

Storm Water Quality Handbooks

Project Planning and Design Guide

Storm Water Pollution Prevention Plan (SWPPP)
and Water Pollution Control Program (WPCP) Preparation Manual

Construction Site
Best Management Practices (BMPs) Manual



State of California
Department of Transportation

March 2003



Storm
Water
Quality
Handbooks

Storm Water
Pollution
Prevention
Plan
(SWPPP)
and
Water
Pollution
Control
Program
(WPCP)
Preparation
Manual



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Caltrans

**State of California
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Contents

Section 1 – Introduction and Background

1.1	Purpose and Scope of this Manual	1-1
1.2	Regulations and Permits	1-1
1.2.1	Federal Regulations	1-1
1.2.2	Caltrans Statewide NPDES Permit.....	1-2

Section 2 – Preparing a Storm Water Pollution Prevention Plan (SWPPP)

2.1	Preparation and Approval of a SWPPP	2-1
2.1.1	Information Provided by Caltrans	2-1
2.1.2	Cost Breakdown	2-4
2.1.3	Conceptual SWPPP	2-4
2.1.4	Minimum Requirements for Construction Sites.....	2-4
2.2	SWPPP Template	2-7
	Title Page.....	2-9
	Contents.....	2-11
	Section 100 – Initial SWPPP Certification and Approval.....	2-14
	Initial SWPPP Certification	2-14
	SWPPP Approval.....	2-16
	Annual Compliance Certification	2-17
	Section 200 – SWPPP Amendments	2-18
	SWPPP Amendment Certification and Approval.....	2-18
	Amendment Log	2-21
	Section 300 – Introduction/Project Description	2-23
	Introduction and Project Description.....	2-23
	Unique Site Features.....	2-23
	Construction Site Estimates	2-24
	Project Schedule/Water Pollution Control Schedule	2-25
	Contact Information/List of Responsible Parties	2-30
	Section 400 – References	2-32
	Section 500 – Body of SWPPP	2-35
	Objectives	2-35
	Vicinity Map.....	2-36
	Pollutant Source Identification and BMP Selection	2-37
	Inventory of Materials and Activities that May Pollute Storm Water	2-37
	Existing (Pre-construction) Control Measures.....	2-39



Nature of Fill Material and Existing Data Describing the Soil2-40

Soil Stabilization (Erosion Control)2-41

Sediment Control.....2-44

Tracking Control2-46

Wind Erosion Control2-48

Non-Storm Water Control.....2-49

Waste Management and Materials Pollution Control2-53

Cost Breakdown for Water Pollution Control.....2-57

Water Pollution Control Drawings.....2-57

Construction BMP Maintenance, Inspection and Repair2-59

Post-Construction Storm Water Management.....2-61

Post Construction Control Practices.....2-61

Operation/Maintenance After Project Completion.....2-62

Training2-63

List of Subcontractors2-65

Other Plans/Permits.....2-65

Section 600 –Monitoring Program and Reports2-67

 Site Inspections2-67

 Discharge Reporting.....2-68

 Record Keeping and Reports.....2-69

 Sampling and Analysis Plan for Sediment.....2-69

 Sampling and Analysis Plan for Non-Visible Pollutants2-81

Section 3 – Preparing a Water Pollution Control Program (WPCP)

3.1 Preparation and Approval of a WPCP3-1

 3.1.1 Information Provided by Caltrans.....3-1

 3.1.2 Minimum Requirements for Construction Sites3-3

 3.1.3 Cost Breakdown.....3-4

3.2 WPCP Template.....3-6

 Section 10 – Title Page and WPCP Certification and Approval.....3-8

 Title Page.....3-8

 WPCP Certification and Approval3-9

 Section 20 – Project Information3-11

 Section 30 – Pollution Sources and Control Measures3-17

 Soil Stabilization (Erosion Control) and Sediment Control3-17

 Soil Stabilization Practices3-18

 Sediment Control Practices3-20

 Tracking Control3-22

Wind Erosion Controls	3-24
Non-Storm Water Management BMPs.....	3-25
Waste Management and Materials Pollution Control BMPs.....	3-28
Water Pollution Control Drawings	3-30
Construction BMP Maintenance, Inspection and Repair.....	3-31
Section 40 - Amendments	3-33
Section 50 – Reporting.....	3-35

Appendices

Appendix A Attachments for use in preparing a SWPPP

Attachment A	Vicinity Map (Sample)
Attachment B	Water Pollution Control Drawings (Sample)
Attachment C	BMP Consideration Checklist
Attachment D	Computation Sheet for Determining Runoff Coefficients
Attachment E	Computation Sheet for Determining Run on Discharges
Attachment F	Notification of Construction - NOC (Blank Form)
Attachment G	Program for Maintenance, Inspection, and Repair of Construction Site BMPs (Sample)
Attachment H	Storm Water Quality Construction Site Inspection Checklist
Attachment I	Trained Contractor Personnel Log Sheet
Attachment J	Subcontractor Notification Letter (Sample) and Log
Attachment K	Notice of Discharge, Written Notice or Order
Attachment L	SWPPP and Monitoring Program Checklist
Attachment M	Annual Certification of Compliance Form
Attachment N	Other Plans/Permits
Attachment O	Water Pollution Control Cost Breakdown
Attachment P	Notice of Completion of Construction (NCC)
Attachment Q	BMPs Selected for the Project
Attachment R	Sampling Activity Log
Attachment S	Pollutant Testing Guidance Table
Attachment T	Sampling Data Reporting Form
Attachment U	Discharge Reporting Log

Appendix B Abbreviations, Acronyms, Definition of Terms and References



Tables

2-1	Sample Cost Breakdown.....	2-5
2-2	Construction Site BMPs – Minimum Requirements.....	2-6
3-1	Construction Site BMPs – Minimum Requirements.....	3-5
3-2	Sample Cost Breakdown.....	3-6

Section 1

Introduction and Background

1.1 Purpose and Scope of this Manual

Caltrans has a comprehensive and coordinated statewide effort to prevent pollution in storm water runoff from Caltrans facilities. This effort includes an integrated approach that addresses the storm water quality activities of the various functional areas, including construction.

This document guides Contractors and Caltrans staff through the process of preparing a Storm Water Pollution Prevention Plan (SWPPP) or a Water Pollution Control Program (WPCP). The organization of this manual is shown below. Working details and instructions for the selection and implementation of construction site BMPs are presented in the Caltrans *Storm Water Quality Handbooks – Construction Site Best Management Practices (BMPs) Manual (CSBMPM)*.

Section 1 provides the purpose and scope of this manual and background information on the National Pollutant Discharge Elimination System (NPDES) regulations and the Caltrans Statewide NPDES Permit.

Section 2 provides detailed instructions for the preparation of a SWPPP.

Section 3 provides detailed instructions for the preparation of a WPCP.

Appendix A provides attachments for use in preparing a SWPPP.

Appendix B provides a listing of frequently used abbreviations, acronyms, and the definitions of terms used throughout this Manual.

1.2 Regulations and Permits

1.2.1 Federal Regulations

Federal regulations for controlling discharges of pollutants from municipal separate sewer systems, construction sites, and industrial activities, were brought under the NPDES permit process by the 1987 amendments to the Clean Water Act (CWA), and the subsequent 1990 promulgation of federal storm water regulations issued by the U.S. Environmental Protection Agency (USEPA). The USEPA regulations require municipal and industrial storm water discharges to comply with an NPDES permit. In California, the USEPA delegated authority to issue NPDES permits to the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs).



1.2.2 Caltrans Statewide NPDES Permit

On July 15, 1999, the SWRCB issued the “*Order No. 99-06-DWQ, NPDES No. CAS000003, National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans)*”; hereby called the “Permit”. The Permit regulates storm water discharges from Caltrans properties, facilities and activities, and requires that the Caltrans construction program comply with the requirements of the “*State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity (General Permit)*” issued by the SWRCB, to regulate discharges from construction sites that disturb 5 acres (ac) or more.

Based on a petition challenging the General Permit, the provisions for monitoring, sampling and analysis were modified pursuant to a court order. The modified provisions were issued as Resolution No. 2001-046, “*Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit For Storm Water Discharges Associated With Construction Activity (General Permit)*”, adopted by the SWRCB on April 26, 2001. The modifications require permittees to implement specific sampling and analytical procedures to determine if BMPs implemented on a construction site are:

- (1) Preventing further impairment by sediment in storm waters discharged directly into waters listed as impaired (Clean Water Act Section 303(d) List [303(d) List]) for sediment, silt, or turbidity; and
- (2) Preventing other pollutants that are known or should be known by permittees to occur on construction sites and that can not be visually observed or detected in storm water discharges, from causing or contributing to exceedances of water quality objectives.

On December 2, 2002, the SWRCB approved the “*Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit For Storm Water Discharges Associated With Construction Activity (General Permit) to include Small Construction Activity (One to Five Acres)*”. This modification was issued to comply with the NPDES Phase II regulations and expands the existing General Permit to include/regulate discharges from construction sites that disturb land equal to or greater than one (1) acres (ac) and less than five (5) acres (ac), known as small construction activity, as of March 10, 2003.

The Permit gives RWQCBs the option to specify additional requirements they may consider necessary to meet water quality standards. In addition, RWQCBs retain the authority to issue NPDES permits for individual projects or adopt Regional Permits. Copies of the Permit and the General Permit can be downloaded from the SWRCB Web site, at <http://www.swrcb.ca.gov/>.

Permit Requirements

The Permit requires Caltrans to implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges. Furthermore, the Permit requires Caltrans to meet water quality standards through implementation of permanent and temporary (during construction) BMPs and other measures. The Permit prohibits the discharge of waste, including soil and sediment, which causes pollution or nuisance. This section does not intend to include all permit requirements. For information and complete listing of all requirements, refer to the Permit and the General Permit.

SWPPP/WPCP

The SWPPP and WPCP are documents that address water pollution control during construction. The Permit requires that all storm water discharges associated with construction activity, where clearing, grading, and excavation results in soil disturbance of at least 0.4 hectares (ha) (1 ac) of total land area, by law must comply with the provisions of an NPDES Permit and develop and implement and effective SWPPP.

Construction projects with a disturbed area of less than 0.4 ha (1 ac) do not require coverage under the Permit at this time and thus do not require a SWPPP. However, Caltrans requires that a WPCP be prepared and implemented by the construction contractor. Additionally, Caltrans may require the development of a SWPPP for projects with disturbed areas less than 0.4 ha (1 ac) if it is determined that the project poses a significant water quality risk.

As part of the SWPPP and WPCP, Caltrans requires that Water Pollution Control Drawings (WPCDs) be developed, showing proposed locations for all construction site BMPs. The project layout sheets, grading plans, stage construction plans, and/or drainage sheets may be used as base sheets for developing the WPCDs.

Section 2

Preparing a Storm Water Pollution Prevention Plan (SWPPP)

2.1 Preparation and Approval of a SWPPP

The Special Provisions require the contractor to prepare a Storm Water Pollution Prevention Plan (SWPPP) for projects that will create 0.4 hectares (ha) [1 acre (ac)] or more of soil disturbance. The SWPPP must comply with Caltrans Standard Specifications Section 7-1.01G - Water Pollution, and it must be prepared in accordance with the Special Provisions, the NPDES General Construction Permit, and the procedures and general format set forth in this manual.

This section (Section 2) provides detailed systematic procedures, instructions and a template that contractors shall use to prepare the project SWPPP. Appendix A contains Attachments that shall be used during preparation of the SWPPP. The Permit requires that the SWPPP applies to all areas that are directly related to the construction activity, including but not limited to asphalt and/or concrete batch plants, staging areas, storage yards, material borrow areas, access roads, etc., whether or not they reside within the Caltrans rights-of-way.

The contractor shall prepare and submit a completed SWPPP to the Caltrans Resident Engineer (RE) for review and approval. If revisions are required, as determined by the RE, the contractor shall revise the SWPPP as noted. The time frames for SWPPP submittal, review, and resubmittal are specified in the Special Provisions. No construction activity having the potential to cause water pollution, as determined by the RE, shall be performed until the SWPPP has been approved by the RE. To allow construction activities to proceed, the RE may conditionally approve the SWPPP while minor revisions are being completed. Construction activities such as traffic control, which will not threaten water quality, may proceed without an approved SWPPP if allowed by the RE.

SWPPPs shall be submitted to Caltrans in a 3-ring binder with dividers and tabs. Furthermore, Caltrans may also require that contractors submit an electronic file (Microsoft® Word) of the SWPPP.

2.1.1 Information Provided by Caltrans

Caltrans may supply certain water quality-related information developed during the design process for use by the contractor, by way of the Information Handout. This handout is intended to provide the contractor with information that substantiates Caltrans' generation of quantities for selected construction site (temporary) BMPs, as well as show the location of placement of the construction site (temporary) BMPs. The contractor will then use this information to prepare either a SWPPP or WPCP, as appropriate. Items that may be provided are:

Vicinity Map

A map extending approximately one quarter mile (400 meters) beyond the property boundaries of the construction site showing: the construction site, surface water bodies (including known springs and wetlands), known wells, an outline of off site drainage areas that discharge into the construction site, general topography, and the anticipated discharge location(s) where the construction site's storm water discharges to a municipal storm drain system or other water body. A U.S. Geological Survey (USGS) quad map may be used for showing the project site and a one-quarter mile (400 meters) extension beyond the property boundaries of the construction site.

Soils/Geotechnical Report, Project Materials Report and/or Other Reports

Toxic History of the Site: To the extent information is available from the soils/geotechnical report, the project materials report, site investigation report developed by the Hazardous Waste Section, or other regulatory or environmental compliance documentation, the Information Handout may include a description of all toxic materials known to have been treated, stored, disposed, spilled, or leaked in significant quantities onto the construction site, and any Waste Discharge Requirements (WDRs) issued by the Regional Water Quality Control Board (RWQCB) related to toxic materials.

The Nature of Fill Material and Existing Data Describing the Soil: The Information Handout may include a copy of the project materials report (geotechnical report). The contractor must describe the conditions of the fill material and the soil that can be found at the construction site (i.e., types of soils, groundwater location and conditions, dewatering operations that may be necessary, etc). Fill material should be described as whether it is native or non native, contaminated or uncontaminated, and its coverage technique (i.e., native soil coverage, asphalt or concrete coverage, and/or landscape).

List of Pre-Construction (Existing) Control Practices (BMPs)

The Information Handout may provide a list and/or written descriptions of existing pre-construction practices, if any, that are already in place to reduce sediment and other pollutants in storm water discharges. These permanent control practices (BMPs) may consist of rock slope protection, infiltration basins, detention basins, sedimentation ponds, oil/water separators, spill containment facilities, etc. If there are no pre-construction control practices, then this may be indicated.

List of Permanent (Post-Construction) Storm Water Control Measures (BMPs)

The Information Handout may provide a written listing and narrative descriptions of post-construction permanent BMPs that have been included and incorporated in the project plans. Narrative descriptions may also include operation and maintenance (O&M) procedures for the permanent BMPs, O&M short term and long term funding, and a statement indicating that the Maintenance Department will be responsible for O&M of the post construction BMPs.

Layout Sheets Showing Suggested Temporary BMP Locations

The Information Handout may provide sheets showing the suggested location of anticipated construction site BMPs such as contractor staging areas, approximate location of concrete washouts, approximate locations for storage of materials, and preferred locations for vehicle and equipment

maintenance. These are not intended to be highly detailed drawings. Typically, these layouts can be hand-drawn on 1:200 or 1:500 scale drawings.

Explanation of Construction Site (Temporary) BMPs

The Information Handout may provide a brief narrative explanation of the various temporary BMPs that may be implemented in the project, including any existing permanent BMPs that may be present within the project limits that can be used during construction, as well as any permanent BMPs that should be constructed early for use as a temporary BMP during construction, such as early application of permanent soil stabilization measures in areas that will no longer experience soil disturbance during construction.

Drainage Information

The Information Handout may include a copy of the drainage information, such as the drainage report for the project, hydrology maps, delineation of drainage boundaries, concentrations of runoff, and runoff coefficients sufficient to determine peak discharges or run-on flowcharts.

Construction Site Estimates

The Information Handout may provide the following information to the contractor:

- An estimate of the construction site area in hectares (acres);
- An estimate of the total disturbed area in hectares (acres);
- An estimate of the runoff coefficient of the construction site before and after construction; and
- An estimate of the percentage of the area of the construction site that is impervious (e.g., pavement, building, etc.) before and after construction.

Copy of Notification of Construction (NOC)

The Information Handout will include a copy of the Notification of Construction (NOC) for the project, submitted to the Regional Water Quality Control Board by Caltrans.

Site-Specific Inspection Sheet

A general Storm Water Quality Construction Inspection Checklist has been developed by Caltrans. In some cases, a District may require that a different checklist be used for a specific construction project or activity. If this is the case, the Information Handout will include a copy of the checklist that the District will require that the contractor use for inspection of construction site BMPs.

Other Information

The Information Handout may also include any other information that would explain the decisions or rationale behind the selection and deployment of construction site and permanent BMPs chosen by the designer. Examples include the designer's estimated staging of the project and estimated time of year for those stages; any scheduling modifications included in the Order of Work specifications that were included to enhance water pollution control; and any specific BMP deployments that are considered to be critical to the success of the contractors SWPPP/WPCP.

Other Plans/Permits: Other agencies may have issued permits (such as California Fish and Game or U.S. Army Corps of Engineers permits) or have plan requirements for the construction of the project or imposed certain conditions. If so, a written description of the permit conditions and a copy of the permit may be provided for inclusion in an appendix to the SWPPP.

2.1.2 Cost Breakdown

The contractor shall prepare and submit with the SWPPP, as attachment O, a cost breakdown that itemizes the contract lump sum for water pollution control. The cost breakdown shall reflect the items of work, quantities and costs for control measures shown in the SWPPP, except for those construction site BMPs and permanent BMPs for which there is a contract item of work. A sample cost breakdown is shown in Table 2-1. The cost breakdown form for the project may also be required to be included in the Special Provisions.

2.1.3 Conceptual SWPPP

In some cases, Caltrans may prepare a Conceptual SWPPP (CSWPPP) for a project. The CSWPPP will provide additional direction and convey specific BMP expectations to the contractor. However, the CSWPPP shall not be considered a complete SWPPP and shall not replace the contractor's SWPPP, since CSWPPPs are prepared assuming standard construction practices and may not reflect the contractor's actual methods of construction, access requirements or project phasing. When a CSWPPP has been prepared, the information is made available to the contractor as part of the Information Handout. The contractor shall use the CSWPPP as a guide and reference tool to develop and submit the contract SWPPP that includes all elements of the CSWPPP and any additional elements required to complete the SWPPP in conformance with the Special Provisions, the Permits, any other local requirements, and the procedures and general format set forth in this manual.

2.1.4 Minimum Requirements for Construction Sites

Caltrans has designated some BMPs as "minimum requirements" that must be implemented, if applicable, on all highway construction projects that require a SWPPP. Implementation of some minimum requirements may not be applicable to every project as verified by the contractor or as determined by Caltrans. These minimum requirements are listed in Table 2-2 and are indicated in Attachment C. The Caltrans "*Storm Water Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual*," provides instructions for selecting and implementing construction site BMPs, and includes working details for construction site BMPs.

TABLE 2-1

SAMPLE COST BREAKDOWN ^{(1) (3) (4)}					
Cost Breakdown for Water Pollution Control					
Contract No. _____					
<i>Unit Description</i>	<i>Unit</i>	<i>Approximate Quantity</i>	<i>Unit Cost \$</i>	<i>Total Cost \$</i>	
SS-1 Scheduling	-	-	N/A	N/A	
SS-2 Preservation of Existing Vegetation	LS	-	5,000.00	5,000.00	
SS-6 Straw Mulch	HA	20	3,750.00	75,000.00	
SS-9 Earth Dike	M	600	3.00	1,800.00	
SS-9 Ditches (lined)	M	400	5.00	2,000.00	
SS-10 Outlet Protection/Velocity Dissipation Device	EA	10	400.00	4,000.00	
SS-11 Slope Drains	M	80	30.00	2,400.00	
SC-1 Silt Fence	M	3,000	10.00	30,000.00	
SC-2 Desilting Basin	EA	1	2,800.00	2,800.00	
SC-4 Check Dams	EA	20	200.00	4,000.00	
SC-7 Street Sweeping and Vacuuming	LS	1	30,000.00	30,000.00	
SC-8 Sandbag Barrier	M	1600	3.00	4,800.00	
SC-10 Storm Drain Inlet Protection Type 1	EA	20	500.00	10,000.00	
SC-10 Storm Drain Inlet Protection Type 2	EA	10	300.00	3,000.00	
SC-10 Storm Drain Inlet Protection Type 3	EA	10	400.00	4,000.00	
WE-1 Wind Erosion Control	HA	5	3,000.00	15,000.00	
TC-1 Stabilized Construction Entrance/Exit	EA	6	1,500.00	9,000.00	
NS-6 Illicit Connection/Illegal Discharge Detection and Reporting	-	-	N/A	N/A	
NS-8 Vehicle and Equipment Cleaning	LS	-	4,000	4,000	
NS-9 Vehicle and Equipment Fueling	LS	-	2,000	2,000	
NS-10 Vehicle and Equipment Maintenance	LS	-	2,000	2,000	
WM-1 Material Delivery and Storage	LS	-	15,000	15,000	
WM-2 Material Use	LS	-	2,000	2,000	
WM-3 Stockpile Management	EA	50	200.00	10,000.00	
WM-4 Spill Prevention and Control	LS	-	2,000	2,000	
WM-9 Sanitary/Septic Waste Management	LS	-	3,000	3,000	
Total				\$242,800.00 ⁽²⁾	

- Notes:
- ¹ This cost breakdown is an example only. The unit costs shown may not reflect unit costs for water pollution control.
 - ² The total of all extended unit costs shall equal the lump sum bid for water pollution control.
 - ³ The cost breakdown shall include minimum requirements and special requirements listed in the contract special provisions.
 - ⁴ The cost breakdown shall not include construction site BMPs shown in the drawings and paid as separate bid items.

