall be recorded in this space with the date of completion.

IV. STORM WATER MONITORING

A. Discharge Monitoring Locations

1. The Discharger shall perform sampling and analysis of storm water and non-storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.
2. Effluent samples shall be collected, at a minimum, at all designated discharge points where storm water and authorized non-storm water is discharged offsite.

3. Dischargers shall ensure that effluent samples are representative of the discharge in each drainage area based on visual observation of the water and upstream conditions.
4. Dischargers shall monitor and report site run-on from surrounding areas if there is a reason to believe run-on may contribute to an effluent limit exceedance. Run-on sampling locations shall be identified in the CSMRP if applicable.
5. Dischargers who deploy an ATS on their site, or a portion of their site, shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.
6. Discharge point monitoring locations shall be identified in the CSMRP and updated if disturbed soil areas change during the course of the project.

B. Receiving Water Monitoring Locations

When receiving water monitoring is determined to apply to the project (see subsection C.3. below), the following shall apply:

1. **Upstream/up-gradient.** Dischargers shall obtain upstream/up-gradient receiving water samples from a representative and accessible location as close as possible to and upstream from the effluent discharge.
2. **Downstream/down-gradient.** Dischargers shall obtain downstream/down-gradient receiving water samples from a representative and accessible location as close as possible to and downstream from the effluent discharge.
3. Receiving water monitoring locations shall be identified in the CSMRP.

C. Sampling Requirements

1. Storm Water Effluent Discharges.

- a. During the active construction season (defined as May 1 through October 15 for purposes of this General Permit), Dischargers shall collect one grab sample from each discharge point where storm water is discharged off the project boundaries and/or to surface waters. A minimum of three samples must be collected for each day that storm water is discharged offsite. If fewer than three discharge points are present at the site, at least three samples shall be collected from the discharge location(s). Dischargers working under an approved variance during the period from October 16

through April 30 of the following year shall collect samples in accordance with the protocols described above.

- b. During the period from October 16 through April 30 of the following year, Dischargers must collect a representative sample from each designated discharge sampling point during a minimum of two storm events that produce a discharge off the project boundaries. Sampling is only required for one day during each storm event. A minimum of three samples for each day sampling is conducted is required.
 - c. Samples shall be analyzed onsite for turbidity using portable field instruments calibrated in accordance with manufacturer specifications. If there is a visible oily sheen at any discharge point, a sample shall be collected and analyzed for grease and oil. Samples shall be collected and analyzed, consistent with Table C-1.
- 2. Non-visible Pollutants in Effluent.** The Discharger shall identify in the CSMRP potential non-visible pollutants that may contaminate storm water or non-storm water discharged from the project site (i.e., acids and bases, solvents, lubricants, fertilizers; pollutants known to have been spilled and have contaminated the soil; concrete or soil amendments, such as gypsum, that may result in increase pH). If a breach, malfunction, leakage, or spill is identified that has the potential to result in the discharge of a non-visible pollutant, or the discharge of the non-visible pollutants is expected, the discharger shall perform sampling for the specific non-visible pollutants at the discharge points corresponding to the applicable drainage area. This includes sampling for pH using a portable field meter when runoff has come into contact with uncured concrete or other materials that could affect the pH of effluent. The discharger shall also collect and analyze a sample of storm water runoff that has not come into contact with the pollutants of concern for comparison with the non-visible pollutant discharge sample.

Analyses may include, but are not limited to, indicator parameters such as volatile organic compounds, semi-volatile organic compounds, metals, salts and nutrients such as nitrogen and phosphorus, and other analyses as appropriate. The CSMRP shall specify appropriate indicator parameters for each non-visible pollutant identified, as well as appropriate analytical methods, detection limits, sampling procedures, and sampling preservation. When possible, these methods should be consistent with 40 CFR Part 136 to the maximum extent possible.

For protection of receiving waters the pH of effluent samples should not fall outside of the range of 6.0 to 9.0. This range is set as a

numeric action level (NAL). If the pH of effluent is outside of the NAL, the discharger must investigate the cause of the excursion and implement appropriate corrective measures. If the pH levels are determined to be from natural causes, the discharger must provide data (e.g., from run-on) to demonstrate this condition.

- 3. Receiving Waters.** For certain sites and situations, such as stream restoration projects or other projects conducted within or adjacent to surface waters, discrete discharge points and effluent outfalls may not exist. In these cases receiving water sampling is more appropriate to evaluate potential impacts to water quality. For these sites, during the period from May 1 through October 15 of each year, the discharger shall collect a minimum of three samples per day for each day that storm water or authorized non-storm water is discharged to receiving waters at both upstream locations above the project effects and downstream locations below the project area. Dischargers working under an approved variance during the period of October 16 through April 30 the following year shall collect samples in accordance with the protocols described above. Samples shall be analyzed in accordance with Table C-1.
- 4. Bioassessments.** Dischargers operating on sites that disturb 30 acres or more of the landscape and have a direct discharge to a wadeable stream or streams shall conduct or participate in benthic macroinvertebrate bioassessment prior to commencement of construction activity, as specified in Attachment C-1.

Table C-1. Monitoring Requirements (May 1 through October 15)*

Parameter	Units	Test Method	Minimum Detection Limit	Frequency
Turbidity	NTU	1	1 NTU	2
pH	SU	1	0.2 pH	4
Grease and Oil	mg/L	EPA 1664 w/silica gel treatment (SGT)	2 mg/L	3
Non-visible Pollutants		4	4	4
Bioassessment	NA	5	NA	6

Notes:

- 1 - Shall be field tested with a calibrated portable instrument.
- 2 - **Effluent**-Minimum of three samples per day storm water is discharged - All designated loctions must be sampled.
Receiving waters – When discharge sampling is determined to be inappropriate, collect three samples per day at designated sampling locations for each day that storm water is discharged to receiving waters.
- 3 - **Effluent** - When visible sheen is observed at discharge point.
- 4 - The units, test method, and minimum detection limit shall be identified in the discharger’s CSMRP for each non-visible pollutant identified by the discharger. Analytical methods shall be in accordance with 40 CFR Part 136. Monitoring for non-visible pollutants shall be conducted as specified in section IV.C.2 of this MRP (when suspected in the discharge or when the potential to discharge has been determined).
- 5 - The current SAFIT STEs (November 28, 2006) list requirements for both the Level I and Level II taxonomic effort, and area located at http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board’s SWAMP website.
- 6 - Applicable only to dischargers with a total project-related ground disturbance of 30 acres or more and a direct discharge to a receiving water. See Attachment C-1.

*Note - see section C of this attachment for requirements during inactive construction period

V. GENERAL REPORTING REQUIREMENTS

- A.** All data and reports must be submitted through the SMARTS and be certified by the LRP or an approved signatory.
- B.** All turbidity and pH analytical results collected from field instruments must be reported within five days after storm event conclusion. All other results determined by an analytical laboratory must be submitted within five days of receipt of the results from the laboratory.
- C.** The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.
- D.** The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:
 - 1.** Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
 - 2.** Sample results less than the reporting limit (RL), but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.
 - 3.** For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.
- E.** Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

VI. TWENTY FOUR-HOUR REPORTING

The Discharger shall immediately notify the Lahontan Water Board orally within 24 hours whenever an adverse condition occurs as a result of a discharge. An adverse condition includes, but is not limited to, a violation or

threatened violation of the conditions of this General Permit, significant spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance pursuant to Section 13267(b) of the California Water Code, a written notification of the adverse condition shall be submitted to the Lahontan Water Board within five (5) business days of occurrence. The written notification shall identify the adverse conditions, describe the actions necessary to remedy the condition and/or the actions implemented to abate the problem from continuing, and specify a timetable, subject to the modifications of the Lahontan Water Board, for remedial actions.

In the event that sampling results exceed any applicable NEL, the dischargers shall orally notify the Lahontan Water Board within 24 hours after the NEL exceedance has been identified and electronically submit all storm event sampling results through the SMARTS within five (5) business

days after the NEL exceedance has been identified.

VII. ANNUAL REPORT

On or before **November 30** of each year, the discharger shall prepare and electronically submit through the SMARTS an Annual Report for the period of October 16 of the previous year through October 15 of the current year. The SMARTS reporting module requests the following information:

- A.** The project name and location.
- B.** Any significant problem(s) which occurred during project construction and remedial measures planned or implemented.
- C.** A summary and evaluation of all sampling and analysis results, including copies of laboratory reports and rain gauge measurements, from monitoring activities conducted pursuant to section IV of this CSMRP.
- D.** A certified statement indicating whether or not the site has been winterized in accordance with BMPs for erosion prevention and sediment control.
- E.** Documentation of required QSP certifications and personnel training. Personnel training records shall be maintained on site and include, at a minimum, signed attendance sheets and agendas from pre-construction meetings covering SWPPP requirements. Additional information or training may be recorded as appropriate. The intent of this requirement is to ensure that all construction personnel are educated on their responsibilities for controlling pollutants in storm water discharges.
- F.** A certified statement indicating whether or not the project site is in compliance with the conditions of the general permit and the SWPPP. This certification shall be signed by a Qualified SWPPP Practitioner

(QSP). This certification should be based upon site inspections required in section III of this CSMRP.

VIII. FINAL REPORT

Following completion of project construction, the Discharger shall prepare and electronically submit through the SMARTS a final report containing the information required under the Annual Report as well as the following information:

- A.** Details of any modification of the construction plans for the proposed storm water collection treatment, or disposal facilities or restoration work.
- B.** Details on any change in the amount of impervious coverage for the project site.
- C.** Records of all inspections (including the inspection log book), compliance certificates, monitoring reports, and noncompliance reporting must be maintained by the project proponent for a period of at least three years.
- D.** The final monitoring report shall be certified by the LRP, or the approved signatory of the LRP, and submitted within 30 days of project completion.

IX. MONITORING AND REPORTING REQUIREMENTS FOR RESTORATION PROJECTS

Because restoration projects are often executed to improve existing water quality conditions, it is necessary to monitor restoration project effectiveness. Monitoring information can also identify project and/or construction method strengths and weaknesses. This knowledge can feedback into the maintenance of the existing system and also be applied to future water quality improvement projects.

To monitor the success of the restoration of a disturbed area, the project proponent shall submit a detailed Restoration Monitoring Plan as part of the CSMRP with annual performance criteria for the review and approval of the Lahontan Water Board staff. The Restoration Monitoring Plan shall include a contingency plan for actions to be taken if performance criteria are not met.

Ideally, pre- and post-construction monitoring is required to best evaluate the success of the restoration project. Monitoring should include, but not be limited to, assessments of vegetative cover and water quality and quantity measurements. Where appropriate, monitoring should also include upgradient and downgradient sampling of water entering a pretreatment system (sediment can, sand and oil trap).

Recommendations for a Restoration Monitoring Plan include the following:

- A.** Pre- and Post-project surveys of vegetative cover at a representative scale for the site, including an inventory of species diversity and an assessment of the restored soil's ability to infiltrate runoff;
- B.** Pre- and Post project cross-sectional surveys of stream channel dimensions and elevations (if applicable);
- C.** Post-project monitoring of the planting survival;
- D.** Photo survey including photo-point locations of the disturbed/restored area.
- E.** Pre- and post-project groundwater level measurements from at least two piezometers installed for observing groundwater levels;
- F.** Site assessments of the success of the implemented erosion and sediment control measures;
- G.** Water quality analyses to include Total N, Total P, Conductivity, and Turbidity at a minimum, in addition to other required sampling under this General Permit.

ATTACHMENT C-1 – BIOASSESSMENT MONITORING GUIDELINES

Bioassessment monitoring is required for projects that meet all of the following criteria:

1. The project directly discharges runoff to a freshwater wadeable stream (or streams) that is either: (a) listed by the State Water Board or USEPA as impaired due to sediment, and/or (b) tributary to any downstream water body that is listed for sediment; and/or have the beneficial use SPAWN & COLD & MIGRATORY

AND

2. Total project-related ground disturbance exceeds 30 acres. For all such projects, the discharger shall conduct bioassessment monitoring, as described in this section, to assess the effect of the project on the biological integrity of receiving waters.

Bioassessment shall include:

1. The collection and reporting of specified instream biological data
2. The collection and reporting of specified instream physical habitat data

Bioassessment Exception

1. If a site qualifies for bioassessment, but the construction schedule does not allow for pre-construction sampling within the index period, the discharger shall:
 2. Receive Lahontan Water Board approval for the sampling exception
 3. Invest \$7,500.00 times the number of samples required into the SWAMP program as compensation.
 4. Make a check payable to: Cal State Chico Foundation (SWAMP Bank Account) or San Jose State Foundation (SWAMP Bank Account) and include the WDID# on the check for the amount calculated for the exempted project.
5. Send a copy of the check to the Lahontan Water Board office.

Site Locations and Frequency

Macroinvertebrate samples shall be collected both before ground disturbance is initiated and after the project is completed. The “after” sample(s) shall be collected after at least one winter season resulting in surface runoff has transpired after project-related ground disturbance has ceased. “Before” and “after” samples shall be collected both upstream and downstream of the project’s discharge. Upstream samples should be taken immediately before the sites outfall and downstream samples should be taken immediately after the outfall (when safe to collect the samples). Samples should be collected for each freshwater wadeable stream that is listed

as impaired due to sediment, or tributary to a water body that is listed for sediment. Habitat assessment data shall be collected concurrently with all required macroinvertebrate samples.

Index Period (Timing of Sample Collection)

Macroinvertebrate sampling shall be conducted between July 1 and August 15 each year, after peak snowmelt flows but before the streams may become intermittent.

Field Methods for Macroinvertebrate Collections

In collecting macroinvertebrate samples, the discharger shall use the "Reachwide Benthos (Multi-habitat) Procedure" specified in Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California (Ode 2007).¹

Physical - Habitat Assessment Methods

The discharger shall conduct, concurrently with all required macroinvertebrate collections, the "Full" suite of physical habitat characterization measurements as specified in Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California (Ode 2007), and as summarized in the Surface Water Ambient Monitoring Program's Stream Habitat Characterization Form — Full Version.

Laboratory Methods

Macroinvertebrates shall be identified and classified according to the Standard Taxonomic Effort (STE) Level I of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT),² and using a fixed-count of 600 organisms per sample.

Quality Assurance

The discharger or its consultant(s) shall have and follow a quality assurance (QA) plan that covers the required bioassessment monitoring. The QA plan shall include, or be supplemented to include, a specific requirement for external QA checks (i.e., verification of taxonomic identifications and correction of data where errors are identified). External QA checks shall be performed on one of the discharger's macroinvertebrate samples collected per calendar year, or ten percent of the samples per year (whichever is greater). QA samples shall be randomly selected. The external QA checks shall be paid for by the discharger, and performed by the California Department of Fish and Game's Aquatic Bioassessment Laboratory. An alternate laboratory with equivalent or better expertise and performance may be used if approved in writing by State Water Board staff.

¹ This document is available on the Internet at: http://www.swrcb.ca.gov/swamp/docs/phab_sopr6.pdf.

² The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

Sample Preservation and Archiving

The original sample material shall be stored in 70 percent ethanol and retained by the discharger until: 1) all QA analyses specified herein and in the relevant QA plan are completed; and 2) any data corrections and/or re-analyses recommended by the external QA laboratory have been implemented. The remaining subsampled material shall be stored in 70 percent ethanol and retained until completeness checks have been performed according to the relevant QA plan. The identified organisms shall be stored in 70 percent ethanol, in separate glass vials for each final ID taxon. (For example, a sample with 45 identified taxa would be archived in a minimum of 45 vials, each containing all individuals of the identified taxon.) Each of the vials containing identified organisms shall be labeled with taxonomic information (i.e., taxon name, organism count) and collection information (i.e., site name/site code, waterbody name, date collected, method of collection). The identified organisms shall be archived (i.e., retained) by the discharger for a period of not less than three years from the date that all QA steps are completed, and shall be checked at least once per year and “topped off” with ethanol to prevent desiccation. The identified organisms shall be relinquished to the State Water Board upon request by any State Water Board staff.

Data Submittal

The macroinvertebrate results (i.e., taxonomic identifications consistent with the specified SAFIT STEs, and number of organisms within each taxa) shall be submitted to the State Water Board in electronic format. The State Water Board’s Surface Water Ambient Monitoring Program (SWAMP) is currently developing standardized formats for reporting bioassessment data. All bioassessment data collected after those formats become available shall be submitted using the SWAMP formats. Until those formats are available, the biological data shall be submitted in MS-Excel (or equivalent) format.³

The physical/habitat data shall be reported using the standard format titled SWAMP Stream Habitat Characterization Form — Full Version.⁴

Invasive Species Prevention

In conducting the required bioassessment monitoring, the discharger and its consultants shall take precautions to prevent the introduction or spread of aquatic invasive species. At minimum, the discharger and its consultants shall follow the recommendations of the California Department of Fish and Game to minimize the introduction or spread of the New Zealand mudsnail.

³ Any version of Excel, 2000 or later, may be used.

⁴ Available at:

http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Lahontan Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR 122.41(i); Wat. Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 CFR 122.41(i)(4).)

G. Bypass

1. Definitions

“Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i).)

“Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Lahontan Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Lahontan Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR 122.41(m)(4)(i)(C).)
4. The Lahontan Water Board may approve an anticipated bypass, after considering its adverse effects, if the Lahontan Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR 122.41(m)(4)(ii).)
5. Notice
 - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR 122.41(m)(3)(i).)
 - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of

- claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 CFR 122.41(n)(3)(ii));
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR 122.41(n)(3)(iv).)
 3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Lahontan Water Board. The Lahontan Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and

incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR 122.41(l)(3); § 122.61.)

III. STANDARD PROVISIONS – MONITORING

- A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR 122.41(j)(1).)
- B.** Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 CFR 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

- A.** Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Lahontan Water Board Executive Officer at any time. (40 CFR 122.41(j)(2).)

Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 CFR 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 CFR 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 CFR 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 CFR 122.41(j)(3)(v)); and
6. The results of such analyses. (40 CFR 122.41(j)(3)(vi).)

Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 CFR 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 CFR 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Lahontan Water Board, State Water Board, or USEPA within a reasonable time, any information which the Lahontan Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Lahontan Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Lahontan Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, V.B.6, and V.B.7 below. (40 CFR 122.41(k).)
2. For a corporation, all permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 CFR 122.22(a)(1).)
3. For a partnership or sole proprietorship, all permit applications shall be signed by a general partner or the proprietor, respectively. (40 CFR 122.22(a)(2).)
4. For a municipality, State, federal, or other public agency, all permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a

senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR 122.22(a)(3).)

5. All reports required by this Order and other information requested by the Lahontan Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2, 3, or 4 above, as appropriate, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2, 3, or 4 above, as appropriate (40 CFR 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR 122.22(b)(2)); and
 - c. The written authorization is submitted to the Lahontan Water Board and State Water Board. (40 CFR 122.22(b)(3).)
6. If an authorization under Standard Provisions – Reporting V.B.5 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.5 above must be submitted to the Lahontan Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR 122.22(c).)
7. Any person signing a document under Standard Provisions – Reporting V.B.2, 3, 4, or 5 above shall make the following certification:

“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 assure 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).)

Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR 122.22(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Lahontan Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Lahontan Water Board. (40 CFR 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR 122.41(l)(4)(iii).)

24-Hour Reporting

5. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR 122.41(l)(6)(i).)
6. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):
 - d. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(A).)
 - e. Any upset that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(B).)
7. The Lahontan Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR 122.41(l)(6)(iii).)

Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR 122.41(l)(5).)

Planned Changes

The Discharger shall give notice to the Lahontan Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii).)

Anticipated Noncompliance

The Discharger shall give advance notice to the Lahontan Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR 122.41(l)(2).)

Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR 122.41(l)(7).)

Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Lahontan Water Board, State Water Board, or USEPA, the

Discharger shall promptly submit such facts or information. (40 CFR 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

- A.** The Lahontan Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387

ATTACHMENT E – ACTIVE TREATMENT SYSTEM (ATS) REQUIREMENTS

Table 1 – Numeric Effluent Limitations, Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level	Numeric Effluent Limitation
Turbidity	EPA 0180.1 and/or field test with a calibrated portable instrument	For ATS discharges	1	NTU	N/A	10 NTU for Daily Flow-Weighted Average & 20 NTU for Any Single Sample

A. Dischargers choosing to implement an Active Treatment System (ATS) on their site shall comply with all of the requirements in this Attachment.

B. The discharger shall maintain a paper copy of each ATS specification onsite in compliance with the record retention requirements in the Special Provisions of this General Permit.

C. ATS Design, Operation and Submittals

1. The ATS shall be designed and approved by a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Storm Water Quality (CPSWQ); a California registered civil engineer; or any other California registered engineer.
2. The discharger shall ensure that the ATS is designed in a manner to preclude the accidental discharge of settled floc¹ during floc pumping or related operations.
3. The discharger shall design outlets to dissipate energy from concentrated flows.
4. The discharger shall install and operate an ATS by assigning a lead person (or project manager) who has either a minimum of five years construction storm

¹ Floc is defined as a clump of solids formed by the chemical action in ATS systems.

water experience or who is a licensed contractors specifically holding a California Class A Contractors license.²

5. The discharger shall prepare an ATS Plan that combines the site-specific data and treatment system information required to safely and efficiently operate an ATS. The ATS Plan shall be electronically submitted to the State Water Board at least 14 days prior to the planned operation of the ATS and a paper copy shall be available onsite during ATS operation. At a minimum, the ATS Plan shall include:
 - a. ATS Operation and Maintenance Manual for All Equipment.
 - b. ATS Monitoring, Sampling & Reporting Plan, including Quality Assurance/Quality Control (QA/QC).
 - c. ATS Health and Safety Plan.
 - d. ATS Spill Prevention Plan.
6. The ATS shall be designed to capture and treat (within a 72-hour period) a volume equivalent to the runoff from a 10-year, 24-hour storm event using a watershed runoff coefficient of 1.0.

D. Treatment – Chemical Coagulation/Flocculation

1. Jar tests shall be conducted using water samples selected to represent typical site conditions and in accordance with ASTM D2035-08 (2003).
2. The discharger shall conduct, at minimum, six site-specific jar tests (per polymer with one test serving as a control) for each project to determine the proper polymer and dosage levels for their ATS.
3. Single field jar tests may also be conducted during a project if conditions warrant, for example if construction activities disturb changing types of soils, which consequently cause change in storm water and runoff characteristics.

E. Residual Chemical and Toxicity Requirements

1. The discharger shall utilize a residual chemical test method that has a method detection limit (MDL) of 10% or less than the maximum allowable threshold

² Business and Professions Code Division 3, Chapter 9, Article 4, Class A Contractor: A general engineering contractor is a contractor whose principal contracting business is in connection with fixed works requiring specialized engineering knowledge and skill. [<http://www.cslb.ca.gov/General-Information/library/licensing-classifications.asp>].

concentration³ (MATC) for the specific coagulant in use and for the most sensitive species of the chemical used.

2. The discharger shall utilize a residual chemical test method that produces a result within one hour of sampling.
3. The discharger shall have a California State certified laboratory validate the selected residual chemical test. Specifically the lab will review the test protocol, test parameters, and the detection limit of the coagulant. The discharger shall electronically submit this documentation as part of the ATS Plan.
4. If the discharger cannot utilize a residual chemical test method that meets the requirements above, the discharger shall operate the ATS in Batch Treatment⁴ mode.
5. A discharger planning to operate in Batch Treatment mode shall perform toxicity testing in accordance with the following:
 - a. The discharger shall initiate acute toxicity testing on effluent samples representing effluent from each batch prior to discharge⁵. All bioassays shall be sent to a laboratory certified by the Department of Public Health Environmental Laboratory Accreditation Program (ELAP). The required field of testing number for Whole Effluent Toxicity (WET) testing is E113.⁶
 - b. Acute toxicity tests shall be conducted with the following species and protocols. The methods to be used in the acute toxicity testing shall be those outlined for a 96-hour acute test in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, USEPA-841-R-02-012" for Fathead minnow, *Pimephales promelas* (fathead minnow). Acute toxicity for *Oncorhynchus mykiss* (Rainbow Trout) may be used as a substitute for testing fathead minnows.
 - c. All toxicity tests shall meet quality assurance criteria and test acceptability criteria in the most recent versions of the EPA test method for WET testing.
 - d. The discharger shall electronically report all acute toxicity testing.

³ The Maximum Allowable Threshold Concentration (MATC) is the allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity testing conducted by an independent, third-party laboratory. A typical MATC would be: The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

⁴ Batch Treatment mode is defined as holding or recirculating the treated water in a holding basin or tank(s) until treatment is complete or the basin or storage tank(s) is full.

⁵ This requirement only requires that the test be initiated prior to discharge.

⁶ http://www.dhs.ca.gov/ps/ls/elap/pdf/FOT_Desc.pdf.

F. Filtration

1. The ATS shall include a filtration step between the coagulant treatment train and the effluent discharge. This is commonly provided by sand, bag, or cartridge filters, which are sized to capture suspended material that might pass through the clarifier tanks.
2. Differential pressure measurements shall be taken to monitor filter loading and confirm that the final filter stage is functioning properly.

G. Residuals Management

1. Sediment shall be removed from the storage or treatment cells as necessary to ensure that the cells maintain their required water storage (i.e., volume) capability.
2. Handling and disposal of all solids generated during ATS operations shall be done in accordance with all local, state, and federal laws and regulations.

H. ATS Instrumentation

1. The ATS shall be equipped with instrumentation that automatically measures and records effluent water quality data and flow rate.
2. The minimum data recorded shall be consistent with the Monitoring and Reporting requirements below, and shall include:
 - a. Influent Turbidity
 - b. Effluent Turbidity
 - c. Influent pH
 - d. Effluent pH
 - e. Residual Chemical
 - f. Effluent Flow rate
 - g. Effluent Flow volume
3. Systems shall be equipped with a data recording system, such as data loggers or webserver-based systems, which records each measurement on a frequency no longer than once every 15 minutes.

4. Cumulative flow volume shall be recorded daily. The data recording system shall have the capacity to record a minimum of seven days continuous data.
5. Instrumentation systems shall be interfaced with system control to provide auto shutoff or recirculation in the event that effluent measurements exceed turbidity or pH.
6. The system shall also assure that upon system upset, power failure, or other catastrophic event, the ATS will default to a recirculation mode or safe shut down.
7. Instrumentation (flow meters, probes, valves, streaming current detectors, controlling computers, etc.) shall be installed and maintained per manufacturer's recommendations, which shall be included in the QA/QC plan.
8. The QA/QC plan shall also specify calibration procedures and frequencies, instrument method detection limit or sensitivity verification, laboratory duplicate procedures, and other pertinent procedures.
9. The instrumentation system shall include a method for controlling coagulant dose, to prevent potential overdosing. Available technologies include flow/turbidity proportional metering, periodic jar testing and metering pump adjustment, and ionic charge measurement controlling the metering pump.

I. ATS Effluent Discharge

1. ATS effluent shall comply with all provisions and prohibitions in this General Permit, specifically the NELs.
2. NELs for discharges from an ATS:
 - a. Turbidity of all ATS discharges shall be less than 10 NTU for daily flow-weighted average of all samples and 20 NTU for any single sample.
 - b. Residual Chemical shall be < 10% of MATC⁷ for the most sensitive species of the chemical used.
3. If an analytical effluent sampling result is outside the range of pH NELs (i.e., is below the lower NEL for pH or exceeds the upper NEL for pH) or exceeds the turbidity NEL (as listed in Table 1), the discharger is in violation of this General

⁷ The Maximum Allowable Threshold Concentration (MATC) is the allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity testing conducted by an independent, third-party laboratory. The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

Permit and shall electronically file the results in violation within 24-hours of obtaining the results.

4. If ATS effluent is authorized to discharge into a sanitary sewer system, the discharger shall comply with any pre-treatment requirements applicable for that system. The discharger shall include any specific criteria required by the municipality in the ATS Plan.

5. Compliance Storm Event:

Discharges of storm water from ATS shall comply with applicable NELs (above) unless the storm event causing the discharges is determined after the fact to be equal to or larger than the Compliance Storm Event. The Compliance Storm Event for ATS discharges is the 20-year, 1-hour storm, which is equal to 1 inch of rainfall in a 1-hour period. This exemption is dependent on the submission of rain gauge data verifying the storm event is equal to or larger than the Compliance Storm.

J. Operation and Maintenance Plan

1. Each Project shall have a site-specific Operation and Maintenance (O&M) Manual covering the procedures required to install, operate and maintain the ATS.⁸
2. The O&M Manual shall only be used in conjunction with appropriate project-specific design specifications that describe the system configuration and operating parameters.
3. The O&M Manual shall have operating manuals for specific pumps, generators, control systems, and other equipment.

K. Sampling and Reporting Quality Assurance/ Quality Check (QA/QC) Plan

4. A project-specific QA/QC Plan shall be developed for each project. The QA/QC Plan shall include at a minimum:
 - a. Calibration – Calibration methods and frequencies for all system and field instruments shall be specified.
 - b. Method Detection Limits (MDLs) – The methods for determining MDLs shall be specified for each residual coagulant measurement method. Acceptable minimum MDLs for each method, specific to individual coagulants, shall be specified.

⁸ The manual is typically in a modular format covering generalized procedures for each component that is utilized in a particular system.

- c. Laboratory Duplicates – Requirements for monthly laboratory duplicates for residual coagulant analysis shall be specified.

L. Personnel Training

1. Operators shall have training specific to using an ATS and liquid coagulants for storm water discharges in California.
2. The training shall be in the form of a formal class with a certificate and requirements for testing and certificate renewal.
3. Training shall include a minimum of eight hours classroom and 32 hours field training. The course shall cover the following topics:
 - a. Coagulation Basics –Chemistry and physical processes
 - b. ATS System Design and Operating Principles
 - c. ATS Control Systems
 - d. Coagulant Selection – Jar testing, dose determination, etc.
 - e. Aquatic Safety/Toxicity of Coagulants, proper handling and safety
 - f. Monitoring, Sampling, and Analysis
 - g. Reporting and Recordkeeping
 - h. Emergency Response

M. Active Treatment System (ATS) Monitoring Requirements

Any discharger who deploys an ATS on their site shall conduct the following:

1. Visual Monitoring
 - a. A designated responsible person shall be on site daily at all times during treatment operations.
 - b. Daily on-site visual monitoring of the system for proper performance shall be conducted and recorded in the project data log.
 - i. The log shall include the name and phone number of the person responsible for system operation and monitoring.

- ii. The log shall include documentation of the responsible person's training.

2. Operational and Compliance Monitoring

- a. Flow shall be continuously monitored and recorded at not greater than 15-minute intervals for total volume treated and discharged.
- b. Influent and effluent pH must be continuously monitored and recorded at not greater than 15-minute intervals.
- c. Influent and effluent turbidity (expressed in NTU) must be continuously monitored and recorded at not greater than 15-minute intervals.
- d. The type and amount of chemical used for pH adjustment, if any, shall be monitored and recorded.
- e. Dose rate of chemical used in the ATS system (expressed in mg/L) shall be monitored and reported 15-minutes after startup and every 8 hours of operation.
- f. Laboratory duplicates – monthly laboratory duplicates for residual coagulant analysis must be performed and records shall be maintained onsite.
- g. Effluent shall be monitored and recorded for residual chemical/additive levels.
- h. If a residual chemical/additive test does not exist and the ATS is operating in a batch treatment mode of operation refer to the toxicity monitoring requirements below.

3. Toxicity Monitoring

A discharger operating in batch treatment mode shall perform toxicity testing in accordance with the following:

- a. The discharger shall initiate acute toxicity testing on effluent samples representing effluent from each batch prior to discharge.⁹ All bioassays shall be sent to a laboratory certified by the Department of Public Health Environmental Laboratory Accreditation Program (ELAP). The required field of testing number for Whole Effluent Toxicity (WET) testing is E113.¹⁰
- b. Acute toxicity tests shall be conducted with the following species and protocols. The methods to be used in the acute toxicity testing shall be those outlined for a 96-hour acute test in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms,

⁹ This requirement only requires that the test be initiated prior to discharge.

¹⁰ http://www.dhs.ca.gov/ps/ls/elap/pdf/FOT_Desc.pdf.

USEPA-841-R-02-012” for Fathead minnow, *Pimephales promelas* or Rainbow trout *Oncorhynchus mykiss* may be used as a substitute for fathead minnow.

- c. All toxicity tests shall meet quality assurance criteria and test acceptability criteria in the most recent versions of the EPA test method for WET testing.¹¹

4. Reporting and Recordkeeping

At a minimum, every 30 days a LRP representing the discharger shall access the State Water Boards Storm Water Multi-Application and Report Tracking system (SMARTS) and electronically upload field data from the ATS. Records must be kept for three years after the project is completed .

5. Non-compliance Reporting

- a. Any indications of toxicity or other violations of water quality objectives shall be reported to the appropriate regulatory agency as required by this General Permit.
- b. Upon any measurements that exceed water quality standards, the system operator shall immediately notify his supervisor or other responsible parties, who shall notify the Regional Water Board.
- c. If any monitoring data exceeds any applicable NEL in this General Permit, the discharger shall electronically submit a NEL Violation Report to the State Water Board within 24 hours after the NEL exceedance has been identified.
 - i. ATS dischargers shall certify each NEL Violation Report in accordance with the Special Provisions for Construction Activity in this General Permit.
 - ii. ATS dischargers shall retain an electronic or paper copy of each NEL Violation Report for a minimum of three years after the date the annual report is filed.
 - iii. ATS dischargers shall include in the NEL Violation Report:
 - (1) The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”);
 - (2) The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation; and

¹¹ <http://www.epa.gov/waterscience/methods/wet/>.

(3) A description of the current onsite BMPs, and the proposed corrective actions taken to manage the NEL exceedance.

- iv. Compliance Storm Event - In the event that an applicable NEL has been exceeded during a storm event equal to or larger than the Compliance Storm Event, ATS dischargers shall report the on-site rain gauge reading and nearby governmental rain gauge readings for verification.

ATTACHMENT F - WASTE DISCHARGE PROHIBITION INFORMATION FOR ACTIVITIES IN STREAM ENVIRONMENT ZONES AND FLOODPLAINS OF THE LAKE TAHOE HYDROLOGIC UNIT

To protect beneficial uses and achieve water quality objectives, the *Water Quality Control Plan for the Lahontan Region* (Basin Plan) contains prohibitions against waste discharges to surface waters and to lands within 100-year floodplains in the Lake Tahoe Hydrologic Unit (HU), and prohibitions against "permanent disturbance" in Stream Environment Zones (SEZs) in the Lake Tahoe HU. These prohibitions may apply to certain construction activities conducted in these areas.

I. Waste Discharge Prohibitions and Exemptions

A. 100-year Floodplains/Highwater Rim

Chapter 5, section 5.2 of the Basin Plan specifies the following **discharge prohibitions** for activities within 100-year floodplains:

8. and 9. "The discharge, or threatened discharge, attributable to human activities, of solid or liquid waste materials, including soil, silt, clay, sand and other organic and earthen materials to lands below the highwater rim of Lake Tahoe or within the 100-year floodplain of any tributary to Lake Tahoe is prohibited."

Chapter 5, section 5.7 provides that **exemptions** may be granted for the following categories of projects that are applicable to construction activities in 100-year floodplains.

1. Public outdoor recreational facilities if: (a) the project is a necessary part of a public agency's long range plans for public outdoor recreation; (b) the project, by its very nature, must be sited in a floodplain; (c) there is no feasible alternative that would reduce the extent of encroachment in a floodplain; and (d) the impacts on the floodplain are minimized.
2. Public service facilities if: (a) the project is necessary for public health, safety or environmental protection, (b) there is no reasonable alternative, including spans, which avoids or reduces the extent of encroachment in the floodplain, and (c) impacts on the floodplain are minimized.
3. Projects that require access across floodplains to otherwise buildable sites if: (a) there is no reasonable alternative that avoids or reduces the extent of encroachment in the floodplain; and (b) the impacts on the floodplain are minimized
4. Erosion control projects, habitat restoration projects, SEZ restoration projects and similar projects provided that the project is necessary for environmental

protection and there is no reasonable alternative which avoids or reduces the extent of encroachment in the floodplain.

B. Stream Environment Zones

Chapter 5 (page 5.2-3) of the Basin Plan specifies the following **discharge prohibitions** for activities within SEZs:

13. "The discharge or threatened discharge, attributable to new development in Stream Environment Zones, of solid or liquid waste, including soil, silt, sand, clay, rock, metal, plastic, or other organic, mineral or earthen materials, to Stream Environment Zones in the Lake Tahoe basin is prohibited."

"New development" as used in the Prohibition 13 means ". . . construction activity resulting in permanent soil disturbance . . . New development does not include maintenance or repair of an existing structure or the replacement of any existing structure with another structure on the same parcel of no greater land coverage." This means that if an activity occurs in an SEZ that does not result in permanent disturbance, the prohibition is not violated.

Chapter 5, section 5.8 provides that **exemptions** may be granted for the following categories of projects that are applicable to construction activities in SEZs.

1. Public Outdoor Recreation facilities, when all of the following findings can be made: (a) the project, by its very nature, must be sited in an SEZ; (b) there is no feasible alternative that would reduce the extent of SEZ encroachment; (c) impacts are fully mitigated; and (d) SEZs are restored in an amount 1.5 times the area of SEZ disturbed or developed for the project.
2. Public Service Facilities if all the following findings can be made: (a) the project is necessary for public health, safety or the environment; (b) there is no reasonable alternative, including spans, which avoids or reduces the extent of encroachment; (c) the impacts are fully mitigated; and (d) SEZ lands are restored in an amount 1.5 times the area of land developed or disturbed by the project
3. Projects that require access across SEZs to otherwise buildable sites if all of the following findings can be made: (a) there is no reasonable alternative that avoids or reduces the extent of encroachment; (b) impacts are fully mitigated; and (c) SEZ lands are restored in an amount 1.5 times the area of SEZ disturbed or developed by the project
4. New development in man-modified SEZs after the Lahontan Water Board has reclassified them according to the procedure.

5. For erosion control projects, habitat restoration projects, wetland restoration projects, SEZ restoration projects, and similar projects, programs and facilities, if:
 - a. The project, program, or facility is necessary for environmental protection;
 - b. There is no reasonable alternative, including relocation, which avoids or reduces the extent of encroachment in the SEZ; and
 - c. Impacts are fully mitigated

In accordance with the Basin Plan, impacts to SEZs due to erosion control projects, habitat restoration projects, wetland restoration projects, or SEZ restoration projects do not need to meet the 1.5:1 restoration requirement and may be granted exemptions to the prohibitions against discharges to surface waters.

II. Exemption Process

In order to obtain an exemption to the waste discharge prohibitions described above, applicants must provide Water Board staff with the information needed to justify the exemption. If a project activity qualifies, staff will prepare a draft exemption and circulate the proposed action to the Water Board members and other interested parties for a 10-day review and comment period. If no objections are received, the Water Board's Executive Officer is authorized to grant the exemptions. Exemptions will be issued by a written notice to the applicant, typically provided with the NOA for projects involving more than one acre of land disturbance.

ATTACHMENT G – WATER QUALITY OBJECTIVES FOR CERTAIN WATER BODIES IN THE LAKE TAHOE HYDROLOGIC UNIT

Table G-1. WQOs for Water Bodies in the Lake Tahoe Hydrologic Unit

	Surface Waters	Objective (mg/L except as noted) ^{1,2}						
		TDS	Cl	SO ₄	B	N	P	Fe
1	Lake Tahoe	60/65	3.0/4.0	1.0/2.0	0.01/ -	0.15/ -	0.008/ -	--
2	Fallen Leaf Lake	50/ -	0.30/0.50	1.3/1.4	0.01/0.02	See Table I-2 for additional objectives		
3	Griff Creek	80/ -	0.40/ -	--	--	0.19/ -	0.010/ -	0.03/ -
4	Carnelian Bay Creek	80/ -	0.40/ -	--	--	0.19/ -	0.015/ -	0.03/ -
5	Watson Creek	80/ -	0.35/ -	--	--	0.22/ -	0.015/ -	0.04/ -
6	Dollar Creek	80/ -	0.30/ -	--	--	0.16/ -	0.030/ -	0.03/ -
7	Burton Creek	90/ -	0.30/ -	--	--	0.1/6 -	0.015/ -	0.03/ -
8	Ward Creek	70/ 85	0.30/0.50	1.4/ 2.8	--	0.15/ -	0.015/ -	0.03/ -
9	Blackwood Creek	70/ 90	0.30/ -	--	--	0.19/ -	0.015/ -	0.03/ -
10	Madden Creek	60/ -	0.10/0.20	--	--	0.18/ -	0.015/ -	0.015/ -
11	McKinney Creek	55/ -	0.40/0.50	--	--	0.19/ -	0.015/ -	0.03/ -
12	General Creek	50/ 90	1.0/1.5	0.4/ 0.5	--	0.15/ -	0.015/ -	0.03/ -
13	Meeks Creek	45/ -	0.40/ -	--	--	0.23/ -	0.010/ -	0.07/ -
14	Lonely Gulch Creek	45/ -	0.30/ -	--	--	0.19/ -	0.015/ -	0.03/ -
15	Eagle Creek	35/-	0.30/-	--	--	0.20/-	0.010/-	0.03/-
16	Cascade Creek	30/-	0.40/-	--	--	0.21/-	0.005/-	0.01/-
17	Tallac Creek	60/-	0.40/-	--	--	0.19/-	0.015/-	0.03/-
18	Taylor Creek	35/-	0.40/0.50	--	--	0.17/-	0.010/-	0.02/-
19	Upper Truckee River	55/75	4.0/5.5	1.0/2.0	--	0.19/-	0.015/-	0.03/-
20	Trout Creek	50/60	0.15/0.20	--	--	0.19/-	0.015/-	0.03/-

¹ Annual average value/90th percentile value.

² Objectives are as mg/L and are defined as follows:

- B Boron
- Cl Chloride
- SO₄ Sulfate
- Fe Iron, Total
- N Nitrogen, Total
- P Phosphorus, Total
- TDS Total Dissolved Solids (Total Filterable Residues)

Table G-2. WQOs for Fallen Leaf Lake

Constituent	Objective (See Fig. 3-6, location 2)
pH ¹	6.5 - 7.9
Temperature ²	Hypolimnion -15 °C Bottom (105m) - 7.5 °C at no time shall water be increased by more than 2.8 C (5 °F).
Dissolved oxygen ³	% saturation above 80% and DO >7 mg/L except if saturation exceeds 80% DO at bottom (105m) > 6mg/L
Total nitrogen ⁴	0.087 ⁵ /0.114 ⁶ /0.210 ⁷
Dissolved inorganic – N ⁸	0.007 / 0.010 / 0.023
Total phosphorus	0.008 / 0.010 / 0.018
Soluble reactive -P	0.001 / 0.002 / 0.009
Soluble reactive iron	0.004 / 0.005 / 0.012
Total reactive iron	0.005 / 0.007 / 0.030
Chlorophyll-a ^{9,10}	0.6 / 0.9 / 1.5
Clarity - Secchi depth ¹¹ - Vertical extinction coefficient	18.5 / 16.0 ¹² / 13.6 ¹³ 0.146 / 0.154 / 0.177 ¹⁴
Phytoplankton cell counts ¹⁵	219 / 280 / 450

- ¹ 0.5 units above and 0.5 units below 1991 maximum and minimum values. Also reflects stability of this constituent throughout the year.
- ² Based on 1991 data. Indicates that if temperature in the hypolimnion during the summer exceeds 15 °C or if the water at 105m exceeds 7.5 °C this would constitute a significant change from existing conditions. Unless there is a anthropogenic source of thermal effluent, which does not currently exist, changes in water temperature in Fallen Leaf Lake are natural. Objectives apply at any time during the defining period.
- ³ Based on coldwater habitat protection and 1991 data base. The need for an objective for the bottom (105m) results from the desire to control primary productivity and deposition of organic matter on the bottom. A decline in bottom DO to below 6 mg/L would indicate a fundamental shift in the trophic state of Fallen Leaf Lake.
- ⁴ Because of the similarity between the mid-lake and nearshore sites, Fallen Leaf Lake objectives for N, P and Fe are based on the combined mid-lake 8 m and 45 m, and nearshore 8 m concentrations. Units are mg N/L, mg P/L and mg Fe/L.
- ⁵ Mean annual concentration (May - October) unless otherwise noted.
- ⁶ 90th percentile value unless otherwise noted.
- ⁷ Maximum allowable value; 1.5 times the maximum 1991 value. No single measurement should exceed this value unless otherwise noted.
- ⁸ DIN = NO₃+NO₂+NH₄
- ⁹ Corrected for phaeophytin degradation pigments.
- ¹⁰ Units are µg chl-a/L.
- ¹¹ Units are meters.
- ¹² 10th percentile since clarity increases with increasing Secchi depth.
- ¹³ Represents 15% loss of clarity from 10th or 90th percentile value.
- ¹⁴ Calculated in the photic zone between 1 m below surface to 35 m. Units are per meter.
- ¹⁵ Units are cells per milliliter.

ATTACHMENT H - RAIN EVENT ACTION PLAN (REAP) TEMPLATE

1. Date:	2. Project name & WDID #:	
3. Date rain predicted to occur:	4. Predicted % chance of rain:	
<p>5. Site information:</p> <p>Site name, Location (address, physical description, nearest landmark and/or access point)</p>		
<p>6. Project storm water manager information:</p> <p>Name, Company, Phone # (24/7)</p>		
<p>7. Review information & scheduling:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inform site personnel of predicted rain <input type="checkbox"/> Check scheduled activities and reschedule as needed <input type="checkbox"/> Alert erosion/sediment control provider (if applicable) <input type="checkbox"/> Alert sample collection contractor (if applicable) <input type="checkbox"/> Schedule staff for extended rain inspections (including weekends & holidays) <input type="checkbox"/> Check erosion and sediment control (ESC) material stock <input type="checkbox"/> Review BMP map/SWPPP <input type="checkbox"/> Other _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ 		
<p>8. Record all active and inactive disturbed soil areas (DSAs), material storage areas, stockpiles, vehicle and equipment storage and maintenance areas, and waste management areas. Cross-reference to BMP plans by sheet #.</p> <p>For each area, list action items to perform and areas to review prior to the rain event. Potential action and review items are included in item 10, below.</p>		
DSA/Sheet #	Action(s) needed	Responsible party
Inspected by		
DSA/Sheet #	Action(s) needed	Responsible party
Inspected by		

DSA/Sheet #	Action(s) needed	Responsible party
Inspected by		
DSA/Sheet #	Action(s) needed	Responsible party
Inspected by		
DSA/Sheet #	Action(s) needed	Responsible party
Inspected by		
DSA/Sheet #	Action(s) needed	Responsible party
Inspected by		
Stockpile/Sheet #	Action(s) needed	Responsible party
Inspected by		
Stockpile/Sheet #	Action(s) needed	Responsible party
Inspected by		
Stockpile/Sheet #	Action(s) needed	Responsible party
Inspected by		
Vehicle and equipment storage area/Sheet #	Action(s) needed	Responsible party
Inspected by		
Waste management area/Sheet #	Action(s) needed	Responsible party
Inspected by		

9. Describe locations and amounts of additional rain event erosion and sediment control materials needed to carry out REAP:

10. Potential action & review items

10a. Review site BMPs

- Adequate capacity in sediment basins and traps
- Site perimeter controls in place
- Disturbed area controls in place
- Catch basin and drop inlet protection in place and cleaned
- Temporary erosion controls deployed and installed per specification
- Temporary perimeter controls deployed around disturbed areas and stockpiles
- Roads swept; site ingress and egress points stabilized
- Other: _____

10b. Material storage/stockpile areas

- Material under cover or stored
- Perimeter control around stockpiles
- Other: _____
- _____
- _____

10c. Waste management areas

- Dumpsters closed
- Drain holes plugged
- Recycling bins covered
- Concrete wash-out stations covered
- Sanitary stations bermed and protected from tipping
- Other _____
- _____
- _____

10d. Spill and drips

- All incident spills and drips, including paint, stucco, fuel, and oil cleaned
- Drip pans emptied
- Other _____
- _____
- _____

11. Attach a printout of the weather forecast from the NOAA website to the REAP. Insert REAP in SWPPP.

12. Certification:

I certify under penalty of law that this Rain Event Action Plan (REAP) will be performed in accordance with the General Permit by me or under my direction or supervision.

Qualified SWPPP Practitioner Signature & Date, Printed Name

ATTACHMENT I - SUGGESTED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) OUTLINE

I. Introduction and Certifications

- A.** SWPPP Objectives
- B.** SWPPP Implementation Schedule
- C.** Permit Registration Documents
- D.** Certification and Training Requirements
- E.** Contractor List
- F.** Emergency contact person and 24-hour phone number
- G.** SWPPP Availability and Public Records Access
- H.** Required Changes (Include SWPPP amendment log form in Appendices)

II. Project Information

- A.** Project Description, site address and driving directions
- B.** WDID
- C.** Construction Schedule
- D.** Potential Construction Site Pollutants of Concern and Sources
- E.** Site Location Map(s)

III. Best Management Practices

- A.** Site Management Narrative (include specs in Appendix X)
- B.** Sediment and Erosion/Stabilization Control Narrative (include specs in Appendices)
- C.** Non-Stormwater and Material Management Narrative (include specs in Appendices)
- D.** Dewatering and Diversions Plan Narrative (include specs in Appendices)
- E.** Active Treatment System Plan Narrative (include ATS Plan in Appendices)
- F.** Post-Construction Stormwater Management Measures Narrative (include specs in Appendices)
- G.** Schedule for BMP Implementation
- H.** BMP and Disturbed Soil Area (DSA) maps

IV. BMP Inspection, Maintenance, and Rain Event Action Plans

- A.** BMP Inspection and Maintenance Narrative (include forms and checklists in Appendices)
- B.** Rain Event Action Plan Narrative (Include REAP template in Appendices)

V. Construction Site Monitoring and Reporting Plan (CSMRP)

- A.** Purpose
- B.** Visual Monitoring (Inspections)
- C.** Water Quality Sampling and Analysis
- D.** Watershed Monitoring Option
- E.** Quality Assurance and Quality Control
- F.** Reporting Requirements and Records Retention
- G.** Non-Compliance Reporting
- H.** Annual Report
- I.** Final Report

Appendices

- A.** SWPPP Amendment Log Form
- B.** BMP Standard Specifications
- C.** Dewatering and Diversion Specifications (if applicable)
- D.** ATS Plan (if applicable)
- E.** Visual Monitoring/BMP Inspection Forms and Checklist Templates
- F.** Rain Event Action Plan Template

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

2501 Lake Tahoe Boulevard, South Lake Tahoe, CA 96150
(530) 542-5400 • Fax (530) 544-2271
<http://www.waterboards.ca.gov/lahontan>

**ORDER NO. R6T-2011-0019
NPDES NO. CAG616002**

FACT SHEET FOR

**GENERAL WASTE DISCHARGE REQUIREMENTS
AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY IN
THE LAKE TAHOE HYDROLOGIC UNIT, COUNTIES OF
ALPINE, EL DORADO, AND PLACER**

**FACT SHEET
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I. PERMIT INFORMATION

A. Background

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that established storm water permit application requirements for specified categories of industries. The regulations provide that discharges of storm water to waters of the United States from construction projects that encompass five or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. Regulations (Phase II Rule) that became final on December 8, 1999 lowered the permitting threshold from five acres to one acre. Further, the NPDES permit must require implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate pollutants in storm water runoff. The NPDES permit must also include additional requirements necessary to implement applicable water quality standards and general waste discharge requirements pursuant to the California Water Code.

On March 10, 2005 the California Regional Water Quality Control Board, Lahontan Region (Lahontan Water Board) adopted Order No. R6T-2005-0007 as the most recent general NPDES Construction Activity Storm Water General Permit for the discharge of storm water associated with construction and land disturbing activities in the Lake Tahoe Hydrologic Unit. The General Permit accompanying this Fact Sheet supersedes Order No. R6T-2005-0007, except for enforcement purposes, for the discharge of storm water runoff from construction sites.

This General Permit authorizes discharges of storm water associated with construction activity for dischargers that agree to comply with all requirements, provisions, limitations and prohibitions in the permit. This General Permit regulates discharges of pollutants in storm water associated with construction activity (storm water discharges) to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface.

Discharges of non-storm water to land may be necessary for the completion of certain construction projects. Such discharges include, but are not limited to, irrigating vegetation for erosion control measures, pipe flushing and testing,

uncontaminated groundwater dewatering, fire hydrant flushing, and water to control dust. Such discharges to land are authorized by this General Permit as long as they (a) comply with the prohibitions established within the General Permit, (b) do not cause or contribute to a violation of any water quality standard, (c) do not violate any other provision of this General Permit, and (d) do not require a non-storm water General Permit as issued by the Lahontan Water Board.

This General Permit does not preempt or supersede the authority of local storm water management agencies to prohibit, restrict, or control storm water discharges to municipal separate storm sewer systems (MS4s) or other watercourses within their jurisdiction.

Dischargers of storm water runoff to surface waters of the United States are currently regulated by Order No. R6T-2005-0007, which was adopted on March 10, 2005 and expired on March 10, 2010. The terms and conditions of the Order No. R6T-2005-0007 have been automatically continued and remain in effect until new waste discharge requirements (WDRs) and NPDES permit are adopted pursuant to this Order.

II. CONDITIONS FOR PERMIT COVERAGE AND NOTIFICATION REQUIREMENTS

A. Legally Responsible Person (LRP)

The application requirements of the General Permit establish a mechanism to clearly identify the responsible parties, locations, and scope of operations of dischargers covered by the General Permit and to document the discharger's knowledge of the General Permit's requirements. To obtain coverage, the legally responsible person (LRP) or the LRP's Approved Signatory must certify and file Permit Registration Documents (PRDs) prior to the commencement of construction activity. A detailed explanation of the LRP and Approved Signatory is provided in Attachment B (Glossary) of this General Permit

B. Permit Effective Date

This General Permit is effective April 14, 2011 and provides a process for covering new dischargers and those previously covered under R6T-2005-0007 whose projects are eligible to continue under this General Permit. All dischargers requiring coverage under this General Permit on or after April 14, 2011, must file the required PRDs and filing fee, and prior to commencing land disturbing activities, must receive a written Notice of Applicability (NOA) from the Lahontan Water Board indicating the date that the permit coverage begins under the General Permit and the Waste Discharge Identification (WDID) code issued for the project.

Previously covered dischargers subject to General Permit No. R6T-2005-0007 will continue coverage under, and must comply with General Permit No. R6T-2005-0007 until a notice of termination for the project is processed, continuing coverage is granted under this General Permit, or December 1, 2011, whichever comes first. Previously covered dischargers that plan to continue land disturbing construction activities and permit coverage beyond December 1, 2011 will be notified of requirements to re-register in accordance with this General Permit on or before September 1, 2011. This will allow the PRDs to be processed and require dischargers to winterize construction sites by October 15, 2011 in accordance with the new requirements of the updated Tahoe CGP. On and after December 1, 2011, General Permit No R6T-2005-0007 is rescinded and all coverage under General Permit No. R6T-2005-0007 is terminated. Previously enrolled dischargers failing to file PRDs or other information required to complete an application to renew coverage under this General Permit will lose permit coverage on December 1, 2011.

C. Registration Process

To obtain coverage, the LRP or Approved Signatory must file Permit Registration Documents (PRDs) and receive written approval by the Lahontan Water Board prior to the commencement of construction activity. Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the CWA and the California Water Code. The LRP must electronically submit the PRDs, which include an NOI, Storm Water Pollution Prevention Plan (SWPPP), and other documents required by this General Permit, if applicable, and mail the appropriate filing fee to the State Water Resources Control Board (State Water Board) before starting construction activities. PRDs must be filed through the State Water Board's Storm Water Multi-Application and Report Tracking System (SMARTS).

Upon receipt of the appropriate PRDs, Lahontan Water Board staff has 30 days to review the documents for completeness. If determined to be incomplete, a notice will be provided to the applicant with the reasons why the determination was made. Upon approval, a written Notice of Applicability (NOA) and WDID will be generated in the SMARTS.

D. General Permit Coverage

This Order serves as a general NPDES Permit for discharges of storm water to surface waters and authorized non-storm water discharges to land associated with construction activity that results in land disturbances equal to or greater than one acre in the Lake Tahoe Hydrologic Unit,

1. Activities covered under this General Permit include:

- a.** Any construction or demolition activity, including, but not limited to clearing, grading, grubbing, or excavation, or any other activity that results in land disturbance of equal to or greater than one acre.
 - b.** Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or sale that disturbs one or more acres.
 - c.** Construction activity that results in land disturbance of equal to or greater than one acre related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to USEPA regulations, such as dairy barns or food processing facilities.
 - d.** Construction activity that results in land disturbance of equal to or greater than one acre associated with linear underground/overhead utility projects including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.
 - e.** Discharges of sediment from construction activities that results in land disturbance of equal to or greater than one acre associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.¹
- 2.** Activities specifically not covered under this General Permit include:
- a.** Disturbance to land of municipal facilities under an approved Storm Water Management Program for routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.
 - b.** Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.

¹ Pursuant to the Ninth Circuit Court of Appeals' decision in NRDC v. EPA (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the USEPA's petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

- c. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.
- d. Construction activity that disturbs less than one acre of land surface, and that is not part of a larger common plan of development or the sale of one or more acres of disturbed land surface.
- e. Construction activity covered by an individual NPDES Permit for storm water discharges.
- f. Discharges of storm water identified in section 402(l)(2) of the CWA, 33 USC section 1342(l)(2).

E. Permit Termination Requirements

To terminate coverage, Dischargers must file a Notice of Termination (NOT) request, final site map, and site photographs through the SMARTS when construction is complete and final stabilization has been reached or when ownership has been transferred. The Discharger must demonstrate that the site is stabilized and does not pose any additional sediment discharge risk than the pre-construction conditions. This may be accomplished using the Revised Universal Soil Loss Equation (RUSLE) or RUSLE2 or other custom methods that account for the physical characteristics (soil and cover conditions) of the site. The purpose of this requirement is to better quantify site stabilization requirements and set measurable benchmarks for project close-out.

The Discharger must certify that all State and local requirements have been met in accordance with this General Permit and demonstrate compliance with the stabilization and post-construction standards set forth in this General Permit. The Discharger is responsible for all compliance issues including all annual fees until the NOT has been filed and approved by the Lahontan Water Board.

Upon approval, a written termination notice will be transmitted to the Discharger. If revocation of coverage under the General Permit is denied, Lahontan Water Board staff shall describe the reasons for denial in a written notification.

III. DISCHARGE PROHIBITIONS

This General Permit implements the waste discharge prohibitions contained in the Basin Plan. Unless granted an exemption in accordance with the Basin Plan, all discharges to surface waters other than storm water are prohibited. The Lahontan Water Board recognizes that certain non-storm water discharges may be necessary for the completion of construction projects. Authorized non-storm water discharges to land may include those from potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, and uncontaminated ground water dewatering. Certain authorized non-

storm water discharges to surface waters may be eligible for an exemption if the project meets the requirements for a restoration project or criteria specified in Attachment F of this General Permit (exemptions for 100-year floodplains and stream environment zones). To be valid, exemptions to applicable waste discharge prohibitions must be granted in writing (e.g., in a NOA).

Non-storm water discharges may include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction must be addressed through structural as well as non-structural BMPs.

IV. EFFLUENT LIMITATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR section 122.44 requires that industrial non-municipal discharges that contain non-conventional and/or toxic pollutants regulated under the NPDES permit program comply with technology-based effluent limits. Both technology-based and WQBELs must be considered, and more stringent WQBELs must be developed if the technology-based effluent limits are not sufficient to meet water quality objectives. WQBELs for discharges authorized by this General Permit were developed to ensure protection of the beneficial uses of receiving waters in the Basin Plan.

A. Technology-Based Effluent Limitations

The CWA requires technology-based effluent limitations to be established based on several levels of controls:

- Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
- New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

On December 1, 2009 the USEPA published final regulations establishing technology-based ELGs and NSPS for the Construction and Development point source category. 40 CFR Part 450 establishes technology-based effluent limitations based BPT, BAT, BCT, and NSPS. For BPT and BCT, the ELGs establish requirements for erosion and sediment controls, soil stabilization, dewatering, pollution prevention measures, prohibited discharges, and outlet requirements. For BAT and NSPS, the ELGs require all dischargers disturbing 20 or more acres of land at one time, achieve a daily maximum turbidity of 280 NTU for all discharges by August 2, 2010. By February 2, 2014, the turbidity ELG will apply to construction sites involving land disturbance of 10 acres or more. In addition, BAT and NSPS include the same requirements for erosion and sediment controls, soil stabilization, dewatering, pollution prevention measures, prohibited discharges, and surface outlets as BPT and BCT.

Table 5.6-1 of the Basin Plan establishes effluent limitations for discharges of storm water to surface waters and municipal separate storm sewer systems, or MS4s, which are termed “collection” systems in the Basin Plan. Order No. R6T-2005-0007 established effluent limitations, consistent with Table 5.6-1 of the

Basin Plan for discharges to land treatment systems, collection systems and surface water. Effluent limitations contained in Table 5.6-1 of the Basin Plan, and established in Order No. R6T-2005-0007, are summarized below:

Table FS-1. Basin Plan Storm Water Effluent Limitations

Parameter	Units	Maximum Concentration for Discharge to:	
		Land Treatment Systems	Collection Systems and Surface Waters
Total Nitrogen (as N)	mg/L	5	0.5
Total Phosphorus (as P)	mg/L	1	0.1
Total Iron	mg/L	4	0.5
Turbidity	NTU	200	20
Grease and Oil	mg/L	40	2.0

Section 5.6 of the Basin Plan states:

“The effluent limitations at the top of Table 5.6-1 apply to storm water discharges to surface waters, and generally to surface runoff leaving a specific project site. If surface runoff enters a project site from upgradient, its quality and volume may together with the quality and volume of runoff generated onsite, affect the quality of the storm water leaving the site. Lahontan Water Board storm water permits for sites where offsite storm water enters the property will take these effects into consideration. In general, where the quality of runoff entering the site is worse than that of runoff generated on site, there should be no statistically significant increase (at a 90 percent confidence level) in pollutants in the water discharged from the site.”

1. Numeric Effluent Limitations (NELs)

The Lahontan Water Board has determined that the application of effluent limitations to land treatment systems is not appropriate for the discharge of storm water from construction activities. Due to the connectivity of storm drains and surface waters in the Lake Tahoe Hydrologic Unit, discharges from the project boundaries must meet the more stringent effluent limitations for discharges to municipal separate storm sewer systems or surface waters where effluent is discharged from the project boundaries or into surface waters, including municipal separate storm sewer systems. The NELs for discharges to surface waters implement requirements imposed under the previous permit.

Effluent limitations for land treatment systems established in a General Permit for Construction Activities are inappropriate. The effluent limitations contained in Table 5.6-1 for discharges to land treatment systems are established to ensure that the waters infiltrated into soils do not contain excessive nutrient concentrations that may not be effectively filtered out by soils and vegetation. However, these effluent limitations do not consider the

treatment efficiency or capacity of the various types of land treatment systems that may be used by dischargers under the General Permit.

Land treatment is an effective method for removing particulate nutrients and fine sediment and under some circumstances may eliminate a discharge to surface waters. Effluent limitations to land treatment systems may unduly restrict the ability of dischargers to treat runoff by this method. Removing effluent limitations to land treatment systems and focusing on effluent limitations applied at the point of discharge, is considered more effective and is consistent with State and federal anti-backsliding requirements.

The numeric effluent limitations contained in Table 5.6-1 are more stringent than those established in the federal ELGs (turbidity). Thus, numeric effluent limitations based on Table 5.6-1 of the Basin Plan have been established in the General Permit as follows:

Table FS-2. Numeric Effluent Limitations

Parameter	Units	Maximum Daily Effluent Limitations For Discharge To Surface Waters
Total Nitrogen (as N)	mg/L	0.5
Total Phosphorus (as P)	mg/L	0.1
Total Iron	mg/L	0.5
Turbidity	NTU	20
Grease and Oil	mg/L	2

Additionally, numeric benchmark levels for pH have been established because construction activities often involve materials, such as concrete, grout, and etching acids, which can affect the pH of runoff. The benchmark action level applies to pH levels not within the range between 6.0 and 9.0. Based on previous data collected and other anecdotal evidence, the Water Board recognizes that pH level in storm water runoff may fluctuate naturally depending on site characteristics. Therefore, dischargers are required to sample for pH when site conditions have the potential to affect pH. If the results do not meet the benchmark range levels, dischargers are required to investigate the cause of the pH excursion and implement corrective actions as needed. This action level is expected to protect receiving waters from changes in pH by more than 0.5, which is the receiving water objective for pH in the Lake Tahoe Hydrologic Unit.

2. Compliance Storm Event

This General Permit contains “compliance storm event” exceptions from the technology-based turbidity NEL similar to the Statewide General Permit. The rationale is that technology-based requirements are developed assuming a certain design storm (defined as the storm producing a rainfall amount for a specified BMPs capacity). Compliance thresholds are needed for storm events above and beyond the design storms assumed to determine the technology-based NELs. This General Permit establishes a compliance storm event as the equivalent rainfall in a 20-year, 1-hour storm, which is 1 inch of rainfall in a 1-hour period. This compliance storm event was chosen because it is consistent with the Basin Plan and other policies for pre- and post-construction BMP requirements.

3. Best Management Practices

Construction activity may result in the discharge of pollutants to receiving waters through storm water runoff and additional dry weather flows. These discharges can be minimized through best management practices and other pollution prevention measure that reduce dry weather discharges, reduce erosion, retain sediment, and minimize contact of materials with storm water.

Consistent with 40 CFR 122.44(k)(4), Order No. R6T-2005-0007 established BMPs and the requirement to develop and implement a SWPPP. This General Permit carries over the requirements to implement BMPs and a SWPPP. Additional BMPs have been established in the General Permit to be consistent with the requirements found in 40 CFR 450 for erosion and sediment controls, soil stabilization, dewatering, pollution prevention measures, prohibited discharges, and surface outlets.

This General Permit also establishes requirements for a Rain Event Action Plan (REAP), which establishes requirements to protect all exposed portions of sites within 24 hours prior to any likely precipitation event. The requirements for the REAP have been modified and established after considering the requirements of the Statewide General Permit.

B. Water Quality-Based Effluent Limitations (WQBELs)

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard,

including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies.

1. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Beneficial uses of surface waters within the Lake Tahoe Hydrologic Unit include MUN, AGR, GWR, FRSH, REC-1, REC-2, COLD, SPWN, COMM, WILD, WQE, FLD, NAV, BIOL, RARE, and MIGR.

The Basin Plan includes both narrative and numeric water quality objectives applicable to receiving waters in the Lake Tahoe Hydrologic Unit. In addition, priority pollutant water quality criteria in the California Toxic Rule (CTR) are applicable to receiving waters in the Lake Tahoe Hydrologic Unit.

2. Determining the Need for WQBELs

Typical pollutants expected in discharges of storm water runoff from construction activities include nutrients, sediments, and petroleum products. As discussed above, Chapter 5.6 of the Basin Plan establishes effluent limitations to be implemented in storm water permits for total nitrogen, total phosphate (as total phosphorus), total iron, turbidity, and grease and oil. These parameters serve as indicator parameters to ensure water quality standards for biostimulatory substances, clarity, oil and grease, sediment, settleable materials, suspended materials, suspended sediment, transparency, and turbidity are not exceeded in the receiving water. Order No. R6T-2005-0007 established effluent limitations for total nitrogen, total phosphate (as total phosphorus), total iron, turbidity, and grease and oil based on the requirements of Chapter 5.6 of the Basin Plan. These effluent limitations have been carried over and serve as both water quality-based effluent limitations as well as technology-based effluent limitations.

Table 5.1-3 (summarized in Attachment G) of the Basin Plan establishes water quality objectives for total nitrogen, total phosphorus, and total iron for some water bodies that may be more stringent than the effluent limitations

established in Section 5.6 of the Basin Plan. In addition, Table 5.1-3 establishes effluent limitations for boron, chloride, sulfate, and total dissolved solids that are applicable to certain water bodies in the Lake Tahoe Hydrologic Unit. Order No. R6T-2005-0007 established the water quality objectives in Table 5.1-3 as receiving water limitations. The Lahontan Water Board found that the effluent limitations established in Section 5.6 of the Basin Plan, and receiving water limitations based on the water quality objectives established on Table 5.1-3 of the Basin Plan were protective of water quality. As such, this General Permit carries over these receiving water limitations.

Due to the presence of portable sanitation devices (porta-potties), the synergistic effects of unknown pollutants in storm water runoff, and the potential presence of toxic materials at construction sites, both bacteria and toxicity are pollutants of concern. Consistent with the water quality standards established in Section 5.1 of the Basin Plan for toxicity and coliform, Order No. R6T-2005-0007 established the narrative effluent limitation:

“All surface flows generated within the project area, or as a results of the development of the project, which are discharged to surface waters or municipal storm water collection systems shall not contain the following:

- i. Substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or animal life; and*
- ii. Coliform organisms attributable to human wastes.”*

The narrative effluent limitation for toxicity and coliform organisms has been carried over.

Section 5.6 of the Basin Plan requires storm water permits issued by the Lahontan Water Board to take into consideration the quality of run-on from offsite areas. Order No. R6T-2005-0007 required that if pollutant concentrations of waters entering the project area exceed the numerical limitations specified above there shall be no increase in the constituent concentrations in the waters that are discharged from the project area. Consistent with section 5.6 of the Basin Plan, this requirement has been carried over.

C. Satisfaction of Anti-Backsliding Requirements

Sections 402(0)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(1) prohibit backsliding in NPDES permits. These anti-backsliding

provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. The effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R6T-2005-0007.

D. Satisfaction of Antidegradation Policy

40 CFR Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where, the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Lahontan Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

This General Permit is no less stringent than Order No. R6T-2005-0007 and does not extend the coverage of the General Permit beyond the types of dischargers previously authorized to discharge under Order No. R6T-2005-0007. The Lahontan Water Board has considered antidegradation pursuant to 40 CFR 131.12 and State Water Board Resolution No. 68-16 and finds that the subject discharges are consistent with the provisions of these policies. An antidegradation analysis is not necessary for this General Permit. Discharges not consistent with the provisions of these policies and regulations are not covered by this General Permit.

E. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on total nitrogen, total phosphorus, total iron, turbidity, and grease and oil. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

1. All surface flows generated within the project site that discharge to surface waters or municipal storm sewer collection systems shall not contain constituents in excess of the following concentrations:

Table FS-3. Summary of Final Effluent Limitations

Parameter	Units	Maximum Daily Effluent Limitations For Discharge To Surface Waters
Total Nitrogen (as N)	mg/L	0.5
Total Phosphorus (as P)	mg/L	0.1

Parameter	Units	Maximum Daily Effluent Limitations For Discharge To Surface Waters
Total Iron	mg/L	0.5
Turbidity	NTU	20*
Grease and Oil	mg/L	2
Note* - For ATS: 10 NTU for daily flow-weighted average and 20 NTU for any single sample.		

2. If constituent concentrations of waters entering the project area exceed the numerical limitations specified above, there shall be no increase in the constituent concentrations in the waters that are discharged from the project area.
3. All surface flows generated within the project area, or as a result of the development of the project that are discharged to surface waters or municipal storm water collection systems shall not contain the following:
 - a. Substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or animal life; and
 - b. Coliform organisms attributable to human wastes.

V. RECEIVING WATER LIMITATIONS

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Lahontan Region as well as site-specific objectives for certain waters within the Lake Tahoe Hydrologic Unit. The Basin Plan also includes an objective to maintain the high quality waters pursuant to federal regulations (40 CFR 131.12) and State Water Board Resolution No. 68-16 (Anti-Degradation Policy). Surface water limitations in this General Permit are included to ensure protection of background water quality and beneficial uses of the receiving water.

VI. TRAINING QUALIFICATIONS AND CERTIFICATION

USEPA suggests that qualified personnel prepare SWPPPs and points to numerous states that require certified professionals to be on construction sites at all times. States that currently have certification programs are California, Washington, Georgia, Florida, Delaware, Maryland, and New Jersey. Order No. R6T-2005-0007 requires that personnel implementing the Storm Water Pollution Prevention Plan (SWPPP) be trained on the appropriate procedures. However, it does not specify any training criteria for SWPPP developers nor is there a specific curriculum or certification program required by the Order. This has resulted in inconsistent implementation by all affected parties - the dischargers, the local governments

where the construction activity occurs, and the regulators enforcing Order No. R6T-2005-0007.

This General Permit requires that all SWPPPs be written, amended, and certified by a Qualified SWPPP Developer (QSD) and that a Qualified SWPPP Practitioner (QSP) is responsible for implementing the SWPPP. A QSD must possess one of the certifications and or registrations specified in this General Permit. A QSP must possess one of the certifications and or registrations specified in this General Permit by **April 13, 2012**. Table FS-4 provides an overview of the criteria used in determining qualified certification titles for a QSD and QSP.

Additionally, the QSD/P, effective **April 13, 2012**, must have attended a State Water Board-sponsored or approved Qualified SWPPP Developer training course and pass the associated examination. The State Water Board has entered into a Memorandum of Understanding with the California Stormwater Quality Association (CASQA) to implement the training and certification program. Specific information on training and educational classes is accessible at:

<http://www.casqa.org/TrainingandEducation/tabid/201/Default.aspx>.

Table FS-4. Qualified SWPPP Developer/ Qualified SWPPP Practitioner Certification Criteria

Certification/ Title	Registered By	QSD/QSP	Certification Criteria
Professional Civil Engineer	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Professional Geologist or Engineering Geologist	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Landscape Architect	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Professional Hydrologist	American Institute of Hydrology	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Certified Professional in Erosion and Sediment Control™ (CPESC)	Enviro Cert International Inc.	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Inspector of Sediment and Erosion Control™ (CISEC)	Certified Inspector of Sediment and Erosion Control, Inc.	QSP	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Erosion, Sediment and Storm Water Inspector™ (CESSWI)	Enviro Cert International Inc.	QSP	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Professional in Storm Water Quality™ (CPSWQ)	Enviro Cert International Inc.	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Professional in Erosion and Sediment Control	National Institute for Certification in Engineering Technologies (NICET)	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites

VII. BEST MANAGEMENT PRACTICES

Consistent with 40 CFR 122.44(k)(4), dischargers are required to implement specific BMPs to control or abate the discharge of pollutants that are likely to be present in storm water runoff from construction sites. In addition, 40 CFR 122.45 establishes BMP requirements for erosion and sediment controls, soil stabilization, dewatering, pollution prevention measures, prohibited discharges, and surface outlets as BPT and BCT. This General Permit establishes minimum BMPs to be implemented by dischargers, based on Order No. R6T-2005-0007, the Statewide General Permit, and the requirements of 40 CFR 122.45.

A. Site Management

Proper handling and managing of construction materials and controlling the limits of land disturbing activities can help minimize threats to water quality. The discharger must consider appropriate site management measures for construction materials and other potential pollutant sources, waste management, vehicle storage and maintenance, landscape materials, vehicle access routes, and construction limits.

B. Sediment and Erosion Control

Sediment control BMPs should be used in combination with erosion controls as a means of preventing storm water contamination. The discharger is required to consider perimeter control measures such as installing silt fences or placing straw wattles below slopes, installing drain inlet protection, installing temporary check dams in flow lines, and constructing sediment basins to capture and treat runoff.

The best way to minimize the risk of creating pollution problems during construction is to prevent erosion at the source. The discharger is required to implement effective erosion control measures in combination with appropriate sediment control measures such as preserving existing vegetation where feasible, limiting disturbance, and stabilizing and re-vegetating disturbed areas as soon as possible after grading or construction activities. Particular attention must be paid to large, mass-graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, temporary soil stabilization is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. The discharger is required to consider measures such as covering disturbed areas with mulch, applying temporary seeding, and using soil stabilizers, binders, or blankets. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed.

Inappropriate management of run-on and runoff can increase erosion and result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include installing berms, gravel bags, or other temporary run-on and runoff diversions, and providing outlet protection at discharge points.

C. Non-Storm Water Management

Non-storm water discharges directly connected to receiving waters or the storm drain system have the potential to negatively impact water quality and are prohibited unless a prohibition exemption is granted in writing. The discharger must implement measures to control all non-storm water discharges to land during construction that are conditionally allowed under the terms of this General Permit. Examples include; properly washing vehicles in contained areas, controlling water applications when cleaning streets, and minimizing irrigation runoff. Control measures must be described in the SWPPP.

D. Dewatering

The discharge of dewatering waste to surface waters is allowed only when alternative options have been considered and deemed infeasible. When dewatering waste must be discharged to surface waters, a site-specific dewatering plan shall be prepared and accepted by the Lahontan Water Board before the discharge may commence. The plan shall be incorporated into the project SWPPP. In certain areas, a Basin Plan prohibition exemption may be required.

E. Inspection, Maintenance, and Repair

All management measures must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is required by the General Permit.

F. Rain Event Action Plan

A Rain Event Action Plan (REAP) is a written document, specific for each rain event, that when implemented, protects all exposed portions of the site. A suggested REAP template is provided in Attachment H. The REAP requirement is designed to ensure that the discharger has adequate materials, staff, and time to implement erosion and sediment control measures before the storm event occurs. A REAP shall be developed at least 24 hours before the day a forecast of 30 percent or greater probability of precipitation is predicted in the project area. This requirement differs from the requirements established in the

Statewide General Permit due to the nature of summer thunderstorms that typically occur in the Lake Tahoe Basin. Dischargers shall consult the National Oceanic and Atmospheric Administration (NOAA) website to determine the probability of predicted rain events in the project area. The website link is: <http://www.srh.noaa.gov/forecast>. Dischargers should be prepared to respond rapidly during periods when thunderstorm activity is predicted and monitor weather conditions for impending thunderstorms that may be localized in the project area.

G. Active Treatment System (ATS²) Requirements

Requirements in this General Permit for the use of an ATS is identical to the requirements established in the Statewide General Permit. There are instances on construction sites where traditional erosion and sediment controls do not effectively control accelerated erosion. Under such circumstances, or under circumstances where storm water discharges leaving the site may cause or contribute to an exceedance of a water quality standard, the use of an ATS may be necessary. Additionally, it may be appropriate to use an ATS when site constraints inhibit the ability to construct a correctly sized sediment basin, when clay and/or highly erosive soils are present, or when the site has very steep or long slope lengths.³

Although treatment systems have been in use in some form since the mid-1990s, the ATS industry in California is relatively young, and detailed regulatory standards have not yet been developed. Many developers are using these systems to treat storm water discharges from their construction sites and there are a number of reasons why an ATS may be necessary. The new ATS requirements set forth in this General Permit are based on those in place for small wastewater treatment systems, ATS regulations from the Central Valley Regional Water Quality Control Board (September 2005 memorandum "2005/2006 Rainy Season – Monitoring Requirements for Storm Water Treatment Systems that Utilize Chemical Additives to Enhance Sedimentation"), the Construction Storm Water Program at the State of Washington's Department of Ecology, as well as recent advances in technology and knowledge of coagulant performance and aquatic safety. The effective design of an ATS requires a detailed survey and analysis of site conditions. With proper planning, ATS performance can provide exceptional water quality discharge and prevent significant impacts to surface water quality, even under extreme environmental conditions.

² An ATS is a treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation in order to reduce turbidity caused by fine suspended sediment

³ Pitt, R., S. Clark, and D. Lake. 2006. Construction Site Erosion and Sediment Controls: Planning, Design, and Performance. DEStech Publications. Lancaster, PA. 370pp.

These systems can be very effective in reducing the sediment in storm water runoff, but the systems that use additives/polymers to enhance sedimentation also pose a potential risk to water quality (e.g., operational failure, equipment failure, additive/polymer release, etc.). The State and Lahontan Water Boards are concerned about the potential acute and chronic impacts that the polymers and other chemical additives may have on fish and aquatic organisms if released in sufficient quantities or concentrations. In addition to anecdotal evidence of polymer releases causing aquatic toxicity in California, the literature supports this concern.⁴ For example, cationic polymers have been shown to bind with the negatively charged gills of fish, resulting in mechanical suffocation.⁵ Due to the potential toxicity impacts, which may be caused by the release of additives/polymers into receiving waters, this General Permit establishes residual polymer monitoring and toxicity testing requirements for discharges from construction sites that utilize an ATS.

The primary treatment process in an ATS is coagulation/flocculation. ATSs operate on the principle that the added coagulant is bound to suspended sediment, forming floc, which is gravitationally settled in tanks or a basin, or removed by sand filters. A typical installation utilizes an injection pump upstream from the clarifier tank, basin, or sand filters, which is electronically metered to both flow rate and suspended solids level of the influent, assuring a constant dose. The coagulant mixes and reacts with the influent, forming a dense floc. The floc may be removed by gravitational setting in a clarifier tank or basin, or by filtration. Water from the clarifier tank, basin, or sand filters may be routed through cartridge(s) and/or bag filters for final polishing. Vendor-specific systems use various methods of dose control, sediment/floc removal, filtration, etc., that are detailed in project-specific documentation. The particular coagulant/flocculant to be used for a given project is determined based on the water chemistry of the site because the coagulants are specific in their reactions with various types of sediments. Appropriate selection of dosage must be carefully matched to the characteristics of each site.

ATSs are operated in two differing modes, either Batch or Flow-Through. Batch treatment can be defined as Pump-Treat-Hold-Test-Release. In Batch treatment, water is held in a basin or tank, and is not discharged until treatment is complete. Batch treatment involves holding or recirculating the treated water in a holding basin or tank(s) until treatment is complete or the basin or storage tank(s) is full. In Flow-Through treatment, water is pumped into the ATS directly from the runoff collection system or storm water holding pond, where it is treated and filtered as

⁴ RomØen, K., B. Thu, and Ø. Evensen. 2002. Immersion delivery of plasmid DNA II. A study of the potentials of a chitosan based delivery system in rainbow trout (*Oncorhynchus mykiss*) fry. *Journal of Controlled Release* **85**: 215-225.

⁵ Bullock, G., V. Blazer, S. Tsukuda, and S. Summerfelt. 2000. Toxicity of acidified chitosan for cultured rainbow trout (*Oncorhynchus mykiss*). *Aquaculture* **185**:273-280.

it flows through the system, and is then directly discharged. “Flow-Through Treatment” is also referred to as Continuous treatment.”

1. Effluent Standards

This General Permit establishes NELs for discharges from construction sites that utilize an ATS. These systems lend themselves to NELs for turbidity and pH because of their known reliable treatment. Advanced systems have been in use in some form since the mid-1990s. ATSs are considered reliable, can consistently produce a discharge of less than 10 NTU, and have been used successfully at many sites in several states since 1995 to reduce turbidity to very low levels.⁶

This General Permit contains “compliance storm event” exceptions from the technology-based NELs for ATS discharges. The rationale is that technology-based requirements are developed assuming a certain design storm. For consistency with the compliance storm event for BMP performance in this General Permit, the compliance storm event for ATS use is 1 inch of rain in a 1-hour period (20-year, 1-hour storm).

2. Training

Operator training is critical to the safe and efficient operation and maintenance of the ATS, and to ensure that all State Water Board monitoring and sampling requirements are met. The General Permit requires that all ATS operators have training specific to using ATS liquid coagulants.

H. Post-Construction Standards

Post-construction standards in this General Permit are focused on reducing fine sediment and nutrient loading to Lake Tahoe and are consistent with requirements being developed under the Lake Tahoe Total Maximum Daily Load (TMDL) program. For municipal and public roadway storm water treatment facilities, each municipal jurisdiction and state highway departments must meet the requirements set forth in its respective municipal NPDES storm water permit.

⁶ Currier, B., G. Minton, R. Pitt, L. Roesner, K. Schiff, M. Stenstrom, E. Strassler, and E. Strecker. 2006. The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.

For new development, re-development, and existing development BMP retrofit projects, dischargers shall consider opportunities to infiltrate stormwater runoff from impervious surfaces. At a minimum, permanent stormwater infiltration facilities must be designed and constructed to infiltrate runoff generated by the 20 year, 1-hour storm, which equates to approximately one inch of runoff over all impervious surfaces during a 1-hour period, or must meet the alternative requirements described below. Where conditions permit, project proponents should consider designing infiltration facilities to accommodate runoff volumes in excess of the 20 year, 1-hour storm to provide additional stormwater treatment.

Infiltrating runoff volumes generated by the 20-year, 1-hour storm may not be possible in some locations due to shallow depth to seasonal groundwater levels, unfavorable soil conditions, or other site constraints such as existing infrastructure or rock outcroppings. In the event that site conditions do not provide opportunities to infiltrate the runoff volume generated by a 20 year, 1-hour storm, project proponents must either (1) provide information showing how treatment facilities are expected to meet the numeric effluent limits in the Basin Plan, or (2) document written acceptance by the local municipality or state highway department that shared stormwater treatment facilities treating private property discharges and public right-of-way stormwater are sufficient to meet the municipality's average annual fine sediment and nutrient load reduction requirements.

Runoff from parking lots, retail and commercial fueling stations, and other similar land uses may contain oil, grease, and other hydrocarbon pollutants. Project proponents designing treatment facilities for these areas must include pre-treatment devices to remove hydrocarbon pollutants prior to infiltration or discharge and contingency plans to prevent spills from polluting groundwater.

VIII. STORM WATER POLLUTION PREVENTION PLAN

This General Permit establishes requirements for the development and implementation of a SWPPP to identify the sources of sediment and other pollutants that affect the quality of storm water discharges; and to describe and ensure the implementation of BMPs to minimize or eliminate sediment and other pollutants in storm water and non-storm water discharges. The conditions of SWPPP are based on previous requirements in Order No. R6T-2005-0007 and the Statewide General Permit.

This General Permit provides more detailed requirements for the content and organization of SWPPPs to be developed. A suggested outline for the SWPPP is also presented in Attachment I.

IX. MONITORING AND REPORTING PROGRAM REQUIREMENTS

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Lahontan Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment C of this General Permit, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Visual Inspections

To ensure the proper implementation of BMPs and the SWPPP, and record site conditions for use in compliance determination, visual inspections of the site are required at the end of each work day during active construction periods, and at least once a month during long periods of inactivity such as the winter shut-down period. Results of inspections must be documented and maintained with the project SWPPP.

B. Storm Water Discharge Monitoring

Pursuant to the requirements of 40 CFR 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations and to assess the impacts of the discharge on the receiving water. Sampling shall be conducted at all identified discharge points in accordance with the requirements of the MRP. The MRP requires daily sampling and analysis of storm water discharge events for turbidity using calibrated portable field meters to evaluate potential impacts from land-disturbing activities.

This General Permit also requires that all dischargers develop a sampling and analysis strategy for monitoring pollutants that are not visually detectable in storm water. The sampling strategy shall be developed based on the potential pollutants to be present considering the construction materials, soil amendments, soil treatments, and historic contamination at the site. Monitoring for non-visible pollutants is required at any construction site when the exposure of construction materials occurs and where a discharge can cause or contribute to an exceedance of a water quality objective. Examples of non-visible pollutants include glyphosate (herbicides), diazinon and chlorpyrifos (pesticides), nutrients (fertilizers), and molybdenum (lubricants). The use of diazinon and chlorpyrifos is a common practice among landscaping professionals and may trigger sampling and analysis requirements if these materials come into contact with storm water. High pH values from cement and gypsum, high pH and suspended sediment concentrations from wash waters, and chemical/fecal contamination from portable toilets are also potential pollutants from construction projects.

The pH of effluent should be between 6.0 and 9.0 to ensure protection of water quality objectives set for receiving waters. This pH range is set as a numeric benchmark level that requires dischargers to investigate the cause of any excursion outside of the 6.0-9.0 pH range. The Lahontan Water Board recognizes that, in some cases, pH levels in storm water runoff may occur at levels outside of the range due to natural conditions. In these cases, dischargers must provide data to demonstrate that an excursion is due to natural conditions.

The most effective way to avoid the sampling and analysis requirements, and to ensure permit compliance, is to avoid the exposure of construction materials to precipitation and storm water runoff by implementing appropriate BMPs. However, preventing or eliminating the exposure of pollutants at construction sites is not always possible. Some materials, such as soil amendments, are designed to be used in a manner that will result in exposure to storm water. In these cases, it is important to make sure that these materials are applied according to the manufacturer's instructions and at a time when they are unlikely to be washed away.

Other construction materials can be exposed when storage, waste disposal or the application of the material is done in a manner not protective of water quality. For these situations, sampling is required unless there is capture and containment of all storm water that has been exposed. In cases where construction materials may be exposed to storm water, but the storm water is contained and is not allowed to run off the site, sampling will only be required when inspections show that the containment failed or is breached, resulting in potential exposure or discharge to receiving waters.

C. Receiving Water Monitoring

1. Surface Water

The storm water discharge sampling requirements and NELs in this General Permit are sufficiently stringent such that surface water (also called receiving water) monitoring is not necessary in most situations. The storm water monitoring requirements specified above provide the most direct opportunity for dischargers to assess site conditions and take corrective actions as necessary. The stringency of the NELs also provides a sufficient enforcement mechanism to ensure that water quality is protected. Additionally, most storm water discharges are commingled with effluent from a variety of sources before discharging to surface waters. These conditions complicate analysis of the results and make it difficult to determine the cause of any potential effects on surface water quality. Therefore, this General Permit requires surface water sampling only in certain cases when stormwater discharge sampling is infeasible and there is a direct discharge to

surface waters from overland flow. These conditions are most often encountered on stream restoration projects where grading activities are located immediately adjacent to the surface water. In these cases, the discharger is required to collect surface water samples up and downstream of the project site.

2. Bioassessments

This General Permit requires a bioassessment of receiving waters for dischargers with construction projects equal to or larger than 30 acres with direct discharges into wadeable streams. Benthic macroinvertebrate samples shall be taken upstream and downstream of the site's discharge points in the receiving water. Bioassessments measure the quality of the stream by analyzing the aquatic life present. Higher levels of appropriate aquatic species tend to indicate a healthy stream; whereas low levels of organisms can indicate stream degradation.

Active construction sites have the potential to discharge large amounts of sediment and pollutants into receiving waters. Requiring a bioassessment for large project sites, with the most potential to impact water quality, provides data regarding the health of the receiving water prior to the initiation of construction activities. Pre- and post-construction data can be used to compare the effects of the construction activity on the receiving water.