Table 2-2

CONSTRUCTION SITE BMPs MINIMUM REQUIREMENTS ⁽¹⁾	
TEMPORARY SOIL STABILIZATION	
SS-1	Scheduling
SS-2	Preservation of Existing Vegetation
SS-3	Hydraulic Mulch ⁽²⁾
SS-4	Hydroseeding ⁽²⁾
SS-5	Soil Binders ⁽²⁾
SS-6	Straw Mulch ⁽²⁾
SS-7	Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats ⁽²⁾
TEMPORARY SEDIMENT CONTROL	
SC-1	Silt Fence ⁽³⁾
SC-5	Fiber Rolls ⁽³⁾
SC-7	Street Sweeping and Vacuuming
SC-10	Storm Drain Inlet Protection
WIND EROSION CONTROL	
WE-1	Wind Erosion Control
NON-STORM WATER MANAGEMENT	
NS-6	Illicit Connection/Illegal Discharge Detection and Reporting
NS-8	Vehicle and Equipment Cleaning
NS-9	Vehicle and Equipment Fueling
NS-10	Vehicle and Equipment Maintenance
WASTE MANAGEMENT AND MATERIAL CONTROL	
WM-1	Material Delivery and Storage
WM-2	Material Use
WM-3	Stockpile Management
WM-4	Spill Prevention and Control
WM-5	Solid Waste Management
WM-9	Sanitary/Septic Waste Management

⁽¹⁾ Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the contractor or determined by Caltrans.

⁽²⁾ The Contractor shall select one of five of the identified soil stabilization measures or a combination thereof to achieve and maintain the contract's disturbed soil area (DSA) protection requirements.

⁽³⁾ The Contractor shall select either sediment control measure or a combination thereof to achieve and maintain the contract's disturbed soil area (DSA) protection requirements.

2.2 SWPPP Template

This section provides step-by-step SWPPP preparation procedures, instructions and a template. The template has been developed in Microsoft® Word 97 and 2000 with the following objectives:

- (1) Provide easy data entry for contractors to prepare SWPPPs (instructions and examples can be viewed in the template while the SWPPP is being prepared).
- (2) Provide consistency in content and format of all SWPPPs prepared and submitted to Caltrans (thus making the SWPPP review process more efficient).

Instructions for using the electronic version of the SWPPP templates:

1. Contractors may download the appropriate template from the Caltrans Web site at:
<http://www.dot.ca.gov/hq/construc/>
2. Once a contractor has developed the text for the various sections of the SWPPP, a draft SWPPP, including instructions, examples and the completed text for each section, can be printed. The instructions include “check box” items that the preparer may use to review his/her own work and check each of the items as they are completed.
3. The contractor’s final SWPPP can then be viewed to check format and perform final edits as necessary. The document can then be printed without “instructions and examples” by going to the menu bar in MS Word, selecting the “TOOLS” menu, selecting “OPTIONS” and making sure that the HIDDEN TEXT checkboxes under both the VIEW and PRINT tabs are cleared.

The step-by-step SWPPP preparation procedures, instructions and template in this section include the following items:

- (i) SWPPP Title Page
- (ii) SWPPP Table of Contents
- Section 100 SWPPP Certifications and Approval Pages
- Section 200 SWPPP Amendments – Certification, Approval, and Log
- Section 300 Introduction/Project Description
- Section 400 Reference Section
- Section 500 Body of SWPPP
- Section 600 Monitoring Program and Reports



Appendix A contains the following attachments for use in preparation of a SWPPP:

- Attachment A Vicinity Map/Site Map (Samples)
- Attachment B Water Pollution Control Drawings (Sample)
- Attachment C BMP Consideration Checklist
- Attachment D Computation Sheet for Determining Runoff Coefficients (Sample)
- Attachment E Computation Sheet for Determining Run-on Discharges (Sample)
- Attachment F Notification of Construction - NOC (Blank Form)
- Attachment G Program for Maintenance, Inspection, and Repair of Construction Site BMPs (Sample)
- Attachment H Storm Water Quality Construction Site Inspection Checklist
- Attachment I Trained Contractor Personnel Log Sheet
- Attachment J Subcontractor Notification Letter (Sample) and Log
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- Attachment M Annual Certification of Compliance Form
- Attachment N Other Plans and Permits
- Attachment O Water Pollution Control Cost Breakdown
- Attachment P Notice of Completion of Construction (NCC)
- Attachment Q BMPs Selected for the Project
- Attachment R Sampling Activity Log
- Attachment S Pollutant Testing Guidance Table
- Attachment T Sampling Data Reporting Form
- Attachment U Discharge Reporting Log

Title Page

INSTRUCTIONS

The title page shall have the following information:

- R Title: "Storm Water Pollution Prevention Plan"
- R Construction Project Name
- R Caltrans Contract Number
- R Identification and address of Lead Agency (Caltrans or Local Agency)
- R Caltrans' Resident Engineer Name and Telephone Number
- R Contractor's Name, Address, Telephone Number and Contact Person
- R Job Site Address and Telephone Number, if Any
- R Name of Contractor's Water Pollution Control Manager (WPCM). This person shall be responsible for SWPPP implementation, inspection and repairs, and shall be available at all times throughout the duration of the project (see also section 300.5)
- R Name of the company that prepared the SWPPP (if it was prepared by an outside consultant), including name and title of preparer
- R SWPPP Preparation Date

A template title page is provided below.

REQUIRED TEXT:

STORM WATER POLLUTION PREVENTION PLAN

for

Project Name

Caltrans Contract Number

Prepared for:

Name of Lead Agency

Address 1

Address 2

City, State, ZIP

Resident Engineer's Name

R.E.'s Telephone Number



Submitted by:

Contractor's Company Name
Address 1
Address 2
City, State, ZIP
Telephone
Owner/Representative's Name

Project Site Address

Enter job site address, if any
Enter job site telephone number, if any

Contractor's Water Pollution Control Manager

WPCM's Name
Telephone(s):

SWPPP Prepared by:

Company Name
Address 1
Address 2
City, State, ZIP
Telephone
Name and Title of Preparer:

SWPPP Preparation Date

Date

Contents

INSTRUCTIONS

- R Include the numbers and names for each section of the SWPPP, from Section 100 to Section 600. List the first page number of each subsection.
- R Include a Tab for each major section of the SWPPP and for each of the attachments.

REQUIRED TEXT:

Section 100 – SWPPP Certifications and Approval

- 100.1 Initial SWPPP Certification
- 100.2 SWPPP Approval.....
- 100.3 Annual Compliance Certification

Section 200 – SWPPP Amendments

- 200.1 SWPPP Amendment Certification and Approval
- 200.2 Amendment Log

Section 300 – Introduction and Project Description

- 300.1 Introduction and Project Description
- 300.2 Unique Site Features.....
- 300.3 Project Schedule/Water Pollution Control Schedule
- 300.4 Construction Site Estimates
- 300.5 Contact Information/List of Responsible Parties.....

Section 400 – References

- References.....

Section 500 – Body of SWPPP

- 500.1 Objectives
- 500.2 Vicinity Map.....
- 500.3 Pollutant Source Identification and BMP Selection
- 500.3.1 Inventory of Materials and Activities that May Pollute Storm Water
- 500.3.2 Existing (pre-construction) Control Measures.....
- 500.3.3 Nature of Fill Material and Existing Data Describing the Soil.....
- 500.3.4 Soil Stabilization (Erosion Control).....
- 500.3.5 Sediment Control
- 500.3.6 Tracking Control.....



500.3.7 Wind Erosion Control.....

500.3.8 Non-Storm Water Control.....

500.3.9 Waste Management and Materials Pollution Control.....

500.4 Water Pollution Control Drawings

500.5 Construction BMP Maintenance, Inspection and Repair.....

500.6 Post-Construction Storm Water Management

500.6.1 Post Construction Control Practices

500.6.2 Operation and Maintenance after Project Completion.....

500.7 Training.....

500.8 List of Subcontractors

500.9 Other Plans/Permits

Section 600 – Monitoring Program and Reports

600.1 Site Inspections

600.2 Discharge Reporting

600.3 Record Keeping and Reports

600.4 Sampling and Analysis Plan for Sediment.....

600.5 Sampling and Analysis Plan for Non-Visible Pollutants.....

SWPPP Attachments

Attachment A..... Vicinity Map

Attachment B..... Water Pollution Control Drawings

Attachment C..... BMP Consideration Checklist

Attachment D..... Computation Sheet for Determining Runoff Coefficients

Attachment E..... Computation Sheet for Determining Run-on Discharges

Attachment F..... Notification of Construction (NOC)

Attachment G... Program for Maintenance, Inspection, and Repair of Construction Site BMPs

Attachment H..... Storm Water Quality Construction Site Inspection Checklist

Attachment I..... Trained Contractor Personnel Log

Attachment J..... Subcontractor Notification Letter and Log

Attachment K..... Notice of Discharge, Written Notice or Order

Attachment L..... SWPPP and Monitoring Program Checklist

Attachment M..... Annual Certification of Compliance Form

Attachment N..... Other Plans/Permits

Attachment O..... Water Pollution Control Cost Breakdown

Attachment P..... Notice of Completion of Construction (NCC)

Attachment Q..... BMPs Selected for the Project

Attachment R..... Sampling Activity Log

Attachment S..... Pollutant Testing Guidance Table

Attachment T Sampling Data Reporting Form
Attachment U Discharge Reporting Log



Section 100

SWPPP Certifications and Approval

100.1 Initial SWPPP Certification

INSTRUCTIONS:

R Include a Separator and Tab for Section 100 for ready reference.

The contractor is required by the Special Provisions to prepare and implement the SWPPP, and shall sign and certify the SWPPP in conformance with Section C, Provision 9 of the General Construction Permit (CAS000002, Order No. 99-08-DWQ) and Section M, Provision 10 of the Caltrans Permit (CAS000003, Order No. 99-06-DWQ).

The SWPPP shall be submitted to the Resident Engineer (RE) for review and approval.

R Fill in the project name and the contract number at the top of the form.

R Certification shall be signed and dated by Contractor's staff; specifically, the person responsible for overall management of the site, such as a corporate officer or person assigned the responsibility by a corporate officer, according to corporate procedures.

R Fill in the name, title and telephone number of the person signing the certification.

R The SWPPP checklist in Attachment L shall be completed and submitted.

R The Notification of Construction (NOC) is to be attached in Attachment F. The completed form will be provided by Caltrans.

REQUIRED TEXT: To be completed by Contractor

Project Name: _____

Caltrans Contract Number: _____

"I certify under a 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, 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."

Contractor's Signature

Date

Contractor's Name and Title

Contractor's Telephone Number



100.2 SWPPP Approval

INSTRUCTIONS:

The Resident Engineer is the authorized representative of the Department for approving, signing, and certifying the SWPPP; in conformance with Section H, Provision 8.b.; and Section M, Provision 10 of the Caltrans Permit (CAS000003, Order No. 99-06-DWQ).

R The Resident Engineer (RE) shall sign and date the approval certification.

R Print the RE's name and telephone number.

REQUIRED TEXT:

The Resident Engineer is the authorized representative of the Department for approving, signing, and certifying the SWPPP in conformance with Section H, Provision 8.b.; and Section M, Provision 10 of the Caltrans Permit (CAS000003, Order No. 99-06-DWQ). The SWPPP was prepared by the Contractor under the direction of the Resident Engineer, pursuant to the Special Provisions, the SWPPP/WPCP Preparation Manual, the Construction Site Best Management Practices Manual, and the Standard Specifications Section 7-1.01G – Water Pollution. The Contractor is responsible and liable at all times for compliance with applicable requirements for which compliance is ultimately determined by the Regional Water Quality Control Board, the State Water Resources Control Board, and/or the U.S. Environmental Protection Agency (EPA).

For Caltrans Use Only
**Resident Engineer's Approval and
Caltrans Certification of the
Storm Water Pollution Prevention Plan**

"I certify under a 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, 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."

RE's Signature

Date

RE's Name

RE's Telephone Number

100.3 Annual Compliance Certification

INSTRUCTIONS:

Qualified assigned personnel listed by name and contact number in the SWPPP shall certify annually that construction activities comply with the requirements of the Permit and the SWPPP. This Certification is based upon the site inspections required in Section 600.

The annual certification shall be completed by the contractor before June 15 of each year and submitted to the RE for approval. Forms for the Annual Certification of Compliance and RE Approval of the Annual Certification are provided in Appendix A, Attachment M of this Manual.

A blank copy of the Annual Certification of Compliance and RE Approval forms shall be included in the SWPPP as Attachment M.

Completed and signed Annual Compliance Certifications and RE Approvals shall be included in this section of the SWPPP following the required text, below.

Do not complete the Annual Certification during the initial SWPPP approval. Annual certifications are completed by June 15 each year. For those projects that start construction on or after June 15, an Annual Certification will not be required until the following June 15.

REQUIRED TEXT:

By June 15 of each year, the contractor shall submit an Annual Certification of Compliance to the Resident Engineer (RE) stating compliance with the terms and conditions of the Permits and the SWPPP. The Annual Certification of Compliance Form and RE Approval Form are included in Attachment M. Completed Annual Certifications of Compliance and Approvals can be found in the following pages.

Section 200

SWPPP Amendments

200.1 SWPPP Amendment Certification and Approval

INSTRUCTIONS:

R Include a Separator and Tab for Section 200 for ready reference.

When changes in the approved SWPPP are required, the contractor shall prepare and certify an amendment and submit it to the RE for review and approval.

The SWPPP shall be amended:

- Whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4); or
- If any condition of the Permits is violated or the general objective of reducing or eliminating pollutants in storm water discharges has not been achieved. If the RWQCB determines that a Permit violation has occurred, the SWPPP shall be amended and implemented within 14-calendar days after notification by the RWQCB;
- Annually, prior to the defined rainy season, when required by the project's Special Provisions; and
- When deemed necessary by the RE.

All SWPPP amendments shall be transmitted in letter format, and shall include revised WPCD sheets, as appropriate.

All amendments shall be recorded in the SWPPP amendment log that is located in Section 200.2 of the SWPPP.

Approved amendments will be inserted into the Contractor's on-site SWPPP. Contractor Certifications and RE Approvals for all amendments shall be inserted into this section.

The following items shall be included in each amendment:

- Discuss who requested the amendment.
- Describe the location of proposed change.
- Describe reason for change.
- Describe the original BMP proposed, if any.
- Describe the new BMP proposed.
- Describe any existing implemented BMP(s)

R This SWPPP certification and approval form shall be used as a cover sheet for each amendment.

R Fill-in the Project name and Caltrans contract number.

R The Contractor shall sign and date the certification form.

R The RE shall sign and date the certification approval form.

R Print the names and telephone numbers.

EXAMPLE:

The Regional Water Quality Control Board has requested the following Amendment:

The concrete washout is to be relocated away from the drainage inlet at Miller Ave. It is now located on the northeast section of the construction site, see revised map. This change will prevent concrete washout water from entering the drainage inlet.

REQUIRED TEXT:

This SWPPP shall be amended:

- x Whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
or
- x If any condition of the Permits is violated or the general objective of reducing or eliminating pollutants in storm water discharges has not been achieved. If the RWQCB determines that a Permit violation has occurred, the SWPPP shall be amended and implemented within 14-calendar days after notification by the RWQCB;
- x Annually, prior to the defined rainy season, when required by the project's Special Provisions;
and
- x When deemed necessary by the RE.

The following items will be included in each amendment:

- x Who requested the amendment;
- x The location of proposed change;
- x The reason for change;
- x The original BMP proposed, if any; and
- x The new BMP(s) proposed.

The amendments for this SWPPP, along with the Contractor's Certification and the RE's approval, can be found in the following pages. Amendments are listed in the Amendment Log in section 200.2



SWPPP Amendment No. _____

Project Name: _____
Caltrans Contract Number: _____

To Be Completed by Contractor

"I certify under a 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, 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."

Contractor's Signature

Date

Contractor's Name and Title

Contractor's Telephone Number

For Caltrans Use Only
**Resident Engineer's Approval and
Caltrans Certification of the
Storm Water Pollution Prevention Plan Amendment**

"I certify under a 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, 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."

RE's Signature

Date

RE's Name

RE's Telephone Number

200.2 Amendment Log

INSTRUCTIONS:

SWPPP amendment(s) prepared and approved as discussed in Section 200.1 shall be documented in the Amendment Log, which shall be kept in Section 200 of the SWPPP, immediately following the Certification and Approval forms.

All amendments shall be dated, directly attached to the SWPPP, and listed in the Amendment Log.

R Enter the project name, and Caltrans contract number at the top of the form.

R Enter the Amendment number, Date, Brief Description, and Name of Person Who Prepared the Amendment in the table.

EXAMPLE:

Amendment No.	Date	Brief Description of Amendment	Prepared By
001	Dec 10, 2000	Grading schedule changed to begin on Feb 10, 2001, and will include additional 2 acres. Amended plans attached to SWPPP.	John Doe, Superintendent

REQUIRED TEXT:

Project Name: _____

Caltrans Contract Number: _____

Amendment No.	Date	Brief Description of Amendment	Prepared By

Section 2
Preparing a Storm Water Pollution Prevention Plan (SWPPP)

Amendment No.	Date	Brief Description of Amendment	Prepared By

Section 300

Introduction and Project Description

300.1 Introduction and Project Description

INSTRUCTIONS:

- R Include a Separator and Tab for Section 300 for ready reference.
- R Provide the project description, (County, cities, route and post-mile/kilo-post). Describe proximity to receiving waters to which the project will discharge, including surface waters, drainage channels, and drainage systems (identify who owns the drainage system; i.e., municipality or agency.)

EXAMPLE:

The Construction project is located in Any County, in Any city, on State Route 42 from Post mile X to Post mile Y. The project will upgrade the westbound two-lane span by replacing the existing substandard steel truss bridge with a four-lane suspension bridge (which includes one HOV lane and a bicycle/pedestrian lane). The new suspension bridge consists of two towers in the Strait and a north and south anchorage. The existing maintenance facility will be demolished. This project also includes constructing a vista point at the north end of the bridge and a bicycle lane from the Route 80/29 separation to the south end of the bridge.

REQUIRED TEXT:

CLICK AND TYPE PROJECT DESCRIPTION HERE

300.2 Unique Site Features

INSTRUCTIONS:

- R Provide a brief description of any unique site features (water bodies, wetlands, environmentally sensitive areas, endangered or protected species, etc.) and significant or high-risk construction activities that may impact storm water quality. Include any unique features or activities within or adjacent to water bodies (such as dredging, dewatering, re-use of aerially deposited lead material, large excavations, or work within a water body).

EXAMPLE:

The Salmon River is located within the project limits. A portion of the construction will occur within the river in order to properly construct the towers. The project will also demolish an existing culvert and will replace it with a larger reinforced concrete box within the tributary.

REQUIRED TEXT:

CLICK AND TYPE PROJECT FEATURES HERE

300.3 Construction Site Estimates

INSTRUCTIONS:

Provide an estimate of the following site features (Refer also to Attachments D and E):

- R Construction site area (hectares or square meters)
- R Runoff coefficient before and after construction
- R Percentage impervious area before and after construction
- R Anticipated storm water run-on to the construction site (Show calculations and include as Attachment E).