Specific requirements of bioassessments are established in Attachment C-1 and have been developed to be consistent with the requirements of the Statewide General Permit. Each ecoregion (biologically and geographically related area) in the State has a specific yearly peak time where stream biota is in a stable and abundant state. This time of year is called an Index Period and is from July 1 through August 15 in the Lake Tahoe Hydrologic Unit. The bioassessment requirements specify that benthic macroinvertebrate sampling be conducted within this index period. If pre-construction bioassessment cannot be completed within the index period, the discharger shall pay into the Surface Water Ambient Monitoring Program (SWAMP) bank account in accordance with Appendix 3 of Water Quality Order No. 2009-0009-DWQ. Bioassessment methods are required to be in accordance with the SWAMP in order to provide data consistency within the state as well as generate useable biological stream data.

D. Reporting Requirements

1. 24-Hour Reporting

Pursuant to the requirements of 40 CFR 122.41(l)(6), this General Permit requires dischargers to orally report to Lahontan Water Board staff within 24

hours whenever an adverse condition occurs as a result of this discharge. An adverse condition includes, but is not limited to, a violation or threatened violation of the conditions of this General Permit, significant spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance pursuant to section 13267(b) of the California Water Code, a written notification of the adverse condition shall be submitted to the Lahontan Water Board within five (5) business days of occurrence. The written notification shall identify the adverse conditions, describe the actions necessary to remedy the condition and/or the actions implemented to abate the problem from continuing, and specify a timetable, subject to the modifications of the Lahontan Water Board, for remedial actions.

In the event that sampling results exceed any applicable NEL, the dischargers shall orally notify the Lahontan Water Board within 24 hours after the NEL exceedance has been identified and electronically submit all storm event sampling results through the SMARTS within five (5) business days after the NEL exceedance has been identified

2. Annual Report

All dischargers must prepare and electronically submit an Annual Report no later than November 30 of each year using the Storm water Multi-Application Reporting and Tracking System (SMARTS). The report shall cover the period from October 16 of the previous year through October 15 of the current year. The Annual Report must include a summary and evaluation of all sampling and analysis results, original laboratory reports, chain-of-custody forms, corrective actions taken during the compliance year, and identification of any compliance activities or corrective actions that were not implemented.

3. Final Report

Dischargers shall prepare a final report following completion of project construction to demonstrate that the project is completed as planned and water quality impacts have been mitigated. The discharger shall electronically submit the report through the SMARTS that describes: 1) whether the project was completed as planned in the NOI and/or any modification of the construction plans for the proposed storm water collection treatment, or disposal facilities or restoration work; 2) details any change in the amount of impervious coverage for the project site beyond what was authorized; and 3) any significant problem(s) which occurred during project construction and remedial measures planned or implemented.

4. Restoration Monitoring and Reporting

Restoration projects are often executed to improve existing water quality conditions; therefore, it is necessary to monitor restoration project effectiveness until it is self sustaining. Monitoring information can also identify project and/or construction method strengths and weaknesses. This knowledge can provide feedback into the maintenance of the existing system and also be applied to future water quality improvement projects.

This General Permit requires the discharger to submit a detailed effectiveness monitoring plan as part of the Construction Site Monitoring and Reporting Plan (CSMRP) that includes annual performance criteria for the review and acceptance by the Lahontan Water Board staff. A contingency plan must also be submitted for actions to be taken if performance criteria are not met.

Ideally, pre- and post-construction monitoring is required to best evaluate the success of the restoration project. Monitoring should include, but not be limited to, assessments of vegetative cover and water quality and quantity measurements. Where appropriate, monitoring should also include upgradient and downgradient sampling of water entering a treatment method (sediment can, sand and oil trap).

X. COMPLIANCE DETERMINATION

Order No. R6T-2005-007 was silent on how compliance with the applicable limitations was determined. This General Permit provides more detailed information on how compliance will be determined as discussed below.

A. Compliance with Effluent Limitations

As previously discussed under section V – Effluent Limitations, the technology-based turbidity NEL in this General Permit is based on the performance of a BMP assuming a certain design storm (defined as the storm producing a rainfall amount). Compliance with the NELs will not be required for storm events that exceed the equivalent rainfall in a 20-year, 1-hour storm (1 inch of rainfall in a 1-hour period). The discharger is required to provide supporting documentation (i.e., evidence of actual rainfall amount for the area, such as an on-site rain gauge and rainfall data provided by NOAA) to the Lahontan Water Board for any claims that an effluent limit exceedance occurred during a storm event exceeding a 20-year, 1-hour storm.

Additionally, NELs may not apply when run-on conditions are causing an exceedance of an NEL or when discharges do not reach surface waters. The dischargers must provide data and information to support any claim that the NELs do not apply due to these circumstances.

B. Multiple Sample Data

The NELs in this General Permit are evaluated as a maximum daily effluent limitation (MDEL). Pursuant to NPDES regulations (40CFR Part 122.2), *maximum daily discharge* limitation means the highest allowable “daily discharge.” *Daily discharge* means the “discharge or a pollutant” measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of measurement other than mass, the daily discharge is calculated as the average measurement of the pollutant over the day. For purposes of this General Permit, the daily average effluent value is defined as the arithmetic mean of the daily effluent data. When determining compliance when more than one sample result is available due to collection at multiple discharge points and/or multiple times during the calendar day, the Discharger shall compute the arithmetic mean concentration for each day of discharge.

Samples must be representative of the volume and quality of runoff from the site. Sample collection must not be manipulated in such a way as to skew the maximum daily effluent value. However, dischargers may indicate the proportional area or flow from the site that each discharge point represents and factor this into the daily average for the entire site when reporting the data.

C. Maximum Daily Effluent Limitation

The NELs in this General Permit are evaluated as a maximum daily effluent limitation (MDEL). If a daily average concentration (or when applicable, the daily median) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that one day only within the reporting period.

D. Sampling by Other Parties

Sampling may be conducted by persons other than the Discharger. Water Board staff, operators of municipal separate storm sewer systems, or others may analyze storm samples. Samples collected by others may be used with other data to determine MDELs and to conduct compliance determinations, as provided above.

XI. PUBLIC PARTICIPATION

The Lahontan Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for discharges of storm water from construction-related activities. This proposed General Permit has been developed for review and comment by the public. As a step in the WDR adoption process, the Lahontan Water

Board staff has developed tentative WDRs. The Lahontan Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

On January 27, 2011, the Lahontan Water Board notified dischargers, interested agencies, and other interested parties of its intent to prescribe waste discharge requirements for construction-related activities in the Lake Tahoe Hydrologic Unit, and provided them with an opportunity to submit their written comments and recommendations on the draft tentative permit by February 26, 2011. Notification was provided through mailing, list serve system emails, and posting on the Lahontan Water Board website. Lahontan Water Board staff revised the permit based on comments received on the tentative draft, and on March 11, 2011, the Lahontan Water Board notified dischargers, interested agencies, and other interested parties that a proposed permit was available for public review. Notification was provided through mailing, list serve system emails, newspaper notifications, and posting on the Lahontan Water Board website.

B. Written Comments

The staff determinations are proposed. Interested persons are invited to submit written comments concerning these proposed WDRs. Written comments must be submitted either in person, by email, or by U.S. mail to the Lahontan Water Board. The mailing address for the Lahontan Water Board is 2501 Lake Tahoe Blvd, South Lake Tahoe, CA 96150. Email comments may be submitted to the attention of Bud Amorfini at bamorfini@waterboards.ca.gov.

To be fully considered by staff and the Lahontan Water Board, written comments must be received at the Lahontan Water Board within ten days of the Public Hearing to consider adopting the updated permit. Comments received after that date will be forwarded on to the Lahontan Water Board.

C. Public Workshop

The Lahontan Water Board conducted two public workshops on February 10, 2011, to inform and discuss issues relating to the tentative WDRs with interested parties.

D. Public Hearing

The Lahontan Water Board has scheduled a public hearing to consider adopting the updated permit. The Board meeting is scheduled as follows:

Date: April 13-14, 2011
Time: TBD
Location: Lake Tahoe Community College

1 College Drive
South Lake Tahoe, CA 96150

Interested persons are invited to attend. At the public meeting, the Lahontan Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is <http://www.waterboards.ca.gov/lahontan/> where the public can access the current agenda for changes in dates and locations.

E. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Lahontan Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Lahontan Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the Lahontan Water Board at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday, at 2501 Lake Tahoe Boulevard, South Lake Tahoe, CA 96150. Copying of documents may be arranged through the Lahontan Water Board by calling (530) 542-5400.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Lahontan Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Bud Amorfini, Engineering Geologist, at 530-542-5463 or by email at Bamorfini@waterboards.ca.gov.

Appendix E: Illegal Dumping Response Plan

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Reporting Party (Person filling out this form)					PHONE
Dist./CC		Date		Supervisor	
TIME RECEIVED		Work Order Number		ICID Number *	
Location: Co.	Rte.	PM	Dir.	HAZMAT <input type="checkbox"/> Yes <input type="checkbox"/> No	

IF YOU SUSPECT THAT THIS COULD BE HAZARDOUS MATERIAL CONTACT YOUR DISTRICT'S HAZMAT MANAGER IMMEDIATELY

Discharge Information

Name (Responsible Party)		Address			PHONE
Type of Material: <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> Solid <input type="checkbox"/> Powder <input type="checkbox"/> Other _____		Type of Drainage: <input type="checkbox"/> Drop inlet <input type="checkbox"/> Culvert <input type="checkbox"/> Curb inlet <input type="checkbox"/> Channel <input type="checkbox"/> Other _____			
Mode of Entry: <input type="checkbox"/> Spill <input type="checkbox"/> Nuisance <input type="checkbox"/> Outdoor Washing <input type="checkbox"/> Dumping <input type="checkbox"/> Groundwater <input type="checkbox"/> Other _____		Was it Cleaned up? <input type="checkbox"/> Yes <input type="checkbox"/> No		Was it Eliminated? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Immediate Problem		<input type="checkbox"/> On going Problem		<input type="checkbox"/> Slope or water course erosion	

Cleaned up by whom?

Caltrans Contractor _____ Property owner

Name

Identification of Discharged Material:

Description of IC/ID:

Actions Taken:

Final Resolution:

What Agencies Were Notified?

District NPDES Coordinator Notified?

Yes No

Name _____ Date _____

Pictures Taken? (If yes attach to report)

Yes No



ILLEGAL CONNECTION, ILLICIT DISCHARGE
(IC/ID) AND ILLEGAL DUMPING
RESPONSE PLAN

Procedures and Best Management Practices

December 2013

CTSW-RT-13-999.43.03

California Department of Transportation (Caltrans)
1120 N Street
Sacramento, CA 95814

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1 INTRODUCTION

This Illegal Connection/Illicit Discharge (IC/ID) and Illegal Dumping Response Plan has been prepared by Caltrans to describe procedures and best management practices (BMPs) that are used to protect its municipal separate sewer system (MS4) and stormwater quality from potential pollutant loading due to the illicit deposition of solid or liquid materials to the Department's right of way.

Submittal of this IC/ID and Illegal Dumping Response Plan complies with Caltrans' requirement under the *National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit Waste Discharge Requirements (WDRS) for State of California Department of Transportation* (Order No. 2012-0011-DWQ), issued by the California State Water Resources Control Board (SWRCB) on September 19, 2012, (Caltrans Permit) and effective July 1, 2013. Provision E.2.h.4.b.ii of the Caltrans Permit states the following:

“The Department shall develop an *IC/ID AND ILLEGAL DUMPING RESPONSE PLAN* that includes, at a minimum, the following:

- (a) Procedures for investigating reports or discoveries of IC/IDs or incidents of illegal dumping, for remediating or eliminating the IC/IDs, and for clean up of illegal sites.
- (b) Procedures for prevention of illegal dumping at sites subject to repeat or chronic incidents of illegal dumping.
- (c) Procedures for educating the public, raising awareness and changing behaviors regarding illegal dumping, and encouraging the public to contact the appropriate local authorities if they witness illegal dumping.”

Future revisions to this document will be submitted with the revision year Annual Report. The procedures and BMPs described in this plan are not intended to supersede efforts that may be required to ensure public safety or the preservation of the State's transportation system.

2 LEGAL AUTHORITY

Caltrans possesses adequate legal authority over its property, under the Streets and Highways Code, to disconnect or prohibit point source illegal connections to its storm drain systems. Streets and Highways Code §660 defines an encroachment as “any tower, pole, pole line, pipe, pipe line, fence, billboard, stand or building, or any structure, object of any kind or character not particularly mentioned in this section, or special event, which is in, under, or over any portion of the highway...”. Thus, illegal connections to the Caltrans storm drainage system are considered encroachments. Pursuant to Streets and Highways Code §720, “If any encroachment exists in, under or over any State highway, the Department may require the removal of such encroachment...”.

In accordance with Streets and Highways Code §721, Caltrans may immediately remove from any State highway any illicit discharge or illegal connection encroachment which:

- obstructs or prevents the use of such highway by the public,
- consists of refuse, or
- is a non-approved, non-permitted advertising sign of any description.

Illegal dumping is prohibited by state and local laws.

Vehicle Code §23112 provides that no one may throw or deposit on the highway any garbage or substance likely to injure or damage traffic using the highway, or any noisome, nauseous, or offensive matter of any kind. It also prohibits the placement of any rocks, refuse, or dirt within the highway right of way.

Enforcement is provided by the California Highway Patrol and local law enforcement agencies. Caltrans relies primarily upon the CHP for investigation, surveillance, and apprehension of suspects believed to have illegally dumped wastes within the highway system and other Caltrans facilities.

Resolution may involve the removal/elimination of the illegal connection, illicit discharge or illegal dumping, proper permitting, or other appropriate actions including external enforcement and/or regulatory agencies involvement.

3 IC/ID MANAGEMENT PROCEDURES

3.1 DEFINITION

An Illegal Connection is an engineered conveyance that is connected to an MS4 without authorization by local, state, or federal statutes, ordinances, codes or regulations. Illegal connections may carry pollutants from unauthorized drainage, wastewater, or other illicit discharges to the Caltrans storm drain system from adjacent properties. Illegal connections may be intentional or may be unknown to the property owner. Common examples of illegal connections are floor drains, sewer lines or other drain pipes connected to a Caltrans storm drain.

An Illicit Discharge is any discharge to an MS4 that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. It includes all non-stormwater discharges except conditionally exempt non-stormwater discharges. It generally includes any discharge, release, or pumping of a pollutant or polluted water (anything other than stormwater) into the Caltrans right of way, properties or facilities including its drainage system. Illicit discharges are considered “illicit” because Municipal Separate Storm Sewer Systems (MS4s) are not designed to accept, process, or discharge non-stormwater wastes. Common examples of illicit discharges include wash water, spilled chemicals, sewage releases, and pollutants from various other sources.

Illegal dumping is discarding or disposal within Caltrans’ right of way, properties or facilities, either intentionally or unintentionally, of trash and other wastes in non-designated areas that may contribute to stormwater pollution.

3.2 DISCOVERY

IC/ID (including illegal dumping) incidences, which do not initiate emergency response protocol, are identified and documented in the following ways:

Caltrans Staff

- Maintenance staff, as part of their routine inspection and maintenance activities of roadway and roadside facilities, are to examine their work areas and report all observed suspected illegal connections, illicit discharges and illegal dumping to their Supervisor. The Supervisor shall review and make the determination to contact the District Maintenance Stormwater Coordinator for investigation of the IC/ID.
- Construction staff and the construction Contractor shall examine the project site prior to and during construction and report any evidence of IC/IDs to the Resident Engineer. The Resident Engineer will notify the Construction Stormwater Coordinator who will notify the District NPDES Coordinator. For projects subject to the Construction General Permit or the Tahoe Construction General Permit, investigation and reporting will be in accordance with the respective Permit’s requirements.

- Other Caltrans staff shall report all observed suspected illegal connections, illicit discharges and illegal dumping to the District NPDES Coordinator for investigation of the IC/ID.

Public

- The public may report suspected IC/IDs by visiting the California Department of Transportation website: www.dot.ca.gov, clicking on the “Contact Us” link and completing a form at the “Maintenance Service Request” link. The Maintenance Service Request (MSR) is forwarded to the District Maintenance Stormwater Coordinator for investigation of the IC/ID.
- The public may call the District Public Information Officer who will collect details of the IC/ID and forward the information to the District Maintenance Stormwater Coordinator for investigation of the IC/ID.

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

3.3 INVESTIGATION

The Division of Maintenance standardized report form MTCE07 is to be completed while conducting the initial investigation at suspected IC/ID sites. A copy of the completed form MTCE07 for a confirmed IC/ID site is forwarded to the District NPDES Coordinator.

The District NPDES Coordinator, District Construction Stormwater Coordinator, District Maintenance Stormwater Coordinator, District Maintenance Hazmat Manager, Maintenance Supervisor, and/or designated staff, as appropriate, will coordinate, as needed, for investigation and documentation of a confirmed IC/ID.

A field investigation to determine the source, substance and duration of the illegal connection or illicit discharge will be conducted.

3.4 REPORTING

Details of an IC/ID investigation are input into the Incident Report Form (IRF) in the Storm Water Multi Application and Report Tracking System (SMARTS) by District staff (e.g., Maintenance Stormwater Coordinator, or NPDES Coordinator). The District NPDES Coordinator reviews the IRF then submits it to the Regional Water Quality Control Board (RWQCB). IC/IDs or illegal dumping that are an immediate threat to water quality or public health are reported directly to the RWQCB and local public health department.

3.5 CORRECTIVE ACTIONS

All IC/IDs will be eliminated as expeditiously as possible.

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

- obstructs or prevents the use of such highway by the public,
- consists of refuse,
- is a non-approved, non-permitted advertising sign of any description or
- has not been removed after legal notice.

In the event that illegal connections and illicit discharges to the Caltrans storm sewer system are used to intentionally introduce chemical, biological, radiological or other life threatening agents into the environment (an act of terrorism), corrective actions shall be in accordance with the Caltrans Division of Maintenance Emergency Operations Plan.

When a highway spill (illicit discharge) causes an immediate threat to life, property or the environment and impacts the traveled way, such as a hazardous materials spill, actions taken shall be in accordance with Maintenance Policy Directive Number 0601, *Emergency Highway Spill Clean-up* and applicable sections of the Maintenance Manual Volume 1, Chapter D5. These are spills requiring a multi-agency response.

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

Actions taken to remove illicit discharges due to illegal encampments shall be in accordance with Maintenance Policy Directive Number 1001, *Illegal Encampments*.

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

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

Removal of Connection/Discharge – District Maintenance staff or Caltrans designee may remove any IC/ID which is not removed, or the removal of which is not commenced and thereafter diligently prosecuted, prior to the expiration of five days from the service of a notice. The standard form TR0213, *Notice of Encroachment* (Red Tag) is to be used.

Other Enforcement Actions – Caltrans is not a typical MS4, such as a city or county, with its own enforcement branch such as police, sheriff, or zoning board.

Without its own enforcement branch, Caltrans relies on other agencies (i.e., California Highway Patrol) for enforcement assistance. Caltrans may also seek the enforcement assistance of the following jurisdictions to correct an IC/ID: U.S. EPA, California EPA, city and county environmental department, city and county law enforcement, and/or municipal MS4s.

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

The District NPDES Coordinator will review the IC/ID database on an annual basis to ascertain the number of IC/ID reports, investigations, and abatements that occurred in a given District. District staff will use this information to identify and focus its efforts on areas experiencing elevated IC/IDs, and to determine if more frequent training and/or changes to existing curriculum and training materials are needed.

Maintenance staff follow the Illegal Connection/Illicit Discharge BMP in the Maintenance Staff Guide for detection, investigation, reporting and elimination of IC/IDs.

Construction staff follow Standard Specification 13-4.03E(2), *Illicit Connection and Illegal Discharge Detection and Reporting* in the 2010 Standard Specifications for detection and reporting of IC/IDs. All work relating to construction sites will be regulated as specified in the Construction General Permit or the Tahoe Construction General Permit.

The District NPDES Coordinator is responsible for tracking and reporting of the District's investigation and resolution of IC/IDs.

3.6 PREVENTION

Caltrans Division of Maintenance Supervisors conduct periodic *Road Patrols* within their defined areas of maintenance responsibility. "No Dumping" signs are erected at areas where repetitive cleanups of illegal dumping have been required. Caltrans also posts "No Dumping" signs when dumping becomes a problem at Park and Ride lots, Safety Roadside Rest Areas, and vista points.

The Division of Maintenance erects and maintains security fencing to restrict public access to areas prone to IC/IDs and illegal dumping such as freeway underpasses.

3.7 PUBLIC AWARENESS

To encourage public reporting of IC/IDs, including illegal dumping, Caltrans provides a link allowing the public to report suspected IC/IDs: www.dot.ca.gov/hq/maint/msrsubmit. This location can be accessed by visiting the Caltrans Internet site www.dot.ca.gov and



clicking on the “Contact Us” tab then scrolling down to the “Maintenance Service Request” link.

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

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

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



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4 ATTACHMENT A - SUPPORT DOCUMENTS

The following support plans, policies and forms are referenced in this document. They are available at the links provided or on the attached CD.

1. California Streets and Highways Code Section 91.8, 660, 720, and 721
2. California Vehicle Code Section 23112, Throwing, Depositing or Dumping Matter on Highway
<https://www.dmv.ca.gov/pubs/vctop/d11/vc23112.htm>
3. Caltrans IC/ID Form MTCE07
4. Caltrans Emergency Operations Plan
5. Caltrans Maintenance Policy Directive 0601, Emergency Highway Spill Clean Up
6. Caltrans Maintenance Manual Volume 1, Chapter D5
http://www.dot.ca.gov/hq/maint/manual/2014/20_Chpt_D5_July_2014.pdf
7. Caltrans Maintenance Manual Volume 1, Chapter D1
http://www.dot.ca.gov/hq/maint/manual/2014/19_Chpt_D1_July_2014.pdf
8. Caltrans Maintenance Policy Directive 1001, Illegal Encampments
9. Caltrans Notice of Encroachment (Red Tag) Form TR0213
10. Caltrans Maintenance Staff Guide, C.22.3 Illegal Connection and Illicit Discharge Detection and Elimination
11. Caltrans Standard Specification 13-4.03E(2), Illicit Connection and Illegal Discharge Detection and Reporting
http://www.dot.ca.gov/hq/esc/oe/construction_contract_standards/std_specs/2010_StdSpecs/2010_StdSpecs.pdf

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Appendix F: District NPDES Coordinators List

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DISTRICT STORMWATER COORDINATORS



Headquarters Stormwater Offices:	Locate Districts by County:		
<ul style="list-style-type: none"> → Chief Environmental Engineer → Stormwater Program Implementation → Stormwater Program Development → Maintenance BMPs → Design BMPs → Construction BMPs → Traffic Operations, Encroachment Permits → Right of Way → Landscape Architecture 	<ul style="list-style-type: none"> → Alameda → Alpine → Amador → Butte → Calaveras → Colusa → Contra Costa → Del Norte → El Dorado 	<ul style="list-style-type: none"> → Madera → Marin → Mariposa → Mendocino → Merced → Modoc → Mono → Monterey → Napa 	<ul style="list-style-type: none"> → San Joaquin → San Luis Obispo → San Mateo → Santa Barbara → Santa Clara → Santa Cruz → Shasta → Sierra → Siskiyou

	<ul style="list-style-type: none"> → Fresno → Glenn → Humboldt → Imperial → Inyo → Kern → Kings → Lake → Lassen → Los Angeles 	<ul style="list-style-type: none"> → Nevada → Orange → Placer → Plumas → Riverside → Sacramento → San Benito → San Bernardino → San Diego → San Francisco 	<ul style="list-style-type: none"> → Solano → Sonoma → Stanislaus → Sutter → Tehema → Trinity → Tulare → Tuolumne → Ventura → Yolo → Yuba
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Other Stormwater Contacts:

→ [Public Education](#)

DISTRICT STORMWATER CONTACTS:	
<p>District 1 Counties: Del Norte, Humboldt, Mendocino, Lake</p>	<p>Alex Arevalo 1656 Union Street Eureka, CA 95501 (707) 441-4674 Alex.Arevalo@dot.ca.gov</p>
<p>District 2 Counties: Lassen, Modoc, Siskiyou, Trinity, Shasta, Tehema, Plumas</p>	<p>Cristian Lavric 1031 Butte Street Redding, CA 96001 (530) 225-2233 Cristian.Lavric@dot.ca.gov</p>
<p>District 3 Counties: Glenn, Butte, Sierra, Colusa, Sutter, Yuba, Nevada, Placer, Yolo, Sacramento, El Dorado</p>	<p>Douglas Coleman 703 B Street Marysville, CA 95901 (530) 741-4539 Douglas.Coleman@dot.ca.gov</p>
<p>District 4 Counties: Sonoma, Napa, Solano, Marin, Contra Costa, San Mateo, San Francisco, Alameda, Santa Clara</p>	<p>Hardeep Takhar 111 Grand Avenue Oakland, CA 94612 (510) 286-7182 Hardeep.S.Takhar@dot.ca.gov</p> <p>Cyrus Vafai 111 Grand Avenue Oakland, CA 94612 (510) 286-5585 Cyrus.Vafai@dot.ca.gov</p>
<p>District 5 Counties: Santa Cruz, San Benito, Monterey, San Luis Obispo, Santa Barbara</p>	<p>Pete Riegelhuth 50 Higuera Street San Luis Obispo, CA (805) 549-3375 pete.riegelhuth@dot.ca.gov</p>

<p>District 6 Counties: Madera, Fresno, Kern, Kings, Tulare</p>	<p>Andrew Pochwatka 2015 E. Shields Ave. Fresno, CA 93726 (559) 243-3417 Andrew.Pochwatka@dot.ca.gov</p> <p>Paul Varney 2015 E. Shields Ave. Fresno, CA 93726 (559) 243-3568 Paul.Varney@dot.ca.gov</p>
<p>District 7 Counties: Ventura, Los Angeles</p>	<p>Shirley Pak 100 S Main Street, Suite 100, MS #13 Los Angeles, CA 90012 (213) 897-0428 Shirley.Pak@dot.ca.gov</p>
<p>District 8 Counties: San Bernardino, Riverside</p>	<p>Patrick J. Hally 464 West Fourth St, 6th Floor, MS 1062 San Bernardino, CA 92401 (909) 383-4948 Patrick.Hally@dot.ca.gov</p>
<p>District 9 Counties: Mono, Inyo</p>	<p>Rebecca Eastman 500 South Main Street Bishop, CA 93514 (760) 872-0643 Rebecca.Eastman@dot.ca.gov</p>
<p>District 10 Counties: Amador, Alpine, Calaveras, Tuolumne, San Joaquin, Stanislaus, Mariposa, Merced</p>	<p>Ethan Heilman 1976 E Charter Way Stockton, CA 95205 (209) 941-1918 Ethan.Heilman@dot.ca.gov</p>
<p>District 11 Counties: San Diego, Imperial</p>	<p>Carl Savage 4050 Taylor St. San Diego, CA 92110 (619) 688-3626 Carl.Savage@dot.ca.gov</p>
<p>District 12 Orange County</p>	<p>Grace Pina-Garrett 3337 Michelson Drive, Suite 380 Irvine, CA 92612-8894 (949) 724-2189 Grace.Pina-Garrett@dot.ca.gov</p>
HEADQUARTERS STORMWATER OFFICES:	
<p>Chief Environmental Engineer</p>	<p>Scott McGowen 1120 N Street, MS-27 Sacramento, CA 95814 (916) 653-4446 Scott.McGowen@dot.ca.gov</p>
<p>Stormwater Program Implementation</p>	<p>Greg Berry 1120 N Street, MS-27 Sacramento, CA 95814 (916) 653-2512 Greg.Berry@dot.ca.gov</p>
<p>Stormwater Program Development</p>	<p>Bhaskar Joshi 1120 N Street, MS-27 Sacramento, CA 95814</p>

	(916) 653-5240 Bhaskar.Joshi@dot.ca.gov
Maintenance BMPs	Parviz Lashai 1120 N Street, MS-31 Sacramento, CA 95814 (916) 654-5784 Parviz.Lashai@dot.ca.gov
<u>Design BMPs</u>	Tim Sobelman 1120 N Street, MS-28 Sacramento, CA 95814 (916) 654-4693 Timothy.Sobelman@dot.ca.gov
<u>Construction BMPs</u>	Robert Effinger 1120 N Street, MS-44 Sacramento, CA 95814 (916) 651-8312 Robert.Effinger@dot.ca.gov
Traffic Operations, Encroachment Permits ->> Provides Guidance on Encroachment Permits in General	Thomas Franklin 1120 N Street, MS-36 Sacramento, CA 95814 (916) 654-6232 Thomas.Franklin@dot.ca.gov
<u>Right of Way</u>	Carol Hanson 1120 N Street, MS-37 Sacramento, CA 95814 (916) 653-2839 Carol.Hanson@dot.ca.gov
<u>Landscape Architecture</u>	Jack Broadbent 1120 N Street, MS-28 Sacramento, CA 95814 (916) 653-3170 Jack.Broadbent@dot.ca.gov

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Appendix G: Incident Report Form

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Appendix A. Incident Report Form

Type of incident: <input type="checkbox"/> Field <input type="checkbox"/> Administrative	
Name of person completing this form:	Person's agency name and address:
	Person's phone and e-mail:

For Field incidents complete Sections 1 and 3. For Administrative incidents complete Section 2. See Non-compliance Notification Schedule on Page 2.

SECTION 1: Field incidents

Date(s) and time(s) of incident:	1. Start date / time:
	2. End date / time:
Location of Incident: County:	3. Nearest city / town:
	4. Street address / nearest cross street:
	5. Latitude / Longitude:
	6. Additional location detail:
Materials involved in the incident: (use Comments Section below if necessary)	6. Name(s) of material(s) discharged:
	7. Approximate quantity discharged (specify units):
	8. Approximate concentration of material:
Discharge to surface water? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, answer questions 9-11	9. Name of water body:
	10. Apparent effects (if any) on water body:
	11. Estimated extent of impacts to water body:
Was CalEMA notified? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, answer questions 12-14	12. Date and time of notification:
	13. Name of person making the notification:
	14. Phone number of person making the notification:
Was the Regional Water Board notified? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, answer questions 15-17	15. Name of RWB contact:
	16. RWB contact's phone / e-mail:
	17. Name of person making the notification:
Were downgradient communities/people notified? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, answer questions 18 - 20	18. Date and time of notification:
	19. Name of person making the notification:
	20. Phone number of person making the notification:
	21. Name of downgradient community/ person:
Field Non-compliance (check all that apply)	
<input type="checkbox"/> Discharge of pollutants to surface water caused by lack of BMP(s), ineffective implementation of BMP(s), or failure of BMP(s).	
<input type="checkbox"/> Monitoring data indicates an exceedance of a defined standard. Defined standards include TMDL Waste Load Allocations, and water quality standards in the Water Quality Control Plans and promulgated policies and regulations of the State and Regional Water Boards, including California Ocean Plan limitations and prohibitions.	
<input type="checkbox"/> Discharge of prohibited non-storm water (as defined in Provision B of the Caltrans NPDES Permit) to surface water.	
<input type="checkbox"/> Failure to comply with a site's Facility Pollution Prevention Plan (FPPP) BMP requirements which results in a discharge to surface water.	
<input type="checkbox"/> Failure to comply with inspection, monitoring, and reporting requirements and protocols.	
<input type="checkbox"/> Other (describe - use Comments Section below if needed):	

SECTION 2: Administrative Non-compliance (check all that apply)

<input type="checkbox"/> Failure to submit reports or documents required by the Caltrans NPDES Permit and/or SWMP, failure of timely submittal, and/or failure to submit required information.
<input type="checkbox"/> Failure to develop and/or maintain a site-specific FPPP or to implement any other procedural requirement of the Caltrans NPDES Permit.
<input type="checkbox"/> Other (describe - use Comments Section below if needed):

SECTION 3: Description of Incident

Activities in the area prior to the incident (If any):
Initial assessment of any impact caused by the discharge (If any):
Samples collected and analyses requested (If any):
Steps taken to mitigate damage and prevent reoccurrence (If any):
Current Status:
Schedule for proposed mitigation/abatement (If any):
Other Comments:

Non-compliance Notification Schedule

Type of Incident	Within 5 Working Days(Verbal)	Within 10 Working Days(Written)	Within 30 Calendar Days (Written)	In Annual Report
Emergency Incidents ¹	–	–	–	Chronological summary and status of all incidents
Field ²	Notify Regional Water Board Executive Officer	To Regional Water Board Executive Officer and copies to Caltrans HQ	–	Chronological summary and status of all incidents
Administrative ³	Notify Regional Water Board Executive Officer or State Water Board Contact ³	–	To Regional Water Board Executive Officer, State Water Board Executive Director, and copies to Caltrans HQ	Chronological summary and status of all incidents

¹ Sudden, unexpected, unpreventable incidents that threaten public health, public safety, property, or the environment that pose a clear and imminent danger requiring immediate action to prevent or mitigate the damage or threat, and that result in a discharge or potential discharge.

² Failure to meet any non-administrative requirement of the SWMP or Caltrans NPDES Permit or to meet any applicable water quality standard. This includes failure to install required BMPs or conduct required monitoring or maintenance. It also includes discharges or prohibited non-storm water that do not meet the definition of emergency incidents. It does not include determinations by the Department (Caltrans) or a Regional Water Board Executive Officer that a discharge is causing or contributing to an exceedance of an applicable WQS. See provision E.2.c.6)c).

³ Failure to meet any administrative or procedural requirement of the SWMP or Caltrans NPDES Permit including submission of required reports, notifications and certifications. The report of non-compliance shall be submitted to the same organization (State or Regional Water Board) to which the required report was originally due.

Certification – I certify that under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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.

Signature of Contractor (if applicable)	Title	Telephone	Date:
Signature of Department Representative	Title	Telephone	Date:

Appendix H: Non-Residential Stormwater Inspection Report

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CONFIDENTIAL
 This document contains personal information and pursuant to Civil Code 1798.21, it shall be kept confidential in order to protect against unauthorized disclosure.

NON-RESIDENTIAL STORMWATER INSPECTION

I. FACILITY INFORMATION

1. TENANT / FACILITY NAME		2. TENANCY NO.	3. AREA SQ FT <input type="checkbox"/> ACRE <input type="checkbox"/>	
4. ADDRESS / LOCATION OF PROPERTY		5. CITY	STATE CA	6. ZIP CODE
7. TENANT CONTACT (NAME)	8. MAILING ADDRESS (if different)		9. CONTACT PHONE NO.	
10. LEASE START DATE	11. LEASE EXPIRATION DATE _____; or MONTH-TO-MONTH <input type="checkbox"/> 11A. STORMWATER LANGUAGE INCLUDED IN LEASE <input type="checkbox"/> YES <input type="checkbox"/> NO			
12. PROPERTY TYPE - <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TELECOMMUNICATIONS <input type="checkbox"/> PARKING <input type="checkbox"/> OTHER: _____				
13. STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES _____				
14. SIC CODE DESCRIPTIONS _____				
15. FACILITY COVERED UNDER GENERAL INDUSTRIAL STORMWATER PERMIT? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A NPDES PERMIT (CAS000001) ISSUED BY THE STATE WATER RESOURCES CONTROL BOARD				
15a. FACILITY'S INDUSTRIAL WASTE DISCHARGE IDENTIFICATION (WDID) NO. _____ <input type="checkbox"/> N/A				
15b. DOES FACILITY HAVE A CURRENT SWPPP ON-SITE? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				
15c. DOES FACILITY HAVE A QUALIFIED INDUSTRIAL STORMWATER PRACTITIONER (QISP) NAME: _____				
15d. QISP CERTIFICATE NUMBER: _____				
16. FACILITY COVERED UNDER OTHER STORMWATER / WASTE WATER PERMIT? <input type="checkbox"/> YES <input type="checkbox"/> NO				
17. PERMIT TYPE _____				
18. PERMIT NUMBER _____				
19. ENTITY RESPONSIBLE FOR STORMWATER DRAINAGE SYSTEM (e.g., County of / City of / Caltrans) _____				

NON-RESIDENTIAL STORMWATER INSPECTION (Cont.)

(Form #)

EXHIBIT

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II. ACTIVITY / BMP ASSESSMENT: Note outdoor activities conducted and BMPs implemented.

Photos Yes No Number of Photos _____

Activities – Check each activity present at the site.	BMP			Implementation Effectiveness*	
	Yes	No	N/A	Satisfactory	Needs Improvement
<input type="checkbox"/> Vehicle or Equipment Fueling. (If allowed by lease.) 1. Is fueling area designed to prevent run-on of stormwater and runoff of spills? 2. Is fueling area under cover? 3. Are employees trained in proper fueling, cleanup, and spill response procedures? 4. Are absorbent materials readily available for small spills? 5. Is fueling area inspected regularly for spills and/or leaks? 6. Does runoff from area drain to oil water separator or sewer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Vehicle or Equipment Washing/Steam Cleaning/Spray Painting. (If allowed by lease.) 1. Is designated wash area used? 2. Is wash area equipped with clarifier and connected to sanitary sewer? 3. Is designated wash area designed with complete containment? 4. Is clarifier or oil/water separator maintained regularly? Is maintenance documented? 5. Is spray painting/sand blasting conducted on site? 6. Is spray painting/sand blasting conducted inside or sheltered from rain and wind? 7. Is spray painting/sand blasting materials and byproducts stored and/or disposed of properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Vehicle or Equipment Maintenance and Repair. (If allowed by lease.) 1. Is maintenance performed in designated area? 2. Is equipment kept clean, no build-up of oil and grease? 3. Are drip pans and containers used in areas where drips or leaks may occur? 4. Are used oil and oil filters, antifreeze, batteries, fluids, etc., recycled/ properly disposed of? 5. Are there any floor drains in maintenance designated area? 6. If yes, are they plugged or verification that they drain to sewer or oil/water separator and not the storm drain?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Outdoor Loading/Unloading of Materials. 1. Are delivery vehicles parked so spills and leaks can be contained? 2. Is the loading/unloading area covered to reduce exposure of materials to rain? 3. Is loading/unloading area designed to prevent stormwater run-on? 4. Are storm drain inlets covered during transfer of materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Outdoor Storage of Materials/Products/Equipment. 1. Are covers used to protect all raw materials, by-products, finished products and containers stored outside? (Circle covering type used) Plastic Roof Canopy Other 2. Are chemicals, drums, or bagged materials on pallets or similar method that keep them off the ground? 3. Are hazardous materials (if permitted in lease) stored in properly designed containment areas? Are spill containment pallets used? 5. Are drip pans and containers used in areas where drips or leaks may occur? 6. Are berms, curbs, or other structures in place to minimize pollutants from entering the stormwater system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

NON-RESIDENTIAL STORMWATER INSPECTION (Cont.)

(Form #)

EXHIBIT

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Activities - Check each activity present at the site.	BMP			Implementation Effectiveness*	
	Yes	No	N/A	Satisfactory	Needs Improvement
<input type="checkbox"/> Waste Handling and Disposal. 1. Are materials recycled whenever possible? 2. Are wastes segregated and separated? 3. Is storage area designed to prevent stormwater runoff and run-on? 4. Are waste dumpsters covered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Animal Handling and Waste Disposal. 1. Are livestock or other animals on the property? 2. Are animal handling areas cleaned regularly and wastes properly disposed of? 3. Are animal handling areas designed to prevent stormwater runoff and run-on? 4. Are animal handling areas located in areas away from drainage facilities and areas free of ponding or subject to flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Building and Grounds Maintenance. 1. Are pesticides and fertilizers used and stored properly? 2. Are areas swept regularly and is wash down by hosing prohibited unless wash water is contained? 3. Are contained wash water, sweepings and sediments disposed of properly? 4. Are materials used in repair and minor remodeling (paints, etc.) stored properly? 5. Are paved surfaces adequately maintained (minimal crumbling asphalt or concrete)? 6. Are safer alternative products used whenever possible?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Park and Landscape Maintenance. 1. Are non-vegetated surfaces covered to prevent erosion? 2. Are pesticides and fertilizers used only as needed and stored properly? 3. Are areas swept regularly and is wash down by hosing prohibited unless wash water is contained? 4. Are landscape clippings collected and disposed of properly? 5. Are irrigation systems designed to prevent runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Agricultural. 1. Are pesticides and fertilizers used and stored properly? 2. Are areas of exposed/disturbed soil properly managed? 3. Are irrigation systems designed to prevent runoff? 4. Are irrigation systems in proper working order? 5. Is equipment maintenance performed only in designated areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Parking Lots. 1. Are parking areas adequately maintained (minimal cracking, deterioration)? 2. Are parking areas kept free of trash and litter? 3. Are parking areas swept or vacuumed regularly and is wash down prohibited unless wash water is contained and disposed of properly? 4. Are parking areas kept relatively free of staining (oil, grease, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Temporary Sanitary Facilities. 1. Are temporary sanitary facilities on site (port-a-potties)? 2. Are the facilities serviced regularly (by a licensed service provider and their maintenance documented)? 3. Are the facilities placed in area where likelihood of overtipping is minimized? 4. Are the facilities located away from drainage courses or storm drains?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Erodible Surface Areas. 1. Are areas of exposed/disturbed soil properly managed? 2. Do any landscaped areas require re-vegetation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

<input type="checkbox"/> Food Service Facilities.					
1. Are any food service facilities on site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. Any grease traps or oil storage containers located outdoors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. Are grease traps or oil storage containers located away from storm drains?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4. Are absorbent pads or other spill material readily available in case of spills/overflows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5. Are food waste and solid waste containers covered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Illicit Connections/Illegal Discharges.					
1. Are any illicit connections present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. Is illegal dumping or uncontrolled spillage/discharge occurring?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
If yes, complete MTCE 07 IC/ID Form included in Appendix E.					

* SATISFACTORY: BMPs (including source control BMPs) are used and are effective.
NEEDS IMPROVEMENT: No BMPs used and stormwater pollution likely/Some BMPs used but not effective/Structural BMPs necessary to improve pollution prevention. *Provide Comments Below*

III. BMP ASSESSMENT

20. Observations/Comments: _____

Corrective Action/Due Date: _____

21. Observations/Comments: _____

Corrective Action/Due Date: _____

22. Observations/Comments: _____

Corrective Action/Due Date: _____

IV. 23. NON-STORMWATER DISCHARGES:

- Authorized Non-Authorized
- None observed / no evidence of / no sources noted
 Sources observed, but BMPs in place
 Sources observed, no BMPs in place, but no discharge
 Observed discharges / evidence of discharges / no BMPs

Report any observed illicit connections and illegal/unknown discharges to the District NPDES Stormwater Coordinator.

V. STORMWATER EDUCATION AND OUTREACH MATERIALS

24. DO EMPLOYEES RECEIVE GENERAL TRAINING FOR MANAGING RUNOFF FROM SITE?	<input type="checkbox"/> NO	<input type="checkbox"/> YES
DO EMPLOYEES RECEIVE SPECIFIC TRAINING FOR PREVENTING POLLUTION AND CONTROLLING RUNOFF FROM SITE (BMP IMPLEMENTATION)?	<input type="checkbox"/> NO	<input type="checkbox"/> YES
ARE TRAINING RECORDS AND EDUCATIONAL MATERIALS AVAILABLE FOR REVIEW?	<input type="checkbox"/> NO	<input type="checkbox"/> YES
ARE TRAINING RECORDS UP TO DATE?	<input type="checkbox"/> NO	<input type="checkbox"/> YES

VI. CONCLUSIONS

NON-RESIDENTIAL STORMWATER INSPECTION (Cont.)

(Form #)

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25. COMMENTS/RECOMMENDATIONS (Describe any non-stormwater discharges, unsatisfactory conditions or work needed):

26. CORRECTIVE ACTIONS

NONE CORRECT DEFICIENCIES NOTED ABOVE IN TIME FRAME INDICATED.