EXAMPLE:

The following are estimates of the construction site:

Construction site area:	171,965 m ²
Percentage impervious area before construction:	51.3 % (88,157 m ²)
Runoff coefficient before construction ⁽¹⁾ :	0.68
Percentage impervious area after construction	58.1 % (100,036 m ²)
Runoff coefficient after construction ⁽¹⁾	0.73
Anticipated storm water flow on to the construction site ⁽²⁾	0.96 m ³ /s (33.8 cfs)

⁽¹⁾ Calculations are shown in Attachment D

⁽²⁾ Calculations are shown in Attachment E

REQUIRED TEXT:

The following are estimates of the construction site:

Construction site area	_____	m ²
Percentage impervious area before construction	_____	%
Runoff coefficient before construction ⁽¹⁾	_____	
Percentage impervious area after construction	_____	%
Runoff coefficient after construction ⁽¹⁾	_____	
Anticipated storm water flow on to the construction site ⁽²⁾	_____	

⁽¹⁾ Calculations are shown in Attachment D



⁽²⁾ Calculations are shown in Attachment E

300.4 Project Schedule/Water Pollution Control Schedule

INSTRUCTIONS:

- R Provide a written and a graphical project schedule. The schedule shall clearly show how the rainy season relates to soil-disturbing and re-stabilization activities. The schedule shall contain an adequate level of detail to show major activities sequenced with implementation of construction site BMPs, including:
 - R project start and finish dates
 - R rainy season dates
 - R annual certifications
 - R mobilization dates
 - R mass clearing and grubbing/roadside clearing dates
 - R major grading/excavation dates
 - R special dates named in other permits such as Fish and Game and Army Corps of Engineers Permits
 - R dates for submittal SWPPP Amendments required by the Special Provisions
 - R annual submittal of rainy season implementation schedule as required by the project's Special Provisions
 - R dates for implementation of pre-rainy season temporary soil stabilization and temporary sediment control BMPs, if required by the project's Special Provisions
 - R rainy season implementation schedule
 - R deployment of temporary soil stabilization BMPs
 - R deployment of temporary sediment control BMPs
 - R deployment of wind erosion control BMPs
 - R deployment of tracking control BMPs
 - R deployment of non-storm water BMPs
 - R deployment of waste management and materials pollution control BMPs
 - R non-rainy season implementation schedule
 - R deployment of temporary soil stabilization BMPs
 - R deployment of temporary sediment control BMPs
 - R deployment of wind erosion control BMPs
 - R deployment of tracking control BMPs

- R deployment of non-storm water BMPs
- R deployment of waste management and materials pollution control BMPs
- R paving, saw-cutting, and any other pavement related operations
- R major planned stockpiling operations
- R dates for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.
- R final stabilization activities staged over time for each area of the project

Note: Projects located in the Lake Tahoe, Truckee River, East Fork Carson River, or West Fork Carson River Hydrologic Units, and projects above 1,200 meters (5,000 ft) in elevations in the portions of Mono County or Inyo County within the Lahontan RWQCB are not allowed to perform removal of vegetation nor disturbance of existing ground surface conditions between October 15 of each year and May 1 of the following year; except when there is an emergency situation that threatens the public health or welfare, or when the project is granted a variance by the RWQCB Executive Officer.

EXAMPLE #1: Written Schedule

Estimate Construction Start: 05/01/2000

Estimate Construction Finish: 4/15/2002

Mobilization of equipment and materials to begin on 05/01/2000

Install ESA fencing 05/01/2000

Store temporary soil stabilization and temporary sediment control products beginning on 05/01/2000.

Install stabilized construction entrance on 05/01/2000

Site preparation: Clearing and grubbing (Phase I) will occur from 5/25/2000-06/30/2000

Submit annual rainy season implementation schedule 9/25/00

Prepare soil stabilization and sediment control implementation plan 20 days prior to the rainy season, submit to RE by 09/25/2001

Start implementation of temporary soil stabilization and sediment control BMPs on 09/28/00 (before rainy season starts). Continue to implement and maintain temporary BMPs throughout rainy season.

Complete installation of temporary soil stabilization and sediment control BMPs on 10/5/2000

Rainy season begins October 15, 2000

Earthwork/roadway widening excavation to begin on 06/30/2000 and continue through 02/20/2001

Roadway widening – grading work 07/15/2000 – 02/20/2001.

Schedule soil stabilization subcontractors for application of temporary soil stabilization on disturbed areas and permanent erosion control on areas substantially complete: 09/01/2000

Rainy season ends April 15, 2001

Clearing and grubbing (Phase II) from 05/01/01 through 07/30/2001

SWPPP Annual Certification Due on 6/15/2001

Begin trenching, backfilling and compaction on 7/15/2001

Implement final erosion control (Type D) of substantially completed areas 8/1/2001

Install temporary concrete washout 9/10/2001

Fish and Game Permit starts 09/15/2001

Begin expansion/structure construction/decks/concrete on 9/15/2001

Submit annual rainy season implementation schedule 9/25/01

Start implementation of temporary soil stabilization and sediment control BMPs on 09/28/01 (before rainy season starts). Continue to implement and maintain temporary BMPs throughout rainy season.

Complete installation of temporary soil stabilization and sediment control BMPs on 10/5/2001

Rainy season starts 10/15/2001

End bridge construction on or before 01/25/2002

End of Fish and Game Permit 01/30/2002

Begin final paving/construction on 2/01/2002. Continue to apply soil stabilization and sediment controls as needed during construction

Remove concrete washout and restore area to original grade

Schedule subcontractors for application of permanent erosion control 03/01/2002

Start final stabilization, revegetation and landscape by 3/15/2002

Project complete 4/15/2002

EXAMPLE #2: Graphic Schedule.

See the Sample Water Pollution Control Schedule in the following page

Insert SAMPLE WATER POLLUTION CONTROL SCHEDULE here and remove this page.

This page intentionally left blank and should be removed.



REQUIRED TEXT:

CLICK AND TYPE NARRATIVE OF PROJECT SCHEDULE HERE

300.5 Contact Information/List of Responsible Parties

INSTRUCTIONS:

Contractor is required to show the Name, Address and Telephone number(s) of the person(s) responsible for water pollution control during construction. This person is the Water Pollution Control Manager (WPCM).

The WPCM shall be available at all times throughout the duration of the project.

Duties of the Contractor's WPCM include but are not limited to:

- Ensuring full compliance with the SWPPP and the Permit
- Implementing all elements of the SWPPP and Special Provisions, including but not limited to:
 - Implementation of prompt and effective erosion and sediment control measures
 - Implementing all Non-storm water management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices); general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.
- Pre-storm inspections
- Post-storm inspections
- Storm event inspections
- Routine inspection as specified in the Special Provisions or described in the SWPPP.
- Preparing annual compliance certification
- Ensuring elimination of all unauthorized discharges
- The Contractor's WPCM shall be assigned authority by the Contractor to mobilize crews in order to make immediate repairs to the control measures
- Coordinate with the Engineer to assure all of the necessary corrections/repairs are made immediately, and that the project complies with the SWPPP, the Permit and approved plans at all times.
- Submitting Notices of Discharge and reports of Illicit Connections or Illegal Discharges

If anyone else other than the Contractor's WPCM is responsible for any of these duties, enter Name, address, telephone number(s) of the person(s) and the duty or duties for which they are responsible and edit the template below as needed.

R Name and Telephone Number(s) of the Contractor's WPCM. The Contractor's WPCM shall have primary responsibility and significant authority for the implementation, maintenance, inspection and amendments to the approved SWPPP.

REQUIRED TEXT:

The Water Pollution Control Manager (WPCM) assigned to this project is:

Insert WPCM's Name - then TAB

Insert Telephone number(s) - then TAB

Insert Contractor's Company Name - then TAB

Insert Address 1 - press ENTER to insert Address 2 or TAB to the next field

Insert City, State, ZIP - then TAB

The WPCM shall have primary responsibility and significant authority for the implementation, maintenance, inspection and amendments to the approved SWPPP. The WPCM will be available at all times throughout duration of the project. Duties of the Contractor's WPCM include but are not limited to:

Ensuring full compliance with the SWPPP and the Permit

Implementing all elements of the SWPPP, including but not limited to:

- Implementation of prompt and effective erosion and sediment control measures
- Implementing all Non-storm water management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices); general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.

Pre-storm inspections

Post-storm inspections

Storm event inspections

Routine inspection as specified in the Special Provisions or described in the SWPPP.

Preparing annual compliance certification

Ensuring elimination of all unauthorized discharges

The Contractor's WPCM shall be assigned authority by the Contractor to mobilize crews in order to make immediate repairs to the control measures

Coordinate with the Engineer to assure all of the necessary corrections/repairs are made immediately, and that the project complies with the SWPPP, the Permit and approved plans at all times.

Submitting Notices of Discharge and reports of Illicit Connections or Illegal Discharges



Section 400 References

INSTRUCTIONS:

- R Include a Separator and Tab for Section 400 for ready reference.

- R Identify and prepare a list of the documents referenced in the SWPPP. Project Plans & Specifications, reports, design, and storm water management related documents used to prepare the SWPPP shall also be included in the references.

Documents that shall be referenced are:

- R All permits that apply to the project (Federal, state and local), such as Fish and Game, U.S. Army Corps of Engineers, DTSC Aerially Deposited Lead Reuse Variance, local RWQCB Permits or specific requirements, etc.

Referenced materials may also include:

- R On-site project information such as the project plans and specifications, Geotechnical Report, Drainage Report, District-prepared Conceptual SWPPP, other reports provided by the owner, regulatory guidance from federal or state agencies, and published technical specifications

The reference for each document shall include:

- R Complete name of the referenced document
- R Number of the document (if applicable)
- R Author
- R Date Published
- R Document date/revision that applies

Referenced documents shall be kept on-site and be readily available for review.

EXAMPLE:

The following documents are made a part of this SWPPP by reference:

Project plans and specifications No. xx-xxxx

State Water Resources Control Board (SWRCB) Order No. 99-06-DWQ, NPDES No. CAS000003 (“Permit”), National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water

Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation. July 15, 1999.

State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002 (“General Permit”), Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity. August 19, 1999.

State Water Resources Control Board (SWRCB) Resolution No. 2001-046, Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit), adopted by the SWRCB on April 26, 2001.

State Water Resources Control Board (SWRCB) Resolution No. 2002-XXX, Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit) to Include Small Construction Activity (One to Five Acres), adopted by the SWRCB on December 2, 2002.

Conceptual Storm Water Pollution Prevention Plan (CSWPPP) prepared for the Division of Toll Bridge Program, Contract No. 04-013014. Prepared by California Department of Transportation, District 04, Division of Toll Bridge Engineering Program, Environmental Engineering Branch. October 1999.

California Regional Water Quality Control Board, Los Angeles Region, Waiver of Clean Water Act Section 401 Water Quality Certification, dated xx/xx/xx.

US Army Corps of Engineers, Nation wide Permit 26-authorization letter, dated xx/xx/xx.

Storm Water Management for Construction Activities – Developing Pollution Prevention Plans and Best Management Practices, USEPA 832-R-92-005, October 1992.

REQUIRED TEXT:

The following documents are made a part of this SWPPP by reference:

Project plans and specifications No. INSERT NUMBER, dated INSERT DATE, prepared by CALTRANS OR OTHER ENTITY PREPARING PLANS.

State Water Resources Control Board (SWRCB) Order No. 99-06-DWQ, NPDES No. CAS000003 (“Permit”), National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans), July 1999.

State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002 (“General Permit”), Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity, August 1999.

State Water Resources Control Board (SWRCB) Resolution No. 2001-046, Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit), adopted by the SWRCB on April 26, 2001.

Modification of Water Quality Order 99-08-DWQ, State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit) to Include Small Construction Activity (One to Five Acres), adopted by the SWRCB on December 2, 2002.

Caltrans Storm Water Quality Handbooks, Construction Site Best Management Practices Manual, dated January 2003.

Caltrans Storm Water Quality Handbooks, SWPPP/WPCP Preparation Manual, dated January 2003.

CLICK AND TYPE OTHER REFERENCES HERE

SECTION 500

Body of SWPPP

500.1 Objectives

INSTRUCTIONS:

R Include a Separator and Tab for Section 500 for ready reference.

The four primary SWPPP objectives are described in the General Permit and are shown below in the “required text” section. Pollutant source identification and BMP selections shall be developed in the body of the SWPPP to support the four SWPPP objectives.

Note: Information on the applicable Permit number and issuing agency is specified in the Special Provisions.

REQUIRED TEXT:

This Storm Water Pollution Prevention Plan (SWPPP) has four main objectives:

Identify all pollutant sources, including sources of sediment that may affect the quality of storm water discharges associated with construction activity (storm water discharges) from the construction site, and

Identify non-storm water discharges, and

Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction, and

Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs).

This SWPPP conforms with the required elements of the Permit (No. CAS000003), and with the required elements of the General Permit (No. CAS000002) issued by the State of California, State Water Resources Control Board (SWRCB). This SWPPP will be modified and amended to reflect any amendments to the Permits, or any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface waters, groundwaters, or the municipal separate storm sewer system (MS4). The SWPPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges. The SWPPP will be readily available on-site for the duration of the project.



500.2 Vicinity Map

INSTRUCTIONS:

The General Permit requires that both a vicinity and site map be included in the SWPPP.

- R The Vicinity Map shall be a 8-1/2" x 11" color copy of a USGS map or equal and shall extend approximately 400 meters (one-quarter mile) beyond the property boundaries of the construction site (an 11" x 17" may be used if needed). Insert the vicinity map as Attachment A and place a reference in Section 500.2.
- R To meet the site map requirement, insert a reduced copy (8-1/2" x 11" or 11" x 17") of the project's Title Sheet in Attachment A and refer to it in Section 500.2.
- R Provide a brief narrative description of the vicinity to support the map in Attachment A. Describe important features, drainage areas, or receiving waters that could not be shown on the map.

The vicinity map shall show:

- R outline of the site's perimeter;
- R easily identifiable major roadways;
- R geographic features or landmarks;
- R water bodies within or adjacent to the construction limits;
- R construction site perimeter;
- R known wells;
- R outline of the offsite drainage area(s) that discharge into the construction site;
- R identification of anticipated discharge location(s) where the construction site's storm water discharges to a municipal storm sewer system or other water body;
- R other geographic features surrounding the site; and
- R general topography.

REQUIRED TEXT

The construction project vicinity map showing the project location, surface water boundaries, geographic features, construction site perimeter, and general topography, is located in Attachment A. The project's Title Sheet provides more detail regarding the project location and is included in Attachment A.

500.3 Pollutant Source Identification and BMP Selection

500.3.1 Inventory of Materials and Activities that May Pollute Storm Water

INSTRUCTIONS:

- R List all construction materials that will be used and construction activities that will have the potential to contribute to the discharge of pollutants to storm water.
- R List all construction activities that have the potential to contribute sediment to storm water discharges.
- R Insert as many bullets as necessary to complete the inventory.

EXAMPLE:

Control practices for each activity are identified in sections 500.3.4 through 500.3.9

The following is a list of construction materials that will be used and activities that will be performed that will have the potential to contribute pollutants, other than sediment, to storm water runoff. Control practices for each activity are identified in the sections 500.3.4 through 500.3.9):

- Vehicle fluids, including oil, grease, petroleum, and coolants
- Asphaltic emulsions associated with asphalt-concrete paving operations
- Cement materials associated with PCC concrete paving operations, drainage structures, median barriers, and bridge construction
- Base and subbase material
- Joint and curing compounds
- Concrete curing compounds
- Paints
- Solvents, thinners, acids
- Sandblasting materials
- Mortar mix
- Raw landscaping materials and wastes (topsoil, plant materials, herbicides, fertilizers, pesticides, mulch)
- BMP materials (sandbags, liquid copolymer)
- Treated lumber (materials and wastes)
- PCC rubble
- Masonry block rubble
- General litter

Construction activities that have the potential to contribute sediment to storm water discharges include:

- Clear and grub operations
- Grading operations
- Soil import operations
- Utility excavation operations
- Sandblasting operations
- Landscaping operations

REQUIRED TEXT:

The following is a list of construction materials that will be used and activities that will be performed that will have the potential to contribute pollutants, other than sediment, to storm water runoff (control practices for each activity are identified in the Water Pollution Control Drawings (WPCDs) and/or in sections 500.3.4 through 500.3.9:

(LIST)

Construction activities that have the potential to contribute sediment to storm water discharges include:

(LIST)

Attachment C lists all Best Management Practices (BMPs) that are either minimum requirements or special contract requirements, and all BMPs selected for this project. Implementation and location of BMPs are shown on the WPCDs in Attachment B. Narrative descriptions of BMPs to be used

during the project are listed by category in each of the following SWPPP sections. Attachment Q includes a copy or a list of all the BMPs selected for this project.

500.3.2 Existing (pre-construction) Control Measures

INSTRUCTIONS:

R Identify the existing control measures in place prior to construction. Pre-construction control measures may include any measures used to reduce erosion, sediment or other pollutants in storm water discharges. Pre-construction control measures may include but not be limited to: Detention basins, infiltration basins, sediment basins, oil water separators, bridge slope protection, rock slope protection, existing erosion control, existing landscaping, lined ditches, energy dissipaters etc.

EXAMPLE:

The following are existing (pre-construction) control measures encountered within the project site:

Detention basin located at the southeast end of the project. This basin was designed as a combination flood control and permanent treatment control measure. It is anticipated that the basin will be used as a temporary sediment basin during construction, and will be restored to original condition prior to project completion.

Slopes under the existing bridge are protected with concrete. No disturbance to these slopes is anticipated.

There are two existing slopes that have permanent rock slope protection, they are shown on WPCD-6. No disturbance is anticipated on these slopes.

REQUIRED TEXT:

The following are existing (pre-construction) control measures encountered within the project site:

(LIST)

500.3.3 Nature of Fill Material and Existing Data Describing the Soil

INSTRUCTIONS:

- R Describe the conditions of the fill material and the soils at the construction site (i.e. types of soils, groundwater location and conditions, dewatering operations that may be necessary, etc). A general description can usually be found in the project materials report or geotechnical report.
- R Show and/or describe existing site features that, as a result of known past usage, may contribute pollutants to storm water, (e.g., toxic materials that are known to have been treated, stored, disposed, spilled, or leaked onto the construction site). Review the contract documents and associated environmental documents to determine the known site contaminants and list them in this section.

EXAMPLE:

Existing site features that, as a result of known past usage, may contribute pollutants to storm water, (e.g., toxic materials that are known to have been treated, stored, disposed, spilled, or leaked onto the construction site) include:

This site includes aerially deposited lead.....located at.....

REQUIRED TEXT:

DESCRIBE CONDITIONS OF FILL MATERIALS AND EXISTING SOILS AT THE PROJECT SITE

Existing site features that, as a result of past usage, may contribute pollutants to storm water (e.g., toxic materials that are known to have been treated, stored, disposed, spilled, or leaked onto the construction site) include:

(LIST)

INSTRUCTIONS:

BMP SELECTION PROCESS

The BMP selection process is an iterative process that first identifies potential pollutant sources and then identifies the BMPs necessary to reduce or eliminate pollutant discharges from the site.

- R Identify all contract required BMPs (indicated as minimum requirements in Attachment C, and any other BMPs required by the special provisions).

R Select BMPs to eliminate or reduce the pollutants identified in the inventory list (Section 500.3.1). See Section 2 of the Caltrans *Storm Water Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual*, for instructions for selecting and implementing construction site BMPs and working details for construction site BMPs. Refer to the BMP Consideration Checklist in Attachment C to select BMPs in each of the following sections:

- 500.3.4 Soil Stabilization (Erosion Control)
- 500.3.5 Sediment Control
- 500.3.6 Tracking Control
- 500.3.7 Wind Erosion Control
- 500.3.8 Non-Storm Water Control
- 500.3.9 Waste Management and Materials Pollution Control

R Show the selected BMPs on the WPCDs. Use the instructions in Section 500.4 and the SWPPP Checklist (Attachment L) to confirm that all WPCD requirements are included. Provide a narrative description of the BMPs selected in the appropriate section.

500.3.4 Soil Stabilization (Erosion Control)

INSTRUCTIONS:

- R Select temporary soil stabilization BMPs to be used and complete the “Temporary Soil Stabilization” section of the BMP Consideration Checklist in Attachment C. See Section 2 of the Caltrans *Storm Water Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual*, for instructions for selecting and implementing construction site BMPs and working details for construction site BMPs.
- R Provide introductory paragraphs that define soil stabilization (erosion control), and give a general approach on how temporary soil stabilization BMPs will be implemented on the project.
- R List all the temporary soil stabilization BMPs to be used in the project.
- R Show selected temporary soil stabilization BMPs on the WPCDs. Provide a narrative description of temporary soil stabilization BMPs that cannot be adequately identified on the WPCDs.
- R Discuss the on-site availability of temporary soil stabilization materials (materials kept for soil temporary soil stabilization BMPs) and proposed mobilization and implementation of temporary soil stabilization BMPs in the event of a predicted storm. Sufficient material(s) needed to install temporary soil stabilization BMPs necessary to completely protect the exposed portions (disturbed soil area) of the site from erosion and to prevent sediment discharges shall be stored on site. Areas that have already been protected from erosion using temporary or permanent physical stabilization, or established vegetation stabilization BMPs, are not considered to be “exposed DSAs” for purposes of this requirement.

EXAMPLE:

Soil Stabilization, also referred to as erosion control, is a source control measure that is designed to prevent soil particles from detaching and becoming transported in the storm water runoff. Soil stabilization BMPs protect the soil surface by covering and/or binding the soil particles. This project will incorporate minimum

temporary soil stabilization requirements, temporary soil stabilization measures required by the contract documents, and other measures selected by the contractor. This construction project will implement the following practices to assure effective temporary and final soil stabilization (erosion control) during construction:

- 1) Preserve existing vegetation where required and when feasible.
- 2) Apply temporary soil stabilization (erosion control) to remaining active and non-active areas as required by the Construction Site BMP Manual and the Special Provisions. Reapply as necessary to maintain effectiveness.
- 3) Implement temporary soil stabilization measures at regular intervals throughout the defined rainy season to achieve and maintain the contract's disturbed soil area requirements. When the project's Special Provisions require it, temporary soil stabilization BMPs will be implemented 20 days prior to the defined rainy season.
- 4) Stabilize non-active areas within 14 days of cessation of construction activities.
- 5) Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding, or plastic lining swales.
- 6) Apply seed to areas deemed substantially complete by the RE during the defined rainy season.
- 7) At completion of construction, apply permanent erosion control to all remaining disturbed soil areas as required in the special provisions.

Sufficient soil stabilization materials will be maintained on-site to allow implementation in conformance with Caltrans requirements and described in this SWPPP. This includes implementation requirements for active areas and non-active areas that require deployment before the onset of rain.

Implementation and locations of temporary soil stabilization BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B and/or described in this section. The BMP Consideration Checklist in Attachment C indicates the BMPs that will be implemented to control erosion on the construction site; these are:

- SS-2, Preservation of Existing Vegetation
- SS-6, Straw Mulch (with tackifier)
- SS-7, Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats
- SS-9, Earth Dikes/Drainage Swales & Lined Ditches

Implementation of Soil Stabilization BMPs

BMPs will be deployed in a sequence to follow the progress of grading and construction. As the locations of soil disturbance change, erosion and sedimentation controls will be adjusted accordingly to control storm water runoff at the downgrade perimeter and drain inlets. BMPs will be mobilized as follows:

Year-round:

The WPCM will monitor weather using National Weather Service reports to track conditions and alert crews to the onset of rainfall events.

Disturbed soil areas will be stabilized, as required by Tables 2-2 and 2-3 of the Construction Site Best Management Practices Manual, with temporary soil stabilization, or with permanent erosion control as soon as possible after grading or construction is complete.

During the rainy season:

Disturbed areas will be stabilized with temporary or permanent soil stabilization (erosion control) before rain events.

Disturbed areas that are substantially complete will be stabilized with permanent soil stabilization (erosion control) and vegetation (if within seeding window for seed establishment).

Prior to forecast storm events, temporary soil stabilization BMPs will be deployed and inspected.

During the non-rainy season:

The project schedule will sequence construction activities with the installation of both soil stabilization and sediment control measures. The construction schedule will be arranged as much as practicable to leave existing vegetation undisturbed until immediately prior to grading.

Straw Mulch

Straw mulch will be primarily used throughout the disturbed areas adjacent to excavations and on shallow slopes surrounding the site. See the WPCDs in Attachment B of this SWPPP for locations where straw mulch will be used.

Geotextiles, Plastic Covers and Erosion Control Blankets/Mats

Geotextile blankets will be used to provide temporary and long-term stabilization for the flow line of the vegetated swale on the western boundary of the project.

Polyethylene covers will be used to cover exposed soil and sand stockpiled material areas. Covers will be placed over stockpiles prior to forecast storm events, and anchored to prevent damage by wind.

REQUIRED TEXT:

Soil stabilization, also referred to as erosion control, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Soil stabilization BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate minimum temporary soil stabilization requirements, temporary soil stabilization measures required by the contract documents, and other measures selected by the contractor. This project will implement the following practices for effective temporary and final soil stabilization during construction:

- 1) Preserve existing vegetation where required and when feasible.
- 2) Apply temporary soil stabilization (erosion control) to remaining active and non-active areas as required by the Construction Site BMPs Manual and the Special Provisions. Reapply as necessary to maintain effectiveness.

- 3) Implement temporary soil stabilization measures at regular intervals throughout the defined rainy season to achieve and maintain the contract's disturbed soil area requirements. When the project's Special Provisions require it, temporary soil stabilization will be implemented 20 days prior to the defined rainy season.
- 4) Stabilize non-active areas within 14 days of cessation of construction activities.
- 5) Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding, and plastic lining swales.
- 6) Apply seed to areas deemed substantially complete by the RE during the defined rainy season.
- 7) At completion of construction, apply permanent erosion control to all remaining disturbed soil areas as required in the special provisions.

Sufficient soil stabilization materials will be maintained on-site to allow implementation in conformance with Caltrans requirements and described in this SWPPP. This includes implementation requirements for active and non-active areas that require deployment before the onset of rain.

Implementation and locations of temporary soil stabilization BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B and/or described in this section. The BMP Consideration Checklist in Attachment C indicates the BMPs that will be implemented to control erosion on the construction site; these are:

- SS-1, Scheduling
- SS-2, Preservation of Existing Vegetation

500.3.5 Sediment Control

INSTRUCTIONS:

- R Select sediment control BMPs to be used and complete the Temporary Sediment Control BMPs section of the BMP Consideration Checklist in Attachment C. See Section 2 of the Caltrans "Storm Water Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual", for instructions for selecting and implementing construction site BMPs and working details for construction site BMPs.
- R Provide introductory paragraphs that defines what is sediment control and give a general approach on how sediment control BMPs will be implemented at the draining perimeter of disturbed soil areas, at the toe of slopes, at inlets and outfall areas at all times.

- R List all the temporary sediment control BMPs to be used in the project.
- R Show selected temporary sediment control BMPs on the WPCDs. Provide a narrative description of temporary sediment control BMPs that cannot be adequately identified on the WPCDs.
- R Show BMPs used to divert off-site drainage around and/or through the construction project.
- R Discuss the on-site availability of temporary sediment control materials (materials kept for temporary sediment control BMPs) and proposed mobilization and implementation of temporary sediment control BMPs in the event of a predicted storm. A minimum of 10% of the installed quantities of sediment control BMPs is required to be maintained onsite as standby sediment control BMPs that may be installed to prevent sediment discharges from exposed portions of the site shall be stored on site.

EXAMPLE:

Sediment controls are structural measures that are intended to complement and enhance the soil stabilization (erosion control) measures and reduce sediment discharges from construction areas. Sediment controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water. This project will incorporate minimum temporary sediment control requirements, temporary sediment control measures required by the contract documents, and other measures selected by the contractor.

Temporary sediment control materials, equivalent to 10% of the installed quantities in the site, will be maintained on-site throughout the duration of the project, to allow implementation of temporary sediment controls in the event of predicted rain, and for rapid response to failures or emergencies, in conformance with other Caltrans requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

Implementation and locations of temporary sediment control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. The BMP Consideration Checklist in Attachment C indicates all the BMPs that will be implemented to control sediment on the construction site; these are:

- SC-1, Silt fence and/or SC-5, Fiber rolls
- SC-4, Check dams
- SC-7, Street Sweeping and Vacuuming
- SC-8, Sandbag barrier
- SC-10, Storm Drain Inlet Protection

Implementation of Temporary Sediment Controls

Temporary sediment control BMPs will be deployed according to the schedule shown in SWPPP Section 300.4.

During the rainy season, temporary sediment controls will be implemented at the draining perimeter of disturbed soil areas, at the toe of slopes, at storm drain inlets and at outfall areas at all times.

During the non-rainy season, temporary sediment controls will be implemented at the draining perimeter of disturbed soil areas and at storm drain downstream from disturbed areas before rain events.



As shown on the WPCDs, silt fences will be deployed along the toe of exterior slopes to filter storm water runoff.

Storm drain inlet protection will be used at all operational internal inlets to the storm drain system during the rainy season as shown on the WPCDs.

During the non-rainy season, in the event of a predicted storm, the following temporary sediment control materials will be maintained on-site: silt fence materials, sandbags for linear barriers, fiber rolls

REQUIRED TEXT:

Sediment controls are structural measures that are intended to complement and enhance the selected soil stabilization (erosion control) measures and reduce sediment discharges from construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will incorporate minimum temporary sediment control requirements, temporary sediment control measures required by the contract documents, and other measures selected by the contractor.

Temporary sediment control materials, equivalent to 10% of the installed quantities in the site, will be maintained on-site throughout the duration of the project, to allow implementation of temporary sediment controls in the event of predicted rain, and for rapid response to failures or emergencies, in conformance with other Caltrans requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

Implementation and locations of temporary sediment control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. The BMP Consideration Checklist in Attachment C indicates all the BMPs that will be implemented to control sediment on the construction site; these are:

- SC-1, Silt Fence and/or SC-5, Fiber Rolls
- SC-7, Street Sweeping and Vacuuming
- SC-10, Storm Drain Inlet Protection

500.3.6 Tracking Control

INSTRUCTIONS:

Tracking controls shall be considered and implemented year round and throughout the duration of the project, at all access (ingress/egress) points to the project site where vehicles and/or equipment may track sediment from the construction site onto public or private roadways.

- R Select BMPs and provide a narrative description of tracking control BMPs that will be used to reduce sediment tracking onto public or private roads.
- R Show on the WPCDs the location of all ingress/egress points to the project site where sediment tracking is likely.
- R Describe measures to prevent sediment tracking in this section.
- R Discuss road-cleaning BMPs.

EXAMPLE:

The following BMPs have been selected to reduce sediment tracking from the construction site onto private or public roads:

- SC-7, Street Sweeping and Vacuuming
- TC-1, Stabilized Construction Entrance/Exit
- TC-2, Stabilized Construction Roadway
- TC-3, Entrance/Outlet Tire Wash

BMPs to Reduce Sediment Tracking

Stabilized Construction Entrance/Exit

A stabilized construction entrance/exit will be constructed and maintained at construction site entrances and exits, equipment yard, PCC batch plants and crushing plants, water filling area for water trucks, and project office location as shown on the site map.

The site entrance/exit will be stabilized to reduce tracking of sediment as a result of construction traffic. The entrance will be designated and graded to prevent runoff from leaving the site. Stabilization material will be 3 to 6-inch aggregate. The entrance will be flared where it meets the existing road to provide an adequate turning radius. During dirt-hauling activities that extend over one week time period, a site entrance/exit will be installed to reduce tracking of sediment.

Stabilized Construction Roadway

The construction roadway through the site will also be designated and stabilized to prevent erosion and to control tracking of mud and soil material onto adjacent roads. The roadway will be clearly marked for limited speed to control dust. Refer to the WPCDs for entrance/exit and construction roadway locations. Stabilization material will be 3 to 6-inch aggregate. A regular maintenance program will be conducted to replace sediment-clogged stabilization material with new stabilization material.

Entrance/Outlet Tire Wash

An entrance/outlet tire wash station will be used to ensure that sediment tracking to public streets is minimized.

Road Cleaning BMPs – Street Sweeping and Vacuuming

Road sweeping and vacuuming will occur during soil hauling and as necessary to keep street clear of soil and debris. Washing of sediment tracked onto streets into storm drains will not occur.

REQUIRED TEXT:

The following BMPs have been selected to reduce sediment tracking from the construction site onto private or public roads:

SC-7, Street Sweeping and Vacuuming

500.3.7 Wind Erosion Control

INSTRUCTIONS:

Wind erosion control BMPs shall be considered and implemented year-round and throughout the duration of the project on all disturbed soils on the project site that are subject to wind erosion, and when significant wind and dry conditions are anticipated during project construction. The objective of wind controls is to prevent the transport of soil from soil-disturbed areas of the project site, offsite by wind.

R Select BMPs and provide a narrative description of BMPs that will be used to control dust during construction operations, including stockpile operations.

EXAMPLE:

The following BMPs have been selected to control dust from the construction site:

WE-1, Wind Erosion Control

Dust Control

Potable water will be applied to disturbed soil areas of the project site to control dust and maintain optimum moisture levels for compaction. The water will be applied using water trucks. As shown on the project schedule, project soils will be disturbed and exposed from approximately May 1 through December 15. Water applications will be concentrated during the late summer and early fall months and especially during the embankment construction operations scheduled for July. The total water to be applied is expected to be between 3,000 and 5,000 m³.

BMP WE-1, Wind Erosion Control, and BMP NS-1, Water Conservation Practices, will be implemented to provide dust control and prevent discharges from dust control activities and water supply equipment. Water application rates will be minimized as necessary to prevent runoff and ponding and water equipment leaks will be repaired immediately.

During windy conditions (forecast or actual wind conditions of approximately 25 mph or greater), dust control will be applied to DSAs, including haul roads to adequately control wind erosion.

BMP WM-3, Stockpile Management, using silt fences and plastic covers will be implemented to prevent wind dispersal of sediment from stockpiles.

REQUIRED TEXT:

The following BMPs have been selected to control dust from the construction site:

WE-1, Wind Erosion Control

500.3.8 Non-Storm Water Control

INSTRUCTIONS:

The Caltrans Statewide NPDES Permit defines non-storm water discharges as follows: "Non-storm water discharges consist of all discharges from a municipal storm water conveyance which do not originate from precipitation events (i.e., all discharges from a conveyance system other than storm water)."

There are three types of non-storm water discharges as specified in the Permit:

- 1) Illicit discharges - unplanned
- 2) Non-prohibited – planned and unplanned
- 3) NPDES permitted - planned

Non-storm water discharges into storm drainage systems or waterways, which are not authorized under the Caltrans Permit or authorized under a separate NPDES permit, are prohibited. Examples of prohibited discharges common to construction activities include:

- Vehicle and equipment wash water, including concrete washout water
- Slurries from concrete cutting and coring operations, PCC grinding or AC grinding operations
- Slurries from concrete or mortar mixing operations
- Blast residue from high-pressure washing of structures or surfaces
- Wash water from cleaning painting equipment
- Runoff from dust control applications of water or dust palliatives
- Sanitary and septic wastes
- Chemical leaks and/or spills of any kind including but not limited to petroleum, paints, cure compounds, etc.

Discharges of construction materials and wastes, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or storm water runoff are also prohibited and shall be addressed in Section 500.3.9, Waste Management and Materials Pollution Control.



Some non-storm water discharges are authorized under the Caltrans Permit and need not be prohibited unless identified as a source of pollutants. However, specific control measures may be required to minimize adverse impacts from these discharges. Some RWQCBs may require a separate NPDES permit or specific monitoring and reporting requirements for authorized discharges. Check with the RE or the applicable RWQCB for requirements in the project area. Non-storm water discharges exempted by the Caltrans Permit include:

- Flows from riparian habitats or wetlands
- Diverted stream flows
- Springs, rising groundwater, and
- Uncontaminated groundwater infiltration

Other discharges such as pumped groundwater, irrigation water and water line and hydrant flushing (see Caltrans Permit, Section B, Non-storm Water Discharge Prohibitions, item 3, Conditionally Exempt Discharges, for entire list), are not prohibited if they are identified as not being sources of pollutants to receiving waters or if appropriate control measures (BMPs) to minimize the adverse impacts of such sources are developed and implemented. Some RWQCBs may require a separate NPDES permit or specific monitoring and reporting requirements for the conditionally exempt discharges. Check with the RE on what discharges are conditionally exempt.

Use the following process to identify, quantify, and select BMPs for non-storm water discharges. List each potential non-storm water discharge and provide the information addressed by each step. Complete the BMP Consideration Checklist in Attachment C to show selected BMPs.

R Identify all potential non-storm water discharges within the project. Examine all project activities and determine what discharges will be generated or may be required in order to complete each activity, including mobile-type operations. Discuss how mobile operations, such as maintenance and fueling for large or stationary equipment, will be addressed. Examples of common construction activities that may result in non-storm water discharges on a project are:

- vehicle and equipment cleaning, fueling and maintenance
- surface water diversions,
- dewatering operations
- saw-cutting
- drilling
- boring
- AC and PCC grinding
- AC and PCC recycling
- Concrete mixing
- crushing
- bridge cleaning
- blasting
- painting
- hydro-demolition
- mortar mixing
- air-blown mortar, etc.

R Describe each planned non-storm water discharge from the project into the storm drain system or waterway, including flow/quantity and expected pollutants. If a flow or quantity cannot be

determined, then fully describe the nature and extent of the activity such that the quantity can be inferred. One-time discharges shall be monitored by the WPCM during the time that such discharges are occurring.

- R Describe each non-storm water source or activity that may generate a discharge; containment facilities and appurtenances that would be employed; and flow paths of discharge to downstream inlets, drainage facilities, and receiving waters. Where possible, depict BMP locations on the WPCDs.
- R Indicate the time period and frequency of each activity that generates or may generate a discharge.
- R Describe mandatory non-storm water control BMPs and practices required by Caltrans, the RWQCB (such as WDR requirements for projects that reuse Aerially Deposited Lead soils), other permits, or other federal, state, or local agencies. Provide details and schedules as appropriate. Include maintenance, inspection, testing, and reporting requirements. Provide permit information for discharges covered by a separate NPDES permit.
- R Describe contractor-selected non-storm water control BMPs and practices to minimize, contain, and dispose prohibited discharges or to minimize adverse impacts of authorized discharges from the project into the storm drain system or waterway. BMPs within both the Non-Storm Water Management and the Materials Handling and Waste Management categories may be applicable to non-storm water discharges. Include maintenance, inspection, testing, and reporting procedures, if applicable.
- R Indicate how illicit connections and illegal discharges will be handled.

EXAMPLE:

An inventory of construction activities and potential non-storm water discharges is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to control non-storm water pollution on the construction site. Implementation and locations of some non-storm water control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. A narrative description of each BMP follows.

- NS-1, Water Conservation Practices
- NS-3, Paving and Grinding Operations
- NS-6, Illicit Connection/Illegal Discharge Detection and Reporting
- NS-8, Vehicle and Equipment Cleaning
- NS-9, Vehicle and Equipment Fueling
- NS-10, Vehicle and Equipment Maintenance
- NS-11, Pile Driving Operations
- NS-12, Concrete Curing
- NS-13, Material and Equipment Use over Water
- NS-14, Concrete Finishing
- NS-15, Structure Demolition/Removal



WM-8, Concrete Waste Management

Illicit Connection/Illegal Discharge Detection and Reporting

The contractor will implement BMP NS-6, Illicit Connection/Illegal Discharge Detection and Reporting throughout the duration of the project.

Paving Operations

The project will include placement of approximately 80,000 m² of AC pavement. Paving locations and adjacent storm drain inlets are shown on WPCDs 2, 3, and 5. Paving operations will generally be conducted in August and September as shown on the project schedule in Section 300.4. BMP NS-3, Paving and Grinding Operations, will be implemented to prevent paving materials from being discharged off-site. Covers will be placed over each inlet adjacent to paving operations. The covers will consist of scrap carpeting placed over, and tucked under, each inlet grate. Following paving operations, the area will be swept, inlet covers will be removed, and the inlets will be inspected for paving materials.

Vehicle and Equipment Operations

Several types of vehicles and equipment will be used on-site throughout the project, including graders, scrapers, excavators, loaders, paving equipment, rollers, trucks and trailers, backhoes, forklifts, generators, compressors, and traffic control equipment. BMPs NS-9, Vehicle and Equipment Fueling, and NS-10, Vehicle and Equipment Maintenance will be utilized to prevent discharges of fuel and other vehicle fluids. Except for concrete washout, which is addressed in Section 500.3.8, vehicle cleaning will not be performed on-site.

A paved temporary fueling area will be constructed in the contractor's yard as shown on WPCD-4. All self-propelled vehicles will be fueled off-site or at the temporary fueling area. Fuel trucks, each equipped with absorbent spill clean-up materials, will be used for all on-site fueling, whether at the temporary fueling area or for mobile fueling elsewhere on the site. Drip pans will be used for all mobile fueling. The fueling truck will be parked on the paved fueling area for overnight storage.

Drip pans or absorbent pads will be used for all vehicle and equipment maintenance activities that involve grease, oil, solvents, or other vehicle fluids.

All vehicle maintenance and mobile fueling operations will be conducted at least 15 m away from operational inlets and drainage facilities and on a level graded area.

Concrete Saw-cutting

The project will include approximately 350 m of concrete saw-cutting at the on- and off-ramp project limits where traffic signal and ramp metering detection loops will be installed. Saw-cutting locations and adjacent storm drain inlets are shown on WPCDs 2, 3, and 4. Estimated saw-cutting dates are shown on the schedule in Section 300.4. Saw-cutting operations will not be conducted during or immediately prior to rainfall events. Saw-cutting operations are expected to produce about 1.5 m³ of waste slurry consisting of water and fine PCC grit.

BMP WM-8, Concrete Waste Management, will be implemented to contain and dispose of saw-cutting slurries. The slurry will be vacuumed and discharged to the concrete washout facility described above. Dried and cured concrete wastes will be disposed off-site during concrete washout maintenance activities.

REQUIRED TEXT:

An inventory of construction activities and potential non-storm water discharges is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to control non-storm water pollution on the construction site. Implementation and locations of some non-storm water control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. A narrative description of each BMP follows.

NS-6, Illicit Connection/Illegal Discharge Detection and Reporting

NS-8, Vehicle and Equipment Cleaning

NS-9, Vehicle and Equipment Fueling

NS-10, Vehicle and Equipment Maintenance

500.3.9 Waste Management and Materials Pollution Control

INSTRUCTIONS:

Waste management consists of implementing procedural and structural BMPs for collecting, handling, storing and disposing of wastes generated by a construction project to prevent the release of waste materials into storm water discharges. Wastes are going to be generated during construction; however, the methods in which the wastes are collected, stored, and removed will determine the success of the waste management activities. Construction site wastes can range from residues collected from non-storm water discharges (i.e. paint removal) to general site litter and debris (i.e. empty marker paint cans).