FACILITY BMP INFORMATION PROVIDED

FOLLOW-UP INSPECTION REQUIRED? NO YES

YES, WITHIN 30 DAYS AFTER _____ YES, TO BE SCHEDULED WITHIN NORMAL FREQUENCY

VII. INSPECTION INFORMATION

27. INSPECTOR NAME (Printed)	28. DATE OF INSPECTION	29. TIME OF INSPECTION
------------------------------	------------------------	------------------------

INSPECTOR SIGNATURE

30. REASON FOR INSPECTION: Initial Scheduled Follow-up Response to Complaint

NAME OF TENANT(S) ACCOMPANYING INSPECTOR

1. _____
2. _____

SIGNATURE(S) - TENANT RECEIVED INSPECTION REPORT

1. _____
2. _____

NAME(S) OF OTHERS ACCOMPANYING INSPECTOR (IF ANY)

1. _____
2. _____

SUPERVISOR'S REVIEW
FORM REVIEWED BY:

DATE: _____

DISPOSITION: _____

**FIELD OBSERVATIONS
HELPFUL HINTS FOR STORMWATER INSPECTIONS**

AREAS AND ACTIVITIES WITH POTENTIAL TO SPILL**HAZARDOUS FLUIDS***

- SPILL KITS AVAILABLE IF NEEDED
- SPILL RESPONSE AGENCY PHONE NUMBERS CLEARLY POSTED
- MATERIAL SAFETY DATA SHEETS AVAILABLE FOR PRODUCTS

VEHICLE OR EQUIPMENT FUELING*

- FUELING AREA COVERED OR SLOPED AWAY FROM DRAINS TO PREVENT RUN-ON/RUNOFF
- SPILLS OR LEAKS SPOT CLEANED AS NEEDED
- SPILL ABSORBENT AVAILABLE AND DISPOSED OF PROPERLY
- "NO TOPPING-OFF" SIGNS POSTED
- OVERFLOW PROTECTION AVAILABLE IF NEEDED
- EMPLOYEES TRAINED ON PROPER FUELING AND CLEANUP PROCEDURES
- GENERAL GOOD HOUSEKEEPING OBSERVED

VEHICLE OR EQUIPMENT WASHING/STEAM CLEANING*

- VEHICLES WASHED IN DESIGNATED AREA
- WASH AREA BERMED TO PREVENT DISCHARGES TO STORM DRAIN
- SAFER ALTERNATIVE PRODUCTS IN USE
- WASH WATER COLLECTED AND DISCHARGED TO SANITARY SEWER
- TRASH RECEPTACLES AVAILABLE TO PREVENT LITTER

VEHICLE OR EQUIPMENT MAINTENANCE AND REPAIR*

- VEHICLE MAINTENANCE AND REPAIR OCCURS INDOORS OR UNDER CANOPY
- DRIP PANS AVAILABLE
- MATERIAL STORAGE HANDLING AREAS ENCLOSED OR COVERED
- STAINS OR OTHER SIGNS OF POLLUTANTS NOT OBSERVED
- HAZARDOUS MATERIALS LABELED, COVERED AND CONTAINED (e.g., AUTO FLUIDS, PAINTS, SOLVENTS, GREASE)
- SPILLS OR LEAKS SPOT CLEANED AS NEEDED
- EMPLOYEES TRAINED ON PROPER CLEANUP AND DISPOSAL PROCEDURES
- GENERAL GOOD HOUSEKEEPING OBSERVED

OUTDOOR LOADING/UNLOADING OF MATERIALS

- MATERIAL LOADING/UNLOADING AREAS ENCLOSED OR COVERED
- LOADING AND UNLOADING CONDUCTED IN DRY WEATHER IF NOT COVERED
- LOADING AND UNLOADING AREA BERMED OR SLOPED TO CONTAIN SPILLAGE
- NO DISCHARGE TO STORM DRAIN
- DRIP PANS AVAILABLE TO CAPTURE LIQUID LEAKS

OUTDOOR STORAGE OF MATERIALS/PRODUCTS/EQUIPMENT

- HAZARDOUS MATERIALS LABELED, COVERED, AND CONTAINED*
- STOCKPILED MATERIALS COVERED
- NO SIGNS OF EXCESSIVE LEAKING FROM STORED EQUIPMENT
- DRIP PANS AVAILABLE TO CAPTURE EQUIPMENT LEAKS
- STORAGE AREA FREE OF LITTER
- GENERAL GOOD HOUSEKEEPING OBSERVED

WASTE HANDLING AND DISPOSAL

- RECYCLABLE MATERIALS BEING RECYCLED
- WASTE CONTAINERS COVERED TO PREVENT STORMWATER RUNOFF/RUN-ON
- DRIP PANS AVAILABLE TO CAPTURE GREASE WHEN TRANSFERRED
- AREA SWEEPED DOWN ON REGULAR BASIS
- AREA FREE OF STAINS OR OTHER SIGNS OF POLLUTANTS GOING INTO STORM DRAIN SYSTEM
- WASTE CONTAINERS IN GOOD CONDITION FREE FROM LEAKS
- GENERAL GOOD HOUSEKEEPING OBSERVED
- NO LITTERING SIGNS POSTED

BUILDING AND GROUNDS MAINTENANCE

- VEGETATION LEFT IN PLACE WHERE POSSIBLE
- SOIL EROSION NOT OBSERVED
- GROUNDS FREE OF LITTER
- PAVED AREAS SWEEPED DOWN AND NOT HOSED OFF
- SAFER ALTERNATIVE PRODUCTS IN USE
- TRASH RECEPTACLES AVAILABLE TO PREVENT LITTER
- MINIMAL USE OF PESTICIDES AND FERTILIZERS

PARK AND LANDSCAPE MAINTENANCE

- SOIL EROSION NOT OBSERVED
- GROUNDS FREE OF LITTER
- PAVED AREAS SWEEPED DOWN AND NOT HOSED OFF
- IRRIGATION SYSTEMS DESIGNED TO PREVENT RUNOFF
- USE OF PESTICIDES AND FERTILIZERS ONLY AS NEEDED

AGRICULTURAL

- VEGETATION LEFT IN PLACE WHERE POSSIBLE
- VEGETATION LEFT IN PLACE DURING FALLOW YEARS
- SOIL EROSION MINIMIZED
- USE OF PESTICIDES AND FERTILIZERS ONLY WHEN REQUIRED
- ANIMAL WASTE MANAGEMENT PROGRAM IN USE
- IRRIGATION SYSTEMS DESIGNED TO PREVENT RUNOFF

PARKING LOTS

- PAVED AREAS SWEEPED DOWN AND NOT HOSED OFF
- TRASH RECEPTACLES AVAILABLE TO PREVENT LITTER
- SPILLS OR LEAKS SPOT CLEANED AS NEEDED

ERODIBLE SURFACE AREAS

- PRESERVE NATURAL VEGETATION
- VEGETATION LEFT IN PLACE WHERE POSSIBLE
- SOIL EROSION NOT OBSERVED
- CHEMICAL STABILIZATION OR GEOSYNTHETICS IN USE ON BARE GROUND
- PAVED AREAS SWEEPED REGULARLY

ILLICIT CONNECTIONS/ILLEGAL DISCHARGES

- SIGNS OF ILLICIT CONNECTIONS TO STORMWATER CONVEYANCE SYSTEM(S)
- SIGNS OF ILLEGAL/UNKNOWN DISCHARGE OBSERVED GOING FROM THE LEASE PREMISES ONTO ADJACENT PROPERTY OR INTO THE STREET
- SIGNS OF ILLEGAL/OR UNKNOWN DISCHARGE OBSERVED COMING FROM ADJACENT PROPERTY ONTO THE LEASE PREMISES
- STAINED PAVEMENT IN AREAS NEAR OR SURROUNDING CATCH BASIN OR STORMWATER OUTFALL

EMPLOYEE STORMWATER MANAGEMENT TRAINING

- ACTIVITY APPLICABLE BMP TIP SHEETS POSTED
- TRAINING RECORDS AVAILABLE FOR REVIEW
- EMPLOYEES OBSERVED CONDUCTING WORK CONSISTENT WITH BMPs

*IF SUCH ACTIVITIES OR MATERIALS ARE PERMITTED IN THE LEASE.

Appendix I: Residential Stormwater Inspection Form

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RESIDENTIAL STORMWATER INSPECTION

I. PROPERTY INFORMATION

1. TENANCY NO.		2. ADDRESS / LOCATION OF PROPERTY		
3. CITY		STATE CA	4. ZIP CODE	5. AREA SQ FT <input type="checkbox"/> ACRE <input type="checkbox"/>
6. TENANT CONTACT (NAME)	7. MAILING ADDRESS (if different)		8. CONTACT PHONE NO.	
9. LEASE START DATE	10. LEASE EXPIRATION DATE _____; or MONTH-TO-MONTH			
10A. STORMWATER LANGUAGE INCLUDED IN LEASE <input type="checkbox"/> YES <input type="checkbox"/> NO				
11. PROPERTY TYPE - <input type="checkbox"/> SINGLE FAMILY DWELLING <input type="checkbox"/> MULTI-FAMILY DWELLING <input type="checkbox"/> MOBILE HOME				

12. ENTITY RESPONSIBLE FOR STORMWATER DRAINAGE SYSTEM (e.g., County of / City of / Caltrans)

II. ACTIVITY / BMP ASSESSMENT: Note outdoor activities conducted and BMPs implemented.

Photos Yes No Number of Photos _____

Activities – Check each activity present at the site.	BMP			Implementation Effectiveness*	
	Yes	No	N/A	Satisfactory	Needs Improvement
<input type="checkbox"/> Vehicle Washing.					
1. Is vehicle washing performed over a pervious surface (lawns, gravel)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. Is vehicle wash water contained on the property to minimize pollutants from entering the stormwater streams?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. Is wash water runoff allowed to enter the stormwater system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4. Is water turned off when not actively washing down vehicle?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5. Are degreasing activities conducted off-site at a facility set up for such activity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6. Are safer alternative soaps and cleaners in use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Vehicle Maintenance.					
1. Is vehicle maintenance performed under a cover to reduce exposure of materials to rain? (Circle covering type used) Garage Carport Canopy Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. Is the vehicle maintenance area kept relatively free of staining (oil, grease, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. Are drip pans and containers used in areas where drips or leaks may occur?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4. Are used oil and oil filters, antifreeze, batteries, fluids, properly stored/ disposed of?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

RESIDENTIAL STORMWATER INSPECTION (Cont.)

(Form #)

EXHIBIT

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Activities – Check each activity present at the site.	BMP			Implementation Effectiveness*	
	Yes	No	N/A	Satisfactory	Needs Improvement
<input type="checkbox"/> Parking Areas. 1. Are parking areas adequately maintained (significant cracking, deterioration)? 2. Are parking areas kept free of trash and litter? 3. Are parking areas swept or vacuumed regularly and is wash down prohibited unless wash water is contained and disposed of properly? 4. Are parking areas kept relatively free of staining (oil, grease, paint, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Landscape Maintenance. 1. Are non-vegetated surfaces covered to prevent erosion? 2. Are pesticides and fertilizers used only as needed and stored properly? 3. Are areas swept regularly and is wash down by hosing prohibited unless wash water is contained and disposed of properly? 4. Are landscape clippings collected and disposed of properly? 5. Are irrigation systems designed to prevent runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Outdoor Storage of Materials. 1. Are covers used to protect all potential sources of pollution stored outside? (Circle covering type used) Plastic Roof Canopy Other 2. Are hazardous materials (if permitted in rental agreement) stored in properly designed containers? 3. Are paved areas kept relatively free of staining (oil, grease, paint, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Waste Handling and Disposal. 1. Are wastes segregated and separated? 2. Are waste materials recycled whenever possible? 3. Are animal wastes properly handled? 4. Is trash storage area designed to prevent stormwater runoff? 5. Are waste dumpsters/trash cans covered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Cleaning Patios, Walkways, Driveways. 1. Are areas swept regularly and is wash down by hosing prohibited unless wash water is contained and disposed of properly? 2. Is wash water runoff allowed to enter the stormwater system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Swimming Pools and Spas. 1. Is excess pool water discharged to the sanitary sewer? 2. Is pool filter wash water discharged in a permeable area or into the sanitary sewer? 3. Are pool chemicals used, stored and disposed of properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Building Maintenance. 1. Are materials used for cleaning and maintenance (cleansers, bleach, etc.) stored properly? 2. Are safer alternative products used whenever possible? 3. Are areas swept regularly and is wash down by hosing prohibited unless wash water is contained? 4. Is household hazardous waste recycled or disposed of properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Illicit Connections/Illegal Discharges. 1. Are any illicit connections present? 2. Is illegal dumping or uncontrolled spillage/discharge occurring? If yes, complete MTCE 07 IC/ID Form included in Appendix E.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Pet Care and Maintenance. 1. Is animal waste present in yard or surrounding property? 2. Are materials used for flea control/pet grooming stored and disposed of properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

* SATISFACTORY: BMPs (including source control BMPs) are used and are effective.

NEEDS IMPROVEMENT: No BMPs used and stormwater pollution likely/Some BMPs used but not effective/Structural BMPs necessary to improve pollution prevention. *Provide Comments Below*

RESIDENTIAL STORMWATER INSPECTION (Cont.)

(Form #)

EXHIBIT

11-EX-54SW (NEW 6/2015)

Page 3 of 4

III. BMP ASSESSMENT

13. Observations/Comments: _____

Corrective Action/Due Date: _____

14. Observations/Comments: _____

Corrective Action/Due Date: _____

15. Observations/Comments: _____

Corrective Action/Due Date: _____

IV. 16. NON-STORMWATER DISCHARGES:

- Authorized Non-Authorized
- None observed / no evidence of / no sources noted
- None observed / no evidence of
- Sources observed, no BMPs in place, but no discharge
- Observed discharges / evidence of discharges / no BMPs

Report any observed illicit connections and illegal/unknown discharges to the District NPDES Stormwater Coordinator.

V. STORMWATER EDUCATION AND OUTREACH MATERIALS

17. HAVE TENANTS RECEIVED GENERAL TRAINING FOR MANAGING RUNOFF FROM SITE?	<input type="checkbox"/> NO	<input type="checkbox"/> YES
HAVE STORMWATER EDUCATION AND OUTREACH MATERIAL BEEN RECEIVED BY THE TENANTS?	<input type="checkbox"/> NO	<input type="checkbox"/> YES

VI. CONCLUSIONS

18. COMMENTS/RECOMMENDATIONS (Describe any non-stormwater discharges, unsatisfactory conditions or work needed):

RESIDENTIAL STORMWATER INSPECTION (Cont.)

(Form #)

EXHIBIT

11-EX-54SW (NEW 6/2015)

Page 4 of 4

19. CORRECTIVE ACTIONS

NONE CORRECT DEFICIENCIES NOTED ABOVE IN TIME FRAME INDICATED.

FACILITY BMP INFORMATION PROVIDED

FOLLOW-UP INSPECTION REQUIRED? NO YES

YES, WITHIN 30 DAYS AFTER _____ YES, TO BE SCHEDULED WITHIN NORMAL FREQUENCY

VII. INSPECTION INFORMATION

20. INSPECTOR NAME (Printed)	21. DATE OF INSPECTION	22. TIME OF INSPECTION
INSPECTOR SIGNATURE		
23. REASON FOR INSPECTION: <input type="checkbox"/> Initial <input type="checkbox"/> Scheduled <input type="checkbox"/> Follow-up <input type="checkbox"/> Response to Complaint		
NAME OF TENANT(S) ACCOMPANYING INSPECTOR 1. _____ 2. _____	SIGNATURE(S) - TENANT RECEIVED INSPECTION REPORT 1. _____ 2. _____	
NAME(S) OF OTHERS ACCOMPANYING INSPECTOR (IF ANY) 1. _____ 2. _____	SUPERVISOR'S REVIEW FORM REVIEWED BY: _____ DATE: _____ DISPOSITION: _____ _____	

RESIDENTIAL STORMWATER INSPECTION (HELPFUL HINTS)

(Form #)

EXHIBIT

11-EX-54SW (NEW 6/2015)

FIELD OBSERVATIONS HELPFUL HINTS FOR STORMWATER INSPECTIONS

AREAS AND ACTIVITIES WITH POTENTIAL TO SPILL HAZARDOUS FLUIDS

- SPILL KITS AVAILABLE IF NEEDED
- SPILL RESPONSE AGENCY PHONE NUMBERS CLEARLY POSTED
- MATERIAL SAFETY DATA SHEETS AVAILABLE FOR PRODUCTS

VEHICLE WASHING

- VEHICLES WASHED IN DESIGNATED AREA
- VEHICLE WASHED OVER PERVIOUS SURFACE TO PREVENT DISCHARGES TO STORM DRAIN
- SAFER ALTERNATIVE PRODUCTS IN USE
- WATER TURNED OFF WHEN NOT ACTIVELY WASHING VEHICLE

VEHICLE MAINTENANCE

- VEHICLE MAINTENANCE AND REPAIR OCCURS INDOORS OR UNDER CANOPY
- DRIP PANS AVAILABLE
- STAINS OR OTHER SIGNS OF POLLUTANTS NOT OBSERVED
- USED OIL AND OIL FILTERS, ANTIFREEZE, BATTERIES, FLUIDS, ETC., STORED PROPERLY
- SPILLS OR LEAKS SPOT CLEANED AS NEEDED

PARKING AREAS

- PARKING AREAS FREE OF SIGNIFICANT CRACKING, DETERIORATION
- PAVED AREAS SWEEPED DOWN AND NOT HOSED OFF
- TRASH AND LITTER REMOVED FREQUENTLY
- SPILLS OR LEAKS SPOT CLEANED AS NEEDED

LANDSCAPE MAINTENANCE

- SOIL EROSION NOT OBSERVED
- GROUNDS FREE OF LITTER
- PAVED AREAS SWEEPED DOWN AND NOT HOSED OFF
- IRRIGATION SYSTEMS DESIGNED TO PREVENT RUNOFF
- USE OF PESTICIDES AND FERTILIZERS ONLY AS NEEDED

OUTDOOR STORAGE OF MATERIALS

- HAZARDOUS MATERIALS LABELED, COVERED, AND CONTAINED
- STORAGE AREA COVERED AND FREE OF LITTER
- GENERAL GOOD HOUSEKEEPING OBSERVED

WASTE HANDLING AND DISPOSAL

- WASTE MATERIALS BEING RECYCLED
- WASTE CONTAINERS COVERED TO PREVENT STORMWATER RUNOFF/RUN-ON
- AREA SWEEPED DOWN ON REGULAR BASIS
- AREA FREE OF STAINS OR OTHER SIGNS OF POLLUTANTS GOING INTO STORM DRAIN SYSTEM
- WASTE CONTAINERS IN GOOD CONDITION FREE FROM LEAKS
- GENERAL GOOD HOUSEKEEPING OBSERVED

CLEANING PATIOS, WALKWAYS, DRIVEWAYS

- PAVED AREAS SWEEPED DOWN AND NOT HOSED OFF
- TRASH AND LITTER REMOVED FREQUENTLY
- SPILLS OR LEAKS SPOT CLEANED AS NEEDED

SWIMMING POOLS AND SPAS

- EXCESS POOL WATER DISCHARGED TO SANITARY SEWER
- POOL FILTERS WASHED OVER PERMEABLE SURFACES
- POOL CHEMICALS LABELED, COVERED, AND CONTAINED

BUILDING MAINTENANCE

- BUILDING/IMPROVEMENT MATERIALS PROPERLY STORED
- DUST AND PARTICULATES SWEEPED UP AND PLACED IN WASTE CAN
- HOUSEHOLD HAZARDOUS WASTE RECYCLED OR DISPOSED OF PROPERLY
- PAVED AREAS SWEEPED DOWN AND NOT HOSED OFF
- SAFER ALTERNATIVE PRODUCTS IN USE

STORMWATER EDUCATION AND OUTREACH

- ACTIVITY APPLICABLE BMP TIP SHEETS AVAILABLE
- STORMWATER EDUCATIONAL AND OUTREACH MATERIALS AVAILABLE

ILLCIT CONNECTIONS/ILLEGAL DISCHARGES

- SIGNS OF ILLICIT CONNECTIONS TO STORMWATER CONVEYANCE SYSTEM(S)
 - SIGNS OF ILLEGAL/UNKNOWN DISCHARGE OBSERVED GOING FROM THE LEASE PREMISES ONTO ADJACENT PROPERTY OR INTO THE STREET
 - SIGNS OF ILLEGAL/OR UNKNOWN DISCHARGE OBSERVED COMING FROM ADJACENT PROPERTY ONTO THE LEASE PREMISES
 - STAINED PAVEMENT IN AREAS NEAR OR SURROUNDING CATCH BASIN OR STORMWATER OUTFALL
-
-

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Appendix J: Airspace Stormwater Inspection Form

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STORMWATER INSPECTION REPORT

(Form #)

CONFIDENTIAL

This document contains personal information and pursuant to Civil Code 1798.21, it shall be kept confidential in order to protect against unauthorized disclosure.

EXHIBIT

15-EX-14 (NEW 6/2015)

Page 1 of 4

I. FACILITY INFORMATION

1. TENANT / FACILITY NAME		2. TENANCY NO.		3. AREA SF FT <input type="checkbox"/> ACRE <input type="checkbox"/>	
4. ADDRESS / LOCATION OF PROPERTY		5. CITY		STATE CA	6. ZIP CODE
7. TENANT CONTACT (NAME)		8. MAILING ADDRESS (if different)		9. CONTACT PHONE NO.	
10. LEASE START DATE		11. LEASE EXPIRATION DATE _____; or MONTH-TO-MONTH			
		11A. STORMWATER LANGUAGE INCLUDED IN LEASE <input type="checkbox"/> YES <input type="checkbox"/> NO			
12. PROPERTY TYPE - <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TELECOMMUNICATIONS <input type="checkbox"/> PARKING <input type="checkbox"/> OTHER:					
13. STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE(S) _____					
14. SIC CODE DESCRIPTIONS _____					
15. FACILITY COVERED UNDER GENERAL INDUSTRIAL STORMWATER PERMIT? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A NPDES PERMIT (CAS000001) ISSUED BY THE STATE WATER RESOURCES CONTROL BOARD					
15a. FACILITY'S INDUSTRIAL WASTE DISCHARGE IDENTIFICATION (WDID) NO. _____ <input type="checkbox"/> N/A					
15b. DOES FACILITY HAVE A CURRENT SWPPP ON-SITE? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A					
16. FACILITY COVERED UNDER OTHER STORMWATER / WASTE WATER PERMIT? <input type="checkbox"/> YES <input type="checkbox"/> NO					
17. PERMIT TYPE _____					
18. PERMIT NUMBER _____					
19. ENTITY RESPONSIBLE FOR STORMWATER DRAINAGE SYSTEM (e.g., County of / City of / Caltrans) _____					

IA. IS THE PROPERTY BEING UTILIZED ACCORDING TO THE LEASE? YES NO

II. ACTIVITY / BMP ASSESSMENT: Note outdoor activities conducted and BMPs implemented.

Photos Yes No Number of Photos _____

Activities - Check each activity present at the site.	BMP			Implementation Effectiveness*	
	Yes	No	N/A	Satisfactory	Needs Improvement
<input type="checkbox"/> Parking Lots.					
1. Are parking areas adequately maintained (significant cracking, deterioration)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. Are parking areas kept free of trash and litter?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. Are parking areas swept or vacuumed regularly and is wash down prohibited unless wash water is contained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4. Are parking areas kept relatively free of staining (oil, grease, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5. Are absorbent materials readily available for small spills/leaks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

STORMWATER INSPECTION REPORT (Cont.)

(Form #)

EXHIBIT

15-EX-14 (NEW 6/2015)

Page 2 of 4

Activities - Check each activity present at the site.	BMP			Implementation Effectiveness*	
	Yes	No	N/A	Satisfactory	Needs Improvement
<input type="checkbox"/> Building and Grounds Maintenance. 1. Are pesticides and fertilizers used and stored properly? 2. Are areas swept regularly and is wash down by hosing prohibited unless wash water is contained? 3. Are contained wash water, sweepings and sediments disposed of properly? 4. Are materials used in repair and minor remodeling (paints, etc.) stored properly? 5. Are paved surfaces adequately maintained (minimal crumbling asphalt or concrete)? 6. Are safer alternative products used whenever possible?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Park and Landscape Maintenance. 1. Are non-vegetated surfaces covered to prevent erosion? 2. Are pesticides and fertilizers used only as needed and stored properly? 3. Are areas swept regularly and is wash down by hosing prohibited unless wash water is contained? 4. Are landscape clippings collected and disposed of properly? 5. Are irrigation systems designed to prevent runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Outdoor Loading/Unloading of Materials. 1. Are delivery vehicles parked so spills and leaks can be contained? 2. Is the loading/unloading area covered to reduce exposure of materials to rain? 3. Is loading/unloading area designed to prevent stormwater run-on? 4. Are storm drain inlets covered during transfer of materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Outdoor Storage of Materials/Products/Equipment. 1. Are covers used to protect all raw materials, by-products, finished products items stored outside? (Circle covering type used) Plastic Roof Canopy Other 2. Are chemicals, drums, or bagged materials on pallets or similar method that keep them off the ground? 3. Are hazardous materials (if permitted in lease) stored in properly designed secondary containment areas? 4. Are drip pans and containers used in areas where drips or leaks may occur? 5. Are berms, curbs, or other structures in place to minimize pollutants from entering the stormwater system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Waste Handling and Disposal. 1. Are materials recycled whenever possible? 2. Are wastes segregated and separated? 3. Is storage area designed to prevent stormwater runoff? 4. Are waste dumpsters covered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Erodible Surface Areas. 1. Are areas of exposed/disturbed soil properly managed? 2. Do any landscaped areas require re-vegetation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Illicit Connections/Illegal Discharges. 1. Are any illicit connections present? 2. Is illegal dumping or uncontrolled spillage/discharge occurring? If yes, complete MTCE 07 IC/ID Form included in Appendix E.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

* SATISFACTORY: BMPs (including source control BMPs) are used and are effective.

NEEDS IMPROVEMENT: No BMPs used and stormwater pollution likely/Some BMPs used but not effective/Structural BMPs necessary to improve pollution prevention. *Provide Comments Below*

STORMWATER INSPECTION REPORT (Cont.)

(Form #)

EXHIBIT

15-EX-14 (NEW 6/2015)

Page 3 of 4

III. BMP ASSESSMENT

20. Observations/Comments: _____

Corrective Action/Due Date: _____

21. Observations/Comments: _____

Corrective Action/Due Date: _____

22. Observations/Comments: _____

Corrective Action/Due Date: _____

IV. 23. NON-STORMWATER DISCHARGES:

- Authorized
- Non-Authorized
- None observed / no evidence of / no sources noted
- Sources observed, but BMPs in place
- Sources observed, no BMPs in place, but no discharge
- Observed discharges / evidence of discharges / no BMPs

Report any observed illicit connections and illegal/unknown discharges to Headquarters Right of Way and the District NPDES Stormwater Coordinator.

V. STORMWATER EDUCATION AND OUTREACH MATERIALS

- | | | |
|--|-----------------------------|------------------------------|
| 24. DO EMPLOYEES RECEIVE GENERAL TRAINING FOR MANAGING RUNOFF FROM SITE? | <input type="checkbox"/> NO | <input type="checkbox"/> YES |
| DO EMPLOYEES RECEIVE SPECIFIC TRAINING FOR PREVENTING POLLUTION AND CONTROLLING RUNOFF FROM SITE (BMP IMPLEMENTATION)? | <input type="checkbox"/> NO | <input type="checkbox"/> YES |
| ARE TRAINING RECORDS AND EDUCATIONAL MATERIALS AVAILABLE FOR REVIEW? | <input type="checkbox"/> NO | <input type="checkbox"/> YES |
| ARE TRAINING RECORDS UP TO DATE? | <input type="checkbox"/> NO | <input type="checkbox"/> YES |

VI. CONCLUSIONS

25. COMMENTS/RECOMMENDATIONS (Describe any non-stormwater discharges, unsatisfactory conditions or work needed):

Empty box for comments and recommendations.

STORMWATER INSPECTION REPORT (Cont.)

(Form #)

EXHIBIT

15-EX-14 (NEW 6/2015)

Page 4 of 4

26. CORRECTIVE ACTIONS

NONE CORRECT DEFICIENCIES NOTED ABOVE IN TIME FRAME INDICATED.

FACILITY BMP INFORMATION PROVIDED

FOLLOW-UP INSPECTION REQUIRED? NO YES

YES, WITHIN 30 DAYS AFTER _____ YES, TO BE SCHEDULED WITHIN NORMAL FREQUENCY

VII. INSPECTION INFORMATION

27. INSPECTOR NAME (Printed)	28. DATE OF INSPECTION	29. TIME OF INSPECTION
------------------------------	------------------------	------------------------

INSPECTOR SIGNATURE

30. REASON FOR INSPECTION: Initial Scheduled Follow-up Response to Complaint

NAME OF TENANT(S) ACCOMPANYING INSPECTOR 1. _____ 2. _____	SIGNATURE(S) - TENANT RECEIVED INSPECTION REPORT 1. _____ 2. _____
--	--

NAME(S) OF OTHERS ACCOMPANYING INSPECTOR (IF ANY) 1. _____ 2. _____	
---	--

Ref: Caltrans NPDES Permit No. CAS000003 issued by California State Water Resources Control Board.

STORMWATER INSPECTION REPORT (HELPFUL HINTS)

(Form #)

EXHIBIT

15-EX-14 (NEW 6/2015)

FIELD OBSERVATIONS HELPFUL HINTS FOR STORMWATER INSPECTIONS

AREAS AND ACTIVITIES WITH POTENTIAL TO SPILL HAZARDOUS FLUIDS

- SPILL KITS AVAILABLE IF NEEDED
- SPILL RESPONSE AGENCY PHONE NUMBERS CLEARLY POSTED
- MATERIAL SAFETY DATA SHEETS AVAILABLE FOR PRODUCTS

PARKING LOTS

- PAVED AREAS SWEEPED DOWN AND NOT HOSED OFF
- TRASH RECEPTACLES AVAILABLE TO PREVENT LITTER
- SPILLS OR LEAKS SPOT CLEANED AS NEEDED

BUILDING AND GROUNDS MAINTENANCE

- VEGETATION LEFT IN PLACE WHERE POSSIBLE
- SOIL EROSION NOT OBSERVED
- GROUNDS FREE OF LITTER
- PAVED AREAS SWEEPED DOWN AND NOT HOSED OFF
- SAFER ALTERNATIVE PRODUCTS IN USE
- TRASH RECEPTACLES AVAILABLE TO PREVENT LITTER
- MINIMAL USE OF PESTICIDES AND FERTILIZERS

PARK AND LANDSCAPE MAINTENANCE

- SOIL EROSION NOT OBSERVED
- GROUNDS FREE OF LITTER
- PAVED AREAS SWEEPED DOWN AND NOT HOSED OFF
- IRRIGATION SYSTEMS DESIGNED TO PREVENT RUNOFF
- USE OF PESTICIDES AND FERTILIZERS ONLY AS NEEDED

OUTDOOR LOADING/UNLOADING OF MATERIALS

- MATERIAL LOADING/UNLOADING AREAS ENCLOSED OR COVERED
- LOADING AND UNLOADING CONDUCTED IN DRY WEATHER IF NOT COVERED
- LOADING AND UNLOADING AREA BERMED OR SLOPED TO CONTAIN SPILLAGE
- NO DISCHARGE TO STORM DRAIN
- DRIP PANS AVAILABLE TO CAPTURE LIQUID LEAKS

OUTDOOR STORAGE OF MATERIALS/PRODUCTS/EQUIPMENT

- HAZARDOUS MATERIALS LABELED, COVERED, AND CONTAINED
- STOCKPILED MATERIALS COVERED
- NO SIGNS OF EXCESSIVE LEAKING FROM STORED EQUIPMENT
- DRIP PANS AVAILABLE TO CAPTURE EQUIPMENT LEAKS
- STORAGE AREA FREE OF LITTER
- GENERAL GOOD HOUSEKEEPING OBSERVED

WASTE HANDLING AND DISPOSAL

- RECYCLABLE MATERIALS BEING RECYCLED
- WASTE CONTAINERS COVERED TO PREVENT STORMWATER RUNOFF/RUN-ON
- DRIP PANS AVAILABLE TO CAPTURE GREASE WHEN TRANSFERRED
- AREA SWEEPED DOWN ON REGULAR BASIS
- AREA FREE OF STAINS OR OTHER SIGNS OF POLLUTANTS GOING INTO STORM DRAIN SYSTEM
- WASTE CONTAINERS IN GOOD CONDITION FREE FROM LEAKS
- GENERAL GOOD HOUSEKEEPING OBSERVED
- NO LITTERING SIGNS POSTED

ERODIBLE SURFACE AREAS

- PRESERVE NATURAL VEGETATION
- VEGETATION LEFT IN PLACE WHERE POSSIBLE
- SOIL EROSION NOT OBSERVED
- CHEMICAL STABILIZATION OR GEOSYNTHETICS IN USE ON BARE GROUND
- PAVED AREAS SWEEPED REGULARLY

ILLICIT CONNECTIONS/ILLEGAL DISCHARGES

- SIGNS OF ILLICIT CONNECTIONS TO STORMWATER CONVEYANCE SYSTEM(S)
 - SIGNS OF ILLEGAL/UNKNOWN DISCHARGE OBSERVED GOING FROM THE LEASE PREMISES ONTO ADJACENT PROPERTY OR INTO THE STREET
 - SIGNS OF ILLEGAL/OR UNKNOWN DISCHARGE OBSERVED COMING FROM ADJACENT PROPERTY ONTO THE LEASE PREMISES
 - STAINED PAVEMENT IN AREAS NEAR OR SURROUNDING CATCH BASIN OR STORMWATER OUTFALL
-
-

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Appendix K: Standardized Letters to Facility Operator

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Today's Date

Facility Operator Name

Facility Name

Facility Address

City, CA XXXXX

Subject: Possible Need for Coverage under the General Permit for Storm Water Discharges Associated with Industrial Activity (General Permit)

Dear Facility Operator:

On Day of Week, Month Day and Year, as part of our Storm Water Inspection Program, Name of RW Agent conducted an inspection of your facility. As a result of our inspection, we believe that your facility may require coverage under the General Permit based upon the following observations:

- Activity Name is included under SIC Code number . Facilities categorized under this SIC Code number are listed in Attachment 1 of the General Permit as requiring coverage.

At this time, we would also like to request that you verify the SIC code that has been assigned to your facility. Information regarding SIC codes applicable to the General Permit are provided as an attachment. If your facility already has coverage under the General Permit or an individual NPDES permit that includes storm water, please submit your Waste Discharge Identification (WDID) number to this office in a timely manner.

If you have any questions, please call me at XXX.XXX.XXXX.

Sincerely,

Name of Caltrans Contact

Right-of-Way Title

Enclosures:

General Industrial Permit SIC Code Handout

This page intentionally left blank.

Today's Date

Facility Operator Name

Facility Name

Facility Address

City, CA XXXXX

Subject: Possible Need for Coverage under the General Permit for Storm Water Discharges Associated with Industrial Activity (General Permit)

Dear Facility Operator:

On Day of Week, Month Day and Year, as part of our Storm Water Inspection Program, Name of RW Agent conducted an inspection of your facility. As a result of our inspection, we believe that your facility may require coverage under the General Permit based upon the following observations:

- **Describe the activity(ies) conducted at the facility that require(s) coverage**

At this time, we would also like to request that you verify the SIC code that has been assigned to your facility. Information regarding SIC codes applicable to the General Permit are provided as an attachment. If your facility already has coverage under the General Permit or an individual NPDES permit that includes storm water, please submit your Waste Discharge Identification (WDID) number to this office in a timely manner.

If you have any questions, please call me at XXX.XXX.XXXX.

Sincerely,

Name of Caltrans Contact

Right-of-Way Title

Enclosures:

General Industrial Permit SIC Code Handout -

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Appendix L: Demolition Stormwater Inspection Forms

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STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
STORMWATER SITE INSPECTION REPORT

CEM-2030 (REV 3/2014)

Page 1 of 9

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER
	WDID NUMBER
CONTRACTOR NAME AND ADDRESS	PROJECT SITE RISK LEVEL <input type="checkbox"/> Risk Level 1 <input type="checkbox"/> N/A. WPCP <input type="checkbox"/> Risk Level 2 <input type="checkbox"/> N/A. Project resides in The Lake Tahoe Hydrologic Unit and is regulated under Order No. R6T-2011-019, NPDES No. CAG616002 <input type="checkbox"/> Risk Level 3
Submitted by contractor (print and sign name)	Date
Water Pollution Control Manager name and company name	Phone number
	Emergency (24/7) phone number

General Information

Inspector's Name	Accompanied by Caltrans staff? <input type="checkbox"/> YES <input type="checkbox"/> NO If Yes, Name/Initials: _____	Date of Inspection
Weather Condition <input type="checkbox"/> Clear <input type="checkbox"/> Partly cloudy <input type="checkbox"/> Cloudy	Precipitation Condition <input type="checkbox"/> None <input type="checkbox"/> Heavy rain <input type="checkbox"/> Misty <input type="checkbox"/> Hail <input type="checkbox"/> Light rain <input type="checkbox"/> Snow <input type="checkbox"/> Rain	Wind Condition <input type="checkbox"/> None <input type="checkbox"/> Less than 5 mph <input type="checkbox"/> Greater than 5 mph
Construction Phase <input type="checkbox"/> Highway construction <input type="checkbox"/> Plant establishment <input type="checkbox"/> Suspension of work (inactive site)	Site Information Total project area: _____ acres Total project disturbed soil area: _____ acres Current phase disturbed soil area: _____ acres Current phase inactive disturbed soil: _____ acres	

Inspection Type <i>Check appropriate box(es)</i>	Storm Information	
<input type="checkbox"/> Weekly <input type="checkbox"/> Quarterly non-stormwater	Time elapsed since last storm _____ days	Precipitation amount from last storm _____ inches
<input type="checkbox"/> Pre-storm	Time storm is expected _____ (time) _____ (date)	Expected precipitation amount _____ inches
<input type="checkbox"/> During storm event	Time elapsed since storm began _____ hours-minutes	Precipitation amount from storm recorded from site rain gauge _____ inches
<input type="checkbox"/> Post storm	Time elapsed since storm _____ hours-minutes	Precipitation amount from storm recorded from site rain gauge _____ inches

Date	Daily Site Inspection of Best Management Practices (BMP) List Daily inspections for previous calendar week. Do not include weekly inspection.	Daily inspection performed by	Any corrective actions identified as completed or new?		If yes, were the actions added or verified on CEM-2035, as appropriate?		Date shown on corrective action form
			YES	NO	YES	NO	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ADA Notice

For individuals with sensory disabilities, this document is available in alternate formats. For information, call (916) 654-6410, TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
STORMWATER SITE INSPECTION REPORT

CEM-2030 (REV 3/2014)

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER
	WDID NUMBER

Site Inspection of Best Management Practices, continued
For project specific BMPs, insert the BMP name and additional inspection requirements below.

Temporary Linear Sediment Barriers <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Right location?		Properly installed or cross barriers installed?		Maintenance performed when 1/3 height or repair needed?		Photos?	Comments and Required Actions	Action No.		
	Yes	No	Yes	No	Yes	No	Yes				
Location 1											
Location 2											
Location 3											
Storm Drain Inlet Protection <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	All inlets protected?		Properly installed?		Maintenance or repair needed?		Photos?	Comments and Required Actions	Action No.		
	Yes	No	Yes	No	Yes	No	Yes				
Location 1											
Location 2											
Location 3											
Stockpile Management <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date stockpile created	Is the stockpile listed as a location on stockpile management inactive stockpiles? <i>If yes, stop here.</i>		Is there a storm event forecasted? <i>If yes, stop here and take action.</i>		Is stockpile being actively used? <i>If yes, stop here.</i>		If no to previous question, what is the last day stockpile was actively used?	How long since stockpile actively used?	Has it been 3 days since the stockpile has been actively used? <i>If yes, take action.</i>	
	Date	Yes	No	Yes	No	Yes	No	Date	Days	Yes	No
Location 1											
Location 2											

- Notes:**
1. If it has been 3 days (72 hours) since a stockpile has been active then the stockpile is inactive and must be reported as a location on stockpile management inactive stockpiles.
 2. Stockpiles must be covered and have perimeter control installed prior to a storm event.

Location Number	Comments / Corrective Actions	Photos?	Action No.
		Yes	
1			
2			

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Inactive Stockpile Management <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Type of Material or Waste	Is the stockpile properly located?		Is the stockpile covered?		Does the stockpile have a perimeter control?		Does the stockpile need maintenance or repair?		
		Yes	No	Yes	No	Yes	No	Yes	No	
Location 1										
Location 2										
Location Number	Comments / Corrective Actions								Photos?	Action No.
1									Yes	
2										

Sediment and Desilting Basins <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are basin inlets, outlets, and spillways in working order?		Is water contained in basin?		Is maintenance needed to provide required retention or detention?		Photos?	Comments and Required Actions	Action No.
	Yes	No	Yes	No	Yes	No	Yes		
Location 1									
Location 2									
Location 3									

Tracking Controls <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Do all entrances and exits have tracking controls?		Is pavement free from visible sediment tracking?		Does sediment need to be removed from rock or ribbed plates?		Is daily sweeping done?		Photos?	Comments and Required Actions	Action No.
	Yes	No	Yes	No	Yes	No	Yes	No	Yes		
Location 1											
Location 2											
Location 3											

Wind Erosion Control <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water trucks on-site?		Visible dust?		Photos?	Comments and Required Actions	Action No.
	Yes	No	Yes	No	Yes		
Location 1							
Location 2							
Location 3							

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	WDID NUMBER

Dewatering Operations <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Dewatering currently active?		Dewatering conforms with RWQCB permit?		Dewatering discharge within discharge specified limitations?		Photos? Yes	Comments and Required Actions	Action No.
	Yes	No	Yes	No	Yes	No			
Location 1									
Location 2									
Location 3									

Temporary Stream Crossing <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Constructed as shown on the plan?		Conforms to 404 permit and 1601 agreement requirements?		Maintenance or repair required?		Photos? Yes	Comments and Required Actions	Action No.
	Yes	No	Yes	No	Yes	No			
Location 1									
Location 2									
Location 3									

Material Storage <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Located away from drainage courses and water courses?		Areas protected from run on and runoff?		Bagged and boxed materials stored on pallets?		Areas reasonably clean and free of spills, leaks, and other material?		Is material inventory up to date?		Liquid materials in secondary containment?		Photos? Yes
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
Location 1													
Location 2													
Location 3													

	Comments and Required Actions	Action No.
Location 1		
Location 2		
Location 3		

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	WDID NUMBER

Waste Management Sanitation Facilities <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Located away from drainage courses and water courses?		Secured to ground or foundation?		Clean and has adequate capacity?		Ground checked for any spills or leaks?		Any spills or leaks found?		Photos?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	
Location 1												
Location 2												
Location 3												

Location Number	Comments / Corrective Actions	Action No.
1		
2		
3		

Project-specific BMP <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Properly located?		Properly installed?		Maintenance or repair needed?		Photos?	Comments and Required Actions	Action No.
	Yes	No	Yes	No	Yes	No	Yes		
Location 1									
Location 2									
Location 3									

Project-specific BMP <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Properly located?		Properly installed?		Maintenance or repair needed?						Photos?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	
Location 1												
Location 2												
Location 3												

	Comments and Required Actions	Action No.
Location 1		
Location 2		
Location 3		

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	WDID NUMBER

Site Inspection Report General Comments

Are the BMPs installed as required by the Stormwater Pollution Prevention Plan for the phase of construction?

Yes No

Does the SWPPP need to be amended?

Yes No

Does the SWPPP currently reflect the current site conditions and contractor operations?

Yes No

Is hazardous waste stored on the jobsite?

Yes No

Are there water pollution control concerns on the project site not addressed by the comments and required actions shown above for BMPs, based on the field review of the jobsite?

Yes No

If yes, provide details, comments, and required actions below for each location.

Location	Water Pollution Control Concern	Comments and Required Actions	Action No.

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PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
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	WDID NUMBER

Stormwater Inspection Report Certification

I certify under penalty of law that this Stormwater Inspection Report was performed in accordance with the General Permit. The information contained in this inspection report was gathered from a field site inspection. I am aware that Section 309 (c)(4) of the Clean Water Act provides for significant penalties, including fines and imprisonment for knowingly submitting a false material statement, representation, or certification.

Stormwater Inspector (Name)	Date Report Completed
Stormwater Inspector (Signature)	

I certify under penalty of law that this Stormwater Inspection Report was performed in accordance with the General Permit by me or under my direction or supervision. The information contained in this inspection report was gathered and evaluated by qualified personnel prior to submittal. Based on my review of the information and inquiry of those who gathered and evaluated the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that Section 309 (c)(4) of the Clean Water Act provides for significant penalties, including fines and imprisonment for knowingly submitting a false material statement, representation, or certification.

Water Pollution Control Manager (Name)	Date
Water Pollution Control Manager (Signature)	

Stormwater Inspection Report Acceptance

If hazardous waste is stored on the jobsite, the resident engineer should notify the district hazardous waste coordinator.

Was the District Hazardous Waste Coordinator notified?

- N/A, no hazardous waste stored on the jobsite
- YES, Date _____ Time _____
- NO

Accepted by Resident Engineer (Print Name)	Date
Resident Engineer (Signature)	

Instructions

General Information

- Construction General Permit attachments C, D, and E, Section G.5. require the information on this form.
- If the inspection form does not contain enough lines to report all locations on a jobsite, click on the "Add Item" button so that all locations are inspected and reported.
- Obtain forecasted precipitation information from the National Weather Service Forecast Office website, <http://www.srh.noaa.gov/forecast>.
- Weather information should be the best estimate of the beginning of the storm event, duration of the event, and time elapsed since the last storm.
- Rainfall amounts should be recorded from the project site rain gauge.
- "Daily Site Inspection of Best Management Practices" section is to be filled out by the water pollution control manager.

Storm Visual Inspections

- For non-visible pollutant inspections, report on all locations shown in the Stormwater Pollution Prevention Plan.

Required Actions

- All corrective actions identified in this report must also be recorded on Form CEM-2035, "Stormwater Corrective Actions Summary."
- Locations identified where BMPs are failing or have other shortcomings require implementation of repairs or design changes within 72 hours of identification, and BMP repairs or other changes must be completed as soon as possible.