Materials pollution control (materials handling) consist of implementing procedural and structural BMPs for handling, storing and using construction materials to prevent the release of those materials into storm water discharges. The amount and type of construction materials to be utilized at the site will be dependent upon the type of construction and the length of the construction period. The materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as fertilizer for landscaping.

Waste management and materials pollution control BMPs shall be implemented to minimize storm water contact with construction materials, wastes and service areas, and to prevent materials and wastes from being discharged off-site. The primary mechanisms for storm water contact that shall be addressed are:

- Direct contact with precipitation
- Contact with storm water run-on and runoff
- Wind dispersion of loose materials
- Direct discharge to the storm drain system through spills or dumping



Extended contact with some materials and wastes, such as plated metals and treated wood products can leach pollutants into storm water.

Use the following process to identify and select BMPs for waste management and materials pollution control.

- R Review construction activities to identify and quantify likely construction materials and wastes. Identify materials and wastes with special handling or disposal requirements such as lead contaminated soils, concrete saw-cutting liquids, waste chemicals and empty chemical containers. (See Section 500.3.1)
- R Substitute safer, less polluting products where possible. Substitution of materials and products require approval pursuant to the Standard Specifications.
- R Use the BMP Consideration Checklist in Attachment C to identify Caltrans minimum requirements and additional BMPs selected to address project-specific activities.
- R List the selected BMPs and describe proposed facilities for materials storage and waste management (including on-site storage and disposal of waste). Discuss how each storm water contact mechanism will be addressed. Include schedules, inspection, and maintenance requirements. Show facility locations and details on the WPCDs where possible.
- R Describe proposed waste collection and removal schedules.

EXAMPLE:

An inventory of construction activities, materials, and wastes is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to control construction site wastes and materials. Implementation and locations of some materials handling and waste management BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. A narrative description of each BMP follows.

- WM-1, Material Delivery and Storage
- WM-2, Material Use
- WM-3, Stockpile Management
- WM-4, Spill Prevention and Control
- WM-5, Solid Waste Management
- WM-6, Hazardous Waste Management
- WM-8, Concrete Waste Management

Material Delivery, Storage, and Use

In general, BMPs WM-1 and WM-2 will be implemented to help prevent discharges of construction materials during delivery, storage, and use. The general material storage area will be located in the contractor's yard as shown on WPCD-4. A sandbag barrier (BMP SC-8) will be provided around the storage area to prevent run-on from adjacent areas. Two types of storage/containment facilities will be provided within the storage area to minimize storm water contact with construction materials:

- Two watertight shipping containers will be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents and grease.
- A separate covered storage/containment facility will be constructed adjacent to the shipping containers to provide storage for larger items such as drums and items shipped or stored on pallets. The containment facility will consist of a 3 m by 6 m raised concrete pad with 120 mm curbed sides. A wood frame and corrugated tin roof and sides will be constructed to protect the facility from sun and rain. The facility will provide about 2 m³ (530 gal) of containment volume. The containment volume is adequate to store 9, 55-gallon drums and the rainfall from a 24 hour – 25 year storm pursuant to BMP WM-1.

Very large items, such as light standards, framing materials, and stockpiled lumber, will be stored in the open in the general storage area. Such materials will be elevated with wood blocks to minimize contact with run-on.

Spill clean-up materials, material safety data sheets, a material inventory, and emergency contact numbers will be maintained and stored in the southern shipping container.

Stockpile Management

BMP WM-3, Stockpile Management, will be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate subbase, pre-mixed aggregate and asphalt minder (so called “cold mix” asphalt). Stockpiles will be surrounded with sediment controls (SC-5, Fiber Rolls or SC-8, Sandbag Barrier). Plastic covers (SS-7, Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats), or SS-5, Soil Binders, will be used.

Spill Prevention and Control

BMP WM-4, Spill Prevention and Control, will be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. Spill prevention is also discussed above in Material Delivery, Storage, and below in the following waste management and equipment maintenance sections.

Waste Management

BMP WM-5, Solid Waste Management, and BMP WM-6, Hazardous Waste Management will be implemented to minimize storm water contact with waste materials and prevent waste discharges. Solid wastes will be loaded directly into trucks for off-site disposal. When on-site storage is necessary, solid wastes will be stored in watertight dumpsters in the general storage area of the contractors yard. Dumpster locations are shown on WPCD-4. AC and PCC rubble will be stockpiled in the general storage area, will be surrounded with sediment controls (SC-8, Sandbag Barrier) and covered when necessary. Solid waste, including rubble stockpiles, will be removed and disposed off-site at least weekly. ABC Waste Disposal (License CA9999999) will provide solid waste disposal services. Hazardous wastes will be stored in the shipping containers or covered containment area discussed above for materials storage. Hazardous wastes will be appropriate and clearly marked containers and segregated from other non-waste materials.

Contaminated Soil Management



When contaminated soils are encountered, the RE will be notified, the contaminated soils will be contained, covered if stockpiled, and disposed of per WM-7, Contaminated Soil Management, and the Special Provisions. Employees will be instructed to recognize evidence of contaminated soil, such as buried debris, discolored soil, and unusual odors.

Concrete Residuals and Washout Wastes

This project includes placement of about 100 m³ of concrete in four separate pours, the largest pour being approximately 40 m³. The estimated maximum washout volume is 0.10 m³. Discharges will consist of rinse water and residual concrete (Portland cement, aggregates, admixture, and water). Estimated pour dates are shown on the project schedule in Section 300.4. Concrete pours will not be conducted during or immediately prior to rainfall events.

BMP WM-8, Concrete Waste Management, will be implemented and a below grade concrete washout facility with a 10 mil PVC liner will be constructed and maintained at the contractor's yard as shown on WPCD-4. All excess concrete and concrete washout slurries will be discharged to the washout facility for drying. The minimum-sized washout, at 3m x 3m x 1m deep, will provide more than sufficient volume to contain concrete washout wastes and waste collected from concrete saw-cutting operations, discussed below. BMP maintenance, waste disposal, and BMP removal will be conducted as described in WM-8. Dried-off concrete will be used as fill material if permitted by the RE.

Concrete waste solids/liquids will be removed and disposed of as required by WM-8 and the Special Provisions.

Sanitary and Septic Wastes

The contractor will implement BMP WM-9, Sanitary and Septic Waste Management, and portable toilets will be located and maintained at the contractors yard for the duration of the project. Specific locations are shown on WPCD-4. Weekly maintenance will be provided each Wednesday by ABC Sanitation (license CA0Q45W) and wastes will be disposed off-site at Lodi Sanitation District facilities. The toilets will be located away from concentrated flow paths and traffic flow.

REQUIRED TEXT:

An inventory of construction activities, materials, and wastes is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to handle materials and control construction site wastes. A narrative description of each BMP follows.

- WM-1, Material Delivery and Storage
- WM- 2, Material Use
- WM-4, Spill Prevention and Control
- WM-5, Solid Waste Management
- WM-9, Sanitary/Septic Waste Management

500.3.10 Cost Breakdown for Water Pollution Control

EXAMPLE:

A cost breakdown itemizing the contract lump sum for water pollution control has been developed for this project and is included in Attachment O. The cost breakdown reflects the items of work, quantities and costs for BMPs shown in the SWPPP, except for those construction site BMPs and permanent BMPs that are shown on the project plans and for which there is a contract item of work.

REQUIRED TEXT:

A cost breakdown itemizing the contract lump sum for water pollution control has been developed for this project and is included in Attachment O. The cost breakdown reflects the items of work, quantities and costs for BMPs shown in the SWPPP, except for those construction site BMPs and permanent BMPs that are shown on the project plans and for which there is a contract item of work.

500.4 Water Pollution Control Drawings (WPCDs)

INSTRUCTIONS:

Prepare water pollution control drawings (WPCDs) in conformance with these instructions and the requirements of the General Construction Permit requirements for a site map. Include the WPCDs as Attachment B to the SWPPP.

- R Include a cover sheet(s) listing the BMPs that will be used and any selected options shown on the fact sheets, along with construction notes and a legend. Use standard symbols as depicted on the BMP fact sheets in the Caltrans *Storm Water Quality Handbooks, Construction Site BMP Manual (CSBMPM)*, or as shown in the Conceptual SWPPP (CSWPPP).
- R The WPCDs shall show locations for the BMPs that will be used.
- R BMP Fact Sheets provided in the Caltrans *Storm Water Quality Handbooks, Construction Site BMP Manual* may be used as appropriate and included in Attachment Q. Attachment Q may show only a list of the appropriate BMPs if a copy of the Caltrans *Storm Water Quality Handbooks, Construction Site BMP Manual* is kept with the on-site SWPPP at all times.
- R Additional details may be necessary to describe site-specific BMP applications. BMP details other than the ones contained in the fact sheets of the Caltrans *Storm Water Quality Handbooks, Construction Site BMP Manual* shall be submitted to the RE for approval.
- R Use project layout, grading, stage construction, drainage sheets and/or erosion sheets as base sheets for the WPCDs. Use section 500.3, "Pollutant Source Identification and BMP Selection" as a guide to pollutant sources and BMPs for construction activities. Select BMPs that are appropriate for the site and show their locations on the site map.

The base sheets shall show the construction project in detail, including:

- R The construction site perimeter
- R Geographic features within or immediately adjacent to the site. Include surface waters such as lakes, streams, springs, wetlands, estuaries, ponds, and the ocean.

- R Site topography before and after construction. Include roads, paved areas, buildings, slopes, drainage facilities, and areas of known or suspected contamination.
- R Permanent (post-construction) BMPs. These are usually shown on the project plans.

Also delineate the following site information:

- R Discharge points from the project to off-site storm drain systems or receiving waters
- R Tributary areas and drainage patterns across the project area (show using flow arrows) into each on-site storm water inlet or receiving water
- R Tributary areas and drainage patterns to each on-site storm water inlet, receiving water or discharge point.
- R Off-site tributary drainage areas that generate run-on to the project. (Where off-site tributary drainage areas are too large to depict on the drawings, use map notes or inserts illustrating the upstream drainage areas).
- R Temporary on-site drainage(s) to carry concentrated flows
- R Drainage patterns and slopes anticipated after major grading activities are completed
- R Outline all areas of existing vegetation, soil cover, or native vegetation that will remain undisturbed during the project.
- R Outline all areas of soil disturbance (disturbed soil areas, DSAs). Indicate which areas will be disturbed during the rainy season and which areas will be left exposed during the rainy season.
- R Identify location(s) of contaminated or hazardous soils.
- R Locate potential non-storm water discharges and activities, such as dewatering operations, concrete saw-cutting or coring, pressure washing, waterline flushing, diversions, cofferdams, and vehicle and equipment cleaning. If operations can't be located, provide a narrative description.

Show proposed locations for all construction site BMPs. Include additional detail drawings if necessary to convey site-specific configurations.

- R Show temporary soil stabilization and temporary sediment control BMPs that will be used during construction. Including temporary on-site drainage(s) to carry concentrated flows, BMPs implemented to divert off-site drainage around or through the construction site, and BMPs that protect storm water inlets.
- R Locate site ingress and egress points and any proposed temporary construction roads.
- R Show BMPs to mitigate or eliminate non-storm water discharges
- R Show BMPs for waste management and materials pollution control, including, but not limited to storage of soil or waste; construction material loading, unloading, storage and access areas; and areas designated for waste handling and disposal
- R Show BMPs for vehicle and equipment storage, fueling, maintenance, and cleaning.
- R Show location of all post-construction BMPs.

The Caltrans Permit states: "The SWPPP shall apply to all areas that are directly related to the construction activity, including but not limited to staging areas, storage yards, material borrow areas and storage areas, access roads, etc., whether or not they reside within the Caltrans rights-of-way." Therefore:

R If the Contractor's yard for the project is not within the Caltrans right-of-way, but is located in the vicinity of the project, the WPCDs shall show all BMPs to be used at contractor's yard.

The WPCDs shall reflect the Contractor's phasing and/or construction staging, and shall address the entire scope of the contract work. (The contractor may address certain individual operations at a later date per the SWPPP amendment process established in Sections 200.1 and 200.2)

EXAMPLE:

The Water Pollution Control Drawings can be found in Attachment B of the SWPPP.

REQUIRED TEXT:

The Water Pollution Control Drawings can be found in Attachment B of the SWPPP.

500.5 Construction BMP Maintenance, Inspection and Repair

INSTRUCTIONS:

The purpose of storm water inspections is to evaluate BMP effectiveness and implement repairs or design changes as soon as feasible.

Inspections shall be completed by the Contractor's WPCM.

Inspections are recommended on a regular basis during dry weather. The purpose of dry-weather inspections is to ensure proper implementation of BMPs that are not necessarily weather-related. Examples include non-storm water, waste management, and sediment tracking control BMPs.

A sample maintenance, inspection, and repair program is shown in Attachment G.

A checklist is required during each inspection. A Storm Water Quality Construction Site Inspection Checklist is included as Attachment H in Appendix A. This checklist shall be used for all inspections unless the project's Special Provisions require the Contractor to use a different checklist.

Inspections are required:

- Prior to a forecast storm
- after a rain event that causes runoff from the construction site
- at 24-hour intervals during extended rain events
- weekly during the rainy season
- every 2 weeks during the non-rainy season
- at any other time(s) or intervals of time specified in the project Special Provisions

Completed inspection checklists shall be submitted to the RE within 24 hours of inspection. Copies of the completed checklists shall be kept with the SWPPP.



A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs.

R Include a discussion of the program to inspect and maintain all BMPs as identified in the site plan or other narrative documents throughout the duration of the project. Insert the complete program as Attachment G.

EXAMPLE:

Inspections will be conducted as follows:

- Prior to a forecast storm
- after a rain event that causes runoff from the construction site
- at 24-hour intervals during extended rain events
- weekly during the rainy season
- every 2 weeks during the non-rainy season

Completed inspection checklists will be submitted to the RE within 24 hours of inspection. Copies of the completed checklists will be kept with the SWPPP. A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs. A program for Maintenance, Inspection and Repair of BMPs is shown in Attachment G.

REQUIRED TEXT

Inspections will be conducted as follows:

- x Prior to a forecast storm
- x after a rain event that causes runoff from the construction site
- x at 24-hour intervals during extended rain events
- x weekly during the rainy season
- x every 2 weeks during the non-rainy season
- x at any other time(s) or intervals of time specified in the project Special Provisions

Completed inspection checklists will be submitted to the RE within 24 hours of inspection. Copies of the completed checklists will be kept with the SWPPP. A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs. A program for Maintenance, Inspection and Repair of BMPs is shown in Attachment G.

500.6 Post-Construction Storm Water Management

500.6.1 Post-Construction Control Practices

INSTRUCTIONS:

Post-Construction BMPs are permanent measures installed during construction, designed to reduce or eliminate pollutant discharges from the site after construction is completed. Caltrans may provide listings, descriptions, special operations, and maintenance requirements for post-construction BMPs in the Storm Water Information Handout.

R Provide descriptions of the BMPs employed after all construction phases have been completed at the site (Post-Construction BMPs). Examples of post-construction measures are:

- infiltration basins,
- detention/retention devices,
- vegetated strips and/or swales,
- biofilters
- permanent erosion control, seeding and planting,
- outlet protection/velocity dissipation devices,
- earth dikes, drainage swales, and lined ditches,
- bridge slope protection,
- rock slope protection,
- mulching,
- verification that interior drains are not connected to a storm sewer system.

EXAMPLE:

The following are the post-construction BMPs that are to be used at this construction site after all construction is complete:

Outlet protection/velocity dissipation devices at all culvert outlets.

Rock slope protection in slopes under and adjacent to all bridges.

All other slopes will be seeded with Erosion Control Type D, planted and protected with wood mulch.

Numerous vegetated strips and swales.

An infiltration basin.

REQUIRED TEXT:

The following are the post-construction BMPs that are to be used at this construction site after all construction is complete:

(LIST)



500.6.2 Operation/Maintenance after Project Completion

INSTRUCTIONS:

Describe the following information regarding post-construction BMPs. Caltrans may provide specific language for any operations and maintenance requirements of post-construction control practices via the Storm Water Information Handout or the Resident Engineer. Any pertinent language provided by Caltrans shall be added by the Contractor to this section of the SWPPP.

R List the parties responsible for long-term operation and maintenance of permanent BMPs. One of three alternatives must be included: (1) Caltrans regional maintenance staff; (2) a local agency or municipality; or (3) Caltrans maintenance staff and local agency or municipality (if the project maintenance will be shared or a portion of the project is to be maintained by a local agency). This information may be provided by Caltrans.

R short and long term funding sources for operations and maintenance

EXAMPLE:

The post-construction BMPs that are described above will be funded and maintained as follows:

Short Term Funding: Caltrans District 7 Maintenance

Long Term Funding: Caltrans District 7 Maintenance

The responsible party for the post-construction BMPs is Caltrans District 7 Maintenance

REQUIRED TEXT:

The post-construction BMPs that are described above will be funded and maintained as follows:

Short Term Funding:

Long Term Funding:

The responsible party for the long-term maintenance of post-construction BMPs is (ENTER ONE OF THREE ALTERNATIVES LISTED IN THE INSTRUCTIONS).

INSERT ANY ADDITIONAL LANGUAGE PROVIDED BY CALTRANS HER OR DELETE THIS LINE (Use the "FORMAT OPTIONS" button to insert subtitles and/or paragraphs)

500.7 Training

INSTRUCTIONS:

Individuals responsible for SWPPP preparation, implementation, and permit compliance are required to be trained, and the SWPPP shall document all training. This includes those personnel responsible for installation, inspection, maintenance, and repair of BMPs. Describe the types of training that the contractor's inspection, maintenance, and repair personnel have received or will receive that are directly related to storm water pollution prevention.

Training may be both formal and informal

Formal storm water pollution prevention or erosion and sediment control training sessions may include certification as a Certified Professional in Erosion Control and Sediment Control (CPESC); workshops offered by the SWRCB, RWQCB, Community College or University of California Extension; or other locally recognized agencies or professional organizations such as the International Erosion Control Association (IECA), Association of Bay Area Governments (ABAG), Association of General Contractors (AGC), etc. Contractors are encouraged to contact the RWQCB or the SWRCB to inquire about availability of training.

A listing of training organizations, subject matter and classes are located at <http://www.dot.ca.gov/hq/construc/stormwater.html>

The Contractor's Water Pollution Control Manager (WPCM) and the SWPPP preparer shall have a minimum of 24-hours (3 days) of formal storm water pollution prevention training.

On-site storm water pollution prevention training shall be conducted on an on-going basis.

Training of water quality sampling personnel shall be in accordance with the Caltrans *Guidance Manual: Stormwater Monitoring Protocols, Second Edition, July 2000*, CTSW-RT-00-005.

- R Document informal storm water training using the sample training log sheet provided as Attachment I.
- R Document formal storm water training by providing a listing of classes and copies of class completion.

EXAMPLE:

Section 300.5 shows the name of the contractor's Water Pollution Control Manager (WPCM). This person has received the following training:

Two (2) day construction storm water management course given by the County of Los Angeles Storm Water Program in October of 1999.

Two (2) day Caltrans Construction Site BMPs training.

Attended 2001 IECA 3-day Conference

City of Los Angeles Storm Water Program

County of Los Angeles Storm Water Program

State of California Regional Water Quality Control Board

IECA, ABAG and/or AGC sponsored training

USEPA sponsored training

Recognized municipal stakeholder organizations throughout California



Professional organizations and societies in the building and construction field

Informal training will include tailgate site briefings to be conducted bi-weekly and address the following topics:

- Erosion Control BMPs
- Sediment Control BMPs
- Non-Storm Water BMPs
- Waste Management and Materials Pollution Control BMPs
- Emergency Procedures specific to the construction site storm water management

Other personnel attending tailgate training will document attendance using the form in Attachment I. On-going, formal training sessions will be selected from one of the following organizations:

This SWPPP was prepared by ABC Engineering, under the direction of Mr. John Doe, a registered Professional Civil Engineer in the State of California. Mr. Doe has over 5 years of experience in the preparation of Storm Water Pollution Prevention Plans (SWPPPs), and has the following previous experience:

- Has prepared over 15 project-specific SWPPPs
- Over 15 years of experience in storm drain design, hydrology and hydraulics
- SWPPP Preparation training sponsored by Orange County Storm Water Program, June 2002
- Attended the 1999, 2000, 2001 and 2002 International Erosion Control Association (IECA) 3-day conferences
- Received certification as a Certified Professional in Erosion Control and Sediment Control (CPESC) in July 2001
- Attended “NPDES Storm Water Permit Compliance” course in spring 2002, sponsored by the American Society of Civil Engineers (ASCE)

REQUIRED TEXT:

Section 300.5 shows the name of the contractor’s Water Pollution Control Manager (WPCM). This person has received the following training:

(LIST)

The training log showing formal and informal training of various personnel is shown in Attachment I.

INSERT HERE ANY ADDITIONAL TEXT REGARDING TRAINING OF PERSONNEL.