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STORMWATER CORRECTIVE ACTIONS SUMMARY

CEM-2035 (REV 11/2013)

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER
	WDID NUMBER
CONTRACTOR NAME AND ADDRESS	SWPPP PROJECT SITE RISK LEVEL <input type="checkbox"/> Risk Level 1 <input type="checkbox"/> N/A. WPCP <input type="checkbox"/> Risk Level 2 <input type="checkbox"/> N/A. Project resides in the Lake Tahoe Hydrologic Unit and is regulated under Order No. R6T-2011-0019, NPDES No. CAG616002. <input type="checkbox"/> Risk Level 3

Submitted by contractor (print and sign name)	Date
---	------

Implement required actions identified in this Stormwater Corrective Actions Summary as soon as possible, but actions must begin within 72 hours of the site inspection, or be completed before the next predicted rain event, whichever is sooner.

Corrective action number	Verification of Stormwater Site Inspection Corrective Actions	Date Corrective Actions Identified:
	BMP Type	Location
	Required Action	Comments
	Date Completed	Verified by (print name and title) Verified by (signature)
	BMP Type	Location
	Required Action	Comments
	Date Completed	Verified by (print name and title) Verified by (signature)
	BMP Type	Location
	Required Action	Comments
	Date Completed	Verified by (print name and title) Verified by (signature)
	BMP Type	Location
	Required Action	Comments
	Date Completed	Verified by (print name and title) Verified by (signature)
	BMP Type	Location
	Required Action	Comments
	Date Completed	Verified by (print name and title) Verified by (signature)
	BMP Type	Location
	Required Action	Comments
	Date Completed	Verified by (print name and title) Verified by (signature)

STORMWATER CORRECTIVE ACTIONS SUMMARY

CEM-2035 (REV 11/2013)

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PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER
	WDID NUMBER

Stormwater Site Inspection Report Corrective Action Summary Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the people who manage the system or are directly responsible for gathering the information, the information submitted is true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment of knowing violations.

Water Pollution Control Manager (name)	Date
Water Pollution Control Manager (signature)	

Stormwater Site Inspection Report Corrective Action Summary Acceptance

Resident Engineer (name)	Date
Resident Engineer (signature)	

Instructions**General Information**

- If the summary form does not have enough lines to report all required actions, use additional copies of this form's page 1 to report all required corrective actions from an inspection form.
- On page 1 of this form and additional copies of page 1, insert consecutive numbers for each required corrective action.

Required Actions

- Identified locations—where BMPs are failing or have other shortcomings—require repairs or design changes within 72 hours of identification and complete BMP repairs or other changes as soon as possible, or before the next predicted rain event, whichever is sooner, per the Lake Tahoe Hydrologic Unit Permit.
- Daily inspections required for waste containers (covered at end of shift), tracking, and others per project specifications.

Appendix M: BMP Factsheets for Residential Properties

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Residential BMPs

General Land Use
General Maintenance
Perchlorate Containing Materials
Residential
Swimming Pool Maintenance

Stormwater Pollution Prevention

General Land Use

Illicit Connections/Illegal Discharge

- Locate solid waste storage areas away from drainage facilities and watercourses and not in areas prone to flooding or ponding. Prevent storm water run-on from contacting stored solid waste through the use of ditches, berms, dikes and swales. Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use wet cleaning techniques only when dry cleanup techniques are not practicable. Periodically inspect the solid waste storage areas and review the disposal procedures.
- Non-storm water discharges to drainage paths, drain systems and watercourses are prohibited. Fluids should be collected by vacuum or other methods and contained and recycled, evaporated or discharged to the sanitary sewer system with approval from the publicly-owned treatment works.
- Store, transport and dispose of all hazardous waste in accordance with federal, state and local regulations. Follow label instructions regarding the proper handling, mixing and application of materials which could generate hazardous waste and a discharge to waterways..
- Train employees in proper waste disposal and cleaning, maintenance and good housekeeping procedures.



General Maintenance and Repair

Properly collect and dispose of water when pressure washing buildings, rooftops, and other large objects. Properly prepare work area before conducting building maintenance. Properly clean and dispose of equipment and wastes used and generated during building maintenance.

Recycle residual paints, solvents, lumber, and other materials to the maximum extent practical. Buy recycled products to the maximum extent practical.

Do not dump waste liquids down the storm drain. Make sure that nearby storm drains are well marked to minimize the chance of inadvertent disposal of residual paints and other liquids.



Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area. Cover materials of particular concern that must be left outside, particularly during the rainy season. Use drip pans or absorbent material under leaking vehicles and equipment to capture fluids.

All maintenance activities should practice water conservation. Keep water application equipment in good working condition. Use the minimum amount of water needed to complete each maintenance activity.

Stormwater Pollution Prevention

General Housekeeping

- Purchase only the amount of material that will be needed for foreseeable use. Choose products that do the same job with less environmental risk.
- Keep work sites clean and orderly. Remove debris in a timely fashion. Sweep the area. Dispose of wash water, sweepings, and sediments, properly. Recycle or dispose of fluids properly.
- Specific employees should be assigned specific inspection responsibilities at the work site and given the authority to remedy any problems found.
- Prohibit littering by employees, subcontractors, and visitors.
- Full dumpsters shall be removed from the project site and the contents shall be disposed of outside the highway right of way. Dumpster washout on the project site is not allowed. Notify trash hauling contractors that only watertight dumpsters are acceptable for use on-site.

Stormwater Pollution Prevention

General Maintenance

Painting

- Use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water." Develop paint handling procedures for proper use, storage, and disposal of paints. Transport paint and materials to and from job sites in containers with secure lids and tied down to the transport vehicle. Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint containers. Mix paint indoors before using so that any spill will not be exposed to rain. Do so even during dry weather because cleanup of a spill will never be 100% effective.
- Transfer and load paint away from storm drain inlets. Plug nearby storm drain inlets prior to starting painting and remove plugs when job is complete when there is significant risk of a spill reaching storm drains or if sand blasting is used to remove paint. Use a ground cloth to collect the chips if painting requires scraping or sand blasting of the existing surface. Dispose the residue properly.
- Cover or enclose painting operations properly to avoid drift. Clean the application equipment in a sink that is connected to the sanitary sewer if using water based paints. Capture all cleanup-water and dispose of properly. Store leftover paints properly if they are to be kept for the next job, or dispose properly.
- Regularly train employees on appropriate BMP implementation, storm water discharge prohibitions, and wastewater discharge requirements. Train employees on proper spill containment and cleanup.



Fence Repair

- Properly clean and dispose of equipment and wastes used and generated during fence repair/maintenance.
- Solid waste storage areas at repair sites should be located away from drainage facilities and watercourses and not located in areas prone to flooding or ponding.
- Compaction is not an alternative to restoring vegetation. Compaction is restricted to areas where vegetation is undesirable or is not sustainable such as in guardrail post or fence post installation. Consider the effect of runoff from the compacted soil on nearby surface water. Evenly grade or level the area prior to compaction. Do not perform compaction while storm water runoff is observed. Compact exposed soil as soon as possible after grading or soil disturbance. Inspect compacted areas to identify any evidence of erosion upon the completion of maintenance activities.

Plumbing

- Copper enters receiving waters through storm drains and from wastewater discharged from wastewater treatment plants. Copper is acutely toxic to plankton and affects the reproduction and growth of shellfish.
- Design each plumbing system to minimize velocity, minimize hot water temperature, avoid stagnant sections and minimize direction and size changes to preserve pipe integrity.
- Eliminate small burrs created from pipe cutting. This reduces turbulence and significantly decreases corrosion. Remove all oxides, debris, and surface soil from tube ends.
- Maintain good housekeeping practices while working. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area. Protect stored pipe from weather and damage so that installed pipe is as clean as possible.
- Newly installed systems should be flushed soon after completion to remove excess flux and debris. For inactive systems, repeat flushing periodically.
- Avoid excess use of flux. Excess flux residue can increase pipe corrosion that leads to copper discharges



Stormwater Pollution Prevention

Graffiti Removal

- If painting over graffiti, use Painting Best Management Practices.
- If removing graffiti using wet sand blasting methods, minimize the quantity of water used, direct runoff to landscaped or soil area, filter runoff through a boom to keep sand out of storm drains, sweep debris and sand and dispose of all waste to avoid future runoff contamination.
- If removing graffiti using high-pressure washing and cleaning compound, direct washwater runoff to landscaped or soil area. No runoff can discharge into stormdrains. Seal stormdrains and vacuum/pump washwater to the sanitary sewer. Contact the local wastewater treatment plant for guidance, as harsh cleaning compounds may require pretreatment.

Roof Repair or Replacement/Chimney Maintenance

- Recycle residual paints, solvents, lumber, and other materials to the maximum extent practical. Buy recycled products to the maximum extent practical.



- Maintain good housekeeping practices while work is underway. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area.
- Store materials properly that are normally used in repair and remodeling such as paints and solvents. To provide protection from rain, bagged and boxed materials stored outdoors should be stored on pallets throughout the rainy season and covered prior to rain events. Storage areas should be kept clean, well organized and equipped with cleanup supplies. Perimeter controls, containment structures, covers and liners shall be repaired or replaced as needed.

- Do not dump waste liquids down the storm drain. Dispose of sweepings, and sediments properly. Properly collect and dispose of water when pressure washing rooftops, chimneys and other large objects.
- Solid waste storage areas at the work site should be located away from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding.
- Periodically inspect the solid waste storage areas and review the disposal procedures.
- Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use another technique only when dry cleanup techniques are not practicable, such as having to wet for dust control for safety or air quality reasons.

Carpentry

- Wood pieces too small for construction reuse should be recycled or chipped for mulch or compost to reduce solid wastes.
- Maintain good housekeeping practices. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area. Dispose of sweepings, and sediments properly. Storage areas should be kept clean, and well organized.
- Solid waste storage areas at the work site should be located away from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding. Periodically inspect the solid waste storage areas and review the disposal procedures.
- Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use another technique only when dry cleanup techniques are not practicable, such as having to wet for dust control for safety or air quality reasons.

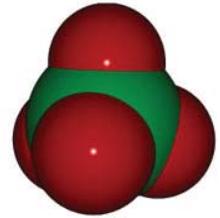


Stormwater Pollution Prevention

Perchlorate Containing Materials

What is Perchlorate?

Perchlorate is both a naturally occurring and manmade salt that is a contaminant increasingly found in groundwater, surface water and soil. Perchlorate is highly soluble and when dissolved in water it easily moves through and travels with the flow of water on or beneath the ground.



Most perchlorate manufactured in the U.S. is used as an ingredient in solid fuel for rockets and missiles. Perchlorate-based chemicals are also used in the construction of highway safety flares, fireworks, pyrotechnic devices, explosives, common batteries and automobile restraint systems (air bags). In light of the risks to public health and the environment posed by perchlorate releases, best management practices are necessary for the prevention of perchlorate contamination.

Storage

Store perchlorate containing materials in weather-resistant structures with floors that:

- are adequately water-resistant to prevent seepage into or out of the containment structure;
- do not have drains that release to the environment; and
- are of adequate strength to support the loads.

Spills

- Immediately contain and collect all perchlorate material spills (i.e. bleach, fertilizers).
- If materials resulting from a spill are considered hazardous, manage and dispose of the material according to all applicable regulatory requirements (Health & Safety Code Section 25210.6 & 58012).

Pollution Prevention

If using perchlorate-containing fertilizers and safety flares in an amount *greater than 500 pounds at a given time*:

- review and record the use of these products,
 - prior to use, investigate and determine if a non-perchlorate-containing alternative is available; and
 - review, improve and implement, as appropriate, all pollution prevention measures utilized to prevent the release of perchlorate in any form.
- Assure that the California Department of Toxic Substance Control has received the one-time notification listing their perchlorate materials and their related uses.

Batteries



Coin type cell batteries with identification numbers starting with "CR" (Manganese Oxide) contain perchlorate.

- Follow the packaging directions to ensure proper use and disposal of batteries.

Stormwater Pollution Prevention



Flares/Fuses

When using road flares in emergency situations:

- Allow flares to burn out completely.
- Dispose of flare residue properly (i.e. solid waste container).
- As appropriate, limit the number flares used and their duration without impeding immediate safety considerations.
- Do not burn flares to dispose of them. Do not dispose of unused flares in water or normal refuse containers. Contact the hazardous waste manager for local disposal requirements.

Alternatives to Flares - Light Sticks, Power Flares (LED)

- Light sticks or Power Flares are a safe alternative to traditional flares. No chemical reaction, heat or spark is produced that can result in a release of residue containing perchlorate to the environment.



Fertilizers

Chilean (sodium) nitrate is a mined source of nitrogen used in several fertilizer products such as Bulldog Soda, nitrate of soda, Chilean saltpeter, soda niter, and nitric acid sodium salt. Chilean nitrate fertilizers contain naturally occurring perchlorate salts.

- Before applying fertilizers, check the label to determine whether perchlorate salts are present. If fertilizers contain perchlorate salts, if not marked, mark the packaging clearly "Perchlorate Material - Special Handling May Apply".
- Keep all perchlorate containing fertilizer in durable and water-resistant packaging or containers.
- Follow any instructions found on the package label and/or any Material Safety Data Sheet (MSDS) provided.

Stormwater Pollution Prevention

Residential

Home

- Locate and know how to operate your water shut-off valve
- In the event of sewer stoppages, breaks and overflows, or if a water pipe breaks on your property, turn off water as soon as possible to control the flow. Provide containment (soil berm, gravel and/or sand bags, etc.) that will prevent flow from discharging into the Storm Water Conveyance System.
- Immediately contact Caltrans or, if an emergency, call a plumbing professional for assistance, and then contact Caltrans.



Garden

- Schedule large projects for dry weather. Store stockpiles under plastic tarps to protect them from wind and rain. Cover non-vegetated surfaces to prevent erosion. Use mulches in planter areas without ground cover to minimize sediment in runoff. Leave a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible. Develop healthy soil; mow high, often, and with sharp blades; water deeply but not too often.
- Adjust irrigation systems to reflect seasonal water needs. Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system. Use drip irrigation, soaker hoses, or micro-spray systems where appropriate and feasible.
- Minimize the use of pesticides and fertilizers; read the labels and follow directions to avoid improper use; do not apply chemicals if it is windy or about to rain. Cultivate garden often to control weeds. Do not use herbicides. Try using organic or non-toxic fertilizer alternatives. Avoid applying chemical fertilizers near curbs, driveways, gutters, ditches, streams or waterbodies. Properly clean up and dispose of spills of gardening chemicals, fertilizers, or soils. If possible, return the spilled material to the container for future use. Store lawn and garden care products in closed, waterproof, labeled containers, in a covered area, or off-ground and under protective tarps. Take unwanted lawn or garden chemicals to a household hazardous waste collection facility.
- Dispose of green wastes as part of the household trash. If quantities are too large, arrange a pick up with the local waste hauler. After garden activities, do not sweep or blow clippings and waste into the street or gutter. Avoid hosing down the pavement. When possible, use a lawn mower that has a mulcher so that the grass clippings remain on the lawn. Compost materials in a designated area within the yard, take clippings to a landfill for composting, or recycle lawn clippings and greenery waste through local programs when available.

Patio, Walkway, Driveway

- Use dry clean-up methods, such as a broom, mop or absorbent material for surface cleaning whenever possible. Do not sweep or blow trash or debris into the street or gutter.



- If water must be used, use it sparingly. Never discharge washwater into the street, a ditch, storm drain, or maintenance hole. Determine how you are going to capture the water and where you are going to discharge it before starting the wash job. Capture and collect the washwater and properly dispose of it (i.e., landscaped areas, private sewer system, sanitary sewer system).
- Avoid using cleaning products that contain hazardous substances that can create hazardous waste.

Stormwater Pollution Prevention

Garbage/Litter

- Arrange trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Use lined bins to reduce leaking of liquid waste. Do not locate trash storage area in immediate vicinity of storm drains.

Hazardous Household Waste

- Use non-hazardous or less-hazardous products.
- Cleaning solvents and other household hazardous materials must be stored indoors or under cover, and in closed and labeled containers. Participate in household hazardous waste reuse and recycling by disposing of household hazardous waste including leftover paint at a local collection facility.
- If safe, contain, clean up, and properly dispose all household hazardous waste spills. If unsafe condition exists, call 911 to activate the proper response team.



Pets

- Restrict animal access to creeks and streams, preferably by fencing. All pet wastes must be picked up and properly disposed of in the regular trash, flushed down a toilet, or composted as type and quantities dictate. While walking pets, carry bags, pooper-scooper, or equivalent to safely pick up pet wastes. Properly inoculate your pet in order to maintain their health and reduce the possibility of pathogens in pet wastes.
- Properly dispose of unused flea control products (shampoo, sprays, or collars). Bathe pets indoors and use less toxic shampoos. When possible, have pets professionally groomed.

Auto

- If possible, use properly maintained off-site commercial washing and steam cleaning businesses. If washing/cleaning must occur on-site, consider washing vehicle on an impervious surface.



- If possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous material. Use non-caustic detergents instead of caustic cleaning for parts cleaning. Use biodegradable, phosphate-free detergents for washing vehicles.
- Good housekeeping practices can minimize the risk of contamination from wash water discharges. Provide trash container in wash area. Sweep washing areas frequently to remove solid debris.
- Conduct auto repair activities at a commercial repair facility. Minor auto maintenance and repairs, if conducted at home, should be performed over impervious surfaces such as concrete, so spills and waste material can be readily cleaned up. Use drip pans, plastic sheeting, etc. to contain spills and waste material. Perform auto repair and maintenance activities under a covered area. Do not perform repair and maintenance activities during rain events. Do not wash parts or equipment in a parking lot, driveway or street. Monitor parked or stored vehicles and equipment for leaks and place pans under leaks to collect fluids for proper disposal or recycling.
- Recycle used oil and antifreeze by taking them to service stations and other recycling centers. Never pour oil in storm drains or other areas. Immediately clean up and contain any spills. Dispose of all waste and adsorbent materials properly. Store hazardous materials and wastes (including, but not limited to, fluids, solvents, parts containing fluids, batteries) indoors, under cover, or in watertight containers. Dispose of cleaning solvents at the designated hazardous waste center. Keep your liquid waste segregated. Do not buy fluids containing target pollutants (e.g., degreasers containing PERC).

Stormwater Pollution Prevention

Swimming Pools

Maintenance and Cleaning

Prevent algae problems with regular cleaning; consistent adequate chlorine levels, and well maintained water filtration and circulation systems.

- Do not use copper-based algacides.
- Control algae with chlorine or other alternatives, such as sodium bromide.

Manage pH and water hardness to minimize corrosion of copper pipes.

Discharge pool and fountain water properly.

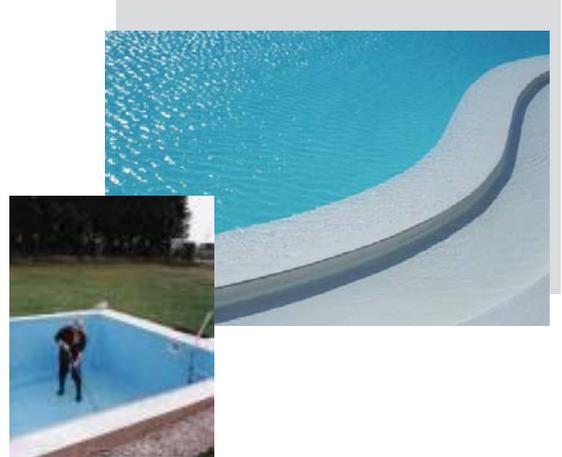
- When draining pools or fountains, never discharge water to a street or storm drain, discharge to the sanitary sewer if permitted to do so.
- If draining a pool to the sanitary sewer, prevent backflow by maintaining an "air gap" between the discharge line and the sewer line (do not seal the connection between the hose and sewer line).
- Be sure to call the local sewer authority for guidance on flow rate restrictions, backflow prevention, and handling special cleaning waste (such as acid wash).
- Keep discharge flows to the low levels. Higher flow rates may be prohibited by local ordinance.
- If water is dechlorinated with a neutralizing chemical or by allowing chlorine to dissipate for a few days (do not use the facility during this time), the water may be recycled/reused by draining it gradually onto a landscaped area. Water must be tested prior to discharge to ensure that chlorine is not present.
- Provide drip pans or buckets beneath drain pipe connections to catch leaks. This will be especially pertinent if pool or spa water that has not been dechlorinated is pumped through piping to the sanitary sewer (if permitted).

Properly clean and/or dispose of filters.

- Never clean a filter in the street or near a storm drain. Rinse cartridge filters onto a dirt area, and work filter residue into soil.
- Backwash diatomaceous earth filters onto dirt. Dispose of spent diatomaceous earth in the garbage. Diatomaceous earth cannot be discharged to surface waters, storm drainage systems, septic systems, or on the ground. If there is not a suitable dirt area, discharge filter backwash or rinsewater to the sanitary sewer if permitted to do so by the local sewer agency.

Training

- Train employees on appropriate BMP implementation, storm water discharge prohibitions, wastewater discharge requirements and proper spill containment and cleanup.



Appendix N: BMP Factsheets for Non-Residential Properties (Commercial and Airspace)

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Group A: BMPs sorted by Land Use

Non-Residential BMPs

Agricultural
Animal Handling Areas
Auto Body Shop
Auto Recycling
Auto Sales & Rentals/Tractor Sales
Board Ups
Christmas Tree & Pumpkin Lots/Flower Stands/Plant Nurseries
Food Service Facilities
Fumigation/Pest and Rodent Control
General Land Use
General Maintenance
General Recycling
Light Industrial
Light Manufacturing
Marinas, Boatyards and Ports
Office/Retail
Outdoor Loading and Unloading
Parking Lots
Parks and Recreation
Perchlorate Containing Materials
Sewer or Drain Cleaning and Maintenance/Septic Systems
Sign Boards/Billboards
Storage
Swimming Pool Maintenance
Trash Removal
Truck Repair and Storage
Vehicle or Equipment Storage
Yard Service

Stormwater Pollution Prevention

Agricultural

Irrigation

The irrigation system should be inspected and tested (or observed while in operation) to verify proper operation multiple times annually. Two of these inspections should occur during or immediately following wet weather. Any leaks, broken spray heads, or other malfunctions with the irrigation system should be repaired immediately.

Repair broken water lines as soon as possible. Shut off the water source to isolate a broken line, sprinkler or valve as soon as possible to minimize the loss of water. Protect downstream storm water drainage systems and watercourses from water pumped or bailed from trenches excavated to repair water lines.

Manage irrigation systems to ensure the appropriate amount of water is used and runoff is minimized. Irrigate slowly or pulse irrigate so the infiltration rate of the soil is not exceeded. Inspect irrigation system regularly for leaks to ensure that excessive runoff is not occurring. If re-claimed water is used for irrigation, ensure that there is no runoff from the landscaped area(s). Use automatic timers to minimize runoff.



Fertilizer



Read the product label and follow the directions carefully, using only as directed. Avoid applying near driveways or gutters. Never apply fertilizer before a rain. Store fertilizers and chemicals in a covered area and in sealed, waterproof containers. Use non-toxic products whenever possible.

Do not locate fertilizer stockpiles in areas of concentrated flows of storm water, drainage systems, inlets or watercourses. Do not locate fertilizer stockpiles adjacent to sensitive water bodies. Divert storm water run-on away from stockpiles. Implement wind erosion control practices on stockpile material.

Minor slides/slipouts usually occur during major storms. Stockpiles should be removed as soon as practicable and materials should be placed so that waterways are not impacted. During rain events, cover fertilizer stockpiles. Repair and/or replace covers as necessary to keep them functioning properly.

Pesticides

Apply pesticides in compliance with federal, state and local pesticide use regulations. Apply pesticides only as specified on the Pesticide Use Recommendation and the label. Activities should be approved by a licensed Agricultural Pest Control Adviser.

Effective pest control through chemical application requires consideration of the following:

- Use of the correct pesticide
- Seasonal timing of applications
- Timing in relation to expected precipitation events
- Proximity to water bodies
- Speed of travel when applying pesticide
- Proper agitation of the spray tank

Minimize the use of pesticides in or near storm water drainage systems or watercourses. Calibrate the spray rig to ensure accurate application of pesticides. Avoid using overhead irrigation for as long as the chemical manufacturer recommends after applying pesticides. Do not spray chemicals when rainfall-causing runoff is forecast within 12 hours.

Use non-toxic products whenever possible.



Stormwater Pollution Prevention

Soil Erosion

Remember the cardinal rule for reducing erosion: keep the land covered! Plant crops that protect the soil. A good conservation cropping sequence contains a high percentage of crops that are soil hugging, produce heavy canopy cover, and produce large amounts of after-harvest residue. Do not grow crops producing low residue more than one year in a row. Use crops that provide protective cover during normal high erosion periods.

Use crop residue management (any tillage system leaving 30 percent of the soil surface covered with crop residue after planting) to protect the soil not covered by a growing crop.

Use conservation tillage systems such as no-till and mulch till to plant crops while maintaining crop residue on the soil surface. No-till uses a one-pass drill with openers that places seed and fertilizer in narrow bands without disturbing the area and residue between the drill rows. Mulch tillage uses equipment that disturbs the full soil surface but does not invert the soil or bury excessive amounts of crop residue.

Shape the sides of waterways and plant grass to provide protection from erosion. Vegetative filter strips are strips of grass or other close growing vegetation that slow water runoff and trap sediment and other solid materials. Plant filter strips in areas where water will pass over them as sheet flow.

Mulch the soil surface with off-site residue or other organic material to protect soil when vegetative or residue cover is not available. Mulches improve water intake, absorb the impact of falling raindrops, and trap water to slow its movement. Straw mulching is becoming a readily accepted way to reduce irrigation-induced erosion in furrow-irrigated fields.



Livestock

Use dry cleaning methods to clean animal handling areas regularly. Sweeping animal handling areas is encouraged over other methods. Properly dispose of droppings, uneaten food, and other potential contaminants.

If water is used for cleaning:

- Do not discharge wash water to storm water drains or other receiving waters.
- Wash water should be collected and pumped to the sanitary sewer, do not allow wash water to enter storm drains. DO NOT discharge wash water to sanitary sewer until contacting the local sewer authority to find out if pretreatment is required.
- Keep animals in paved and covered areas, if feasible. If keeping animals in covered areas is not feasible, cover the ground with vegetation or some other type of ground cover such as mulch. Prevent animals from moving away from controlled areas where BMPs are in use (e.g. fencing, leashing, etc.).
- Non-storm water discharges to drainage paths, drain systems and watercourses are prohibited.
- Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use another technique only when dry cleanup techniques are not practicable, such as having to wet for dust control for safety or air quality reasons. Recycle, reuse or properly dispose of solid waste.
- Prevent storm water run-on from contacting stored solid waste through the use of ditches, berms, dikes and swales. Locate solid waste storage areas away from drainage facilities and watercourses and areas prone to flooding or ponding. Periodically inspect the solid waste storage areas and review the disposal procedures. Repair or replace damaged or missing BMPs.

Farm Equipment

Conduct regular cleaning. Sweeping or vacuuming the storage facility is encouraged over wet cleaning methods. Sweep all storage lots at least once before the onset of the wet season. Establish frequency of sweeping based on usage and field observations of sediment accumulation.

Washing or rinsing of equipment shall be performed in designated areas (describe what a designated area should be) and the resulting runoff shall not be discharged to the storm drain system.

Train employees on appropriate BMPs, storm water discharge prohibitions, and wastewater discharge requirements.



Stormwater Pollution Prevention

Animal Handling Areas

Use dry cleaning methods to clean animal handling areas regularly

- Sweeping animal handling areas is encouraged over wet cleaning methods.
- Promptly sweep up and properly dispose of droppings, uneaten food, and other potential contaminants.

If water must be used for cleaning

- Do not discharge wash water to storm water drains or other receiving waters.
- Wash water should be collected and pumped to the sanitary sewer; do not allow wash water to enter storm drains. DO NOT discharge wash water to sanitary sewer until contacting the local sewer authority to find out if pretreatment is required.

Keep animals in paved and covered areas, if feasible

- If keeping animals in covered areas is not feasible, cover the ground with vegetation or some other type of ground cover such as mulch.
- Prevent animals from moving away from controlled areas where BMPs are in use (e.g. fencing, leashing, etc.).

Training

- Train employees on the implementation of appropriate BMPs, storm water discharge prohibitions, and wastewater discharge requirements.
- Train employees on proper spill containment and cleanup of droppings, feed or other potential contaminants.



Stormwater Pollution Prevention

Auto Body Shop

Spray Painting

Use drop/ground cloths underneath outdoor painting, scraping, and sandblasting, as well as the mixing of paints, solvents, and tool cleaning.

Shelter any blasting and spray painting activities. Hang wind-blocking tarps to prevent sand blasting dust and overspray from escaping. Do not conduct these activities when wind conditions are such that containment is ineffective. Do not conduct these activities over open water.

Maintain a clean working environment. Utilize dry cleaning methods (e.g. sweeping). If washing is unavoidable, collect wash water for treatment and/or proper disposal. Vacuum loose paint chips and paint dust to prevent discharges. Properly dispose of surface chips, used blasting sand, residual paints, and other materials. Use temporary storage containment that is not exposed to rain.

Cover and seal nearby storm drain inlets with waterproof material, mesh, or other runoff control devices. Leave covers in place until job is complete. Then remove cover from inlet. Clean covers daily and remove any debris for proper disposal.

Properly clean, store, and dispose of painting, finishing, and coating materials. Do not dispose of toxic substances or liquid wastes on the pavement, ground, or storm drain. Cover materials with a temporary waterproof covering made of polyethylene, polypropylene or hypalon. Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be poured into a sanitary sewer drain. Clean paintbrushes and tools covered with non-water-based paints, finishes, or other materials such that used solvents (e.g., paint thinner, turpentine, etc.) can be collected for recycling or proper disposal. Recycle paint, paint thinner, solvents, and other recyclable materials whenever possible.

Train employees on BMP implementation, storm water discharge prohibitions, wastewater discharge requirements, and proper spill containment and cleanup. Ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.

Car Washing/Detailing

- If possible, use properly maintained off-site commercial washing and steam cleaning businesses whenever possible. If washing/cleaning must occur on-site, consider washing vehicle equipment inside the building or on an impervious surface to control the targeted constituents by directing them to the sanitary sewer.
- If washing must occur on-site and outdoors, use designated paved wash areas. Designated wash areas must be well marked with signs indicating where and how washing must be done. Map on-site storm drain locations to avoid discharges to the storm drain system. The designated wash area must be covered or bermed to collect the wash water and graded to direct the wash water to a sanitary sewer after contacting the local sewer authority to find out if pretreatment is required. Use biodegradable, phosphate-free detergents for washing vehicles as appropriate. Do not conduct oil changes and other engine maintenance in the designated washing area. Perform these activities in a place designated for oil change and maintenance activities. Cover the wash area when not in use to prevent contact with rain water.
- Pressure and steam clean off-site at commercial washing/steam cleaning facility to avoid generating runoff with high pollutant concentrations. If done on-site, no pressure cleaning and steam cleaning should be done in areas designated as wellhead protection areas for public water supply. Have all steam cleaning done in areas designed to collect and hold the wash and rinse water or effluent generated. Recycle, collect or treat wash water effluent prior to discharge to the sanitary sewer system.
- If possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous material. Use non-caustic detergents instead of caustic cleaning for parts cleaning. Use detergent-based or waterbased cleaning systems in place of organic solvent degreasers. Replace chlorinated organic solvents with non-chlorinated solvents. Non-chlorinated solvents like kerosene or mineral spirits are less toxic and less expensive to dispose of properly. Check list of active ingredients to see whether it contains chlorinated solvents. Choose cleaning agents that can be recycled.



Stormwater Pollution Prevention

- Good housekeeping practices can minimize the risk of contamination from wash water discharges. Provide trash container in wash area. Sweep washing areas frequently to remove solid debris. Inspect and maintain sumps, oil/water separators, and on-site treatment/recycling units.
- Emphasize to employees the connection between the storm drain system and runoff, help reinforce that car washing activities affect local water quality. Train employees on proper cleaning and wash water disposal procedures and conduct "refresher" courses on a regular basis. Train staff on proper maintenance measures for the wash area. Train employees and contractors on proper spill containment and cleanup. Collect all spilled liquids and properly dispose of them. Store and maintain appropriate spill cleanup materials in a location known to all near the designated wash area.

Outdoor Storage of Chemicals, Solvents, and Batteries

Provide secure storage to prevent vandalism-caused contamination. Place tight-fitting lids on all containers. Enclose or cover the containers where they are stored. Raise the containers and batteries off the ground by use of pallet or similar method, with provisions for spill control. Contain the material in such a manner that if the container leaks or spills, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters or groundwater.

Place drip pans or absorbent materials beneath all mounted container taps, and at all potential drip and spill locations during filling and unloading of containers. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.

Inspect storage areas regularly for leaks or spills. Conduct routine inspections and check for external corrosion of material containers. Also check for structural failure, spills and overfills due to operator error. Check for leaks or spills during pumping of liquids. Visually inspect new containers for loose fittings, poor welding, and improper or poorly fitted gaskets. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the container. Replace containers that are leaking, corroded, or otherwise deteriorating with ones in good condition. If the liquid chemicals are corrosive, containers made of compatible materials must be used instead of metal drums. New or secondary containers must be labeled with the product name and hazards.

Train employees in proper storage measures. Train employee and contractors in proper spill containment and cleanup.



Parking Areas

Clean parking lots on a regular basis to prevent accumulated wastes and pollutants from being discharged into storm drain systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.

Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.

Have designated personnel conduct inspections of the parking facilities and storm drain systems associated with them on a regular basis. Inspect cleaning equipment/sweepers for leaks on a regular basis.

Have spill cleanup materials readily available and in a known location. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.



Stormwater Pollution Prevention

Auto Recycling

Dismantling and Vehicle Maintenance

- Drain all fluids from vehicles upon arrival at the site. Segregate the fluids and properly store or dispose of them. Keep waste streams separate (e.g., waste oil and mineral spirits). Non-hazardous substances that are contaminated with a hazardous substance are considered a hazardous substance. Recycle anti-freeze, gasoline, used oil, mineral spirits, and solvents. Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers properly. Label and track the recycling of waste material (e.g., used oil, spent solvents, and batteries). Drain oil filters before disposal or recycling. Store cracked batteries in a non-leaking secondary container. Promptly transfer used fluids to the proper container. Do not leave full drip pans or other open containers around. Empty and clean drip pans and containers. Maintain an organized inventory of materials used.
- Do not pour liquid waste down floor drains, sinks, or outdoor storm drain inlets. Plug floor drains that are connected to the storm or sanitary sewer. If necessary, install a sump that is pumped regularly. Filter storm water discharges with devices such as oil-water separators.
- Inspect the maintenance area regularly for proper implementation of control measures.
- Train employees on proper waste control and disposal procedures.

Vehicle, Equipment and Parts Washing Areas

- Avoid washing parts or equipment outside. Designate an area for cleaning activities. Contain steam cleaning washwaters or discharge under an applicable NPDES permit. Ensure that washwaters drain well. Install curbing, berms or dikes around cleaning areas.
- Use phosphate-free biodegradable detergents. Consider using detergent-based or water-based cleaning systems in place of organic solvent degreasers.
- Inspect cleaning area regularly.
- Train employees on proper washing procedures.



Outdoor Vehicle, Equipment, and Parts Storage

- Use drip pans under all vehicles and equipment waiting for maintenance and during maintenance.
- Store batteries on impervious surfaces. Curb, dike or berm this area.
- Confine storage of parts, equipment and vehicles to designated areas.
- Cover all storage areas with a permanent cover (e.g., roofs) or temporary cover (e.g., canvas tarps).

Improper Connection with Storm Drains

- Plug all floor drains if it is unknown whether the connection is to storm drain or sanitary sewer systems. Alternatively, install a sump that is pumped regularly. Perform dye testing to determine if interconnections exist between sanitary water system and storm drain system. Update facility schematics to accurately reflect all plumbing connections.
- Install a safeguard to keep washwaters from cleaning vehicles and parts from entering the storm drain.
- Maintain and inspect the integrity of all underground storage tanks; replace when necessary.
- Train employees on proper disposal practices for all material.

Liquid Storage in Above Ground Containers

Ensure that any aboveground storage tanks are designed and managed in accordance with applicable regulations, identified as a potential pollution source, and have secondary containment such as a berm or dike with an impervious surface.

Provide barriers such as posts or guardrails, where tanks are exposed, to prevent collision damage with vehicles. Provide secure storage to prevent vandalism-caused contamination.

Stormwater Pollution Prevention

Place tight-fitting lids on all containers. Enclose or cover the containers where they are stored. Raise the containers off the ground by use of pallet or similar method, with provisions for spill control. Contain the material in such a manner that if the container leaks or spills, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters or groundwater.

Place drip pans or absorbent materials beneath all mounted container taps, and at all potential drip and spill locations during filling and unloading of containers. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.

Inspect storage areas regularly for leaks or spills. Conduct routine inspections and check for external corrosion of material containers. Also check for structural failure, spills and overfills due to operator error, or failure of piping system. Check for leaks or spills during pumping of liquids or gases from truck to a storage facility or vice versa. Visually inspect new tank or container installations for loose fittings, poor welding, and improper or poorly fitted gaskets. Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system. Replace containers that are leaking, corroded, or otherwise deteriorating with ones in good condition. If the liquid chemicals are corrosive, containers made of compatible materials must be used instead of metal drums. New or secondary containers must be labeled with the product name and hazards.

Train employees in proper storage measures. Train employee and contractors in proper spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.

Outdoor Storage of Chemicals, Solvents, and Batteries

- Provide secure storage to prevent vandalism-caused contamination. Place tight-fitting lids on all containers. Enclose or cover the containers where they are stored. Raise the containers and batteries off the ground by use of pallet or similar method, with provisions for spill control. Contain the material in such a manner that if the container leaks or spills, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters or groundwater.
- Place drip pans or absorbent materials beneath all mounted container taps, and at all potential drip and spill locations during filling and unloading of containers. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.
- Inspect storage areas regularly for leaks or spills. Conduct routine inspections and check for external corrosion of material containers. Also check for structural failure, spills and overfills due to operator error. Check for leaks or spills during pumping of liquids. Visually inspect new containers for loose fittings, poor welding, and improper or poorly fitted gaskets. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the container. Replace containers that are leaking, corroded, or otherwise deteriorating with ones in good condition. If the liquid chemicals are corrosive, containers made of compatible materials must be used instead of metal drums. New or secondary containers must be labeled with the product name and hazards.
- Train employees in proper storage measures. Train employee and contractors in proper spill containment and cleanup.

Stormwater Pollution Prevention

Auto and Other Vehicle Sales & Rentals/Tractor Sales

Parking Areas

Clean parking lots on a regular basis to prevent accumulated wastes and pollutants from being discharged into storm drain systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.

Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.

Have designated personnel conduct inspections of the parking facilities and storm drain systems associated with them on a regular basis. Inspect cleaning equipment/sweepers for leaks on a regular basis.

Have spill cleanup materials readily available and in a known location. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.



Vehicle Washing

If possible, use properly maintained off-site commercial washing and steam cleaning businesses. If washing/cleaning must occur on-site, consider washing vehicle equipment inside the building or on an impervious surface to control the targeted constituents by directing them to the sanitary sewer.

If washing must occur on-site and outdoors, use designated paved wash areas. Designated wash areas must be well marked with signs indicating where and how washing must be done. Map on-site storm drain locations to avoid discharges to the storm drain system. The designated wash area must be covered or bermed to collect the wash water and graded to direct the wash water to a sanitary sewer after contacting the local sewer authority to find out if pretreatment is required. Use biodegradable, phosphate-free detergents for washing vehicles as appropriate. Do not conduct oil changes and other engine maintenance in the designated washing area. Perform these activities in a place designated for oil change and maintenance activities. Cover the wash area when not in use to prevent contact with rain water.

Pressure and steam clean off-site to avoid generating runoff with high pollutant concentrations. If done on-site, no pressure cleaning and steam cleaning should be done in areas designated as wellhead protection areas for public water supply. Have all steam cleaning done in areas designed to collect and hold the wash and rinse water or effluent generated. Recycle, collect or treat wash water effluent prior to discharge to the sanitary sewer system.

If possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous material. Use non-caustic detergents instead of caustic cleaning for parts cleaning. Use detergent-based or waterbased cleaning systems in place of organic solvent degreasers. Replace chlorinated organic solvents with non-chlorinated solvents. Non-chlorinated solvents like kerosene or mineral spirits are less toxic and less expensive to dispose of properly. Check list of active ingredients to see whether it contains chlorinated solvents. Choose cleaning agents that can be recycled.



Good housekeeping practices can minimize the risk of contamination from wash water discharges. Provide trash container in wash area. Sweep washing areas frequently to remove solid debris. Inspect and maintain sumps, oil/water separators, and on-site treatment/recycling units.

Stormwater Pollution Prevention

Emphasize to employees the connection between the storm drain system and runoff; help reinforce that car washing activities affect local water quality. Train employees on proper cleaning and wash water disposal procedures and conduct "refresher" courses on a regular basis. Train staff on proper maintenance measures for the wash area. Train employees and contractors on proper spill containment and cleanup. Collect all spilled liquids and properly dispose of them. Store and maintain appropriate spill cleanup materials in a location known to all near the designated wash area.

Fuel Pumps

- Design fueling area to prevent stormwater runoff and spills. Cover fueling area with an overhanging roof structure or canopy so that precipitation cannot come in contact with the fueling area and if possible use a perimeter drain or slope pavement inward with drainage to a blind sump (must be properly maintained and water properly disposed of). Install an oil/water separator and connect to the sanitary sewer (if allowed), if a dead-end sump is not used to collect spills. Accumulated non-contaminated stormwater (e.g., in a secondary containment) should be released prior to next storm. Pave area with concrete rather than asphalt.
- Maintain clean fuel-dispensing areas using dry cleanup methods such as sweeping for removal of litter and debris, or use of rags and absorbents for leaks and spills. Do not wash down areas with water. "Spot clean" leaks and drips routinely. Leaks are not cleaned up until the absorbent is picked up and disposed of properly.
- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date. Place stockpiles of spill cleanup materials where they are readily accessible. Store portable absorbent booms (long flexible shafts or barriers made of absorbent material) in unbermed fueling areas. Report spills promptly.
- Label drains within the facility boundary, by paint/stencil (or equivalent), to indicate whether they flow to an oil/water separator, directly to the sewer, or to a storm drain. Inspect and clean, if necessary, storm drain inlets and catch basins within the facility boundary before October 1 each year. Post signs to remind employees not to top off the fuel tank when filling and signs that ban employees from changing engine oil or other fluids at that location.
- Ensure the following safeguards are in place:
 - Overflow protection devices on tank systems to warn the operator to automatically shutdown transfer pumps when the tank reaches full capacity.
 - Protective guards around tanks and piping to prevent vehicle damage.
 - Clearly tagging or labeling all valves to reduce human error.
 - Automatic shut off for severed fuel hoses.
 - Fit fuel dispensing nozzles with "hold-open latches" (automatic shutoffs) except where prohibited by local fire departments.
 - Use secondary containment when transferring fuel from the tank truck to the fuel tank. Cover storm drains in the vicinity during transfer.
- Aboveground Tank Leak and Spill Control:
 - Check for external corrosion and structural failure.
 - Check for spills and overfills due to operator error.
 - Check for failure of piping system.
 - Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.
 - Visually inspect new tank or container installation for loose fittings, poor welding, and improper or poorly fitted gaskets.
 - Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
 - Periodically, integrity testing should be conducted by a qualified professional.
- Train all employees upon hiring and annually thereafter on proper methods for handling and disposing of waste. Make sure that all employees understand stormwater discharge prohibitions, wastewater discharge requirements, and these best management practices. Train employees on proper fueling and cleanup procedures. Ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.



Stormwater Pollution Prevention

Board Ups

Good Housekeeping and Waste Management

- Take special care when loading or unloading wastes to minimize losses.
- Secure or cover transported materials, and supplies to and from activity sites to prevent spillage to the roadway.
- Keep the work site clean and orderly. Remove debris (e.g., sawdust, wood chips, etc.) in a timely fashion. Sweep the area.
- Do not dump waste liquids down the storm drain. Dispose of wash water, sweepings, and sediments properly.
- Have spill cleanup materials readily available. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.



Graffiti Removal

- If using paint to cover graffiti, follow the Painting Best Management Practice.
- If removing graffiti using wet sand blasting methods, minimize the quantity of water used, direct runoff to landscaped or soil area, filter runoff through a boom to keep sand out of storm drains, sweep debris and sand and dispose of all waste to avoid future runoff contamination.
- If removing graffiti using high-pressure washing and cleaning compound, direct washwater runoff to landscaped or soil area. No runoff can discharge into stormdrains. Seal stormdrains and vacuum/pump washwater to the sanitary sewer. Contact the local wastewater treatment plant for guidance, as harsh cleaning compounds may require pretreatment

Fence Repair

- Properly clean and dispose of equipment and wastes used and generated during fence repair/maintenance.
- Solid waste storage areas at repair sites should be located away from drainage facilities and watercourses and not located in areas prone to flooding or ponding.
- Compaction is not an alternative to restoring vegetation. Compaction is restricted to areas where vegetation is undesirable or is not sustainable such as in guardrail post or fence post installation. Consider the effect of runoff from the compacted soil on nearby surface water. Evenly grade or level the area prior to compaction. Do not perform compaction while storm water runoff is observed. Compact exposed soil as soon as possible after grading or soil disturbance. Inspect compacted areas to identify any evidence of erosion upon the completion of maintenance activities.

Patio, Walkway, Driveway

- Use dry clean-up methods, such as a broom, mop or absorbent material for surface cleaning whenever possible. Do not sweep or blow trash or debris into the street or gutter. Avoid graffiti abatement activities during rain events and use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal). Avoid using cleaning products that contain hazardous substances that can create hazardous waste.
- If water must be used for surface cleaning, use it sparingly. Never discharge washwater into the street, a ditch, or storm drain. Determine how you are going to capture the water and where you are going to discharge it before starting the wash job. Capture and collect the washwater and properly dispose of it (i.e., landscaped areas, private sewer system, sanitary sewer system).
- Provide regular training to employees and/or contractors regarding surface cleaning.

Parking Area

Clean parking lots on a regular basis to prevent accumulated wastes and pollutants from being discharged into storm drain systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.

Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.

Have designated personnel conduct inspections of the parking facilities and storm drain systems associated with them on a regular basis. Inspect cleaning equipment/sweepers for leaks on a regular basis.

Have spill cleanup materials readily available and in a known location. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.

Stormwater Pollution Prevention

Christmas Tree & Pumpkin Lots/Flower Stands/Plant Nurseries

Trash/Trash Bins/Dumpsters / Illegal Connections and Discharges

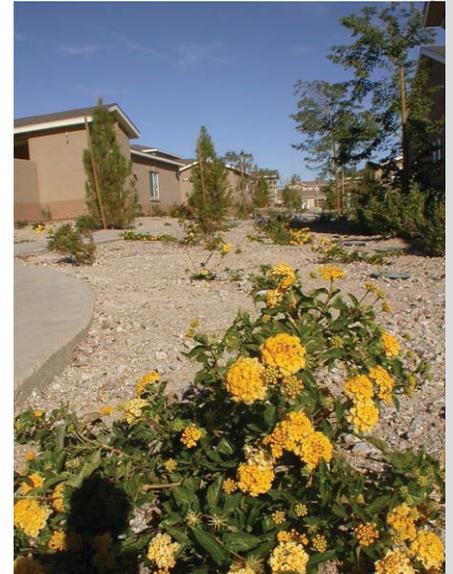
Post "No Littering" signs and enforce anti-litter laws. Provide trash receptacles in parking lots to discourage litter. Clean out and cover trash receptacles frequently to prevent spillage. Regularly inspect, repair, and/or replace trash receptacles.

Keep dumpster areas clean. Recycle materials whenever possible. Inspect dumpsters and trash bins weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating. Sweep and clean the storage area regularly and clean up spills immediately.

If the dumpster area is paved, do not hose it down to a storm drain. Instead, collect the wash water and discharge it to the sewer if allowed by the local sewer authority. Use dry methods when possible (e.g., sweeping, use of absorbents). Prevent stormwater run-on from entering the dumpster area by enclosing it or building a berm around the area. Prevent waste materials from direct contact with rain. Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.

Routinely sweep, shovel and dispose of litter in the trash. Remove litter and debris from drainage grates, trash racks and ditch lines to reduce discharge to the storm water drainage systems and watercourses.

Provide regular training to employees regarding proper waste disposal.



Sediment Tracking

- Inspect tires prior to entering the roadway. Use dry cleanup techniques to remove rock and sediment from tires prior to leaving the site.
- Inspect potential sediment tracking locations daily. Visible sediment tracking shall be swept and vacuumed on a daily basis. Be careful not to sweep up any unknown substance or any object that may be potentially hazardous. Adjust brooms frequently; maximize efficiency of sweeping operations. After sweeping is finished, properly dispose of sweeper wastes.

Burning Excess Plant Material

- Do not locate stockpiles in areas of concentrated flows of storm water, drainage systems, inlets or watercourses or adjacent to sensitive water bodies. Divert storm water run-on away from stockpiles.
- Implement wind erosion control practices on stockpile material such as tarping or spraying with water.
- Stockpiles should be removed as soon as practicable and materials should be placed so that waterways are not impacted.
- During rain events, stockpiles shall be covered or protected.

Sanitary/Septic Waste Management

- Sanitary facilities should be located in a convenient location and away from drainage facilities, watercourses, and from traffic circulation. When subjected to high winds or risk of high winds, temporary sanitary facilities should be secured to prevent overturning.
- Wastewater should not be discharged or buried within the project site. Sanitary and septic systems that discharge directly into sanitary sewer system should be properly connected to avoid illicit discharges and comply with the local health agency, city, county, and sewer district requirements. Sanitary and septic facilities should be maintained in good working order by a licensed service. Regular waste collection by a licensed hauler should be arranged before facilities overflow.
- Educate employees, subcontractors, and suppliers on sanitary and septic waste storage and disposal procedures

Stormwater Pollution Prevention

Chemical Storage

Place tight-fitting lids on all containers. Enclose or cover the containers where they are stored. Raise the containers off the ground by use of pallet or similar method, with provisions for spill control. Contain the material in such a manner that if the container leaks or spills, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters or groundwater.

Place drip pans or absorbent materials beneath all mounted container taps, and at all potential drip and spill locations during filling and unloading of containers. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.

Inspect storage areas regularly for leaks or spills. Conduct routine inspections and check for external corrosion of material containers. Also check for structural failure, spills and overfills due to operator error or failure of piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the container system. Replace containers that are leaking, corroded, or otherwise deteriorating with ones in good condition. If the liquid chemicals are corrosive, containers made of compatible materials must be used instead of metal drums. New or secondary containers must be labeled with the product name and hazards.

Train employees in proper storage measures. Train employee and contractors in proper spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.



Plant Overwatering

- Irrigate slowly or pulse irrigate so the infiltration rate of the soil is not exceeded. Use automatic timers to minimize runoff. Use popup sprinkler heads in areas with a lot of activity or where pipes may be broken. Consider the use of mechanisms that reduce water flow to broken sprinkler heads. Install and use moisture sensors and automatic sprinklers for more accurate scheduling of irrigation. Recycle runoff; blend with fresh water as necessary
- Inspect irrigation system regularly for leaks and to ensure that excessive runoff is not occurring. If re-claimed water is used for irrigation, ensure that there is no runoff from the landscaped area(s).
- Convert paved or bare soil areas to vegetation that will retard runoff (turf grasses or other comparable plant materials) wherever possible.
- Group plants with similar water needs together to improve irrigation efficiency. Establish plant buffer zones between production areas and ditches, creeks, ponds, lakes, or wetlands.

Stormwater Pollution Prevention

Food Service Facilities/ Grease Traps

Blockage Prevention in the Sanitary Sewer System

- Post "No Grease" signs above sinks and on the front of dishwashers
- Recycle waste cooking oil
- Practice dry cleanup. Remove food waste with "dry" methods such as scraping, wiping, or sweeping before using "wet" methods that use water. Wet methods typically wash the water and waste materials into the drains where it eventually collects on the interior walls of the drainage pipes. Successful dry cleanup includes:
 - Use of rubber scrapers to remove fats, oils and grease from cookware, utensils, chafing dishes, and serving ware
 - Use of food grade paper to soak up oil and grease under fryer baskets
 - Use of paper towels to wipe down work areas. Cloth towels will accumulate grease that will eventually end up in drains from towel washing/rinsing.
- Dispose of food waste by recycling and/or solid waste removal. Do not pour grease, fats or oils from cooking down the drain and do not use the sinks to dispose of food scraps.
- Educate kitchen staff not to remove drain screens since this may allow paper or plastic cups, straws, and other utensils to enter the plumbing system during clean up.
- Spill prevention reduces the amount of food waste that will require cleanup. Empty grease trap and interceptor containers before they are full to avoid spills. Use a cover to transport interceptor contents to rendering barrel. Provide employees with the proper tools (ladles, ample containers, etc.) to transport materials without spilling.



Grease Trap and Interceptor Maintenance

- Train all staff to perform correct cleaning procedures, particularly for under-sink interceptors that are prone to break down due to improper maintenance.
- Clean undersink grease traps at least weekly. If grease traps are more than 50% full when cleaned weekly, the cleaning frequency needs to be increased.
- Clean grease interceptors routinely.
- Keep a maintenance log.
- Contract with a management company to professionally clean large hood filters. Small hoods can be hand-cleaned with spray detergents and wiped down with cloths for cleaning. Hood filters can be effectively cleaned by routinely spraying with hot water with little or no detergents over the mop sink that should be connected to a grease trap. After hot water rinse, filter panels can go into the dishwasher.

Prevention of Fats, Oil, and Grease from Entering Creeks and Streams Through the Storm Drain System

- Cover outdoor grease and oil storage containers. Regularly check for leaks or spills and correct immediately. Some local jurisdictions will provide or require Best Management Practices in place for stormwater.
- Locate grease dumpsters and storage containers away from storm drain catch basins.
- Use absorbent pads or other material in or around the storm drain inlets if grease dumpsters and containers must be located nearby.
- Do not use free flowing absorbent materials such as "kitty litter" or sawdust. Use absorbent pads or other material to clean up spilled material around outdoor equipment, containers or dumpsters.

Stormwater Pollution Prevention

Trash/Trash Bins/Dumpsters Connections/Illegal Discharge

Post "No Littering" signs and enforce anti-litter laws. Provide a sufficient number of litter receptacles for the facility. Clean out and cover litter receptacles frequently to prevent spillage.

Keep dumpster areas clean. Recycle materials whenever possible. Use all of a product before disposing of the container. Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc., may not be disposed of in solid waste containers. Take special care when loading or unloading wastes to minimize losses.

Inspect dumpsters and trash bins weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating. Sweep and clean the storage area regularly and clean up spills immediately.

If the dumpster area is paved, do not hose it down to a storm drain. Instead, collect the wash water and discharge it to the sewer if allowed by the local sewer authority. Use dry methods when possible (e.g., sweeping, use of absorbents). Prevent stormwater run-on from entering the dumpster area by enclosing it or building a berm around the area. Prevent waste materials from directly contacting rain. Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.



Parking Area

Clean parking lots on a regular basis to prevent accumulated wastes and pollutants from being discharged into storm drain systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.

Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.

Have designated personnel conduct inspections of the parking facilities and storm drain systems associated with them on a regular basis. Inspect cleaning equipment/sweepers for leaks on a regular basis.



Have spill cleanup materials readily available and in a known location. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.

Patio, Walkway, Driveway

- Use dry clean-up methods, such as a broom, mop or absorbent material for surface cleaning whenever possible. Do not sweep or blow trash or debris into the street or gutter. Avoid graffiti abatement activities during rain events and use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal). Avoid using cleaning products that contain hazardous substances that can create hazardous waste.
- If water must be used for surface cleaning, use it sparingly. Never discharge washwater into the street, a ditch, or storm drain. Determine how you are going to capture the water and where you are going to discharge it before starting the wash job. Capture and collect the washwater and properly dispose of it (i.e., landscaped areas, private sewer system, sanitary sewer system).

Provide regular training to employees and/or contractors regarding surface cleaning.

Stormwater Pollution Prevention

Fumigation/Pest and Rodent Control

Know the Application Site

Scout the area to evaluate the extent of the pest problem in order to select the appropriate control method. Identify environmentally sensitive areas and learn how the soil types and the layout of each application site affect the movement of water, both through and across soil.

Read and Follow Label Directions

Pesticide labels contain important information about applicator and environmental safety, including water quality protection. Always follow label directions.

Match Application Rates to the Pest Problem

Every pesticide label specifies application rates. Carefully consider all aspects of the pest problem, such as the type of pest(s), level of infestation, location, and environmental considerations (i.e., soil type, organic matter).



Do Not Mix and Load Near Water

Pesticides can reach groundwater and surface water as a result of discharges or spills that occur during mixing and loading operations. Mixing and loading should be done at least 50 feet and as far as possible from surface waters such as wells, lakes, streams, and rivers as well as storm drains. When possible, mix and load the pesticides at the site of application. Be sure all containers being transported are secured.

Calibrate Application Equipment Properly

Frequently check and maintain spray nozzles, hoses, gauges and tanks. Proper calibration is the key to applying accurate rates of pesticides. Improper calibration can result in too much or too little product applied, irregular distribution and poor pest control. Inaccurate tank volumes and pressure gauges or worn nozzles also may cause improper application. Inspect application equipment before every use.

Do Not Apply Pesticides If Heavy Rain Is Forecast

Pesticides are most susceptible to runoff from heavy rains during the first several hours after application. Therefore, delaying application until after the storm will avoid polluting surface waters and allow for the pesticide to function properly.

Avoid Overspray and Drift

Check the pesticide label for application precautions or restrictions during windy conditions. Wind speed, temperature and humidity all affect pesticide spray drift. Drift can be reduced by lowering the height at which pesticides are applied and using nozzles that produce large droplet sizes.

Store Pesticides in a Safe Place

Pesticides need to be stored in a secure place in their original containers and with labels clearly visible. Pesticides must be stored at least 50 feet from any well unless they are stored in secondary containment.

Properly Dispose of Pesticide Containers

Information about container disposal is on the pesticide label. Containers should be triple or pressured-rinsed thoroughly after use, punctured and disposed of in accordance with label directions or offered for recycling. Sprayers should be cleaned at the application site whenever possible and at a safe distance from wells, lakes, streams and storm drains. The rinsate should be sprayed on a site that is listed on the pesticide label or used as makeup water in the next tank mix. Be sure label rates are not exceeded.

Develop Emergency Response Plan

Anyone who stores, handles or uses pesticides should have an emergency response plan should an accident occur.

Stormwater Pollution Prevention

General Land Use

Illicit Connections/Illegal Discharge

- Locate solid waste storage areas away from drainage facilities and watercourses and not in areas prone to flooding or ponding. Prevent storm water run-on from contacting stored solid waste through the use of ditches, berms, dikes and swales. Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use wet cleaning techniques only when dry cleanup techniques are not practicable. Periodically inspect the solid waste storage areas and review the disposal procedures.
- Non-storm water discharges to drainage paths, drain systems and watercourses are prohibited. Fluids should be collected by vacuum or other methods and contained and recycled, evaporated or discharged to the sanitary sewer system with approval from the publicly-owned treatment works.
- Store, transport and dispose of all hazardous waste in accordance with federal, state and local regulations. Follow label instructions regarding the proper handling, mixing and application of materials which could generate hazardous waste and a discharge to waterways..
- Train employees in proper waste disposal and cleaning, maintenance and good housekeeping procedures.



General Maintenance and Repair

Properly collect and dispose of water when pressure washing buildings, rooftops, and other large objects. Properly prepare work area before conducting building maintenance. Properly clean and dispose of equipment and wastes used and generated during building maintenance.

Recycle residual paints, solvents, lumber, and other materials to the maximum extent practical. Buy recycled products to the maximum extent practical.

Do not dump waste liquids down the storm drain. Make sure that nearby storm drains are well marked to minimize the chance of inadvertent disposal of residual paints and other liquids.



Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area. Cover materials of particular concern that must be left outside, particularly during the rainy season. Use drip pans or absorbent material under leaking vehicles and equipment to capture fluids.

All maintenance activities should practice water conservation. Keep water application equipment in good working condition. Use the minimum amount of water needed to complete each maintenance activity.

Stormwater Pollution Prevention

General Housekeeping

- Purchase only the amount of material that will be needed for foreseeable use. Choose products that do the same job with less environmental risk.
- Keep work sites clean and orderly. Remove debris in a timely fashion. Sweep the area. Dispose of wash water, sweepings, and sediments, properly. Recycle or dispose of fluids properly.
- Specific employees should be assigned specific inspection responsibilities at the work site and given the authority to remedy any problems found.
- Prohibit littering by employees, subcontractors, and visitors.
- Full dumpsters shall be removed from the project site and the contents shall be disposed of outside the highway right of way. Dumpster washout on the project site is not allowed. Notify trash hauling contractors that only watertight dumpsters are acceptable for use on-site.

Stormwater Pollution Prevention

General Maintenance

Painting

- Use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water." Develop paint handling procedures for proper use, storage, and disposal of paints. Transport paint and materials to and from job sites in containers with secure lids and tied down to the transport vehicle. Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint containers. Mix paint indoors before using so that any spill will not be exposed to rain. Do so even during dry weather because cleanup of a spill will never be 100% effective.
- Transfer and load paint away from storm drain inlets. Plug nearby storm drain inlets prior to starting painting and remove plugs when job is complete when there is significant risk of a spill reaching storm drains or if sand blasting is used to remove paint. Use a ground cloth to collect the chips if painting requires scraping or sand blasting of the existing surface. Dispose the residue properly.
- Cover or enclose painting operations properly to avoid drift. Clean the application equipment in a sink that is connected to the sanitary sewer if using water based paints. Capture all cleanup-water and dispose of properly. Store leftover paints properly if they are to be kept for the next job, or dispose properly.
- Regularly train employees on appropriate BMP implementation, storm water discharge prohibitions, and wastewater discharge requirements. Train employees on proper spill containment and cleanup.



Fence Repair

- Properly clean and dispose of equipment and wastes used and generated during fence repair/maintenance.
- Solid waste storage areas at repair sites should be located away from drainage facilities and watercourses and not located in areas prone to flooding or ponding.
- Compaction is not an alternative to restoring vegetation. Compaction is restricted to areas where vegetation is undesirable or is not sustainable such as in guardrail post or fence post installation. Consider the effect of runoff from the compacted soil on nearby surface water. Evenly grade or level the area prior to compaction. Do not perform compaction while storm water runoff is observed. Compact exposed soil as soon as possible after grading or soil disturbance. Inspect compacted areas to identify any evidence of erosion upon the completion of maintenance activities.

Plumbing

- Copper enters receiving waters through storm drains and from wastewater discharged from wastewater treatment plants. Copper is acutely toxic to plankton and affects the reproduction and growth of shellfish.
- Design each plumbing system to minimize velocity, minimize hot water temperature, avoid stagnant sections and minimize direction and size changes to preserve pipe integrity.
- Eliminate small burrs created from pipe cutting. This reduces turbulence and significantly decreases corrosion. Remove all oxides, debris, and surface soil from tube ends.
- Maintain good housekeeping practices while working. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area. Protect stored pipe from weather and damage so that installed pipe is as clean as possible.
- Newly installed systems should be flushed soon after completion to remove excess flux and debris. For inactive systems, repeat flushing periodically.
- Avoid excess use of flux. Excess flux residue can increase pipe corrosion that leads to copper discharges



Stormwater Pollution Prevention

Graffiti Removal

- If painting over graffiti, use Painting Best Management Practices.
- If removing graffiti using wet sand blasting methods, minimize the quantity of water used, direct runoff to landscaped or soil area, filter runoff through a boom to keep sand out of storm drains, sweep debris and sand and dispose of all waste to avoid future runoff contamination.
- If removing graffiti using high-pressure washing and cleaning compound, direct washwater runoff to landscaped or soil area. No runoff can discharge into stormdrains. Seal stormdrains and vacuum/pump washwater to the sanitary sewer. Contact the local wastewater treatment plant for guidance, as harsh cleaning compounds may require pretreatment.

Roof Repair or Replacement/Chimney Maintenance

- Recycle residual paints, solvents, lumber, and other materials to the maximum extent practical. Buy recycled products to the maximum extent practical.



- Maintain good housekeeping practices while work is underway. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area.
- Store materials properly that are normally used in repair and remodeling such as paints and solvents. To provide protection from rain, bagged and boxed materials stored outdoors should be stored on pallets throughout the rainy season and covered prior to rain events. Storage areas should be kept clean, well organized and equipped with cleanup supplies. Perimeter controls, containment structures, covers and liners shall be repaired or replaced as needed.

- Do not dump waste liquids down the storm drain. Dispose of sweepings, and sediments properly. Properly collect and dispose of water when pressure washing rooftops, chimneys and other large objects.
- Solid waste storage areas at the work site should be located away from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding.
- Periodically inspect the solid waste storage areas and review the disposal procedures.
- Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use another technique only when dry cleanup techniques are not practicable, such as having to wet for dust control for safety or air quality reasons.

Carpentry

- Wood pieces too small for construction reuse should be recycled or chipped for mulch or compost to reduce solid wastes.
- Maintain good housekeeping practices. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area. Dispose of sweepings, and sediments properly. Storage areas should be kept clean, and well organized.
- Solid waste storage areas at the work site should be located away from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding. Periodically inspect the solid waste storage areas and review the disposal procedures.
- Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use another technique only when dry cleanup techniques are not practicable, such as having to wet for dust control for safety or air quality reasons.



Stormwater Pollution Prevention

General Recycling

Inbound Recyclable and Waste Material Control

Provide public education brochures on acceptable recyclable materials. Educate curbside pick-up drivers on acceptable materials. Reject unacceptable materials at the source.

Establish a program to encourage suppliers of scrap, waste, and other salvageable materials to drain residual fluids prior to arrival at the facility. Establish an acceptance program for handling, storage and disposal of lead-acid batteries. Establish procedures for rejecting or handling, storing and disposal of hazardous wastes and other nonhazardous residual fluids. Establish procedures to properly handle industrial turnings and cuttings and prohibiting cutting oils and metallic fines from coming in contact with runoff.

Provide totally enclosed drop-off containers for public.



Storage Other: Lightweight Materials

- Provide covered storage, container bins or equivalent for lighter-weight materials such as glass, plastics, aluminum cans, paper, cardboard. Store equivalent of the average daily volume of recyclable materials indoors. Minimize/eliminate residue from bottles, containers, etc. from coming in contact with storm water runoff.
- Practice good housekeeping to eliminate particulate and residual materials buildup and establish a frequent cleaning schedule for high traffic areas. Establish dry clean up methods.
- Directly discharging floor wash waters to sanitary sewer system only if permitted by local sanitary authority. Prohibit the discharge of wash down water from floor areas to the storm drain system
- Identify/provide supplier training or information bulletins on requirements for acceptance of lightweight materials. Encourage supplier participation in program to minimize/eliminate, as practicable, volume of semisolid and liquid residues in recyclable materials (e.g., residual fluids in aluminum and plastic containers). Establish procedures and employee training for the handling, storage and disposal of residual fluids from small containers. Provide covered disposal containers or equivalent for residual waste materials.

Residual Non-recyclable Materials

- Store residual non-recyclable materials in covered containers for transport to a proper disposal facility.
- Bale residual non-recyclable materials and cover with tarpaulin or equivalent.

Recyclable Material Processing/Preventative Maintenance

- Conduct processing operations indoors. Clean up residual fluids.
- Conduct routine preventive maintenance on all processing equipment and replace worn component parts on valves, pumps, and motors per manufacturer's recommendations.
- Schedule frequent good housekeeping to minimize particulate and residual materials buildup.

[Need to add loading and unloading bmps.](#)

Stormwater Pollution Prevention

Vehicle and Equipment Washing

- When possible, site vehicles should be cleaned off-site at a commercial car wash.
- Prohibit washing vehicles and equipment outdoors except in a designated area that does not discharge to the storm drain system. Recycle wash water.
- Provide vehicle wash rack with connection to sanitary sewer.
- Use auto shut-off valves on washing equipment.
- Establish clean up procedures for minor spills including the use of dry adsorbents.

Inspections

- Conduct daily inspections of all material storage, handling and transfer areas. Train employees on how to inspect implemented BMPs
- Document signs of corrosion, worn parts or components on pumps and motors, leaking seals and gaskets.



Stormwater Pollution Prevention

Light Industrial/Light Manufacturing

Trash/Trash Bins/Dumpsters

- Post "No Littering" signs and enforce anti-litter laws. Provide a sufficient number of litter receptacles for the facility. Clean out litter receptacles frequently and keep covered to prevent spillage.
- Keep dumpster areas clean. Recycle materials whenever possible. Use all of a product before disposing of the container. Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc., may not be disposed of in solid waste containers. Take special care when loading or unloading wastes to minimize losses. Loading systems can be used to minimize spills and fugitive emission losses such as dust or mist. Vacuum transfer systems can minimize waste loss.
- Inspect dumpsters and trash bins weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating. Sweep and clean the storage area regularly and clean up spills immediately.
- If the dumpster area is paved, do not hose it down to a storm drain. Instead, collect the wash water and discharge it to the sewer if allowed by the local sewer authority. Use dry methods when possible (e.g., sweeping, use of absorbents). Prevent stormwater run-on from entering the dumpster area by enclosing it or building a berm around the area. Prevent waste materials from directly contacting rain. Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.



Landscaping

Where feasible, retain and/or plant native vegetation since it usually requires less maintenance than new vegetation. When planting or replanting consider using flowers, trees, shrubs, and groundcovers that have low water usage. Consider alternative landscaping techniques such as naturescaping and xeriscaping.

Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage at a permitted landfill or by composting. Do not dispose of gardening wastes in streets, waterways, or storm drainage systems. Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm and/or cover.



Irrigate slowly or pulse irrigate so the infiltration rate of the soil is not exceeded. Inspect irrigation system regularly for leaks and to ensure that excessive runoff is not occurring. If re-claimed water is used for irrigation, ensure that there is no runoff from the landscaped area(s). Use automatic timers to minimize runoff. Use popup sprinkler heads in areas with a lot of activity or where pipes may be broken. Consider the use of mechanisms that reduce water flow to broken sprinkler heads.

Use mechanical methods of vegetation removal such as hand weeding rather than applying herbicides. When conducting mechanical or manual weed control, avoid loosening the soil, which could lead to erosion.

If using pesticides, follow all federal, state, and local laws and regulations governing their use, storage, and disposal. Follow manufacturers' recommendations and label directions. When applicable, use less toxic pesticides that will do the job and avoid use of copper-based pesticides if possible. Do not apply pesticides if rain is expected or if wind speeds are above 5 mph. Do not mix or prepare pesticides for application near storm drains. Prepare the minimum amount of pesticide needed for the job and use the lowest rate that will effectively control the targeted pest. Do not apply any chemicals directly to surface waters and do not spray pesticides within 100 feet of open waters. If pesticide use is necessary within 100 feet of waters, application procedures must follow local regulatory guidance. Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques. Purchase only the amount of pesticide that you can reasonably use in a given time period. Careful soil mixing and layering techniques using a topsoil mix or composted organic material can be used as an effective measure to reduce weeds and the need for watering.

Stormwater Pollution Prevention

Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers. Follow manufacturers' recommendations and label directions. Employ techniques to minimize off-target application (e.g. spray drift) of fertilizer, including consideration of alternative application techniques. Calibrate fertilizer distributors to avoid excessive application. Periodically test soils for determining proper fertilizer use. Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface. Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water. Use slow release fertilizers whenever possible to minimize leaching.

▪ Patio, Walkway, Driveway

- Use dry clean-up methods, such as a broom, mop or absorbent material for surface cleaning whenever possible. Do not sweep or blow trash or debris into the street or gutter. Avoid graffiti abatement activities during rain events and use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal). Avoid using cleaning products that contain hazardous substances that can create hazardous waste.
- If water must be used for surface cleaning, use it sparingly. Never discharge washwater into the street, a ditch, or storm drain. Determine how you are going to capture the water and where you are going to discharge it before starting the wash job. Capture and collect the washwater and properly dispose of it (i.e., landscaped areas, private sewer system, sanitary sewer system).
- Provide regular training to employees and/or contractors regarding surface cleaning.

▪ Parking

- Design lot to include semi-permeable hardscape. Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.
- Clean parking facilities on a regular basis to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately. Inspect cleaning equipment/sweepers for leaks on a regular basis.

Chemical Storage

Ensure that any underground or aboveground storage tanks are designed and managed in accordance with applicable regulations, identified as a potential pollution source, and have secondary containment such as a berm or dike with an impervious surface.

Provide barriers such as posts or guardrails, where tanks are exposed, to prevent collision damage with vehicles. Provide secure storage to prevent vandalism-caused contamination.

Place tight-fitting lids on all containers. Enclose or cover the containers where they are stored. Raise the containers off the ground by use of pallet or similar method, with provisions for spill control. Contain the material in such a manner that if the container leaks or spills, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters or groundwater.

Place drip pans or absorbent materials beneath all mounted container taps, and at all potential drip and spill locations during filling and unloading of containers. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.

Inspect storage areas regularly for leaks or spills. Conduct routine inspections and check for external corrosion of material containers. Also check for structural failure, spills and overfills due to operator error, or failure of piping system. Check for leaks or spills during pumping of liquids or gases from truck to a storage facility or vice versa. Visually inspect new tank or container installations for loose fittings, poor welding, and improper or poorly fitted gaskets. Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system. Replace containers that are leaking, corroded, or otherwise deteriorating with ones in good condition. If the liquid chemicals are corrosive, containers made of compatible materials must be used instead of metal drums. New or secondary containers must be labeled with the product name and hazards.



Stormwater Pollution Prevention

Train employees in proper storage measures. Train employee and contractors in proper spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.

Outdoor Storage

- Store materials indoors, if feasible. Designate a secure material storage area that is paved with Portland cement concrete, free of cracks and gaps, and impervious in order to contain leaks and spills. Protect materials stored outside from rainfall and wind dispersal by covering them with a fixed roof or a temporary waterproof covering made of polyethylene, polypropylene, or hypalon. Keep covers in place at all times when work is not occurring. If areas are so large that they cannot feasibly be covered and contained, implement erosion control practices at the perimeter of the area and at catch basins to prevent dispersion of the stockpiled material.



- Protect materials stored outside from stormwater runoff. Construct a berm around the perimeter of the material storage area to prevent the runoff of uncontaminated stormwater from adjacent areas, as well as storm water runoff from the storage area.
- All materials stored outside should have a secondary containment system. Surround storage tanks with a berm or other secondary containment system. Slope the area inside the berm to a containment drain, if possible. Drain liquids to the sanitary sewer if available. Pass accumulated stormwater in petroleum storage areas through an oil/water separator. Paved areas should be sloped in a manner that minimizes pooling of water on the site. A minimum slope of 1.5% is recommended.
- Do not store chemicals, drums, or bagged or cardboard boxed materials directly on the ground. Place these items in secondary containers. Liquid materials should be stored in UL approved double walled tanks or surrounded by a curb or dike to provide the volume to contain 10 percent of the volume of all the containers or 110 percent of the volume of the largest container, whichever is greater. Keep chemicals in their original containers, if feasible, and keep them well labeled. Keep outdoor storage containers in good condition. Keep storage areas clean and dry. Sweep and maintain routes to and from storage areas. Conduct regular inspections of storage areas.

Outdoor Loading and Unloading

Develop an operations plan that describes procedures for loading and/or unloading. Load/unload only at designated loading areas. Pave loading areas with concrete instead of asphalt, if possible.

Conduct loading and unloading in dry weather if possible. Have employees load and unload all materials and equipment in covered areas such as building overhangs at loading docks, if feasible. Cover designated loading/unloading areas to reduce exposure of materials to rain. Consider placing a seal or door skirt between delivery vehicles and building to prevent exposure to rain.

Design loading/unloading area to prevent stormwater run-on, which would include grading or berming the area, and positioning roof downspouts so they direct stormwater away from the loading/unloading areas. Grade and/or berm the loading/unloading area to a drain that is connected to a form of containment.

Use drip pans underneath hose and pipe connections and other leak-prone spots during liquid transfer operations, and when making and breaking connections. Several drip pans should be stored in a covered location near the liquid transfer area so that they are always available, yet protected from precipitation when not in use. Drip pans can be made specifically for railroad tracks. Drip pans must be cleaned periodically, and drip collected materials must be disposed of properly.

Sweep up and dispose of any loose debris remaining after loading/unloading is completed.



Stormwater Pollution Prevention

Outdoor Maintenance and Repairs/Painting

Properly collect and dispose of water if pressure washing buildings, rooftops, and other large objects. If pressure washing where the surrounding area is paved, use a water collection device that enables collection of wash water and associated solids. Use a sump pump, wet vacuum or similarly effective device to collect the runoff and loose materials. Dispose of the collected runoff and solids properly. If pressure washing on a landscaped area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the landscaping and not drain to pavement.



Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain. Store toxic material under cover when not in use and during precipitation events. Switch to non-toxic chemicals for maintenance when possible. If cleaning agents are used, select biodegradable products whenever feasible. Consider using a waterless and non-toxic chemical cleaning method for graffiti removal (e.g. gels or spray compounds). Use chemicals that can be recycled. Buy recycled products to the maximum extent practicable

Use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water." Develop paint handling procedures for proper use, storage, and disposal of paints. Transport paint and materials to and from job sites in containers with secure lids and tied down to the transport vehicle. Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint containers. Mix paint indoors before using so that any spill will not be exposed to rain. Do so even during dry weather because cleanup of a spill will never be 100% effective.

Transfer and load paint away from storm drain inlets. When there is significant risk of a spill reaching storm drains or if sand blasting is used to remove paint, cover nearby storm drain inlets prior to starting painting and remove covers when job is complete. Use a ground cloth to collect the chips if painting requires scraping or sand blasting of the existing surface. Dispose the residue properly.

Cover or enclose painting operations properly to avoid drift. Clean the application equipment in a sink that is connected to the sanitary sewer if using water based paints. Capture all cleanup-water and dispose of properly. Cover and store leftover paints if they are to be kept for the next job properly, or dispose properly.

Regularly train employees on appropriate Best Management Practices implementation, storm water discharge prohibitions, and wastewater discharge requirements. Train employees on proper spill containment and cleanup.

Stormwater Pollution Prevention

Marinas, Boat Yards and Ports

Painting, Blasting, Sanding and Stripping

- Conduct ship painting, blasting, sanding, or stripping in specifically designated areas designed to minimize releases. Pave work areas, preferably with concrete to allow easier removal of spills or wastes. Slope surface to allow capture of spills. Use catch basins with a valve that allow spills and releases to enter a dead-end sump. Use berms to minimize run-on of stormwater. Create a paint / spray booth to prevent residue from being carried into surface waters and into the air. New portable ship paint booths are being tested and may be commercially available soon.
- Use temporary controls such as wind-blocking tarps to prevent dust and overspray from escaping, shrouds between the vessel and pier/shore to prevent spillage into the water, plywood and/or plastic sheeting to cover open areas between decks when sandblasting, drip pans, drop cloths, tarpaulins, or other protective devices in all paint mixing and solvent operations unless carried out in impervious contained and covered areas. Prohibit uncontained spray painting, blasting or sanding activities over open water. Prohibit outside spray painting, blasting, or sanding activities during windy conditions that render containment ineffective.



Boat Cleaning

- Clean hulls frequently to reduce buildup of hard growth. Use phosphate-free, biodegradable soaps and detergents, alternative anti-fouling paints and "natural" cleansers instead of solvents, and amounts used should be kept to a minimum. Do not use detergents containing ammonia, sodium hypochlorite, chlorinated solvents, petroleum distillates, or lye. No soaps or detergents of any kind should be used to wash the topsides of boats where the wash water will enter a waterbody.
- Do not perform in-the-water hull scraping or any process that occurs underwater to remove paint from the boat hull.

Collection, Cleanup, Storage, Recycling, and Disposal

- Use vacuum sanders that have dust-containment bags to remove paint from hulls and collect paint dust. Plug scuppers to contain dust and debris. Don't sand underwater or in a strong breeze. Wipe down small amounts of sanding dust with a damp rag. Vacuum or sweep paved surfaces regularly. Do not hose down area.
- Clean up stripping wastes immediately to reduce potential releases from wind or stormwater. Collect spent abrasives regularly and store under cover to await proper disposal. Reuse blast material where possible. Where necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips, and dispose of waste properly. All paint and chemical strippers should be labeled and stored properly.
- Collect and properly dispose of wash water from washing painted boat hulls. Consider taking the boat to a local boat yard that is equipped to collect and treat wash water.
- Dispose of empty solvent and paint containers properly. Dispose of lead-based paint residues in accordance with local, state, and federal guidelines. Do not pour out unused portions on the ground or down the storm drains. Use proper receptacles or disposal facilities for unused portions.



Spill Prevention and Response

- Have adequate oil spill response equipment that is easily accessible and clearly marked. Develop and maintain an oil spill plan. Inform your local harbormaster and fire department about your oil spill recovery plan and equipment. In the event of an accidental discharge of oil or hazardous material into the water or onto a deck or pier with a potential for entry into the water, immediately notify the yard, port, or marina owner or manager.
- If a spill occurs stop source of spill immediately and contain liquid. If the substance spills near or in the water, use containment booms, as appropriate. Do not use emulsifiers or dispersants. As appropriate, cover spill with absorbent material. If spill is in an enclosed area, keep the area ventilated. Properly dispose of used oil spill response supplies.

Vessel Operation

- Fuel docks, if any, should be supervised by an employee. Use automatic shut-off nozzles and promote the use of "whistles" and fuel/air separators on air vents or tank stems of inboard fuel tanks to reduce the amount of fuel spilled into surface waters during fueling of boats.
- Install pumpout stations to receive sewage from onboard Marine Sanitation Devices (MSDs). Install a dump station, possibly located at the end of a pier, to receive sewage from portable or removable toilets (port-a-potty) typical on smaller boats. Ensure that pumpout facilities are available on

Stormwater Pollution Prevention

weekend mornings and evenings when demand is high. Consider keeping pumpout fees to a minimum to encourage use. Inspect pumpout stations routinely enough to ensure that the equipment is functioning properly. Maintain a dedicated fund for the repair and maintenance of marina pumpout stations. Add language to slip leasing agreements mandating the use of pumpout facilities and specifying penalties for failure to comply. Educate boaters about the state and federal regulations, impacts of discharging untreated sewage, and the availability of pumpout stations. Encourage boaters to use marina restrooms, not boat heads. Provide signage marking pumpout station locations, hours of operation, and operation guidance.

- Provide bilge pumpout stations connected to oil/water separator and sanitary sewer. Regularly inspect connecting hoses for leaks. Inform ship captains, boaters, tenants, and contractors that discharging bilge water contaminated with oil, fuel, or other regulated contaminants is illegal. Post location of the nearest bilge pumpout service, if the marina does not have one. Promote the use of oil-absorbing materials in the bilge areas of all boats with inboard engines. Encourage your tenants to examine these materials at least once a year, replace them as necessary, and recycle them if possible or dispose of them in accordance with petroleum disposal regulations. Keep low cost or no cost oil absorbent pads available for boaters and tenants to remove oil from bilge water. Dispose the pads as hazardous waste once they are saturated. Collect oil contaminated by water, fuel, or engine fluids for proper disposal. If the marina does not collect waste oil, post the location of the nearest collection facility.
- Use covered containers for loading / unloading materials and products. Cover materials stored outside. Use temporary barriers during unloading from vessels to contain runoff from pier deck.



Fish Handling

- Establish designated fish cleaning stations at the marina and boat launching sites and require fishermen to only use these sites to clean fish. Ensure that fish cleaning areas have ample covered receptacles for waste and are hooked up to the sewer system. Clean the stations frequently and make sure the collected waste is disposed of regularly and properly. Do not rinse fish wastes to outdoor drains or off the premises.
- Compost fish waste when possible. Contact a local extension service for information on locally applicable composting procedures and equipment and where supplies can be purchased.

Waterfront Management

- Provide receptacles for recycling used oil and oil filters. Provide proper and easily accessible trash disposal facilities to marina patrons. Because of the tendency for windy conditions in nearshore areas, covered dumpsters or other covered receptacles are preferred. Provide facilities for the eventual recycling of appropriate materials, such as glass, aluminum, plastic, trash, newspapers, and batteries. Clearly mark receptacles to minimize disposal of hazardous waste such paints and solvents. Develop information packets for ship captains and boaters identifying solid waste facilities and prescribing acceptable waste handling procedures. Empty solid waste receptacles as often as necessary to keep up with disposal.
- Monitor outdoor areas for dirt and debris. Clean regularly all accessible work, service, and storage areas to remove debris, spent sandblasting material, and any other potential stormwater pollutants. Do not dump or sweep debris and wastes into outdoor drains, between planking, or over the side of piers. Sweep rather than hosing down. If hosing is unavoidable, dry sweep thoroughly first to collect potential pollutants prior to rinsing. Do not use soap or chemicals when rinsing down areas that drain into outdoor drains, between planking, or over the side of piers. Immediately repair or replace leaking connections, valves, pipes, hoses and equipment that causes the pollution of stormwater.



Stormwater Pollution Prevention

Office/Retail

Trash/Trash Bins/Dumpsters Connections/Illegal Discharge

Post "No Littering" signs and enforce anti-litter laws. Provide a sufficient number of litter receptacles for the facility. Clean out and cover litter receptacles frequently to prevent spillage.

Keep dumpster areas clean. Recycle materials whenever possible. Use all of a product before disposing of the container. Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc., may not be disposed of in solid waste containers. Take special care when loading or unloading wastes to minimize losses.

Inspect dumpsters and trash bins weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating. Sweep and clean the storage area regularly and clean up spills immediately.



If the dumpster area is paved, do not hose it down to a storm drain. Instead, collect the wash water and discharge it to the sewer if allowed by the local sewer authority. Use dry methods when possible (e.g., sweeping, use of absorbents). Prevent stormwater run-on from entering the dumpster area by enclosing it or building a berm around the area. Prevent waste materials from directly contacting rain. Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.

Building Maintenance

Properly collect and dispose of water if pressure washing buildings, rooftops, and other large objects. If pressure washing where the surrounding area is paved, use a water collection device that enables collection of wash water and associated solids. Use a sump pump, wet vacuum or similarly effective device to collect the runoff and loose materials. Dispose of the collected runoff and solids properly. If pressure washing on a landscaped area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the landscaping and not drain to pavement.

Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain. Store toxic material under cover when not in use and during precipitation events. Switch to non-toxic chemicals for maintenance when possible. If cleaning agents are used, select biodegradable products whenever feasible. Consider using a waterless and non-toxic chemical cleaning method for graffiti removal (e.g. gels or spray compounds). Use chemicals that can be recycled. Buy recycled products to the maximum extent practicable

Use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water." Develop paint handling procedures for proper use, storage, and disposal of paints. Transport paint and materials to and from job sites in containers with secure lids and tied down to the transport vehicle. Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint containers. Mix paint indoors before using so that any spill will not be exposed to rain. Do so even during dry weather because cleanup of a spill will never be 100% effective.



Transfer and load paint away from storm drain inlets. When there is significant risk of a spill reaching storm drains or if sand blasting is used to remove paint, cover nearby storm drain inlets prior to starting painting and remove covers when job is complete. Use a ground cloth to collect the chips if painting requires scraping or sand blasting of the existing surface. Dispose the residue properly.

Cover or enclose painting operations properly to avoid drift. Clean the application equipment in a sink that is connected to the sanitary sewer if using water based paints. Capture all cleanup-water and dispose of properly. Store leftover paints if they are to be kept for the next job properly, or dispose properly.

Regularly train employees on appropriate Best Management Practices implementation, storm water discharge prohibitions, and wastewater discharge requirements. Train employees on proper spill containment and cleanup.

Stormwater Pollution Prevention

Landscaping

Where feasible, retain and/or plant native vegetation since it usually requires less maintenance than new vegetation. When planting or replanting consider using flowers, trees, shrubs, and groundcovers that have low water use. Consider alternative landscaping techniques such as naturescaping and xeriscaping. Use mulch or other erosion control measures on exposed soils.

Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage at a permitted landfill or by composting. Do not dispose of gardening wastes in streets, waterways, or storm drainage systems. Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm and/or cover.

Irrigate slowly or pulse irrigate so the infiltration rate of the soil is not exceeded. Inspect irrigation system regularly for leaks and to ensure that excessive runoff is not occurring. If re-claimed water is used for irrigation, ensure that there is no runoff from the landscaped area(s). Use automatic timers to minimize runoff. Use popup sprinkler heads in areas with a lot of activity or where pipes may be broken. Consider the use of mechanisms that reduce water flow to broken sprinkler heads.

Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers. Follow manufacturers' recommendations and label directions. Employ techniques to minimize off-target application (e.g. spray drift) of fertilizer, including consideration of alternative application techniques. Calibrate fertilizer distributors to avoid excessive application. Periodically test soils for determining proper fertilizer use. Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface. Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water. Use slow release fertilizers whenever possible to minimize leaching.

Whenever possible, use mechanical methods of vegetation removal such as hand weeding rather than applying herbicides. When conducting mechanical or manual weed control, avoid loosening the soil, which could lead to erosion.

If using pesticides, follow all federal, state, and local laws and regulations governing their use, storage, and disposal. Follow manufacturers' recommendations and label directions. When applicable, use less toxic pesticides that will do the job and avoid use of copper-based pesticides if possible. Do not apply pesticides if rain is expected or if wind speeds are above 5 mph. Do not mix or prepare pesticides for application near storm drains. Prepare the minimum amount of pesticide needed for the job and use the lowest rate that will effectively control the targeted pest. Do not apply any chemicals directly to surface waters and do not spray pesticides within 100 feet of open waters. Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques. Purchase only the amount of pesticide that you can reasonably use in a given time period. Careful soil mixing and layering techniques using a topsoil mix or composted organic material can be used as an effective measure to reduce weeds and watering. Check irrigation schedules so pesticides will not be washed away and to minimize non-stormwater discharge.

Integrate pest management techniques where appropriate. Mulch can be used to prevent weeds where turf is absent. Remove insects by hand and place in soapy water or vegetable oil. Alternatively, remove insects with water or vacuum them off the plants. Use species-specific traps (e.g. pheromone-based traps or colored sticky cards). Sprinkle the ground surface with abrasive diatomaceous earth to prevent infestations by soft-bodied insects and slugs. Slugs also can be trapped in small cups filled with beer that are set in the ground so that slugs can get in easily. In cases where microscopic parasites, such as bacteria and fungi, are causing damage to plants, the affected plant material can be removed and disposed of (pruning equipment should be disinfected with bleach to prevent spreading the disease organism). Small mammals and birds can be excluded using fences, netting, and tree trunk guards. Promote beneficial organisms, such as bats, birds, green lacewings, ladybugs, praying mantis, ground beetles, parasitic nematodes, trichogramma wasps, seedhead weevils, and spiders that prey on detrimental pest species.