This SWPPP was prepared by INSERT COMPANY, NAME AND PROFESSIONAL REGISTRATION OR OTHER QUALIFICATIONS (INCLUDING INFORMATION REGARDING OTHER TRAINING COURSES, SUCH AS CALTRANS SWPPP PREPARATION TRAINING) OF PERSON THAT PREPARED THE SWPPP.

500.8 List of Subcontractors

INSTRUCTIONS:

The SWPPP is required to include a list of names of all contractors, (or subcontractors) and individuals responsible for implementation of the SWPPP. This list shall include telephone numbers and addresses. Specific areas of responsibility of each subcontractor (type of work to be performed) and emergency contact numbers shall also be included.

A sample sub-contractor notification letter and log is provided as Attachment J. Discuss pertinent conditions in the contractual agreement and/or letter of approval that address subcontractor responsibility for General Permit compliance.

R Include a completed Attachment J in the SWPPP.

EXAMPLE:

All contractors and subcontractors will be notified of the requirement for storm water management measures during the project. A list of contractors will be maintained and included in the SWPPP. If subcontractors change during the project, the list will be updated accordingly. The sub-contractor notification letter and log is included in the SWPPP as Attachment J.

REQUIRED TEXT:

All contractors and subcontractors will be notified of the requirement for storm water management measures during the project. A list of contractors will be maintained and included in the SWPPP. If subcontractors change during the project, the list will be updated accordingly. The sub-contractor notification letter and log is included in the SWPPP as Attachment J.

500.9 Other Plans/Permits

INSTRUCTIONS:

- R The SWPPP shall incorporate appropriate elements of other plans or permits required by local, State, or Federal agencies.
- R Include a copy of the Caltrans Statewide Permit CAS000003 and the General Permit CAS000002.
- R Provide a list of all of the other plans and permits in this section, and describe of any special requirements for each permit. Insert additional bullets as needed. Delete bullets if not needed.
- R Include a copy of all other plans/permits as Attachment N of the SWPPP.

EXAMPLE:

Following is a list of the plans and permits included in Attachment N of this SWPPP.



State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity, August 1999. Including Resolution No. 2001-046, “Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit)”, adopted by the SWRCB on April 26, 2001.

State Water Resources Control Board (SWRCB) Resolution No. 2002-XXX, Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit) to Include Small Construction Activity (One to Five Acres), adopted by the SWRCB on December 5, 2002.

California Department of Fish and Game Code section 1601 Streambed Alteration Agreement

Clean Water Act section 401 Water Quality Certification issued by the State of California as processed through the RWQCB

U.S. Army Corps of Engineers Clean Water Act section 404 Nationwide Permit

REQUIRED TEXT:

Attachment N includes copies of other local, state, and federal plans and permits.

Following is a list of the plans and permits included in Attachment N:

State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity, August 1999. Including Resolution No. 2001-046, “Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit)”, adopted by the SWRCB on April 26, 2001.

State Water Resources Control Board (SWRCB) Resolution No. 2002-XXX, Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit) to Include Small Construction Activity (One to Five Acres), adopted by the SWRCB on December 5, 2002.

INSERT NAME(S), DATE(S) AND SOURCE(S) OF OTHER LOCAL, STATE OR FEDERAL PLANS OR PERMITS HERE

Section 600

Monitoring Program and Reports

600.1 Site Inspections

INSTRUCTIONS:

R Include a Separator and Tab for Section 600 for ready reference.

The site shall be inspected:

- Prior to a forecast storm
- after a rain event that causes runoff from the construction site
- at 24-hour intervals during extended rain events
- weekly during the rainy season
- every 2 weeks during the non-rainy season
- as specified in the project Special Provisions

BMPs shall be evaluated for adequacy, proper implementation, and whether additional BMPs are required in accordance with the terms of the Permits, the Special Provisions, and the Handbooks.

Implementation of non-storm water discharge BMPs shall be verified and their effectiveness evaluated.

One-time discharges of non-storm water shall be inspected when such discharges occur.

The results of the inspections and assessments shall be recorded on the Storm Water Quality Construction Site Inspection Checklist included in Appendix A, Attachment H. This checklist shall be used for all inspections unless the project's Special Provisions require the Contractor to use a different checklist.

A copy of each completed Storm Water Quality Construction Site Inspection Checklist shall be provided to the RE within 24-hours of the inspection, and a copy attached to the on-site SWPPP. A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs.

REQUIRED TEXT:

The contractor will inspect the site prior to a forecast storm, after a rain event that causes runoff from the construction site, at 24-hour intervals during extended rain events, weekly during the rainy season, every 2 weeks during the non-rainy season, and as specified in the project Special Provisions. The results of all inspections and assessments will be documented, a copy shall be provided to the RE within 24-hours of the inspection, and copies of the completed inspection checklists will be maintained with the SWPPP. Site inspections conducted for monitoring purposes will be performed using the inspection checklist shown in Attachment H.

The name(s) and contact number(s) of the assigned inspection personnel are listed below:

Assigned inspector: NAME OF INSPECTOR

Contact phone: TELEPHONE NUMBER



600.2 Discharge Reporting

INSTRUCTIONS:

Discharges will be reported in writing to the Resident Engineer verbally upon discovery and in writing within 7 days of occurrence, or as specified in the Special Provisions. A sample form for reporting discharges is shown in Attachment K.

Note: USEPA has issued regulations that define Reportable Quantity (RQ) levels for oil and hazardous substances. These regulations are found in the Code of Federal Regulations at 40 CFR Part 110, Part 117, or Part 302.

- For example, an oily sheen in storm water runoff as a result of a spill or release is an exceedance of a RQ level. The RQ level for dieldrin, a pesticide, is 1 kilogram. A spill or release of one or more kg of dieldrin is an exceedance of the RQ threshold.

REQUIRED TEXT:

If a discharge occurs or if the project receives a written notice or order from any regulatory agency, the contractor will immediately notify the Engineer and will file a written report to the RE within 7 days of the discharge event, notice, or order. Corrective measures will be implemented immediately following the discharge, notice or order. A sample discharge form is provided in Attachment K. All discharges shall be documented on a Discharge Reporting Log using the example form in Appendix A, Attachment U.

Discharges requiring reporting include:

Storm water from a DSA discharged to a waterway without treatment by a temporary construction BMP;

Non-storm water, except conditionally exempted discharges, discharged to a waterway or a storm drain system, without treatment by an approved control measure (BMP);

Storm water discharged to a waterway or a storm drain system where the control measures (BMPs) have been overwhelmed or not properly maintained or installed;

Storm water runoff containing hazardous substances from spills discharged to a waterway or storm drain system;

Where water quality sample results from a 303(d) stream listed for sediment indicate elevated levels of sediment in downstream samples;

Where water quality sample results indicate elevated levels of non-visible pollutants; and

Other discharge reporting as directed by the RE.

The report to the RE will contain the following items:

The date, time, location, nature of operation, and type of unauthorized discharge, including the cause or nature of the notice or order,

The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order,

The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence, and

An implementation and maintenance schedule for any affected BMPs

600.3 Record Keeping and Reports

REQUIRED TEXT:

Records shall be retained for a minimum of three years for the following items:

Site inspections

Compliance certifications

Discharge reports

Approved SWPPP document and amendments

600.4 Sampling and Analysis Plan for Sediment

INSTRUCTIONS:

If the project has the potential to discharge directly into a water body listed as impaired due to Sedimentation/Siltation and/or Turbidity pursuant to Section 303(d) of the Clean Water Act, the SWPPP must include a Sampling and Analysis Plan (SAP) for Sediment. The purpose of a SAP for Sediment is to determine if BMPs implemented on the construction site are effective for preventing impacts to levels of sedimentation/siltation and/or turbidity in 303(d) listed water bodies impaired by those pollutants.

- Refer to the SWRCB web site at <http://www.swrcb.ca.gov/tmdl/docs/303d98.pdf> for the list of 303(d) water bodies in California. Determine if the project will discharge directly into one of the 303(d) water bodies listed as impaired due to Sedimentation/Siltation and/or Turbidity.
- **Direct discharge** is defined as a point source or conveyance that discharges directly to the 303(d) listed water body, that does not first flow through a tributary river or stream (that itself is not listed as impaired) or combine with storm water from off-site in a municipal separate storm sewer system (MS4).

Include the following required text to identify whether or not the project discharges directly to a 303(d) listed water body.

REQUIRED TEXT:

This project [does/ does not] have the potential to discharge directly to a water body listed as impaired due to Sedimentation/Siltation and/or Turbidity pursuant to Clean Water Act, Section 303(d).

INSTRUCTIONS:

If the project does not discharge to a 303(d) listed water body, delete Sections 600.4.1 through 600.4.9 from the template and continue with Section 600.5.

If the project does discharge to a 303(d) listed water body, complete Sections 600.4.1 through 600.4.9 by following the instructions provided at the beginning of each section.

600.4.1 Scope of Monitoring Activities

INSTRUCTIONS:

- R Provide the name(s) of the 303(d) listed water bodies and identify the reason for impairment. (Sedimentation/Siltation and/or Turbidity)
- R Describe the location(s) of direct discharge from the project site to the 303(d) water body and show the locations of direct discharge on the WPCDs.
- R Include the appropriate required text to identify whether run-on to the Caltrans right-of-way may combine with storm water and directly discharge to the 303(d) water body. If the project does receive run-on, describe the locations of run-on and show the locations on the WPCDs.

REQUIRED TEXT:

This project discharges directly into [specify 303(d) water body], a water body listed as impaired due to [specify reason(s) for impairment: Sedimentation/Siltation and/or Turbidity] pursuant to Clean Water Act, Section 303(d). This Sampling and Analysis Plan (SAP) has been prepared pursuant to the requirements of Resolution 2001-046 and the applicable sections of the Caltrans *Guidance Manual: Stormwater Monitoring Protocols* (Second Edition, July 2000). The SAP describes the sampling and analysis strategy and schedule for monitoring [specify impairment: Sedimentation/Siltation and/or Turbidity] in the 303(d) listed water body and potential increases in the [specify impairment: Sedimentation/Siltation and/or Turbidity] levels caused by storm water discharges from the project site.

The project has the potential for direct (concentrated) storm water discharges to [specify 303(d) water body] at the following locations, as shown on the WPCDs in Attachment B.

REQUIRED TEXT for PROJECTS that do not RECEIVE RUN-ON:

The project does not receive run-on with the potential to combine with storm water that discharges directly to the 303(d) listed water body.

REQUIRED TEXT for PROJECTS that RECEIVE RUN-ON:

The project receives run-on with the potential to combine with storm water that discharges directly to the 303(d) listed water body at the following locations, as shown on the WPCDs in Attachment B:

600.4.2 Monitoring Strategy

INSTRUCTIONS:

- R Describe the sampling schedule for monitoring the impacts of direct storm water discharges to the 303(d) water body.
- R Describe the sampling locations for monitoring the impacts of direct storm water discharges from the project to the 303(d) water body.
- R Describe the rationale for the selection of sampling locations.
- R Identify a location upstream of all direct discharge from the construction site that appears to represent the flow of the water body, to analyze the prevailing condition of the receiving water without any influence from the construction site. Describe exactly, either using GPS coordinates of post kilometer/post mile, where the sample will be collected. Note: Sampling too far upstream may not show prevailing conditions immediately upstream of the construction site.
- R Identify a location immediately downstream from the last point of direct discharge from the construction site that appears to represent the nature of the flow to analyze potential impacts to the 303(d) listed water body from the project. Describe exactly where the sample will be collected. Downstream samples should represent the receiving water mixed with flow from the construction site. Note: Sampling too far downstream may detect pollutants from other discharges.
- R For projects that, in Section 600.4.1, identified locations of run-on to the Caltrans right-of-way, include the required text to identify run-on sampling location(s) to determine potential impairments that originate off the project site. Describe exactly where the sample will be collected.
- R Show all sampling locations on the WPCDs.
Locate sampling locations in areas that are safe, out of the path of heavy traffic, and reasonably accessible.
- R Describe surrounding areas such as agricultural fields, or other sites that may contribute run-on sediment to the site.
- R Do not locate sampling points upstream or downstream of point sources or confluences to minimize backwater effects or poorly mixed flows.

REQUIRED TEXT:

Sampling Schedule



Upstream, downstream, discharge, and run-on samples, if applicable, shall be collected for [specify impairment: Sedimentation/Siltation and/or Turbidity] during the first two hours of discharge from rain events that result in a direct discharge from the project site to [enter 303(d) water body]. Samples shall be collected during daylight hours (sunrise to sunset) and shall be collected regardless of the time of the year, status of the construction site, or day of the week.

All storm events that occur during daylight hours will be sampled up to a maximum of four rain events within a 30-day period. In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

Sampling Locations

Sampling locations are based on proximity to identified discharge or run-on location(s), accessibility for sampling, personnel safety, and other factors in accordance with the applicable requirements in the Caltrans *Guidance Manual: Stormwater Monitoring Protocols*. Sampling locations are shown on the WPCDs and include:

- x A sample location (designated number) is upstream of all direct discharge from the construction site for the collection of a control sample to be analyzed for the prevailing condition of the receiving water without any influence from the construction site. The control sample will be used to determine the background levels of [specify impairment: Sedimentation/Siltation and/or Turbidity] in the 303(d) listed water body upstream of the project, if any.
 - o Sample location number is located .

- x A sample location (designated number) is immediately downstream from the last point of direct discharge from the construction site for the collection of a sample to be analyzed for potential increases in [specify impairment: Sedimentation/Siltation and/or Turbidity] in the 303(d) listed water body caused by storm water discharges from the project, if any.
 - o Sample location number is located .

REQUIRED TEXT only for PROJECTS that RECEIVE RUN-ON:

- x [Enter number of locations] sampling location(s) (designated number(s)) has been identified for the collection of samples of run-on to the Caltrans right-of-way with the potential to combine with discharges from the construction site in other than MS4 to the 303(d) water body. These samples will identify potential [specify impairment: Sedimentation/Siltation and/or Turbidity] that originates off the project site and contributes to direct storm water discharges from the construction site to the 303(d) listed water body.

If the following is not “needed”, place cursor in a field and use the “Delete Line” option on the toolbar.

- Sample location number is located .
- If needed Sample location number is located .
- If needed Sample location number is located .

600.4.3 Monitoring Preparation

INSTRUCTIONS:

Training of water quality sampling personnel shall be in accordance with the Caltrans *Guidance Manual: Stormwater Monitoring Protocols, Second Edition, July 2000*, CTSW-RT-00-005.

- R Identify whether samples will be collected by the contractor’s personnel, by a commercial laboratory, or by an environmental consultant.
- R Identify training and experience of individuals responsible for collecting water samples
- R Identify the contractor’s health and safety procedures for sampling personnel.
- R Identify alternate sampling personnel in case of emergency, sick leave, and/or vacations during storm water monitoring. Identify training of alternate sampling personnel.
- R Identify the state-certified laboratory(ies) that will analyze the samples. For a the list of California state-certified laboratories that are accepted by Caltrans, access the following web site: www.dhs.ca.gov/ps/ls/elap/html/lablist_county.htm
- R Include the appropriate required text to describe the strategy for ensuring that adequate sample collection supplies are available to the project in preparation for a sampling event.
- R Describe the strategy for ensuring that appropriate field-testing equipment is available to the project in preparation for a sampling event. If equipment is to be rented, contact a local environmental equipment rental company, such as www.totalsafetyinc.com.

REQUIRED TEXT IF contractor personnel will collect samples:

Samples on the project site will [be collected/ not be collected] by contractor sampling personnel:

Name/Telephone Number: Name Phone Number

Name/Telephone Number: Name Phone Number

Alternate(s)/Telephone Number: Name Phone Number

Alternate(s)/Telephone Number: Name Phone Number

Prior to the rainy season, all sampling personnel and alternates will review the SAP. Qualifications of designated contractor personnel describing environmental sampling training and experience are provided in Attachment I.

An adequate stock of supplies and equipment for monitoring [specify impairment: Sedimentation/Siltation and/or Turbidity] will be available on the project site or provided by [specify laboratory] prior to a sampling event. Monitoring supplies and equipment will be stored in a cool-temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule.

Supplies maintained at the project site will include, but will be not limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms.

The contractor will obtain and maintain the field-testing instruments, as identified in Section 600.4.5, for analyzing samples in the field by contractor sampling personnel. Safety practices for sample collection will be in accordance with the [enter title and publication date of contractor health and safety plan for the project].

REQUIRED TEXT only if consultant or laboratory will collect samples:

Samples on the project site will be collected by the following [specify laboratory or environmental consultant]:

Company Name:

Address:

Telephone Number:

Point of Contact:

Qualifications of designated sampling personnel describing environmental sampling training and experience are provided in Attachment I.

WPCM will contact [specify name of laboratory or environmental consultant] [enter number of hours] hours prior to a predicted rain event to ensure that adequate sample collection personnel, supplies and field test equipment for monitoring [specify impairment: Sedimentation/Siltation and/or Turbidity] are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

[Specify name of laboratory or environmental consultant] will obtain and maintain the field-testing instruments, as identified in Section 600.4.5, for analyzing samples in the field by their sampling personnel.

600.4.4 Sample Collection and Handling

INSTRUCTIONS:

R Describe sample collection procedures to be used on the project. For sample collection procedures, refer to the Caltrans Guidance Manual: Stormwater Monitoring Protocols (Second Edition, July 2000) for general guidance.

Run-on samples may be collected using the following collection procedures or other approved by the RE:

- Place several rows of sand bags in a half circle directly in the path of the run-on to pond water and wait for enough water to spill over. Then place a cleaned or decontaminated flexible hose along the top and cover with another sandbag so that ponded water will only pour through the flexible hose and into sample bottles. Do not reuse the same sandbags in future sampling events as they may cross-contaminate future samples.
- Place a cleaned or decontaminated dustpan with open handle in the path of the run-on so that water will pour through the handle and into sample bottles.

For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136.

For a the list of California state-certified laboratories that are accepted by Caltrans, access the following web site: www.dhs.ca.gov/ps/ls/elap/html/lablist_county.htm

R Describe sample handling procedures.

R Describe decontamination waste disposal requirements (i.e., TSP soapy water shall not to be discharged to the storm drainage system or receiving water)

R Describe sample collection documentation procedures.

R Describe procedures for recording and correcting sampling data.

A Chain of Custody (COC) form is required to be submitted to the laboratory with the samples to trace the possession and handling of samples from collection through analysis.

A Sampling Activity Log is required to document details of all sampling events and to record results for samples analyzed in the field.

Each sample bottle is required to have a proper and complete identification label.

REQUIRED TEXT:

Sample Collection Procedures

Grab samples will be collected and preserved in accordance with the methods identified in Table 600-1, "Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity", provided in section 600.4.5. Only personnel trained in proper water quality sampling will collect samples.

Upstream samples will be collected to represent the condition of the water body upgradient of the construction site. Downstream samples will be collected to represent the water body mixed with direct flow from the construction site. Samples will not be collected directly from ponded, sluggish, or stagnant water.



Upstream and downstream samples will be collected using one of the following methods:

- x Placing a sample bottle directly into the stream flow in or near the main current upstream of sampling personnel, and allowing the sample bottle to fill completely;

OR,

- x Placing a decontaminated or 'sterile' bailer or other 'sterile' collection device in or near the main current to collect the sample, and then transferring the collected water to appropriate sample bottles, allowing the sample bottles to fill completely.

Run-on samples, if applicable, will be collected to identify potential sedimentation/siltation and/or turbidity that originates off the project site and contributes to direct discharges from the construction site to the 303(d) listed water body. Run-on samples will be collected downgradient and within close proximity of the point of run-on to the project by pooling or ponding water and allowing the ponded water to spill over into sample bottles directly in the stream of water.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel will:

- x Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location.
- x Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample.
- x Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.
- x Not leave the cooler lid open for an extended period of time once samples are placed inside.
- x Not touch the exposed end of a sampling tube, if applicable.
- x Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- x Not eat, smoke, or drink during sample collection.
- x Not sneeze or cough in the direction of an open sample bottle.
- x Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place.
- x Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.
- x Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water

Sample Handling Procedures

REQUIRED TEXT only If laboratory will analyze ALL or SOME OF THE samples:

Immediately following collection, sample bottles for laboratory analytical testing will be capped, labeled, documented on a Chain of Custody (COC) form provided by the analytical laboratory, sealed in a re-sealable plastic storage bag, placed in an ice-chilled cooler, at as near to 4 degrees Celsius as practicable, and delivered within 24 hours to the following California state-certified laboratory:

Laboratory Name:

Address:

Telephone Number:

Point of Contact:

REQUIRED TEXT only If contractor will analyze ALL OR SOME OF THE samples:

Immediately following collection, samples for field analysis will be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log.

REQUIRED TEXT:

Sample Documentation Procedures

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Chain of Custody form and Sampling Activity Log are provided in Attachment I. Sampling and field analysis activities will be documented using the following:

- x **Sample Bottle Identification Labels:** Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:
 - Project name
 - Project number
 - Unique sample identification number and location.
[Caltrans Number]-[Six digit sample collection date]-[Location]
(*Example: 07-0G5304-081801-Upstream*).Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation

(Example: 07-0G5304-081801-DUP1).

- Collection date/time (No time applied to QA/QC samples)
- Analysis constituent

Sampling Activity Logs: A log of sampling events will identify:

- Sampling date
 - Separate times for sample collection of upstream, downstream, run-on, and QA/QC samples recorded to the nearest minute
 - Unique sample identification number and location
 - Analysis constituent
 - Names of sampling personnel
 - Weather conditions (including precipitation amount)
 - Field analysis results
 - Other pertinent data
- x Chain of Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.
- x Storm Water Quality Construction Inspection Checklists: When applicable, the contractor's storm water inspector will document on the checklist that samples for sedimentation/siltation and/or turbidity were taken during a rain event.

600.4.5 Sample Analysis

INSTRUCTIONS:

- R Identify the tests to be used on the project by completing Table 600-1, "Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity".
- R For 303(d) listed water bodies impaired due to Sedimentation/Siltation, select YES for (b) and (c) OR YES for (b), and (c) and/or (a).
- R For 303(d) listed water bodies impaired due to Turbidity, select YES for (d).
- R For each test selected, fill in the blank fields in the table. Contact the selected laboratory for the specifications to obtain the necessary information.

REQUIRED TEXT:

Samples will be analyzed for the constituents indicated in Table 600-1, "Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity".

TABLE 600-1
Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity

Constituent ⁽¹⁾	Analytical Method	Test to be Used?	Sample Preservation	Minimum Sample Volume	Sample Bottle	Maximum Holding Time	Reporting Limit
(a) Suspended Sediment Concentration (SSC)	ASTM D3977-97	<input type="checkbox"/> YES <input type="checkbox"/> NO	Store at 4° C (39.2° F)				
(b) Settleable Solids (SS)	EPA 160.5 Std Method 2540(f)	<input type="checkbox"/> YES <input type="checkbox"/> NO	Store at 4° C (39.2° F)				mL/L/hr
(c) Total Suspended Solids (TSS)	EPA 160.2 Std Method 2540(d)	<input type="checkbox"/> YES <input type="checkbox"/> NO	Store at 4° C (39.2° F)				mg/L
(d) Turbidity	EPA 180.1 Std Method 2130(b)	<input type="checkbox"/> YES <input type="checkbox"/> NO	Store at 4° C (39.2° F)				NTU

Notes: ⁽¹⁾ Samples shall be analyzed by using methods (b) and (c), or only method (a)

- ASTM – American Society for Testing and Materials
- °C – Degrees Celsius
- °F – Degrees Fahrenheit
- EPA – U.S. Environmental Protection Agency
- L – Liter
- mL/L/hr – Milliliters per liter per hour

- mg/L – Milligrams per liter
- mL – Milliliters
- NTU – Nephelometric Turbidity Unit
- Std Method – Per the *Standard Methods for the Examination of Water and Wastewater*, 20th Edition, American Water Works Association

REQUIRED TEXT only If samples will be analyzed in the field:

For samples collected for field analysis, collection, analysis and equipment calibration will be in accordance with the field instrument manufacturer’s specifications.

The following field instrument(s) will be used to analyzed the following constituents:

Field Instrument	Constituent

- x The instrument(s) will be maintained in accordance with manufacturer’s instructions.
- x The instrument(s) will be calibrated before each sampling and analysis event.
- x Maintenance and calibration records will be maintained with the SWPPP.

600.4.6 Quality Assurance/Quality Control

REQUIRED TEXT:

For an initial verification of laboratory or field analysis, duplicate samples will be collected at a rate of 10 percent or 1 duplicate per sampling event. The duplicate sample will be collected, handled, and analyzed using the same protocols as primary samples, and will be collected where contaminants are likely, and not on the upstream sample. A duplicate sample will be collected immediately after the primary sample has been collected. Duplicate samples will not influence any evaluations or conclusions; however, they will be used as a check on laboratory quality assurance.

600.4.7 Data Management and Reporting

INSTRUCTIONS:

R Electronic data results shall be provided to the RE, unless he/she provides the name, company and e-mail address of the person to whom the data should be submitted.

REQUIRED TEXT:

A copy of all water quality analytical results and QA/QC data will be submitted to the Resident Engineer within 5 days of sampling (for field analyses) and within 30 days of sampling (for laboratory analyses).

Electronic results will be submitted on diskette in Microsoft Excel (.xls) format, and will include, at a minimum, the following information from the lab: Sample ID Number, Contract Number, Constituent, Reported Value, Lab Name, Method Reference, Method Number, Method Detection Limit, and Reported Detection Limit. Electronic data shall be reported in a format consistent with Caltrans *Water Quality Data Reporting Protocol* dated October 2001.

Lab reports and COCs will be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms and Sampling Activity Logs, shall be kept with the SWPPP document.

Electronic results will be e-mailed to [Name] of [Company] at [e-mail address] after final sample results are received after each sampling event for inclusion into a statewide database.

600.4.8 Data Evaluation

INSTRUCTIONS:

The General Permit requires that BMPs be implemented on the construction site to prevent a net increase of sediment load in storm water discharges relative to pre-construction levels. The upstream sample, while not representative of pre-construction levels, provides a basis for comparison with the sample collected downstream of the construction site.

The downstream water quality sample analytical results will be evaluated to determine if the downstream sample(s) show elevated levels of the tested constituent relative to the levels found in the upstream sample. The run-on sample analytical results will be used as an aid in evaluating potential offsite influences on water quality results. If elevated levels of pollutants are identified, additional BMPs must be implemented in an iterative manner to prevent a net increase in pollutants to receiving waters.

REQUIRED TEXT:

An evaluation of the water quality sample analytical results, including figures with sample locations, will be submitted to the Resident Engineer with the water quality analytical results and the QA/QC data for every event that samples are collected. Should the downstream sample concentrations exceed the upstream sample concentrations, the WPCM or other personnel will evaluate the BMPs, site conditions, surrounding influences (including run-on sample analysis), and other site factors to determine the probable cause for the increase. As determined by the data and project evaluation, appropriate BMPs will be repaired or modified to mitigate increases in sediment concentrations in the water body. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

600.4.9 Change of Conditions

REQUIRED TEXT:

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations, testing protocols will be revised accordingly. All such revisions will be recorded as amendments to the SWPPP.

600.5 Sampling and Analysis Plan for Non-Visible Pollutants

INSTRUCTIONS:

The project SWPPP must include a Sampling and Analysis Plan (SAP) for pollutants not visually detectable in storm water. The purpose of a SAP for Non-Visible Pollutants is to determine if BMPs implemented on the construction site are effective in preventing pollutants not visually detectable in storm water, from leaving the construction site and potentially impacting water quality objectives.



REQUIRED TEXT:

This Sampling and Analysis Plan (SAP) for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in storm water discharges from the project site and offsite activities directly related to the project in accordance with the requirements of Section B of the General Permit, including modifications, and applicable requirements of the Caltrans *Guidance Manual: Stormwater Monitoring Protocols*, Second Edition (July 2000).

600.5.1 Scope of Monitoring Activities

INSTRUCTIONS:

- R** Identify the general sources and locations of potential non-visible pollutants on the project site in the following categories:
- Materials or wastes as identified in Section 500.3.1, containing potential non-visible pollutants and that are not stored under watertight conditions.
 - Materials or wastes containing potential non-visible pollutants that are stored under watertight conditions, but (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.
 - Construction activities such as application of fertilizers, pesticides, herbicides or non-pigmented curing compounds, that have occurred during a rain event or within 24 hours preceding a rain event, and there is the potential for discharge of pollutants to surface waters or drainage system.
 - Existing site features contaminated with non-visible pollutants as identified in Section 500.3.3.
 - Applications of soil amendments, including soil stabilization products, with the potential to alter pH levels or other properties of the soil (such as chemical properties, engineering properties, or erosion resistance), or contribute toxic pollutants to storm water runoff, and there is the potential for discharge of pollutants to surface waters or drainage system (unless independent test data are available that demonstrate acceptable concentration levels of non-visible pollutants in the soil amendment.)
 - Certain soil amendments, when sprayed on straw or mulch, are considered visible pollutants and are not subject to water quality monitoring requirements.
 - Storm water runoff from an area contaminated by historical usage of the site is observed to combine with storm water, and there is the potential for discharge of pollutants to surface waters or drainage system.
 - Storm water run-on to the Caltrans right-of-way with the potential to contribute non-visible pollutants to discharges from the project.
 - Breaches, malfunctions, leakages, or spills from a BMP

EXAMPLE:

The following construction materials, wastes, or activities, as identified in Section 500.3.1, are potential sources of non-visible pollutants to storm water discharges from the project. Storage, use, and operational locations are shown on the WPCDs in Attachment B.

- x Solvents, thinners
- x Concrete curing
- x Treated wood
- x Soil stabilizers
- x Lime treated subgrade
- x Fertilizers, herbicides, and pesticides

The following existing site features, as identified in Section 500.3.3, are potential sources of non-visible pollutants to storm water discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the WPCDs in Attachment B.

- x Southwest portion of the construction site was previously used as a municipal landfill until 1987 and may have volatile organics in the soil.
- x North portion of the construction site was a storage area for a metal plating shop until 1960 and may have metals in the soil.

The following soil amendments have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site. Locations of soil amendment application are shown on the WPCDs in Attachment B.

- x None

The project has the potential to receive storm water run-on with the potential to contribute non-visible pollutants to storm water discharges from the project. Locations of such run-on to the Caltrans right of way are shown on the WPCDs in Attachment B.

- x One location down gradient of the Millenium Chemical Company chemical plant and the Progress Industrial Park is identified as a run-on location to the construction site.
- x Two locations are identified as run-on locations along the eastern edge of the construction site boundary.
- x The northern boundary of the construction site has one location where run-on is likely.

REQUIRED TEXT:

The following construction materials, wastes or activities, as identified in Section 500.3.1, are potential sources of non-visible pollutants to storm water discharges from the project. Storage, use, and operational locations are shown on the WPCDs in Attachment B.

(LIST)

The following existing site features, as identified in Section 500.3.3, are potential sources of non-visible pollutants to storm water discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the WPCDs in Attachment B.

(DESCRIBE)

The following soil amendments have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site. Locations of soil amendment application are shown on the WPCDs in Attachment B.

(LIST)

The project has the potential to receive storm water run-on with the potential to contribute non-visible pollutants to storm water discharges from the project. Locations of such run-on to the Caltrans right-of-way are shown on the WPCDs in Attachment B.

(LIST LOCATIONS)

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

600.5.2 Monitoring Strategy

INSTRUCTIONS:

- R Describe the sampling schedule for monitoring potential non-visible pollutants in storm water runoff. Note the specific conditions under which a sampling event for non-visible pollutants is triggered.
- R Describe the sampling locations for monitoring non-visible pollutants.
- R Describe the rationale for the selection of sampling locations.
- R Identify a location for collecting samples of storm water runoff from each source location of non-visible pollutant identified in Section 600.5.1. Describe exactly where the sample will be collected.
- R Identify a location for collecting an uncontaminated background sample of runoff that has not come into contact with the non-visible pollutants identified in Section 600.5.1 or disturbed soil areas of the project. Describe exactly where the sample will be collected.
- R Identify a location for collecting samples of storm water run-on from each of the locations identified in Section 600.5.1 to identify possible sources of contamination that may originate from off the project site. Describe exactly where the sample will be collected.

- R Identify sampling locations at offsite activities directly related to the project such as; storage areas, in the contractor's yard, PCC or asphalt batch plants, whether or not they are located within the Caltrans right of way.
- R Show all sampling locations on the WPCDs.
- R Locate sampling locations in areas that are safe, out of the path of heavy traffic, and have attainable access.
- R Describe or list surrounding areas, such as industrial sites, that may contribute run-on or airborne constituents to the site.
- R If no inspections of the site are performed prior to or during a rain event, monitoring and sampling of all non-visible pollutants will be required.

REQUIRED TEXT:

Sampling Schedule

Samples for the applicable non-visible pollutant(s) and a sufficiently large uncontaminated background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during daylight hours (sunrise to sunset) and shall be collected regardless of the time of year, status of the construction site, or day of the week.

In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during the required inspections conducted before or during rain events:

Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents storm water contact and runoff from the storage area.

Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

An operational activity, including but not limited to those in Section 600.5.1, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) applicable BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

Storm water runoff from an area contaminated by historical usage of the site has been observed to combine with storm water runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, personnel safety; and other factors in accordance with the applicable requirements in the Caltrans *Guidance Manual: Stormwater Monitoring Protocols*. Planned sampling locations are shown on the WPCDs and include the following:

If the following is not “applicable”, place cursor in a field and use the “Delete Line” option on the toolbar.

[Enter number of locations] sampling locations have been identified for the collection of samples of runoff that drain areas where soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil will be applied.

If applicable Sample location number(s) is located .

[Enter number of locations] sampling locations have been identified for the collection of samples of runoff that drain areas contaminated by historical usage of the site.

If applicable Sample location number(s) is located .

[Enter number of locations] sampling locations have been identified for the collection of samples of run-on to the Caltrans right-of-way with the potential to combine with discharges being sampled for non-visible pollutants. These samples are intended to identify sources of potential non-visible pollutants that originate off the project site.

If applicable Sample location number(s) is located .

A location has been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location was selected such that the sample will not have come in contact with (1) operational or storage areas associated with the materials, wastes, and activities identified in Section 500.3.1; (2) potential non-visible pollutants due to historical use of the site as identified in Section 500.3.3; (3) areas in which soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied; or (4) disturbed soils areas.

If applicable Sample location number(s) is located .

If an operational activity or storm water inspection conducted 24 hours prior to or during a rain event identifies the presence of a material storage, waste storage, or operations area with spills or the potential for the discharge of non-visible pollutants to surface waters or a storm sewer system that was an unplanned location and has not been identified on the WPCDs, sampling locations will be selected using the same rationale as that used to identify planned locations.

600.5.3 Monitoring Preparation

INSTRUCTIONS:

Training of water quality sampling personnel shall be in accordance with the Caltrans *Guidance Manual: Stormwater Monitoring Protocols, Second Edition, July 2000*, CTSW-RT-00-005.

- R Identify whether samples will be collected by the contractor's personnel, by a commercial laboratory, or by an environmental consultant.
- R Identify training and experience of individuals responsible for collecting water samples
- R Identify the contractor's health and safety procedures for sampling personnel.
- R Identify alternate sampling personnel in case of emergency, sick leave, and/or vacations during storm water monitoring. Identify training of alternate sampling personnel.
- R Identify the state-certified laboratory(ies) that will analyze the samples. For a the list of California state-certified laboratories that are accepted by Caltrans, access the following web site: www.dhs.ca.gov/ps/ls/elap/html/lablist_county.htm
- R Include the appropriate required text to describe the strategy for ensuring that adequate sample collection supplies are available to the project in preparation for a sampling event.
- R Describe the strategy for ensuring that appropriate field-testing equipment is available to the project in preparation for a sampling event. If equipment is to be rented, contact a local environmental equipment rental company, such as www.totalsafetyinc.com.

REQUIRED TEXT if contractor personnel will collect samples:

Samples on the project site will be collected by the following contractor sampling personnel:

Name/Telephone Number:

Name/Telephone Number:

Alternate(s)/Telephone Number:

Alternate(s)/Telephone Number:

Prior to the rainy season, all sampling personnel and alternates will review the SAP. Qualifications of designated contractor personnel describing environmental sampling training and experience are provided in Attachment I.

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool-temperature environment that will not come into contact with rain or direct sunlight.



Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms.

The contractor will obtain and maintain the field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by contractor sampling personnel.

Safety practices for sample collection will be in accordance with the [ENTER TITLE AND PUBLICATION DATE OF CONTRACTOR'S HEALTH AND SAFETY PLAN FOR THE PROJECT OR PROVIDE SPECIFIC REQUIREMENTS HEREIN].

REQUIRED TEXT if consultant or laboratory will collect samples:

Samples on the project site will be collected by the following [specify laboratory or environmental consultant]:

Company Name:

Address:

Telephone Number:

Point of Contact:

Qualifications of designated sampling personnel describing environmental sampling training and experience are provided in Attachment I.

WPCM will contact [specify name of laboratory or environmental consultant] [enter number of hours] hours prior to a predicted rain event and if one of the triggering conditions is identified during an inspection before, during, or after a storm event to ensure that adequate sample collection personnel, supplies and field test equipment for monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

[Specify name of laboratory or environmental consultant] will obtain and maintain the field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by their sampling personnel.

600.5.4 Analytical Constituents

INSTRUCTIONS:

- R Identify the specific non-visible pollutants on the project site by completing Table 600-2, "Potential Non-Visible Pollutants and Water Quality Indicator Constituents" table.
- R List the non-visible pollutant source, non-visible pollutant name, and water quality indicator
- R Refer to the "Construction Material and Pollutant Testing Guidance Table - Non-Visible Pollutants" for a partial list of some of the common non-visible pollutants.

R Add lines to the table as needed.

Do not include visible pollutants such as:

- Petroleum products: gas, diesel, and lubricants
- Colored paints
- Sand, gravel or topsoil
- Asphalt cold mix

R Fill in Table 600-3, Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants

REQUIRED TEXT:

Identification of Non-Visible Pollutants

The following table lists the specific sources and types of potential non-visible pollutants on the project site and the applicable water quality indicator constituent(s) for that pollutant.

Table 600-2
Potential Non-Visible Pollutants and Water Quality Indicator Constituents

	Pollutant Source	Pollutant	Water Quality Indicator Constituent
<i>Example:</i>	Vehicle batteries	Lead, Sulfate, Acid.	Lead, sulfate or pH

600.5.5 Sample Collection and Handling

INSTRUCTIONS:

For sampling collection procedures, refer to the *Caltrans Guidance Manual: Stormwater Monitoring Protocols* (Second Edition, July 2000) for general guidance.

For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136.

For a the list of California state-certified laboratories that are accepted by Caltrans, access the following web site: www.dhs.ca.gov/ps/ls/elap/html/lablist_county.htm

A Chain of Custody (COC) form is required to be submitted to the laboratory with the samples to trace the possession and handling of samples from collection through analysis.

A Sampling Activity Log is required to document details of all sampling events and to record results for samples analyzed in the field.

Each sample bottle is required to have a proper and complete identification label.

Run-on samples may be collected using the following collection procedures or others approved by the RE:



- Place several rows of sand bags in a half circle directly in the path of the run-on to pond water and wait for enough water to spill over. Then place a decontaminated or clean flexible hose along the top and cover with another sandbag so that ponded water will only pour through the flexible hose and into sample bottles. Do not reuse the same sandbags in future sampling events as they may cross-contaminate future samples.
- Place a decontaminated or clean dustpan with open handle in the path of the run-on so that water will pour through the handle and into sample bottles.
- If not using clean equipment, decontaminate by washing equipment in a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.

R Describe sample collection procedures to be used on the project site.

R Describe sample-handling procedures.

R Describe decontamination waste disposal requirements (i.e., TSP soapy water shall not to be discharged to the storm drainage system or receiving water)

R Describe sample collection documentation procedures.

R Describe procedures for recording and correcting sampling data.

R Fill in Table 600-3, Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants, in Section 600.5.6.

REQUIRED TEXT:

Sample Collection Procedures

Samples of discharge will be collected at the designated sampling locations shown on the WPCDs for observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples will be collected and preserved in accordance with the methods identified in Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants" table provided in Section 600.5.6. Only personnel trained in proper water quality sampling will collect samples.

Samples will be collected by placing a separate lab-provided sample container directly into a stream of water downgradient and within close proximity to the potential non-visible pollutant discharge location. This separate lab-provided sample container will be used to collect water, which will be transferred to sample bottles for laboratory analysis. The upgradient and uncontaminated background samples shall be collected first prior to collecting the downgradient to minimize cross-contamination. The sampling personnel will collect the water upgradient of where they are standing. Once the separate lab-provided sample container is filled, the water sample will be poured directly into sample bottles provided by the laboratory for the analyte(s) being monitored.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel will:

Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location.

Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample.

Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.

Not leave the cooler lid open for an extended period of time once samples are placed inside.

Not sample near a running vehicle where exhaust fumes may impact the sample.

Not touch the exposed end of a sampling tube, if applicable.

Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.

Not eat, smoke, or drink during sample collection.

Not sneeze or cough in the direction of an open sample bottle.

Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place.

Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.

Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water

Sample Handling Procedures

REQUIRED TEXT only if A laboratory will analyze ALL OR SOME OF THE samples:

Immediately following collection, sample bottles for laboratory analytical testing will be capped, labeled, documented on a Chain of Custody form provided by the analytical laboratory, sealed in a re-sealable storage bag, placed in an ice-chilled cooler, at as near to 4 degrees Celsius as practicable, and delivered within 24 hours to the following California state-certified laboratory:

Laboratory Name:

Address:

Telephone Number:

Point of Contact:



REQUIRED TEXT only If contractor will analyze SOME OR ALL samples:

Immediately following collection, samples for field analysis will be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log.

REQUIRED TEXT:

Sample Documentation Procedures

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Chain of Custody form and Sampling Activity Log are provided in Attachment I.