Patio, Walkway, Driveway

- Use dry clean-up methods, such as a broom, mop or absorbent material for surface cleaning whenever possible. Do not sweep or blow trash or debris into the street or gutter. Avoid graffiti abatement activities during rain events and use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal). Avoid using cleaning products that contain hazardous substances that can create hazardous waste.
- If water must be used for surface cleaning, use it sparingly. Never discharge washwater into the street, a ditch, or storm drain. Determine how you are going to capture the water and where you are going to discharge it before starting the wash job. Capture and collect the washwater and properly dispose of it (i.e., landscaped areas, private sewer system, sanitary sewer system).
- Provide regular training to employees and/or contractors regarding surface cleaning.



Stormwater Pollution Prevention

Parking Area

Clean parking lots on a regular basis to prevent accumulated wastes and pollutants from being discharged into storm drain systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.

Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.

Have designated personnel conduct inspections of the parking facilities and storm drain systems associated with them on a regular basis. Inspect cleaning equipment/sweepers for leaks on a regular basis.

Have spill cleanup materials readily available and in a known location. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.



Stormwater Pollution Prevention

Outdoor Loading and Unloading

General Guidelines

Develop an operations plan that describes procedures for loading and/or unloading. Load/unload only at designated loading areas. Pave loading areas with concrete instead of asphalt, if possible.

Conduct loading and unloading in dry weather if possible. Have employees load and unload all materials and equipment in covered areas such as building overhangs at loading docks, if feasible. Cover designated loading/unloading areas to reduce exposure of materials to rain. Consider placing a seal or door skirt between delivery vehicles and building to prevent exposure to rain.



Design loading/unloading area to prevent stormwater run-on, which would include grading or berming the area, and positioning roof downspouts so they direct stormwater away from the loading/unloading areas. Grade and/or berm the loading/unloading area to a drain that is connected to a form of containment.

Use drip pans underneath hose and pipe connections and other leak-prone spots during liquid transfer operations, and when making and breaking connections. Several drip pans should be stored in a covered location near the liquid transfer area so that they are always available, yet protected from precipitation when not in use. Drip pans can be made specifically for railroad tracks. Drip pans must be cleaned periodically, and drip collected materials must be disposed of properly.

Sweep up and dispose of any loose debris remaining after loading/unloading is completed.

Inspection

- Check loading and unloading equipment regularly for leaks, including valves, pumps, flanges and connections. Look for dust or fumes during loading or unloading operations.
- Designate a responsible party to check under delivery vehicles for leaking fluids, spilled materials, debris, or other foreign materials.

Spill Response and Prevention/Training

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date. Have an emergency spill cleanup plan readily available and ensure that employees are familiar with the plan.
- Train employees (e.g., fork lift operators) and contractors on proper spill containment and cleanup. Train employees in proper handling techniques during liquid transfers to avoid spills. Make sure forklift operators are properly trained on loading and unloading procedures.
- Contain leaks during transfer. Use drip pans or comparable devices when transferring oils, solvents, and paints.
- Store and maintain appropriate spill cleanup materials in a location that is readily accessible and known to all.

Stormwater Pollution Prevention

Parking Lots

Leaking Vehicles

Clean parking lots on a regular basis to prevent accumulated wastes and pollutants from being discharged into storm drain systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.

Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.

Have designated personnel conduct inspections of the parking facilities and storm drain systems associated with them on a regular basis. Inspect cleaning equipment/sweepers for leaks on a regular basis.

Have spill cleanup materials readily available and in a known location. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.



Trash

- Post "No Littering" signs and enforce anti-litter laws.
- Provide trash receptacles in parking lots to discourage litter. Clean out and cover trash receptacles frequently to prevent spillage. Regularly inspect, repair, and/or replace trash receptacles.
- Routinely sweep, shovel and dispose of litter in the trash. Remove litter and debris from drainage grates, trash racks and ditch lines to reduce discharge to the storm water drainage systems and watercourses.
- Provide regular training to field employees and/or contractors regarding cleaning of paved areas and proper operation of equipment.

Stormwater Pollution Prevention

Parks & Recreation

Landscaping /Yard Maintenance

- Where feasible, retain and/or plant native vegetation since it usually requires less maintenance than new vegetation. When planting or replanting consider using flowers, trees, shrubs, and groundcovers that have low water use. Consider alternative landscaping techniques such as naturescaping and xeriscaping.
- Minimize the use of pesticides and fertilizers. Read the labels and follow directions to avoid improper use. When applicable, use less toxic pesticides that will do the job and avoid use of copper-based pesticides if possible. Try using organic or non-toxic fertilizer alternative. Do not apply chemicals if it is windy or about to rain. Avoid applying chemical fertilizers and pesticides near curbs, driveways, gutters, ditches, streams or waterbodies. Properly clean up and dispose of spills of chemicals, fertilizers, or soils. If possible, return the spilled material to the container for future use. Store fertilizers and chemicals in closed, waterproof, labeled containers, in a covered area, or off-ground and under protective tarps.
- If using pesticides, follow all federal, state, and local laws and regulations governing their use, storage, and disposal. Follow manufacturers' recommendations and label directions. Prepare the minimum amount of pesticide needed for the job and use the lowest rate that will effectively control the targeted pest. Do not apply any chemicals directly to surface waters and do not spray pesticides within 100 feet of open waters. Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques. Purchase only the amount of pesticide that can reasonably be used in a given time period.
- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers. Follow manufacturers' recommendations and label directions. Employ techniques to minimize off-target application (e.g. spray drift) of fertilizer, including consideration of alternative application techniques. Calibrate fertilizer distributors to avoid excessive application. Periodically test soils for determining proper fertilizer use. Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface. Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water. Use slow release fertilizers whenever possible to minimize leaching.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Irrigate slowly or pulse irrigate so the infiltration rate of the soil is not exceeded. Design the irrigation system to each landscape area's specific water requirements. Adjust irrigation systems to reflect seasonal water needs. Implement landscape plans consistent with County or City water conservation resolutions, which may include water sensors, programmable irrigation times (for short cycles), rain-triggered shutoff devices to prevent irrigation after precipitation and flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines. Inspect irrigation system regularly for leaks and to ensure that excessive runoff is not occurring. Use popup sprinkler heads in high activity areas or where pipes may be broken. If re-claimed water is used for irrigation, ensure that there is no runoff from the landscaped area(s).
- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage at a permitted landfill or by composting as soon as possible. Do not dispose of landscaping wastes in streets, waterways, or storm drainage systems. Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm and/or cover. After landscaping activities, do not sweep or blow clippings and waste into the street or gutter. Avoid hosing down pavement.
- Schedule large landscaping projects for dry weather. Store stockpiles under plastic tarps to protect them from wind and rain. Cover non-vegetated surfaces to prevent erosion. Use mulches in planter areas without ground cover to minimize sediment in runoff. Leave a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible. Develop healthy soil; choose a grass type that thrives in your climate; mow high, often, and with sharp blades; water deeply but not too often.
- Use mechanical methods of vegetation removal such as hand weeding rather than applying herbicides. When conducting mechanical or manual weed control, avoid loosening the soil, which could lead to erosion. Careful soil mixing and layering techniques using a topsoil mix or composted organic material can be used as an effective measure to reduce weeds and watering.
- When possible, use a lawn mower that has a mulcher so that the grass clippings remain on the lawn. Compost materials in a designated area, take clippings to a landfill for composting, or recycle lawn clippings and greenery waste through local programs when available.



Stormwater Pollution Prevention

- For activities involving the removal of vegetation, the limits of disturbance should be defined to minimize adverse effects on vegetation outside the working area. The protection of desirable vegetation provides erosion and sediment control. The following steps should be taken to preserve existing vegetation:
- Vegetation outside the limits of disturbance should be replaced if damaged
- Minimize the number of access and egress points and locate them to reduce damage to existing vegetation
- Maintenance materials and equipment storage and parking areas should be located where they will not cause root compaction
- Keep equipment away from trees to prevent trunk and root damage
- Avoid placing soil around trunks of trees.

Trash Bins

- Post “No Littering” signs and enforce anti-litter laws. Provide a sufficient number of litter receptacles for the facility. Clean out and cover litter receptacles frequently to prevent spillage.
- Keep dumpster areas clean. Recycle materials whenever possible. Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, pesticides, etc., may not be disposed of in solid waste containers. Take special care when loading or unloading wastes to minimize losses.
- Inspect dumpsters and trash bins weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating. Sweep and clean the storage area regularly and clean up spills immediately.
- If the dumpster area is paved, do not hose it down to a storm drain. Instead, collect the wash water and discharge it to the sewer if allowed by the local sewer authority. Use dry methods when possible (e.g., sweeping, use of absorbents). Prevent stormwater run-on from entering the dumpster area by enclosing it or building a berm around the area. Prevent waste materials from directly contacting rain. Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.



Restrooms

- Have restrooms connected to the sanitary sewer system where feasible. In areas where sanitary sewer connections are not possible, ensure the septic system adequacy and maintenance.
- Paper towels should be replaced with air dryers, where feasible. Post “No Littering” signs. Provide a sufficient number of litter receptacles and empty receptacles frequently to prevent spillage.
- Develop an educational program to promote visitor compliance with park regulations on facility use and waste disposal.

Stormwater Pollution Prevention

Patio, Walkway, Driveway

- Use dry clean-up methods, such as a broom, mop or absorbent material for surface cleaning whenever possible. Do not sweep or blow trash or debris into the street or gutter. Avoid graffiti abatement activities during rain events and use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal). Avoid using cleaning products that contain hazardous substances that can create hazardous waste.
- If water must be used for surface cleaning, use it sparingly. Never discharge washwater into the street, a ditch, or storm drain. Determine how you are going to capture the water and where you are going to discharge it before starting the wash job. Capture and collect the washwater and properly dispose of it (i.e., landscaped areas, private sewer system, sanitary sewer system).
- Provide regular training to employees and/or contractors regarding surface cleaning.

Parking Area

Clean parking lots on a regular basis to prevent accumulated wastes and pollutants from being discharged into storm drain systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.

Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.

Have designated personnel conduct inspections of the parking facilities and storm drain systems associated with them on a regular basis. Inspect cleaning equipment/sweepers for leaks on a regular basis.

Have spill cleanup materials readily available and in a known location. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.

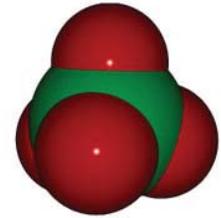


Stormwater Pollution Prevention

Perchlorate Containing Materials

What is Perchlorate?

Perchlorate is both a naturally occurring and manmade salt that is a contaminant increasingly found in groundwater, surface water and soil. Perchlorate is highly soluble and when dissolved in water it easily moves through and travels with the flow of water on or beneath the ground.



Most perchlorate manufactured in the U.S. is used as an ingredient in solid fuel for rockets and missiles. Perchlorate-based chemicals are also used in the construction of highway safety flares, fireworks, pyrotechnic devices, explosives, common batteries and automobile restraint systems (air bags). In light of the risks to public health and the environment posed by perchlorate releases, best management practices are necessary for the prevention of perchlorate contamination.

Storage

Store perchlorate containing materials in weather-resistant structures with floors that:

- are adequately water-resistant to prevent seepage into or out of the containment structure;
- do not have drains that release to the environment; and
- are of adequate strength to support the loads.

Spills

- Immediately contain and collect all perchlorate material spills (i.e. bleach, fertilizers).
- If materials resulting from a spill are considered hazardous, manage and dispose of the material according to all applicable regulatory requirements (Health & Safety Code Section 25210.6 & 58012).

Pollution Prevention

If using perchlorate-containing fertilizers and safety flares in an amount *greater than 500 pounds at a given time*:

- review and record the use of these products,
 - prior to use, investigate and determine if a non-perchlorate-containing alternative is available; and
 - review, improve and implement, as appropriate, all pollution prevention measures utilized to prevent the release of perchlorate in any form.
-
- Assure that the California Department of Toxic Substance Control has received the one-time notification listing their perchlorate materials and their related uses.

Batteries



Coin type cell batteries with identification numbers starting with "CR" (Manganese Oxide) contain perchlorate.

- Follow the packaging directions to ensure proper use and disposal of batteries.

Stormwater Pollution Prevention



Flares/Fuses

When using road flares in emergency situations:

- Allow flares to burn out completely.
- Dispose of flare residue properly (i.e. solid waste container).
- As appropriate, limit the number flares used and their duration without impeding immediate safety considerations.
- Do not burn flares to dispose of them. Do not dispose of unused flares in water or normal refuse containers. Contact the hazardous waste manager for local disposal requirements.

Alternatives to Flares - Light Sticks, Power Flares (LED)

- Light sticks or Power Flares are a safe alternative to traditional flares. No chemical reaction, heat or spark is produced that can result in a release of residue containing perchlorate to the environment.



Fertilizers

Chilean (sodium) nitrate is a mined source of nitrogen used in several fertilizer products such as Bulldog Soda, nitrate of soda, Chilean saltpeter, soda niter, and nitric acid sodium salt. Chilean nitrate fertilizers contain naturally occurring perchlorate salts.

- Before applying fertilizers, check the label to determine whether perchlorate salts are present. If fertilizers contain perchlorate salts, if not marked, mark the packaging clearly "Perchlorate Material - Special Handling May Apply".
- Keep all perchlorate containing fertilizer in durable and water-resistant packaging or containers.
- Follow any instructions found on the package label and/or any Material Safety Data Sheet (MSDS) provided.

Stormwater Pollution Prevention

Sewer or Drain Cleaning and Maintenance/Septic Systems

Storm Drain Cleaning/Maintenance

- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- When possible use vacuum techniques to clean debris out of catch basins, channels or other conveyance systems.



Septic System Cleaning/Maintenance

- Maintain good housekeeping practices. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area. Dispose of sweepings, and sediments properly. Storage areas should be kept clean, and well organized.
- Solid waste storage areas at the work site should be located away from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding. Check for spills or accidental discharges and perform required cleaning.
- Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use another technique only when dry cleanup techniques are not practicable, such as having to wet for dust control for safety or air quality reasons.



Stormwater Pollution Prevention

Sign Boards/Billboards

Waste Management

- Recycle, reuse or properly dispose of solid waste.
- Take special care when loading or unloading wastes to minimize losses.
- Secure or cover transported materials, and supplies to and from activity sites to prevent spillage to the roadway.

Good Housekeeping

- Keep project site clean and organized
- Train employees on proper spill containment and cleanup. Have spill cleanup materials readily available. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.



Sweeping and Vacuuming

- Sweep project area after work is complete and before leaving the site.



Stormwater Pollution Prevention

Storage

Trash/Trash Bins/Dumpsters

- Post "No Littering" signs and enforce anti-litter laws. Provide a sufficient number of litter receptacles for the facility. Clean out and cover litter receptacles frequently to prevent spillage.
- Keep dumpster areas clean. Recycle materials whenever possible. Use all of a product before disposing of the container. Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc., may not be disposed of in solid waste containers. Take special care when loading or unloading wastes to minimize losses. Loading systems can be used to minimize spills and fugitive emission losses such as dust or mist. Vacuum transfer systems can minimize waste loss.
- Inspect dumpsters and trash bins weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating. Sweep and clean the storage area regularly and clean up spills immediately.
- If the dumpster area is paved, do not hose it down to a storm drain. Instead, collect the wash water and discharge it to the sewer if allowed by the local sewer authority. Use dry methods when possible (e.g., sweeping, use of absorbents). Prevent stormwater run-on from entering the dumpster area by enclosing it or building a berm around the area. Prevent waste materials from directly contacting rain. Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.



Leaking Vehicles

Place drip pans under leaking vehicles. Drain all vehicles in long-term storage. Clean storage facilities on a regular basis to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.



Train employees on proper spill containment and cleanup. Have spill cleanup materials readily available and in a known location. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.

Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.

Sediment on Stored Construction Equipment

- Conduct regular cleaning. Sweeping or vacuuming the storage facility is encouraged over other methods. Sweep all storage lots at least once before the onset of the wet season. Establish frequency of sweeping based on usage and field observations of sediment accumulation.
- Washing or rinsing of equipment shall be performed in designated areas and the resulting runoff shall not be discharged to the storm drain system.

Stormwater Pollution Prevention

Potential Illegal Discharge from Unknown Materials Inside Storage Units

- Design storage areas to minimize stormwater exposure. Construct a berm or intercept trench at doorways. Install a collection system for pretreatment and sewer disposal under permit by the local sewer authority.
- Utilize dry cleanup methods such as sweeping for removal of litter and debris, or use of rags and absorbents for leaks and spills. Properly dispose of collected wastes.
- Use secondary containment or protective barriers for indoor liquid storage.
- Train employees on the proper implementation of Best Management Practices, storm water discharge prohibitions, and wastewater discharge requirements. Train employees on proper spill containment and cleanup.

Outdoor Storage of Loose Materials

Store materials indoors, if feasible. Designate a secure material storage area that is paved with Portland cement concrete, free of cracks and gaps, and impervious in order to contain leaks and spills.

Protect materials stored outside from rainfall and wind dispersal by covering them with a fixed roof or a temporary waterproof covering made of polyethylene, polypropylene, or hypalon. Keep covers in place at all times when work is not occurring. If areas are so large that they cannot feasibly be covered and contained, implement erosion control practices at the perimeter of the area and at catch basins to prevent dispersion of the stockpiled material. Implement erosion control practices at the perimeter of your site and at catch basins to prevent erosion of the stockpiled material off-site, if the stockpiles are so large that they cannot feasibly be covered and contained. Minor slides/slipouts usually occur during major storms. Stockpiles should be removed as soon as practicable and materials should be placed so that waterways are not impacted.

Cover wood products treated with chromated copper arsenate, ammonical copper zinc arsenate, creosote, or pentachlorophenol with tarps or store indoors.

Protect materials stored outside from stormwater runoff. Construct a berm around the perimeter of the material storage area to prevent the runoff of uncontaminated stormwater from adjacent areas as well as runoff of stormwater from the material. Paved areas should be sloped in a manner that minimizes pooling of water on the site. A minimum slope of 1.5% is recommended.

Keep storage areas clean and dry. Sweep and maintain routes to and from storage areas. Conduct regular inspections of storage areas.



Stormwater Pollution Prevention

Swimming Pools

Maintenance and Cleaning

Prevent algae problems with regular cleaning; consistent adequate chlorine levels, and well maintained water filtration and circulation systems.

- Do not use copper-based algaecides.
- Control algae with chlorine or other alternatives, such as sodium bromide.

Manage pH and water hardness to minimize corrosion of copper pipes.

Discharge pool and fountain water properly.

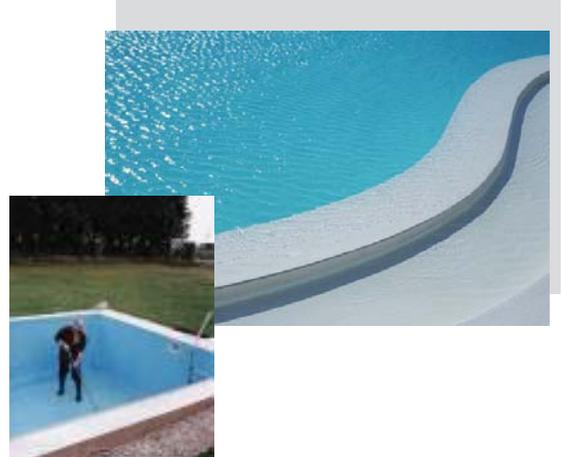
- When draining pools or fountains, never discharge water to a street or storm drain, discharge to the sanitary sewer if permitted to do so.
- If draining a pool to the sanitary sewer, prevent backflow by maintaining an "air gap" between the discharge line and the sewer line (do not seal the connection between the hose and sewer line).
- Be sure to call the local sewer authority for guidance on flow rate restrictions, backflow prevention, and handling special cleaning waste (such as acid wash).
- Keep discharge flows to the low levels. Higher flow rates may be prohibited by local ordinance.
- If water is dechlorinated with a neutralizing chemical or by allowing chlorine to dissipate for a few days (do not use the facility during this time), the water may be recycled/reused by draining it gradually onto a landscaped area. Water must be tested prior to discharge to ensure that chlorine is not present.
- Provide drip pans or buckets beneath drain pipe connections to catch leaks. This will be especially pertinent if pool or spa water that has not been dechlorinated is pumped through piping to the sanitary sewer (if permitted).

Properly clean and/or dispose of filters.

- Never clean a filter in the street or near a storm drain. Rinse cartridge filters onto a dirt area, and work filter residue into soil.
- Backwash diatomaceous earth filters onto dirt. Dispose of spent diatomaceous earth in the garbage. Diatomaceous earth cannot be discharged to surface waters, storm drainage systems, septic systems, or on the ground. If there is not a suitable dirt area, discharge filter backwash or rinsewater to the sanitary sewer if permitted to do so by the local sewer agency.

Training

- Train employees on appropriate BMP implementation, storm water discharge prohibitions, wastewater discharge requirements and proper spill containment and cleanup.



Stormwater Pollution Prevention

Trash Removal

Waste Handling and Disposal

- Recycle, reuse or properly dispose of solid waste.
- Take special care when loading or unloading wastes to minimize losses.
- Secure or cover transported materials to prevent spillage to the roadway. Do not fill waste containers with washout water or any other liquid.



Good Housekeeping

- Keep waste collection areas clean
- If possible, sweep and clean the trash storage area particularly after trash removal. If it is paved, do not hose down the area to a storm drain.
- Remove litter and debris from drainage grates, trash racks and ditch lines to reduce discharge to the storm water drainage systems and watercourses.



Stormwater Pollution Prevention

Truck Repair and Storage

Oil Leaks

- Place drip pans under leaking vehicles. Drain all vehicles in long-term storage. Clean storage facilities on a regular basis to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.
- Use dry cleaning methods as much as possible. When wet cleaning methods are necessary, storm drains should be blocked and the wash water should be collected and pumped to the sanitary sewer or discharged to a pervious surface. After cleaning, remove blocks from storm drain. Wash water should not be allowed to enter the storm drains. Do not discharge wash water to the sanitary sewer before contacting the local sewer authority.
- Train employees on proper spill containment and cleanup. Have spill cleanup materials readily available and in a known location. Cleanup spills immediately using dry methods if possible. Properly dispose of spill cleanup material. Designate personnel to conduct inspections of the facility and stormwater conveyance systems associated with them. Inspect cleaning equipment/sweepers for leaks on a regular basis.
- Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices if possible. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.



Outdoor Storage of Chemicals, Solvents, and Batteries

Design fueling area to prevent stormwater runoff and spills. Cover fueling area with an overhanging roof structure or canopy so that precipitation is diverted from storage area. Provide secure storage to prevent vandalism-caused contamination. Place tight-fitting lids on all containers. Enclose or cover the containers where they are stored. Raise the containers and batteries off the ground by use of pallet or similar method, with provisions for spill control. Contain the material in such a manner that if the container leaks or spills, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters or groundwater.



Place drip pans or absorbent materials beneath all mounted container taps, and at all potential drip and spill locations during filling and unloading of containers. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.

Inspect storage areas regularly for leaks or spills. Conduct routine inspections and check for external corrosion of material containers. Also check for structural failure, spills and overfills due to operator error. Check for leaks or spills during pumping of liquids. Visually inspect new containers for loose fittings, poor welding, and improper or poorly fitted gaskets. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the container. Replace containers that are leaking, corroded, or otherwise deteriorating with ones in good condition. If the liquid chemicals are corrosive, containers made of compatible materials must be used

instead of metal drums. New or secondary containers must be labeled with the product name and hazards.

Train employees in proper storage measures. Train employee and contractors in proper spill containment and cleanup.

Stormwater Pollution Prevention

Vehicle or Equipment Storage

Oil Leaks

Place drip pans under leaking vehicles. Drain all vehicles in long-term storage. Clean storage facilities on a regular basis to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.

Use dry cleaning methods as much as possible. When wet cleaning methods are necessary, storm drains should be blocked and the wash water should be collected and pumped to the sanitary sewer or discharged to a pervious surface. After cleaning, remove blocks from storm drains. Wash water should not be allowed to enter the storm drains. Do not discharge wash water to the sanitary sewer before contacting the local sewer authority.

Train employees on proper spill containment and cleanup. Have spill cleanup materials readily available and in a known location. Cleanup spills immediately using dry methods if possible. Properly dispose of spill cleanup material. Designate personnel to conduct inspections of the facility and stormwater conveyance systems associated with them. Inspect cleaning equipment/sweepers for leaks on a regular basis.

Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.



Caked Dirt on Tires

- Conduct regular cleaning. Sweeping or vacuuming the storage facility is encouraged over wet cleaning methods. Sweep all storage lots at least once before the onset of the wet season. Establish frequency of sweeping based on usage and field observations of sediment accumulation.



- Washing or rinsing of equipment shall be performed in designated areas and the resulting runoff shall not be discharged to the storm drain system.
- Train employees on appropriate Best Management Practices, storm water discharge prohibitions, and wastewater discharge requirements.

Stormwater Pollution Prevention

Yard Service

Landscaping

- Where feasible, retain and/or plant native vegetation since it usually requires less maintenance than new vegetation. When planting or replanting consider using flowers, trees, shrubs, and groundcovers that have low water use. Consider alternative landscaping techniques such as naturescaping and xeriscaping.
- Minimize the use of pesticides and fertilizers; read the labels and follow directions to avoid improper use; do not apply chemicals if it is windy or about to rain. Try using organic or non-toxic fertilizer alternatives. Avoid applying chemical fertilizers near curbs, driveways, gutters, ditches, streams or waterbodies. Properly clean up and dispose of spills of landscaping chemicals, fertilizers, or soils. If possible, return the spilled material to the container for future use. Store fertilizers and chemicals in closed, waterproof, labeled containers, in a covered area, or off-ground and under protective tarps.
- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers. Follow manufacturers' recommendations and label directions. Employ techniques to minimize off-target application (e.g. spray drift) of fertilizer, including consideration of alternative application techniques. Calibrate fertilizer distributors to avoid excessive application. Periodically test soils for determining proper fertilizer use. Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface. Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water. Use slow release fertilizers whenever possible to minimize leaching.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements. Design the irrigation system to each landscape area's specific water requirements. Adjust irrigation systems to reflect seasonal water needs. Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system. Implement landscape plans consistent with County or City water conservation resolutions, which may include water sensors, programmable irrigation times (for short cycles), rain-triggered shutoff devices to prevent irrigation after precipitation and flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines. Use drip irrigation, soaker hoses, or micro-spray systems where appropriate and feasible.
- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage at a permitted landfill or by composting as soon as possible. Do not dispose of gardening wastes in streets, waterways, or storm drainage systems. Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm and/or cover. After landscaping activities, do not sweep or blow clippings and waste into the street or gutter. Avoid hosing down the pavement.
- Irrigate slowly or pulse irrigate so the infiltration rate of the soil is not exceeded. Inspect irrigation system regularly for leaks and to ensure that excessive runoff is not occurring. If re-claimed water is used for irrigation, ensure that there is no runoff from the landscaped area(s). Use automatic timers to minimize runoff. Use popup sprinkler heads in areas with a lot of activity or where pipes may be broken. Consider the use of mechanisms that reduce water flow to broken sprinkler heads.
- Store stockpiles under plastic tarps to protect them from wind and rain. Cover non-vegetated surfaces to prevent erosion. Use mulches in planter areas without ground cover to minimize sediment in runoff. Leave a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible. Develop healthy soil; choose a grass type that thrives in the climate where it will be planted; mow high, often, and with sharp blades; water deeply but not too often.



Tree Trimming

Place temporarily stockpiled material away from watercourses and storm drain inlets, and cover.

Dispose of collected vegetation as garbage at a permitted landfill or by composting. Do not dispose of tree trimming wastes in streets, waterways, or storm drainage systems.

Stormwater Pollution Prevention

Weed Abatement, Mowing, Disking

- Use mechanical methods of vegetation removal such as hand weeding rather than applying herbicides. When mowing or hand weeding, minimize loosening the soil, which could lead to erosion.
- When possible, use a lawn mower that has a mulcher so that the grass clippings remain on the lawn. Compost materials in a designated area, take clippings to a landfill for composting, or recycle lawn clippings and greenery waste through local programs when available.
- For activities involving the removal of vegetation, the limits of disturbance should be defined to minimize adverse effects on vegetation outside the working area. The protection of desirable vegetation provides erosion and sediment control. The following steps should be taken to preserve existing vegetation:



- Vegetation outside the limits of disturbance should be replaced if damaged
- Minimize the number of access and egress points and locate them to reduce damage to existing vegetation
- Maintenance materials and equipment storage and parking areas should be located where they will not cause root compaction
- Keep equipment away from trees to prevent trunk and root damage
- Avoid placing soil around trunks of trees.

- Disking involves turning over the soil in which a plow having one or more heavy, round, concave, sharpened, freely rotating steel disks angled to cut and turn a furrow is drawn across a site. When possible, maintain furrows away from points of ingress/egress.
- Avoid heavy equipment operations in very wet or saturated soil conditions. Do not damage water control devices (i.e. culverts, wing ditches). Maintain an undisked buffer along the perimeter to serve as a vegetation filter for sediments.
- Avoid over spraying onto sidewalks, lined drainage channels, roadways or existing vegetation. Minimize the number of access and egress points and locate them to reduce damage to existing vegetation.
- During egress from the property inspect the disks to assure that they are free of accumulated sediment and vegetation.



Group B: BMPs sorted by Maintenance Activity

Maintenance BMPs

Board Ups

Fumigation/Pest and Rodent Control

General Maintenance

Perchlorate Containing Materials

Sewer or Drain Cleaning and Maintenance/Septic Systems

Trash Removal

Yard Service

Stormwater Pollution Prevention

Board Ups

Good Housekeeping and Waste Management

- Take special care when loading or unloading wastes to minimize losses.
- Secure or cover transported materials, and supplies to and from activity sites to prevent spillage to the roadway.
- Keep the work site clean and orderly. Remove debris (e.g., sawdust, wood chips, etc.) in a timely fashion. Sweep the area.
- Do not dump waste liquids down the storm drain. Dispose of wash water, sweepings, and sediments properly.
- Have spill cleanup materials readily available. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.



Graffiti Removal

- If using paint to cover graffiti, follow the Painting Best Management Practice.
- If removing graffiti using wet sand blasting methods, minimize the quantity of water used, direct runoff to landscaped or soil area, filter runoff through a boom to keep sand out of storm drains, sweep debris and sand and dispose of all waste to avoid future runoff contamination.
- If removing graffiti using high-pressure washing and cleaning compound, direct washwater runoff to landscaped or soil area. No runoff can discharge into stormdrains. Seal stormdrains and vacuum/pump washwater to the sanitary sewer. Contact the local wastewater treatment plant for guidance, as harsh cleaning compounds may require pretreatment

Fence Repair

- Properly clean and dispose of equipment and wastes used and generated during fence repair/maintenance.
- Solid waste storage areas at repair sites should be located away from drainage facilities and watercourses and not located in areas prone to flooding or ponding.
- Compaction is not an alternative to restoring vegetation. Compaction is restricted to areas where vegetation is undesirable or is not sustainable such as in guardrail post or fence post installation. Consider the effect of runoff from the compacted soil on nearby surface water. Evenly grade or level the area prior to compaction. Do not perform compaction while storm water runoff is observed. Compact exposed soil as soon as possible after grading or soil disturbance. Inspect compacted areas to identify any evidence of erosion upon the completion of maintenance activities.

Patio, Walkway, Driveway

- Use dry clean-up methods, such as a broom, mop or absorbent material for surface cleaning whenever possible. Do not sweep or blow trash or debris into the street or gutter. Avoid graffiti abatement activities during rain events and use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal). Avoid using cleaning products that contain hazardous substances that can create hazardous waste.
- If water must be used for surface cleaning, use it sparingly. Never discharge washwater into the street, a ditch, or storm drain. Determine how you are going to capture the water and where you are going to discharge it before starting the wash job. Capture and collect the washwater and properly dispose of it (i.e., landscaped areas, private sewer system, sanitary sewer system).
- Provide regular training to employees and/or contractors regarding surface cleaning.

Parking Area

Clean parking lots on a regular basis to prevent accumulated wastes and pollutants from being discharged into storm drain systems during rainy conditions. When cleaning heavy oily deposits, use absorbent materials on oily spots prior to sweeping or washing. Dispose of used absorbents appropriately.

Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices. Utilize sand filters or oleophilic collectors for oily waste in low concentrations. Clean out oil/water/sand separators regularly, especially after heavy storms.

Have designated personnel conduct inspections of the parking facilities and storm drain systems associated with them on a regular basis. Inspect cleaning equipment/sweepers for leaks on a regular basis.

Have spill cleanup materials readily available and in a known location. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.

Stormwater Pollution Prevention

Fumigation/Pest and Rodent Control

Know the Application Site

Scout the area to evaluate the extent of the pest problem in order to select the appropriate control method. Identify environmentally sensitive areas and learn how the soil types and the layout of each application site affect the movement of water, both through and across soil.

Read and Follow Label Directions

Pesticide labels contain important information about applicator and environmental safety, including water quality protection. Always follow label directions.

Match Application Rates to the Pest Problem

Every pesticide label specifies application rates. Carefully consider all aspects of the pest problem, such as the type of pest(s), level of infestation, location, and environmental considerations (i.e., soil type, organic matter).



Do Not Mix and Load Near Water

Pesticides can reach groundwater and surface water as a result of discharges or spills that occur during mixing and loading operations. Mixing and loading should be done at least 50 feet and as far as possible from surface waters such as wells, lakes, streams, and rivers as well as storm drains. When possible, mix and load the pesticides at the site of application. Be sure all containers being transported are secured.

Calibrate Application Equipment Properly

Frequently check and maintain spray nozzles, hoses, gauges and tanks. Proper calibration is the key to applying accurate rates of pesticides. Improper calibration can result in too much or too little product applied, irregular distribution and poor pest control. Inaccurate tank volumes and pressure gauges or worn nozzles also may cause improper application. Inspect application equipment before every use.

Do Not Apply Pesticides If Heavy Rain Is Forecast

Pesticides are most susceptible to runoff from heavy rains during the first several hours after application. Therefore, delaying application until after the storm will avoid polluting surface waters and allow for the pesticide to function properly.

Avoid Overspray and Drift

Check the pesticide label for application precautions or restrictions during windy conditions. Wind speed, temperature and humidity all affect pesticide spray drift. Drift can be reduced by lowering the height at which pesticides are applied and using nozzles that produce large droplet sizes.

Store Pesticides in a Safe Place

Pesticides need to be stored in a secure place in their original containers and with labels clearly visible. Pesticides must be stored at least 50 feet from any well unless they are stored in secondary containment.

Properly Dispose of Pesticide Containers

Information about container disposal is on the pesticide label. Containers should be triple or pressured-rinsed thoroughly after use, punctured and disposed of in accordance with label directions or offered for recycling. Sprayers should be cleaned at the application site whenever possible and at a safe distance from wells, lakes, streams and storm drains. The rinsate should be sprayed on a site that is listed on the pesticide label or used as makeup water in the next tank mix. Be sure label rates are not exceeded.

Develop Emergency Response Plan

Anyone who stores, handles or uses pesticides should have an emergency response plan should an accident occur.

Stormwater Pollution Prevention

General Maintenance

Painting

- Use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water." Develop paint handling procedures for proper use, storage, and disposal of paints. Transport paint and materials to and from job sites in containers with secure lids and tied down to the transport vehicle. Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint containers. Mix paint indoors before using so that any spill will not be exposed to rain. Do so even during dry weather because cleanup of a spill will never be 100% effective.
- Transfer and load paint away from storm drain inlets. Plug nearby storm drain inlets prior to starting painting and remove plugs when job is complete when there is significant risk of a spill reaching storm drains or if sand blasting is used to remove paint. Use a ground cloth to collect the chips if painting requires scraping or sand blasting of the existing surface. Dispose the residue properly.
- Cover or enclose painting operations properly to avoid drift. Clean the application equipment in a sink that is connected to the sanitary sewer if using water based paints. Capture all cleanup-water and dispose of properly. Store leftover paints properly if they are to be kept for the next job, or dispose properly.
- Regularly train employees on appropriate BMP implementation, storm water discharge prohibitions, and wastewater discharge requirements. Train employees on proper spill containment and cleanup.



Fence Repair

- Properly clean and dispose of equipment and wastes used and generated during fence repair/maintenance.
- Solid waste storage areas at repair sites should be located away from drainage facilities and watercourses and not located in areas prone to flooding or ponding.
- Compaction is not an alternative to restoring vegetation. Compaction is restricted to areas where vegetation is undesirable or is not sustainable such as in guardrail post or fence post installation. Consider the effect of runoff from the compacted soil on nearby surface water. Evenly grade or level the area prior to compaction. Do not perform compaction while storm water runoff is observed. Compact exposed soil as soon as possible after grading or soil disturbance. Inspect compacted areas to identify any evidence of erosion upon the completion of maintenance activities.

Plumbing

- Copper enters receiving waters through storm drains and from wastewater discharged from wastewater treatment plants. Copper is acutely toxic to plankton and affects the reproduction and growth of shellfish.
- Design each plumbing system to minimize velocity, minimize hot water temperature, avoid stagnant sections and minimize direction and size changes to preserve pipe integrity.
- Eliminate small burrs created from pipe cutting. This reduces turbulence and significantly decreases corrosion. Remove all oxides, debris, and surface soil from tube ends.
- Maintain good housekeeping practices while working. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area. Protect stored pipe from weather and damage so that installed pipe is as clean as possible.
- Newly installed systems should be flushed soon after completion to remove excess flux and debris. For inactive systems, repeat flushing periodically.
- Avoid excess use of flux. Excess flux residue can increase pipe corrosion that leads to copper discharges



Stormwater Pollution Prevention

Graffiti Removal

- If painting over graffiti, use Painting Best Management Practices.
- If removing graffiti using wet sand blasting methods, minimize the quantity of water used, direct runoff to landscaped or soil area, filter runoff through a boom to keep sand out of storm drains, sweep debris and sand and dispose of all waste to avoid future runoff contamination.
- If removing graffiti using high-pressure washing and cleaning compound, direct washwater runoff to landscaped or soil area. No runoff can discharge into stormdrains. Seal stormdrains and vacuum/pump washwater to the sanitary sewer. Contact the local wastewater treatment plant for guidance, as harsh cleaning compounds may require pretreatment.

Roof Repair or Replacement/Chimney Maintenance

- Recycle residual paints, solvents, lumber, and other materials to the maximum extent practical. Buy recycled products to the maximum extent practical.



- Maintain good housekeeping practices while work is underway. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area.
- Store materials properly that are normally used in repair and remodeling such as paints and solvents. To provide protection from rain, bagged and boxed materials stored outdoors should be stored on pallets throughout the rainy season and covered prior to rain events. Storage areas should be kept clean, well organized and equipped with cleanup supplies. Perimeter controls, containment structures, covers and liners shall be repaired or replaced as needed.

- Do not dump waste liquids down the storm drain. Dispose of sweepings, and sediments properly. Properly collect and dispose of water when pressure washing rooftops, chimneys and other large objects.
- Solid waste storage areas at the work site should be located away from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding.
- Periodically inspect the solid waste storage areas and review the disposal procedures.
- Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use another technique only when dry cleanup techniques are not practicable, such as having to wet for dust control for safety or air quality reasons.

Carpentry

- Wood pieces too small for construction reuse should be recycled or chipped for mulch or compost to reduce solid wastes.
- Maintain good housekeeping practices. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area. Dispose of sweepings, and sediments properly. Storage areas should be kept clean, and well organized.
- Solid waste storage areas at the work site should be located away from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding. Periodically inspect the solid waste storage areas and review the disposal procedures.
- Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use another technique only when dry cleanup techniques are not practicable, such as having to wet for dust control for safety or air quality reasons.

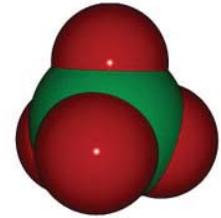


Stormwater Pollution Prevention

Perchlorate Containing Materials

What is Perchlorate?

Perchlorate is both a naturally occurring and manmade salt that is a contaminant increasingly found in groundwater, surface water and soil. Perchlorate is highly soluble and when dissolved in water it easily moves through and travels with the flow of water on or beneath the ground.



Most perchlorate manufactured in the U.S. is used as an ingredient in solid fuel for rockets and missiles. Perchlorate-based chemicals are also used in the construction of highway safety flares, fireworks, pyrotechnic devices, explosives, common batteries and automobile restraint systems (air bags). In light of the risks to public health and the environment posed by perchlorate releases, best management practices are necessary for the prevention of perchlorate contamination.

Storage

Store perchlorate containing materials in weather-resistant structures with floors that:

- are adequately water-resistant to prevent seepage into or out of the containment structure;
- do not have drains that release to the environment; and
- are of adequate strength to support the loads.

Spills

- Immediately contain and collect all perchlorate material spills (i.e. bleach, fertilizers).
- If materials resulting from a spill are considered hazardous, manage and dispose of the material according to all applicable regulatory requirements (Health & Safety Code Section 25210.6 & 58012).

Pollution Prevention

If using perchlorate-containing fertilizers and safety flares in an amount *greater than 500 pounds at a given time*:

- review and record the use of these products,
 - prior to use, investigate and determine if a non-perchlorate-containing alternative is available; and
 - review, improve and implement, as appropriate, all pollution prevention measures utilized to prevent the release of perchlorate in any form.
- Assure that the California Department of Toxic Substance Control has received the one-time notification listing their perchlorate materials and their related uses.

Batteries



Coin type cell batteries with identification numbers starting with "CR" (Manganese Oxide) contain perchlorate.

- Follow the packaging directions to ensure proper use and disposal of batteries.

Stormwater Pollution Prevention



Flares/Fuses

When using road flares in emergency situations:

- Allow flares to burn out completely.
- Dispose of flare residue properly (i.e. solid waste container).
- As appropriate, limit the number flares used and their duration without impeding immediate safety considerations.
- Do not burn flares to dispose of them. Do not dispose of unused flares in water or normal refuse containers. Contact the hazardous waste manager for local disposal requirements.

Alternatives to Flares - Light Sticks, Power Flares (LED)

- Light sticks or Power Flares are a safe alternative to traditional flares. No chemical reaction, heat or spark is produced that can result in a release of residue containing perchlorate to the environment.



Fertilizers

Chilean (sodium) nitrate is a mined source of nitrogen used in several fertilizer products such as Bulldog Soda, nitrate of soda, Chilean saltpeter, soda niter, and nitric acid sodium salt. Chilean nitrate fertilizers contain naturally occurring perchlorate salts.

- Before applying fertilizers, check the label to determine whether perchlorate salts are present. If fertilizers contain perchlorate salts, if not marked, mark the packaging clearly "Perchlorate Material - Special Handling May Apply".
- Keep all perchlorate containing fertilizer in durable and water-resistant packaging or containers.
- Follow any instructions found on the package label and/or any Material Safety Data Sheet (MSDS) provided.

Stormwater Pollution Prevention

Sewer or Drain Cleaning and Maintenance/Septic Systems

Storm Drain Cleaning/Maintenance

- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- When possible use vacuum techniques to clean debris out of catch basins, channels or other conveyance systems.



Septic System Cleaning/Maintenance

- Maintain good housekeeping practices. Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area. Dispose of sweepings, and sediments properly. Storage areas should be kept clean, and well organized.
- Solid waste storage areas at the work site should be located away from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding. Check for spills or accidental discharges and perform required cleaning.
- Use dry cleanup techniques (e.g., vacuuming, sweeping, dry rags) to remove solid waste from the site when practicable. Use another technique only when dry cleanup techniques are not practicable, such as having to wet for dust control for safety or air quality reasons.



Stormwater Pollution Prevention

Trash Removal

Waste Handling and Disposal

- Recycle, reuse or properly dispose of solid waste.
- Take special care when loading or unloading wastes to minimize losses.
- Secure or cover transported materials to prevent spillage to the roadway. Do not fill waste containers with washout water or any other liquid.



Good Housekeeping

- Keep waste collection areas clean
- If possible, sweep and clean the trash storage area particularly after trash removal. If it is paved, do not hose down the area to a storm drain.
- Remove litter and debris from drainage grates, trash racks and ditch lines to reduce discharge to the storm water drainage systems and watercourses.



Stormwater Pollution Prevention

Yard Service

Landscaping

- Where feasible, retain and/or plant native vegetation since it usually requires less maintenance than new vegetation. When planting or replanting consider using flowers, trees, shrubs, and groundcovers that have low water use. Consider alternative landscaping techniques such as naturescaping and xeriscaping.
- Minimize the use of pesticides and fertilizers; read the labels and follow directions to avoid improper use; do not apply chemicals if it is windy or about to rain. Try using organic or non-toxic fertilizer alternatives. Avoid applying chemical fertilizers near curbs, driveways, gutters, ditches, streams or waterbodies. Properly clean up and dispose of spills of landscaping chemicals, fertilizers, or soils. If possible, return the spilled material to the container for future use. Store fertilizers and chemicals in closed, waterproof, labeled containers, in a covered area, or off-ground and under protective tarps.
- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers. Follow manufacturers' recommendations and label directions. Employ techniques to minimize off-target application (e.g. spray drift) of fertilizer, including consideration of alternative application techniques. Calibrate fertilizer distributors to avoid excessive application. Periodically test soils for determining proper fertilizer use. Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface. Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water. Use slow release fertilizers whenever possible to minimize leaching.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements. Design the irrigation system to each landscape area's specific water requirements. Adjust irrigation systems to reflect seasonal water needs. Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system. Implement landscape plans consistent with County or City water conservation resolutions, which may include water sensors, programmable irrigation times (for short cycles), rain-triggered shutoff devices to prevent irrigation after precipitation and flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines. Use drip irrigation, soaker hoses, or micro-spray systems where appropriate and feasible.
- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage at a permitted landfill or by composting as soon as possible. Do not dispose of gardening wastes in streets, waterways, or storm drainage systems. Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm and/or cover. After landscaping activities, do not sweep or blow clippings and waste into the street or gutter. Avoid hosing down the pavement.
- Irrigate slowly or pulse irrigate so the infiltration rate of the soil is not exceeded. Inspect irrigation system regularly for leaks and to ensure that excessive runoff is not occurring. If re-claimed water is used for irrigation, ensure that there is no runoff from the landscaped area(s). Use automatic timers to minimize runoff. Use popup sprinkler heads in areas with a lot of activity or where pipes may be broken. Consider the use of mechanisms that reduce water flow to broken sprinkler heads.
- Store stockpiles under plastic tarps to protect them from wind and rain. Cover non-vegetated surfaces to prevent erosion. Use mulches in planter areas without ground cover to minimize sediment in runoff. Leave a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible. Develop healthy soil: choose a grass type that thrives in the climate where it will be planted; mow high, often, and with sharp blades; water deeply but not too often.



Tree Trimming

Place temporarily stockpiled material away from watercourses and storm drain inlets, and cover.

Dispose of collected vegetation as garbage at a permitted landfill or by composting. Do not dispose of tree trimming wastes in streets, waterways, or storm drainage systems.

Stormwater Pollution Prevention

Weed Abatement, Mowing, Disking

- Use mechanical methods of vegetation removal such as hand weeding rather than applying herbicides. When mowing or hand weeding, minimize loosening the soil, which could lead to erosion.
- When possible, use a lawn mower that has a mulcher so that the grass clippings remain on the lawn. Compost materials in a designated area, take clippings to a landfill for composting, or recycle lawn clippings and greenery waste through local programs when available.
- For activities involving the removal of vegetation, the limits of disturbance should be defined to minimize adverse effects on vegetation outside the working area. The protection of desirable vegetation provides erosion and sediment control. The following steps should be taken to preserve existing vegetation:



- Vegetation outside the limits of disturbance should be replaced if damaged
- Minimize the number of access and egress points and locate them to reduce damage to existing vegetation
- Maintenance materials and equipment storage and parking areas should be located where they will not cause root compaction
- Keep equipment away from trees to prevent trunk and root damage
- Avoid placing soil around trunks of trees.

- Disking involves turning over the soil in which a plow having one or more heavy, round, concave, sharpened, freely rotating steel disks angled to cut and turn a furrow is drawn across a site. When possible, maintain furrows away from points of ingress/egress.
- Avoid heavy equipment operations in very wet or saturated soil conditions. Do not damage water control devices (i.e. culverts, wing ditches). Maintain an undisked buffer along the perimeter to serve as a vegetation filter for sediments.
- Avoid over spraying onto sidewalks, lined drainage channels, roadways or existing vegetation. Minimize the number of access and egress points and locate them to reduce damage to existing vegetation.
- During egress from the property inspect the disks to assure that they are free of accumulated sediment and vegetation.



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Appendix O: BMP Factsheets for Construction/Demolition Projects

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Post - Demolition BMP Information Sheets

Temporary Sediment Control

Fiber Rolls
Gravel Bag Berm
Sand Bag Barrier
Straw Bale Barrier
Street Sweeping and Vacuuming

Temporary Soil Stabilization

Geotextiles
Hydraulic Mulch
Hydroseeding
Scheduling and Preservation of Vegetation
Soil Binders
Straw Mulch

Tracking Control

Wind Erosion Control

Waste Management and Materials Handling Control

Non-Storm Water Management

Stormwater Pollution Prevention

Fiber Rolls

A fiber roll consists of wood excelsior, rice or wheat straw, or coconut fibers that is rolled or bound into a tight tubular roll and placed on the toe and face of slopes to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide removal of sediment from the runoff. Fiber rolls may also be used for inlet protection and as check dams under certain situations.

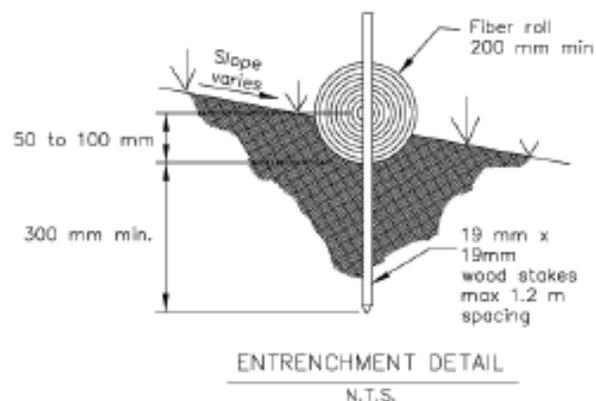
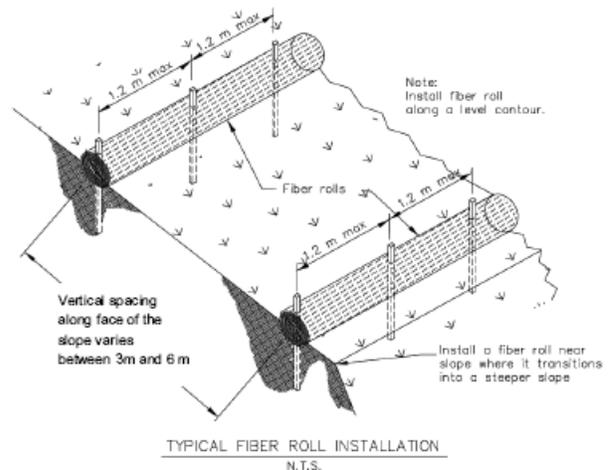
Appropriate Applications

- This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible.
- Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- Below the toe of exposed and erodible slopes.
- Fiber rolls may be used as check dams in unlined ditches if approved by the Resident Engineer (RE) or the District Construction Storm Water Coordinator (refer to SC-4 "Check Dams").
- Fiber rolls may be used for drain inlet protection if approved by the RE or the District Construction Storm Water Coordinator (refer to SC-10 "Storm Drain Inlet Protection").
- Down-slope of exposed soil areas.
- Around temporary stockpiles.
- Along the perimeter of a project.



Maintenance and Inspection

- Repair or replace split, torn, unraveling, or slumping fiber rolls.
- Inspect fiber rolls when rain is forecast. Perform maintenance as needed or as required by the RE.
- Inspect fiber rolls following rainfall events and a least daily during prolonged rainfall. Perform maintenance as needed.
- Maintain fiber rolls to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches three quarters (3/4) of the barrier height. Removed sediment shall be incorporated onsite as designated by the RW Property Maintenance Contract Manager or disposed offsite in conformance with the Standard Specifications.



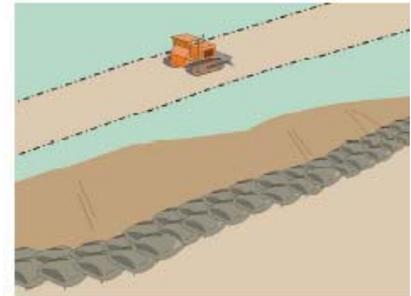
Stormwater Pollution Prevention

Gravel Bag Berm

A gravel bag berm consists of a single row of gravel bags that are installed end to end to form a barrier across a slope to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide some sediment removal. Gravel bags can be used where flows are moderately concentrated, such as ditches, swales, and storm drain inlets (see BMP SC-10, Storm Drain Inlet Protection) to divert and/or detain flows.

Appropriate Applications

- BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible.
- Along streams and channels.
- Below the toe of exposed and erodible slopes.
- Down slope of exposed soil areas.
- Around stockpiles.
- Across channels to serve as a barrier for utility trenches or provide a temporary channel crossing for construction equipment, to reduce stream impacts.
- Parallel to a roadway to keep sediment off paved areas.
- At the top of slopes to divert roadway runoff away from disturbed slopes.
- Along the perimeter of a site.
- To divert or direct flow or create a temporary sediment basin.
- During construction activities in stream beds when the contributing drainage area is less than 2 ha (5 ac).
- When extended construction period limits the use of either silt fences or straw bale barriers.
- When site conditions or construction sequencing require adjustments or relocation of the barrier to meet changing field conditions and needs during construction.
- At grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.



Maintenance and Inspection

- Inspect gravel bag berms before and after each rainfall event, and weekly throughout the rainy season.
- Reshape or replace gravel bags as needed.
- Repair washouts or other damages as needed.
- Inspect gravel bag berms for sediment accumulations and remove sediments when accumulation reaches one-third of the berm height. Removed sediment shall be incorporated onsite as designated by the RW Property Maintenance Contract Manager or disposed of offsite in conformance with the Standard Specifications.
- Remove gravel bag berms when no longer needed. Remove sediment accumulations and clean, re-grade, and stabilize the area.

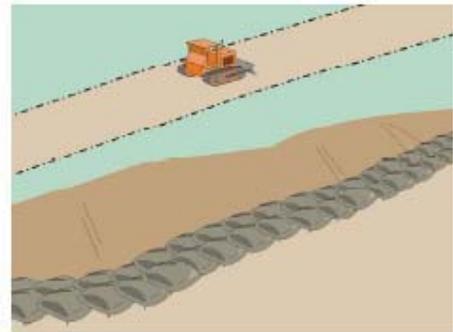
Stormwater Pollution Prevention

Sandbag Barrier

A sandbag barrier is a temporary linear sediment barrier consisting of stacked sandbags, designed to intercept and slow the flow of sediment-laden sheet flow runoff. Sandbag barriers allow sediment to settle from runoff before water leaves the construction site.

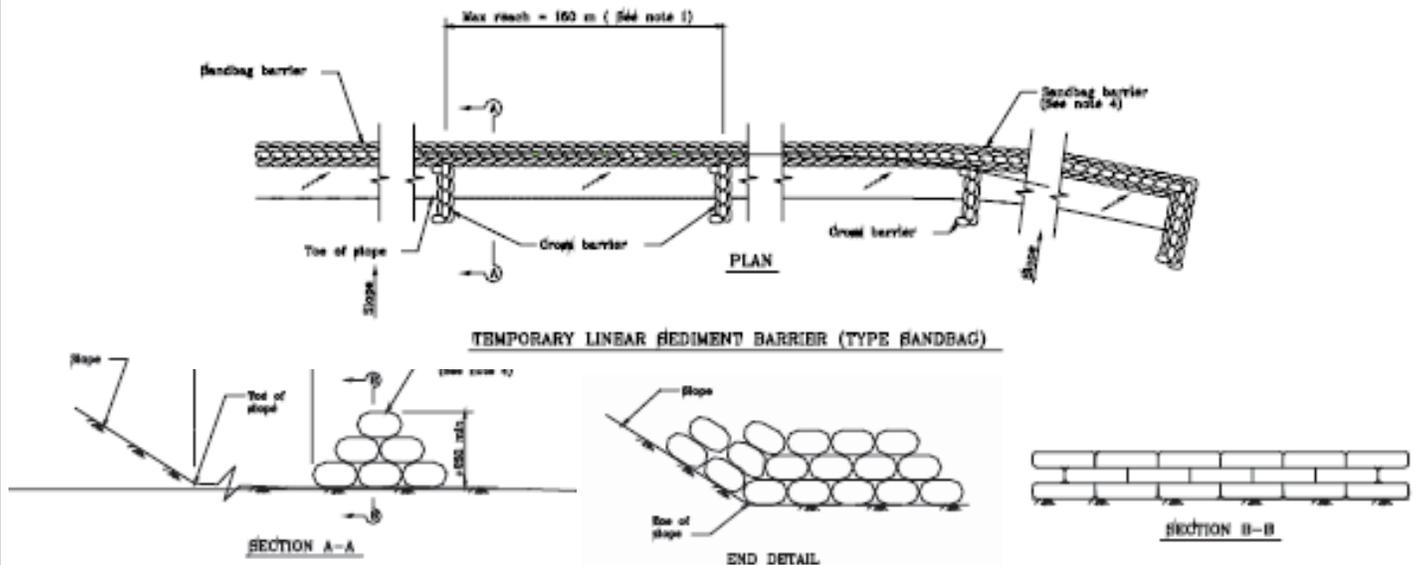
Appropriate Applications

- This BMP may be implemented on a project-by-project basis in addition to other BMPs when determined necessary and feasible.
- Along the perimeter of a site.
- Along streams and channels.
- Below the toe of exposed and erodible slopes.
- Down slope of exposed soil areas.
- Around stockpiles.
- Across channels to serve as a barrier for utility trenches or provide a temporary channel crossing for construction equipment, to reduce stream impacts.
- Parallel to a roadway to keep sediment off paved areas.
- At the top of slopes to divert roadway runoff away from disturbed slopes.
- To divert or direct flow or create a temporary sediment/desilting basin.
- During construction activities in stream beds when the contributing drainage area is less than 2 ha (5 ac).
- When extended construction period limits the use of either silt fences or straw bale barriers.
- Along the perimeter of vehicle and equipment fueling and maintenance areas or chemical storage areas.
- To capture and detain non-storm water flows until proper cleaning operations occur.
- When site conditions or construction sequencing require adjustments or relocation of the barrier to meet changing field conditions and needs during construction.
- To temporarily close or continue broken, damaged or incomplete curbs.



Maintenance and Inspection

- Inspect sandbag barriers before and after each rainfall event, and weekly throughout the rainy season.
- Reshape or replace sandbags as needed.
- Repair washouts or other damages as needed.
- Inspect sandbag barriers for sediment accumulations and remove sediments when accumulation reaches one-third the barrier height. Removed sediment shall be incorporated onsite as designated by the RW Property Maintenance Contract Manager or disposed of offsite in conformance with the Standard Specifications.
- Remove sandbags when no longer needed. Remove sediment accumulation, and clean, re-grade, and stabilized the area.



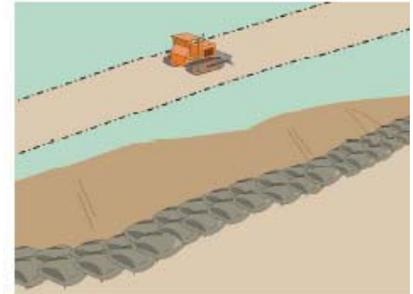
Stormwater Pollution Prevention

Straw Bale Barrier

A straw bale barrier is a temporary linear sediment barrier consisting of straw bales, designed to intercept and slow sediment-laden sheet flow runoff. Straw bale barriers allow sediment to settle from runoff before water leaves the construction site.

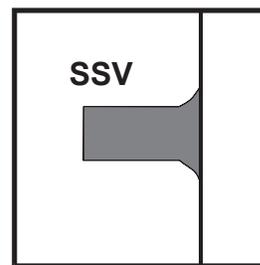
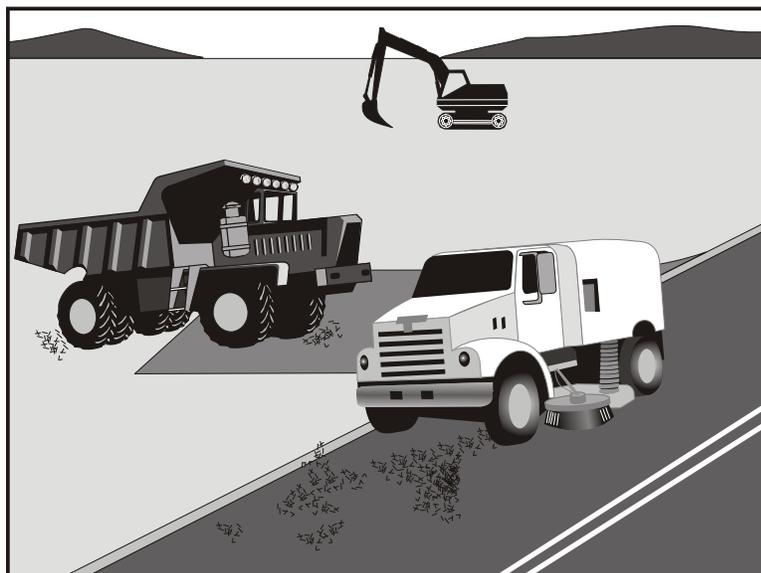
Appropriate Applications

- This BMP may be implemented on a project-by-project basis in addition to other BMPs when determined necessary and feasible.
- Along the perimeter of a site.
- Along streams and channels.
- Below the toe of exposed and erodible slopes.
- Down slope of exposed soil areas.
- Around stockpiles.
- Across minor swales or ditches with small catchments.
- Around above grade type temporary concrete washouts (See BMP WM-8, "Concrete Waste Management").
- Parallel to a roadway to keep sediment off paved areas.
- Use is not prohibited by District policy or other jurisdictions.



Maintenance and Inspection

- Inspect straw bale barriers before and after each rainfall event, and weekly throughout the rainy season. Reshape or replace sandbags as needed.
- Inspect straw bale barriers for sediment accumulations and remove sediment when depth reaches one-third the barrier height. Removed sediment shall be incorporated onsite as designated by the RW Property Maintenance Contract Manager or disposed offsite in conformance with the Standard Specifications.
- Replace or repair damage bales as needed.
- Repair washouts or other damages as needed.
- Remove straw bales when no longer needed. Remove sediment accumulation, and clean, re-grade, and stabilized the area.



Standard Symbol

- BMP Objectives**

 - Soil Stabilization
 - Sediment Control
 - Tracking Control
 - Wind Erosion Control
 - Non-Storm Water Management
 - Materials and Waste Management

Definition and Purpose Practices to remove tracked sediment to prevent the sediment from entering a storm drain or watercourse.

Appropriate Applications These practices are implemented anywhere sediment is tracked from the project site onto public or private paved roads, typically at points of ingress/egress.

Limitations Sweeping and vacuuming may not be effective when soil is wet or muddy.

- Standards and Specifications**
- Kick brooms or sweeper attachments shall not be used.
 - Inspect potential sediment tracking locations daily.
 - Visible sediment tracking shall be swept and/or vacuumed daily.
 - If not mixed with debris or trash, consider incorporating the removed sediment back into the project.

- Maintenance and Inspection**
- Inspect ingress/egress access points daily and sweep tracked sediment as needed, or as required by the Resident Engineer (RE).
 - Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
 - Adjust brooms frequently; maximize efficiency of sweeping operations.
 - After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite in conformance with the provisions in Standard Specifications Section 7-1.13 .

Stormwater Pollution Prevention

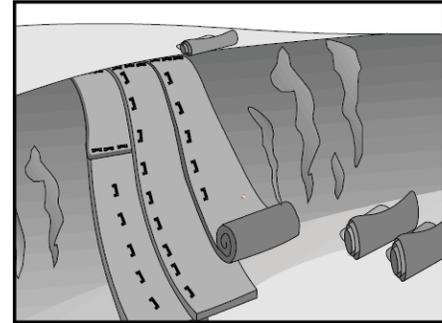
Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats

This is Best Management Practice (BMP) involves the placement of geotextiles, mats, plastic covers, or erosion control blankets to stabilize disturbed soil areas and protect soils from erosion by wind or water. This is one of five temporary soil stabilization in alternatives to consider.

Appropriate Applications

These measures are used when disturbed soils may be particularly difficult to stabilize, including the following situations:

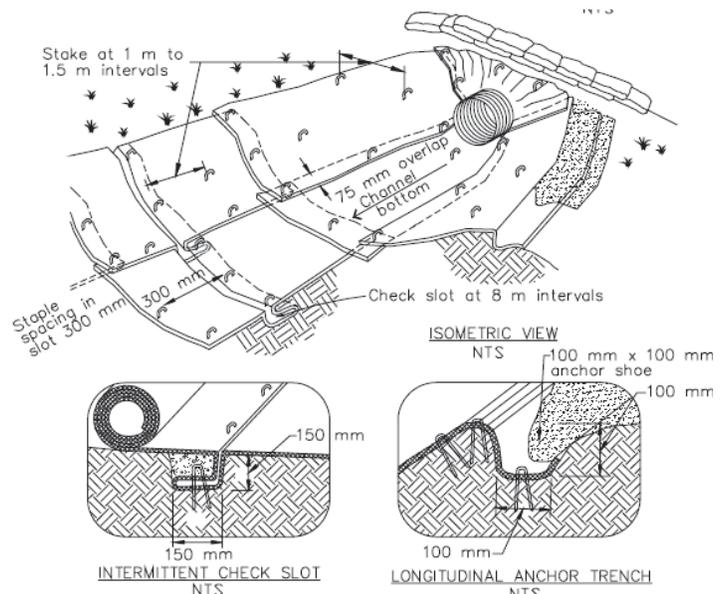
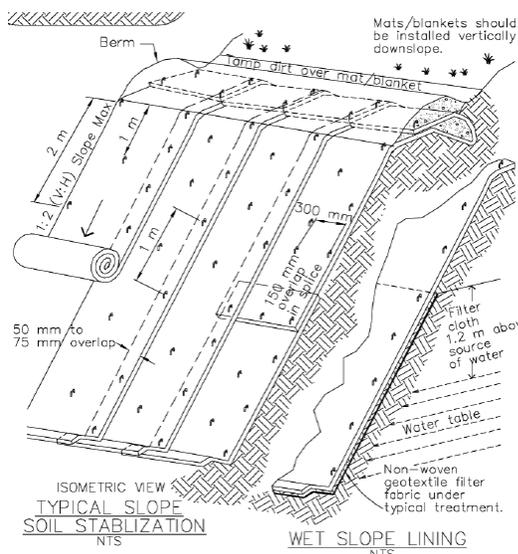
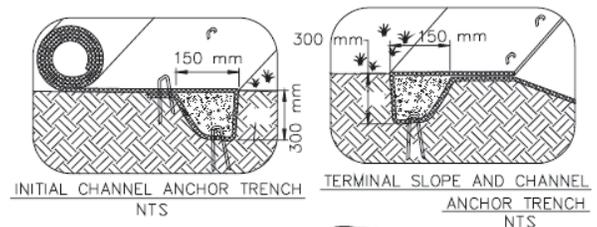
- Steep slopes, generally steeper than 1:3 (V:H).
- Slopes where the erosion potential is high.
- Slopes and disturbed soils where mulch must be anchored.
- Disturbed areas where plants are slow to develop.
- Channels with flows exceeding 1.0 m/s (3.3 ft/s).
- Channels to be vegetated.
- Stockpiles.
- Slopes adjacent to water bodies of Environmentally Sensitive Areas (ESAs).



Maintenance and Inspection

Areas treated with temporary soil stabilization shall be inspected as specified in the Standard Special Provisions (SSPs). Areas treated with temporary soil stabilization shall be maintained to provide adequate erosion control. Temporary soil stabilization shall be reapplied or replaced on exposed soils when area becomes exposed or exhibits visible erosion.

- All blankets and mats shall be inspected periodically after installation.
- Installation shall be inspected after significant rainstorms to check for erosion and undermining. Any failures shall be repaired immediately.
- If washout or breakage occurs, re-install the material after repairing the damage to the slope or channel.



Stormwater Pollution Prevention

Hydraulic Mulch

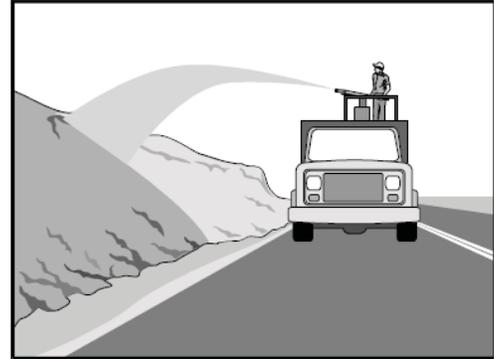
Hydraulic mulch consists of applying a mixture of shredded wood fiber or a hydraulic matrix and a stabilizing emulsion or tackifier with hydroseeding equipment, which temporarily protects exposed soil from erosion by raindrop impact or wind. This is one of five temporary soil stabilization alternatives to consider.

Appropriate Applications

- Hydraulic mulch is applied to disturbed areas requiring temporary protection until permanent vegetation is established or disturbed areas must be redisturbed following an extended period of inactivity.

Maintenance and Inspection

- Maintain an unbroken, temporary mulched ground cover throughout the period of construction when the soils are not being reworked. Inspect before expected rainstorms and repair any damaged ground cover and re-mulch exposed areas of bare soil.
- After any rainfall event, inspect site for any signs of erosion.



Stormwater Pollution Prevention

Hydroseeding

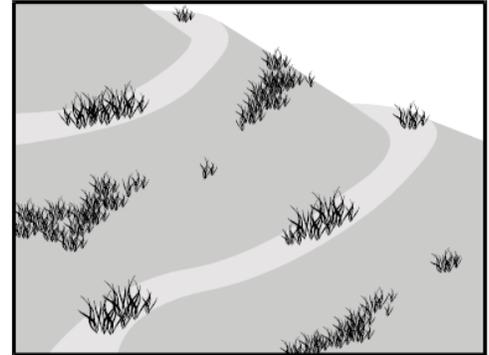
Hydroseeding typically consists of applying a mixture of wood fiber, seed, fertilizer, and stabilizing emulsion with hydro-mulch equipment, which temporarily protects exposed soils from erosion by water and wind. This is one of five temporary soil stabilization alternatives to consider.

Appropriate Applications

- Hydroseeding is applied on disturbed soil areas requiring temporary protection until permanent vegetation is established or disturbed soil areas must be re-disturbed following an extended period of inactivity.

Maintenance and Inspection

- All seeded areas shall be inspected for failures and re-seeded, fertilized, and mulched within the planting season, using not less than half the original application rates. Any temporary revegetation efforts that do not provide adequate cover must be reapplied at a scheduled recommended by the Caltrans Landscape Architect or other appropriate Caltrans staff.
- After any rainfall event, inspect site for any signs of erosion.



Stormwater Pollution Prevention

Soil Binders

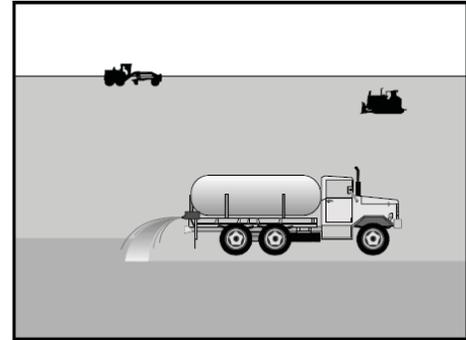
Soil binders consist of applying and maintaining a soil stabilizer to exposed soil surfaces. Soil binders are materials applied to the soil surface to temporarily prevent water-induced erosion of exposed soils on construction sites. Soil binders also provide temporary dust, wind, and soil stabilization (erosion control) benefits. This is one of five temporary soil stabilization alternatives to consider.

Appropriate Applications

Soil binders are typically applied to disturbed areas requiring short-term temporary protection. Because soil binders can often be incorporated into the work, they may be a good choice for areas where grading activities will soon resume. Application on stockpiles to prevent water and wind erosion.

Maintenance and Inspection

- Reapplying the selected soil binder may be needed for proper maintenance. High traffic areas shall be inspected daily, and lower traffic areas shall be inspected weekly.
- After any rainfall event, inspect the site for any signs of erosion.
- Maintain an unbroken, temporary stabilized area while disturbed soil areas (DSAs) are nonactive. Repair any damaged stabilized area and re-apply soil binder to exposed areas.



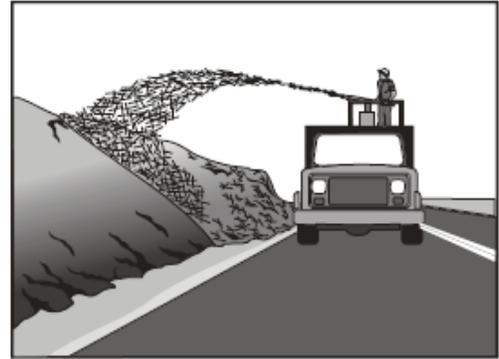
Stormwater Pollution Prevention

Straw Mulch

Straw mulch consists of placing a uniform layer of straw and incorporating it into the soil with a studded roller or anchoring it with a stabilizing emulsion. This is one of five temporary soil stabilization alternatives to consider.

Appropriate Applications

- Straw mulch is typically used for soil stabilization as a temporary surface cover on disturbed areas until soils can be prepared for revegetation and permanent vegetation is established.
- Also typically used in combination with temporary and/or permanent seeding strategies to enhance plant establishment.



Maintenance and Inspection

- The key consideration in Maintenance and Inspection is that the straw needs to last long enough to achieve erosion control objectives.
- Maintain an unbroken, temporary mulched ground cover while disturbed soil areas (DSAs) are non-active. Repair any damaged ground cover and re-mulch exposed areas.
- Reapplication of straw mulch and tackifier may be required by the RW Property Maintenance Contract Manager to maintain effective soil stabilization over disturbed areas and slopes.
- After any rainfall event, inspect the site for any signs of erosion.

Stormwater Pollution Prevention

Scheduling

This best management practice (BMP) involves developing, for every project, a schedule that includes sequencing of maintenance activities, including maintenance of temporary soil stabilization (erosion control) and temporary sediment controls measures. The purpose is to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff and vehicle tracking, and to perform the maintenance activities and control practices in accordance with the planned schedule.

Maintenance sequencing shall be scheduled to minimize land disturbance for all projects during the rainy and non-rainy season. Appropriate BMPs shall be implemented during both rainy and non-rainy seasons.

Maintenance and Inspection

- Verify that work is progressing in accordance with the schedule. If progress deviates, take corrective actions.
- Amend the schedule when changes are warranted.

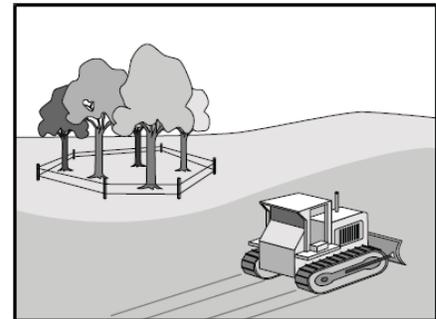


Preservation of Existing Vegetation

Preservation of existing vegetation is the identification and protection of desirable vegetation that provides erosion and sediment control benefits.

Appropriate Applications

- Preserve existing vegetation at areas on a site where no construction activity is planned or will occur at a later date. Specifications for preservation of existing vegetation can be found in Standard Specifications, Section 7-1.11.
- On a year-round basis, temporary fencing shall be provided prior to the commencement of any soil-disturbing activities on the site.
- Any soil disturbing activities should be staged to preserve existing vegetation.



Maintenance and Inspection

- During maintenance, the limits of disturbance shall remain clearly marked at all times.

Stormwater Pollution Prevention

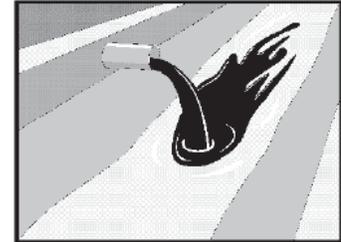
Non-Storm Water Management

Illicit Connection / Illegal Discharge Detection and Reporting

Procedures and practices designed for contractors to recognize illicit connections or illegally dumped or discharged materials on a work site and report incidents to the RW Property Maintenance Contract Manager.

Appropriate Applications

- Illicit connection/illegal discharge detection and reporting is applicable anytime an illicit connection or discharge is discovered or illegally dumped material is found on the work site.
- This best management practice (BMP) applies to all maintenance projects.

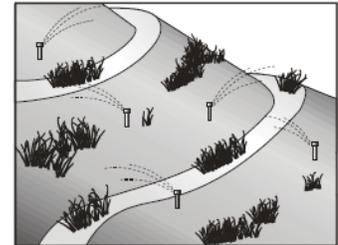


Cleanup and Removal

The contractor is not responsible for investigation and clean up of illicit or illegal dumping or discharges not generated by the contractor. Caltrans may direct contractor to clean up non-hazardous dumped or discharged material on the construction site.

Potable Water / Irrigation

Potable Water/Irrigation management consists of practices and procedures to manage the discharge of potential pollutants generated during discharges from irrigation water lines, landscape irrigation, lawn or garden watering, planned and unplanned discharges from potable water sources, water line flushing, and hydrant flushing.



Appropriate Applications

- Implement this BMP whenever the above activities or discharges occur at a maintenance site.

Maintenance and Inspection

- Repair broken water lines as soon as possible.
- Inspect irrigated areas regularly for signs of erosion and/or discharge.

Vehicle and Equipment Cleaning

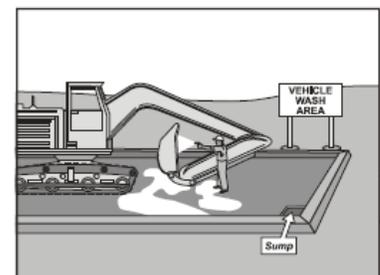
Vehicle and equipment cleaning procedures and practices are used to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to storm drain system or to watercourses.

Appropriate Applications

- These procedures are applied on all maintenance sites where vehicle and equipment cleaning is performed.

Maintenance and Inspection

- The control measure shall be inspected at a minimum of once a week.
- Monitor employees and subcontractors throughout the duration of the construction project to ensure appropriate practices are being implemented.
- Inspect sump regularly and remove liquids and sediment as needed or as directed by the RW Property Maintenance Contract Manager.



Stormwater Pollution Prevention

Vehicle and Equipment Fueling

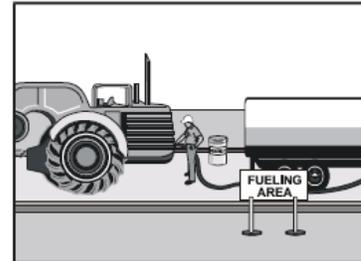
Vehicle and equipment fueling procedures and practices are designed to minimize or eliminate the discharge of fuel spills and leaks into storm drain systems or to watercourses.

Appropriate Applications

- These procedures are applied on all construction sites where vehicle and equipment fueling takes place.

Maintenance and Inspection

- Fueling areas and storage tanks shall be inspected regularly.
- Keep an ample supply of spill cleanup material on the site.
- Immediately cleanup spills and properly dispose of contaminated soil and cleanup materials.



Vehicle and Equipment Maintenance

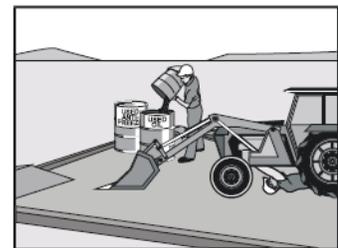
Procedures and practices to minimize or eliminate the discharge of pollutants to the storm drain systems or to watercourses from vehicle and equipment maintenance procedures.

Appropriate Applications

- These procedures are applied on all maintenance projects where an onsite yard area is necessary for storage and maintenance of heavy equipment and vehicles.

Maintenance and Inspection

- Maintain waste fluid containers in leak proof condition.
- Vehicle and equipment maintenance areas shall be inspected regularly.
- Vehicles and equipment shall be inspected on each day of use. Leaks shall be repaired immediately or the problem vehicle(s) or equipment shall be removed from the project site.
- Inspect equipment for damaged hoses and leaky gaskets routinely. Repair or replace as needed.



Water Conservation Practices

Water conservation practices are activities that use water during maintenance work in a manner that avoids causing erosion and/or the transport of pollutants off site.

Appropriate Applications

- Water conservation practices are implemented on all maintenance sites and wherever water is used.
- Applies to all maintenance work.

Maintenance and Inspection

- Inspect water equipment at least weekly.
- Repair water equipment as needed.



Stormwater Pollution Prevention

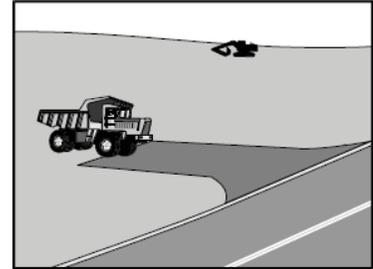
Tracking Control Practices

Stabilized Construction Entrance/Exit

A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Appropriate Applications

- Use at maintenance sites:
 - Where dirt or mud can be tracked onto public roads.
 - Adjacent to water bodies.
 - Where poor soils are encountered.
 - Where dust is a problem during dry weather conditions.
- This BMP may be implemented on a project-by-project basis in addition to other BMPs when determined necessary and feasible by the RW Property Maintenance Contract Manager.



Maintenance and Inspection

- Inspect routinely for damage and assess effectiveness of the BMP. Remove aggregate, separate and dispose of sediment if maintenance site entrance/exit is clogged with sediment or as directed by the RW Property Maintenance Contract Manager. Reshape or replace gravel bags as needed, or as directed by the RW Property Maintenance Contract Manager.
- Keep all temporary roadway ditches clear.
- Inspect for damage and repair as needed.

Stormwater Pollution Prevention

Waste Management and Materials Pollution Control

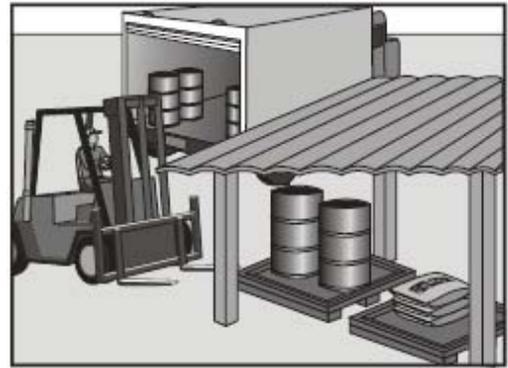
Material Delivery and Storage

Procedures and practices for the proper handling and storage of materials in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or to watercourses.

Appropriate Applications

These procedures are implemented at all maintenance sites with delivery and storage of the following:

- Hazardous chemicals such as:
 - Acids
 - Lime
 - Glues
 - Adhesives
 - Paints
 - Solvents
 - Curing Compounds.
- Soil stabilizers and binders
- Fertilizers
- Other materials that may be detrimental if released to the environment



Maintenance and Inspection

- Storage areas shall be kept clean, well organized, and equipped with ample clean-up supplies as appropriate for the materials being stored.
- Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.
- Inspect storage areas before and after rainfall events, and at least weekly during other times. Collect and place into drums any spills or accumulated rainwater.

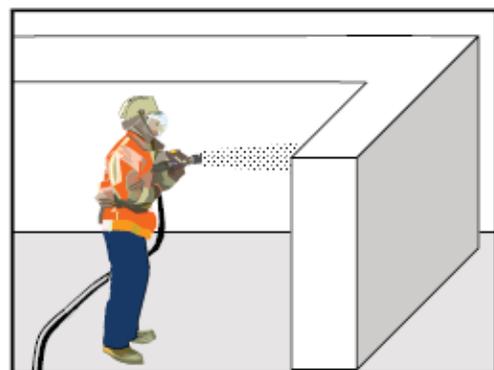
Material Use

These are procedures and practices for use of maintenance materials in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or to watercourses.

Appropriate Applications

This BMP applies to all construction projects. These procedures apply when the following materials are used or prepared on site:

- Hazardous chemicals such as:
 - Acids
 - Lime
 - Glues
 - Adhesives
 - Paints
 - Solvents
 - Curing Compounds
- Soil stabilizers and binders.
- Fertilizers.
- Other materials that may be detrimental if released to the environment.



Maintenance and Inspection

- Spot check employees and subcontractors monthly throughout the job to ensure appropriate practices are being employed.

Stormwater Pollution Prevention

Stockpile Management

Stockpile management procedures and practices are designed to reduce or eliminate air and storm water pollution from stockpiles of soil or other loose materials stored onsite.

Appropriate Applications

Implemented in all projects that stockpile soil and other materials.

Maintenance and Inspection

- Repair and/or replace perimeter controls and covers as needed, or as directed by the RW Property Maintenance Contract Manager, to keep them functioning properly. Sediment shall be removed when sediment accumulation reaches one third (1/3) of the barrier height.

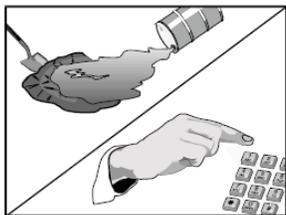


Spill Prevention and Control

These procedures and practices are implemented to prevent and control spills in a manner that minimizes or prevents the discharge of spilled material to the drainage system or watercourses.

Appropriate Applications

This best management practice (BMP) applies to all maintenance projects. Spill control procedures are implemented anytime chemicals and/or hazardous substances are stored. Substances may include, but are not limited to:



- Soil stabilizers/binders
- Dust Palliatives
- Growth inhibitors
- Fertilizers
- Fuels
- Lubricants
- Other petroleum distillates

To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110, 117, and 302, and sanitary and septic wastes shall be contained and

cleaned up immediately.

Maintenance and Inspection

- Verify weekly that spill control clean up materials are located near material storage, unloading, and use areas.
- Update spill prevention and control plans and stock appropriate clean-up materials whenever changes occur in the types of chemicals used or stored onsite.

Solid Waste Management

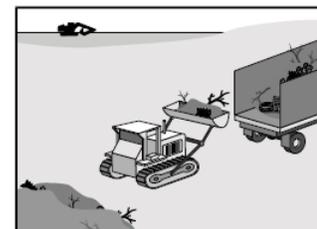
Solid waste management procedures and practices are designed to minimize or eliminate the discharge of pollutants to the drainage system or to watercourses as a result of the creation, stockpiling, or removal of maintenance site wastes.

Appropriate Applications

Solid waste management procedures and practices are implemented on all maintenance sites that generate solid wastes.

Solid wastes include but are not limited to:

- Construction wastes including brick, mortar, timber, steel and metal scraps, sawdust, pipe and electrical cuttings, non-hazardous equipment parts, styrofoam and other materials used to transport and package construction materials; storm water BMPs that are in a state of disrepair and non biodegradable.
- Highway planting wastes, including vegetative material, plant containers, and packaging materials.
- Litter, including food containers, beverage cans, coffee cups, paper bags, plastic wrappers, and smoking materials, including litter generated by the public.



Maintenance and Inspection

- The Contractor shall monitor onsite solid waste storage and disposal procedures.
- Police site for litter and debris.

Stormwater Pollution Prevention

Hazardous Waste Management

These are procedures and practices to minimize or eliminate the discharge of pollutants from maintenance site hazardous waste to the storm drain systems or to watercourses.

Appropriate Applications

- This best management practice (BMP) applies to all maintenance projects.
- Hazardous waste management practices are implemented on maintenance sites that generate waste from the use of:
 - Petroleum Products
 - Acids
 - Solvents
 - Any materials deemed a hazardous waste in California, Title 22 Division 4.5, or listed in 40 CFR Parts 110, 117, 261, or 302.

Maintenance and Inspection

- The contractor shall monitor on-site hazardous waste storage and disposal procedures.
- Waste storage areas shall be kept clean, well organized, and equipped with ample clean-up supplies as appropriate for the materials being stored.
- Storage areas shall be inspected in conformance with the provisions in the contract documents.
- Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.
- Hazardous spills shall be cleaned up and reported in conformance with the applicable Material Safety Data Sheet (MSDS) and the instructions posted at the project site.
- The National Response Center, at (800) 424-8802, shall be notified of spills of Federal reportable quantities in conformance with the requirements in 40 CFR parts 110, 117, and 302.
- Copy of the hazardous waste manifests shall be provided to the RW Property Maintenance Contract Manager.

Sanitary / Septic Waste Management

Procedures and practices to minimize or eliminate the discharge of maintenance site sanitary/septic waste materials to the storm drain system or to watercourses.

Appropriate Applications

Sanitary/septic waste management practices are implemented on all maintenance sites that use temporary or portable sanitary/septic waste systems.

Maintenance and Inspection

- The Contractor shall monitor onsite sanitary/septic waste storage and disposal procedures at least weekly.



Stormwater Pollution Prevention

Wind Erosion Control

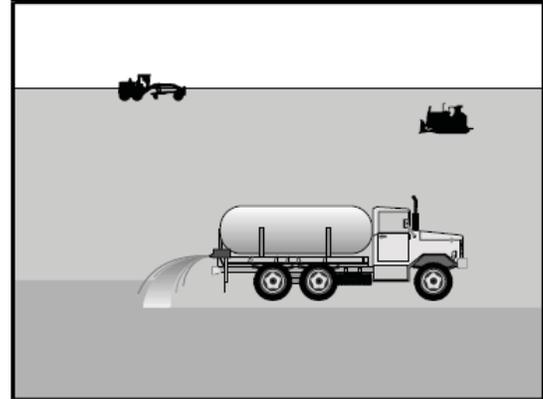
Wind erosion control consists of applying water and/or other dust palliatives as necessary to prevent or alleviate erosion by the forces of wind. Dust control shall be applied in accordance with Caltrans standard practices. Covering of small stockpiles or areas is an alternative to applying water or other dust palliatives.

Appropriate Applications

- This practice is implemented on all exposed soils subject to wind erosion.
- Effectiveness depends on soil, temperature, humidity and wind velocity.

Maintenance and Inspection

- Check areas that have been protected to ensure coverage.



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