Sampling and field analysis activities will be documented using the following:

Sample Bottle Identification Labels: Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:

- Project name
- Project number
- Unique sample identification number and location.
[Caltrans Number]-[Six digit sample collection date]-[Location]
(Example: 07-0G5304-081801-Inlet472).
Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation
(Example: 07-0G5304-081801-DUP1).
- Collection date/time (No time applied to QA/QC samples)
- Analysis constituent

Sampling Activity Logs: A log of sampling events will identify:

- Sampling date
- Separate times for collected samples and QA/QC samples recorded to the nearest minute
- Unique sample identification number and location
- Analysis constituent
- Names of sampling personnel
- Weather conditions (including precipitation amount)
- Field analysis results
- Other pertinent data

Chain of Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.

Storm Water Quality Construction Inspection Checklists: When applicable, the contractor's storm water inspector will document on the checklist that samples for non-visible pollutants were taken during a rain event.

600.5.6 Sample Analysis

INSTRUCTIONS:

- R Identify the test method and specifications to be used to monitor the non-visible pollutants included in the "Potential Non-Visible Pollutants and Water Quality Indicator Constituents" table in Section 600.5.4.
- R Fill in Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants".
- R There should be a test method identified for each Water Quality Indicator Constituent listed in the table in Section 600.5.4.
- R Contact the selected laboratory for the appropriate test method(s)/specifications to be used for each constituent.
- R Identify field test instruments to be used for analyzing samples in the field, if any.

REQUIRED TEXT:

Samples will be analyzed for the applicable constituents using the analytical methods identified in Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants" table in this section.

Example:

**TABLE 600-3 (Sample)
Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants**

Constituent	Analytical Method	Minimum Sample Volume	Sample Bottle	Sample Preservation	Reporting Limit	Maximum Holding Time
VOCs-Solvents	EPA 8260B	3 x 40 mL	VOA-glass	Store at 4° C, HCl to pH<2	1 µg/L	14 days
SVOCs	EPA 8270C	1 x 1 L	Glass-Amber	Store at 4° C	10 µg/L	7 days
Pesticides/PCBs	EPA 8081A/8082	1 x 1 L	Glass-Amber	Store at 4° C	0.1 µg/L	7 days
Herbicides	EPA 8151A	1 x 1 L	Glass-Amber	Store at 4° C	Check Lab	7 days
BOD	EPA 405.1	1 x 500 mL	Polypropylene	Store at 4° C	1 mg/L	48 hours
COD	EPA 410.4	1 x 250 mL	Glass-Amber	Store at 4° C, H ₂ SO ₄ to pH<2	5 mg/L	28 days
DO	SM 4500-O G	1 x 250 mL	Glass-Amber	Store at 4° C	Check Lab	8 hours
pH	EPA 150.1	1 x 100 mL	Polypropylene	None	unitless	Immediate
Alkalinity	SM 2320B	1 x 250 mL	Polypropylene	Store at 4° C	1 mg/L	14 days
Metals (Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, Se, Na, Th, Va, Zn)	EPA 6010B/7470A	1 x 250 mL	Polypropylene	Store at 4° C, HNO ₃ to pH<2	0.1 mg/L	6 months
Metals (Chromium VI)	EPA 7199	1 x 500 mL	Polypropylene	Store at 4° C	1 □g/L	24 hours
Notes: °C	Degrees Celsius					
BOD	Biological Oxygen Demand	µg/L	—	Micrograms per Liter		
COD	Chemical Oxygen Demand	mL	—	Milliliter		
DO	Dissolved Oxygen	PCB	—	Polychlorinated Biphenyl		
EPA	Environmental Protection Agency	SVOC	—	Semi-Volatile Organic Compound		
HCl ₂ SO ₄	Hydrogen Chloride	SM	—	Standard Method		
H	Hydrogen Sulfide	TPH	—	Total Petroleum Hydrocarbons		
HNO ₃	Nitric Acid	TRPH	—	Total Recoverable Petroleum Hydrocarbons		
L	Liter	VOC	—	Volatile Organic Analysis		
mg/L	Milligrams per Liter			Volatile Organic Compound		



REQUIRED TEXT only if samples will be analyzed in the field:

For samples collected for field analysis, collection, analysis and equipment calibration will be in accordance with the field instrument manufacturer’s specifications.

The following field instrument(s) will be used to analyze the following constituents:

Field Instrument	Constituent

The instrument(s) will be maintained in accordance with manufacturer’s instructions.

The instrument(s) will be calibrated before each sampling and analysis event.

Maintenance and calibration records will be maintained with the SWPPP.

600.5.7 Quality Assurance/Quality Control

REQUIRED TEXT:

For an initial verification of laboratory or field analysis, duplicate samples will be collected at a rate of 10 percent or 1 duplicate per sampling event. The duplicate sample will be collected, handled, and analyzed using the same protocols as primary samples. A duplicate sample will be collected at each location immediately after the primary sample has been collected. Duplicates will be collected where contamination is likely, not on the background sample. Duplicate samples will not influence any evaluations or conclusions; however, they will be used as a check on laboratory quality assurance.

600.5.8 Data Management and Reporting

INSTRUCTIONS:

R Electronic data results shall be provided to the RE, unless he/she provides the name, company and e-mail address of the person to whom the data should be submitted.

REQUIRED TEXT:

A copy of all water quality analytical results and QA/QC data will be submitted to the Resident Engineer within 5 days of sampling (for field analyses) and within 30 days (for laboratory analyses).

Electronic results will be submitted on diskette in Microsoft Excel (.xls) format, and will include, at a minimum, the following information from the lab: Sample ID Number, Contract Number, Constituent, Reported Value, Lab Name, Method Reference, Method Number, Method Detection Limit, and Reported Detection Limit. Electronic data shall be reported in a format consistent with Caltrans *Water Quality Data Reporting Protocol* dated October 2001.

Lab reports and COCs will be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms and Sampling Activity Logs, shall be kept with the SWPPP document.

Electronic results will be emailed to [NAME] of [COMPANY] at [e-mail address] after final sample results are received after each sampling event for inclusion into a statewide database.

600.5.9 Data Evaluation

INSTRUCTIONS:

The General Permit requires that BMPs be implemented on the construction site to reduce non-visible pollutants in discharges of storm water from the construction site.

The runoff/downgradient water quality sample analytical results will be evaluated to determine if the runoff/downgradient sample(s) show significantly elevated concentrations of the tested analyte relative to the concentrations found in the uncontaminated background sample.

The water quality sample analytical results will be evaluated to determine if the runoff and run-on samples show significantly elevated levels of the tested constituent relative to the levels found in the background sample. The run-on sample analytical results will be used as an aid in evaluating potential offsite influences on water quality results.

REQUIRED TEXT:

An evaluation of the water quality sample analytical results, including figures with sample locations, will be submitted to the Resident Engineer with the water quality analytical results and the QA/QC data.

Should the runoff/downgradient sample show an increased level of the tested analyte relative to the background sample, the BMPs, site conditions, and surrounding influences will be assessed to determine the probable cause for the increase. As determined by the site and data evaluation, appropriate BMPs will be repaired or modified to mitigate discharges of non-visual pollutant concentrations. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

600.5.10 Change of Conditions

REQUIRED TEXT:

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations or introduce additional non-visible pollutants of concern, testing protocols will be revised accordingly. All such revisions will be recorded as amendments to the SWPPP.

Section 3

Preparing a Water Pollution Control Program (WPCP)

3.1 Preparation and Approval of a WPCP

The Special Provisions require the contractor to prepare a Water Pollution Control Program (WPCP) for each project resulting in less than 0.4 ha (1 ac) of soil disturbance or not otherwise subject to the requirements of the NPDES program. The WPCP must comply with Caltrans Standard Specifications Section 7-1.01G – Water Pollution, and must be prepared in accordance with the Special Provisions following the procedures and format set forth in this Manual.

The section provides detailed, step-by-step procedures, instructions and a template that contractors shall use to prepare a WPCP. Instructions for selection and implementation of construction site BMPs, and working details for the BMPs, are presented in Caltrans *Storm Water Quality Handbooks – Construction Site Best Management Practices (BMPs) Manual*.

The contractor shall prepare and submit the completed WPCP to the Caltrans Resident Engineer (RE) for review and approval. If revisions are required, as determined by the RE, the contractor must revise and resubmit the WPCP. The time frames for WPCP submittal, review, and resubmittal are specified in the Special Provisions. No activity having the potential to cause water pollution, as determined by the RE, shall be performed until the WPCP has been approved by the RE. In order to allow construction activities to proceed, the RE may conditionally approve the WPCP while minor amendments are being completed. Construction activities that will not threaten water quality, such as traffic control, may proceed without an approved WPCP if allowed by the RE. The WPCP shall be submitted to Caltrans in a 3-ring binder with separators and tabs.

3.1.1 Information Provided by Caltrans

In addition to information shown on the project plans, Caltrans may supply to the contractor certain information developed during the design process. The contractor shall use this information to prepare the WPCP, as appropriate. Items that may be provided are:

Vicinity Map

A map extending approximately one quarter mile (400 meters) beyond the property boundaries of the construction site showing: the construction site; surface water bodies (including known springs and wetlands); known wells; an outline of off site drainage areas that discharge into the construction site; general topography; and the anticipated discharge location(s) where the construction site's storm water discharges to a municipal storm drain system or other water body. A U.S. Geological Survey (USGS) quad map may be used for showing the project site and a one-quarter mile (400 meters) extension beyond the property boundaries of the construction site.



Soils/Geotechnical Report, Project Materials Report and/or Other Reports

Toxic History of the Site: To the extent information is available from the soils/geotechnical report, the project materials report, site investigation report developed by the Hazardous Waste Section, or other regulatory or environmental compliance documentation, the Information Handout may include a description of all toxic materials known to have been treated, stored, disposed, spilled, or leaked in significant quantities onto the construction site.

The Nature of Fill Material and Existing Data Describing the Soil: The Information Handout may include a copy of the project materials report (geotechnical report). The contractor must describe the conditions of the fill material and the soil that can be found at the construction site. Fill material should be described as whether it is native or non native, contaminated or uncontaminated, and its coverage technique (i.e., native soil coverage, asphalt or concrete coverage, and/or landscape).

List of Pre-Construction (Existing) Control Practices (BMPs)

The Information Handout may provide a list and written descriptions of existing pre construction practices, if any, that are already in place to reduce sediment and other pollutants in storm water discharges. These permanent control practices (BMPs) may consist of sedimentation ponds, oil/water separators, spill containment facilities, etc. If there are no pre construction control practices, then this should be indicated.

List of Permanent (Post-Construction) Storm Water Control Measures (BMPs)

The Information Handout may provide a written listing and narrative descriptions of post construction permanent BMPs that have been included in the project. Narrative descriptions may also include operation and maintenance (O&M) procedures for the permanent BMPs, O&M short term and long term funding, and a statement indicating that the Maintenance Department will be responsible for O&M of the post construction BMPs.

Layout Sheets Showing Suggested Temporary BMP Locations

The Information Handout may provide sheets showing the location of anticipated temporary BMPs such as contractor staging areas, approximate location of concrete washouts, approximate locations for storage of materials, and preferred locations for vehicle and equipment maintenance. These are not intended to be highly detailed drawings. Typically, these layouts can be hand-drawn on 200 scale drawings.

Explanation of Construction Site (Temporary) BMPs

The Information Handout may provide a brief narrative explanation of the various temporary BMPs that may be implemented in the project, including any existing permanent BMPs that may be present within the project limits that can be used during construction, as well as any permanent BMPs that should be constructed early for use as a temporary BMP during construction, such as early application of permanent soil stabilization measures in areas that will no longer experience soil disturbance during construction.

Drainage Report

The Information Handout may include a copy of the drainage report for the project or appropriate information, such as the hydrology maps, delineation of drainage boundaries, concentrations of runoff, and runoff coefficients.

Construction Site Estimates

The Information Handout may provide the following information to the contractor:

- An estimate of the construction site area in square meters (acres);
- An estimate of the runoff coefficient of the construction site before and after construction;
- and
- An estimate of the percentage of the area of the construction site that is impervious (e.g., pavement, building, etc.) before and after construction.

Site-Specific Inspection Sheet

A general Storm Water Quality Construction Inspection Checklist has been developed by Caltrans. In some cases, a District may require that a different checklist is used for a specific construction project or activity. If this is the case, the Information Handout will include a copy of the checklist that the District will require that the contractor use for inspection of construction site BMPs.

Other Information

The Information Handout may also include any other information that would explain the decisions or thought process behind the selection and deployment of the BMPs chosen by the designer. Examples include the designer's estimated staging of the project and estimated time of year for those stages; any scheduling modifications included in the Order of Work specifications that were included to enhance water pollution control; and any specific BMP deployments that are considered to be critical to the success of the contractor's WPCP.

Other Plans/Permits: Other agencies may have issued permits or have plan requirements for the construction of the project or imposed certain conditions. If so, a written description of the permit conditions and a copy of the permit will be provided for inclusion in an appendix to the WPCP. Hazardous materials must be handled in accordance with specific laws and regulations and disposed of as a hazardous waste. If during the preparation of the PS&E, it is known that special permits for accomplishing disposal of hazardous waste is known, then a written explanation will be provided to the contractor to be incorporated within this section and it must be consistent with other specifications in the contract. In addition, information regarding other related permits such as California Fish and Game or U.S. Army Corps of Engineers permits may also be included.

3.1.2 Minimum Requirements for Construction Sites

In order to ensure a minimum level of water pollution control, Caltrans has designated some BMPs as minimum requirements that contractors must implement during construction of highway projects statewide. These minimum requirements are listed in Table 3-1 and are also indicated in Appendix A, Attachment C. The Caltrans *"Storm Water Quality Handbooks, Construction Site Best*

Management Practices (BMPs) Manual,” provides instructions for selecting and implementing construction site BMPs and working details for construction site BMPs.

3.1.3 Cost Breakdown

The contractor shall prepare and submit with the WPCP, a cost breakdown that itemizes the contract lump sum for water pollution control. The cost breakdown shall reflect the items of work, quantities and costs for control measures shown in the WPCP, except for those construction site BMPs and permanent BMPs for which there is a contract item of work. A sample cost breakdown is shown in Table 3-2. The cost breakdown form for the project may also be required to be included in the Special Provisions.

Table 3-1

CONSTRUCTION SITE BMPs MINIMUM REQUIREMENTS ⁽¹⁾	
TEMPORARY SOIL STABILIZATION	
SS-1	Scheduling
SS-2	Preservation of Existing Vegetation
SS-3	Hydraulic Mulch ⁽²⁾
SS-4	Hydroseeding ⁽²⁾
SS-5	Soil Binders ⁽²⁾
SS-6	Straw Mulch ⁽²⁾
SS-7	Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats ⁽²⁾
TEMPORARY SEDIMENT CONTROL	
SC-1	Silt Fence ⁽³⁾
SC-5	Fiber Rolls ⁽³⁾
SC-7	Street Sweeping and Vacuuming
SC-10	Storm Drain Inlet Protection
WIND EROSION CONTROL	
WE-1	Wind Erosion Control
NON-STORM WATER MANAGEMENT	
NS-6	Illicit Connection/Illegal Discharge Detection and Reporting
NS-8	Vehicle and Equipment Cleaning
NS-9	Vehicle and Equipment Fueling
NS-10	Vehicle and Equipment Maintenance
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL	
WM-1	Material Delivery and Storage
WM-2	Material Use
WM-3	Stockpile Management
WM-4	Spill Prevention and Control
WM-5	Solid Waste Management
WM-9	Sanitary/Septic Waste Management

⁽¹⁾ Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the contractor or determined by Caltrans.

⁽²⁾ The Contractor shall select one of five of the identified soil stabilization measures or a combination thereof to achieve and maintain the contract's disturbed soil area (DSA) protection requirements.

⁽³⁾ The Contractor shall select either sediment control measure or a combination thereof to achieve and maintain the contract's disturbed soil area (DSA) protection requirements.

TABLE 3-2

SAMPLE COST BREAKDOWN ⁽¹⁾ ⁽³⁾ ⁽⁴⁾					
Cost Breakdown for Water Pollution Control					
Contract No. _____					
<i>Unit Description</i>	<i>Unit</i>	<i>Approximate Quantity</i>	<i>Unit Cost \$</i>	<i>Total Cost \$</i>	
SS-1 Scheduling	-	-	N/A	N/A	
SS-2 Preservation of Existing Vegetation	LS	-	N/A	2,000.00	
SS-6 Straw Mulch	HA	0.3	3,750.00	1,125.00	
SS-9 Earth Dike	M	300	3.00	900.00	
SS-9 Ditches (lined)	M	200	5.00	1,000.00	
SS-10 Outlet Protection/Velocity Dissipation Device	EA	2	400.00	800.00	
SS-11 Slope Drains	M	20	30.00	600.00	
SC-1 Silt Fence	M	1000	10.00	10,000.00	
SC-2 Desilting Basin	EA	1	2,800.00	2,800.00	
SC-4 Check Dams	EA	8	200.00	1,600.00	
SC-7 Street Sweeping and Vacuuming	LS	1	30,000.00	30,000.00	
SC-8 Sandbag Barrier	M	800	3.00	2,400.00	
SC-10 Storm Drain Inlet Protection Type 1	EA	20	500.00	10,000.00	
SC-10 Storm Drain Inlet Protection Type 2	EA	10	300.00	3,000.00	
SC-10 Storm Drain Inlet Protection Type 3	EA	10	400.00	4,000.00	
WE-1 Wind Erosion Control	HA	0.3	3,000.00	900.00	
TC-1 Stabilized Construction Entrance/Exit	EA	3	1,500.00	4,500.00	
NS-6 Illicit Connection/Illegal Discharge Detection and Reporting	-	-	N/A	N/A	
NS-8 Vehicle and Equipment Cleaning	LS	-	2,000	2,000.00	
NS-9 Vehicle and Equipment Fueling	LS	-	1,000	1,000.00	
NS-10 Vehicle and Equipment Maintenance	LS	-	1,000	1,000.00	
WM-1 Material Delivery and Storage	LS	-	7,000	7,000.00	
WM-2 Material Use	LS	-	1,000	1,000.00	
WM-3 Stockpile Management	EA	20	200.00	4,000.00	
WM-4 Spill Prevention and Control	LS	-	1,000	1,000.00	
WM-9 Sanitary/Septic Waste Management	LS	-	1,500	1,500.00	
Total				\$94,125.00 ⁽²⁾	

- Notes:
- 1 This cost breakdown is an example only. The unit costs shown may not reflect unit costs for water pollution control.
 - 2 The total of all extended unit costs shall equal the lump sum bid for water pollution control.
 - 3 The cost breakdown shall include minimum requirements and special requirements listed in the contract special provisions.
 - 4 The cost breakdown shall not include construction site BMPs shown in the drawings and paid as separate bid items.

3.2 WPCP Template

This section provides step-by-step WPCP preparation procedures, instructions and a template. The template has been developed in Microsoft® Word 97 and 2000 with the following objectives:

- (1) to make it easier for contractors to prepare WPCPs (instructions and examples can be viewed in the template while the WPCP is being prepared).
- (2) to make sure that all WPCPs prepared and submitted to Caltrans are consistent (thus making the review and approval process more efficient). Contractors may download the appropriate template from the Caltrans Web site at: <http://www.dot.ca.gov/hq/construc/>

Once a contractor has developed the text for the various sections of the WPCP, including instructions, examples and the completed text for each section, can be printed. The instructions include “check box” items that the preparer may use to review his/her own work and check each of the items as they are completed.

The Contractor’s final WPCP can then be viewed to check format and perform final edits as necessary. The document can then be printed without instructions and examples by going to the menu bar in MS Word, selecting the “TOOLS” menu, selecting “OPTIONS” and making sure that the HIDDEN TEXT checkboxes under both the VIEW and PRINT tabs are cleared.

The format of the WPCP includes the following sections:

- Section 10.0 Project Description and Contractor’s Certification
- Section 20.0 Project Information
- Section 30.0 Pollution Sources and Control Measures
- Section 40.0 Amendments



Section 10.0

Title Page and WPCP Certification and Approval

10.1 Title Page

INSTRUCTIONS

Fill in the following information:

REQUIRED TEXT

1. Name of the Project: _____
2. Caltrans Contract Number: _____
3. Prepared For:
Name of Lead Agency _____
Address 1 _____
Address 2 _____
City, State, ZIP _____
Resident Engineer's Name _____
Resident Engineer's Telephone Number () - _____
4. Submitted By:
Contractor's Company Name _____
Address 1 _____
Address 2 _____
City, State, ZIP _____
Telephone (-) _____
Owner/Representative's Name _____
5. Project Site Address
Enter job site address, if any _____
Enter job site telephone number, if any _____

6. WPCP Prepared by
Company Name _____
Address 1 _____
Address 2 _____
City, State, Zip Code: _____
Phone () - _____
Name and Title of Preparer _____
7. WPCP Preparation Date
Date _____

10.2 Contractor's Certification and Approval by the Resident Engineer

INSTRUCTIONS

The contractor, authorized and required by the Special Provisions to prepare and implement the WPCP, shall provide and sign the following certification:

REQUIRED TEXT

CONTRACTOR'S CERTIFICATION OF WPCP

"I certify under a 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, to the best of my knowledge and belief 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."

Signature

Date

Name and Title

Telephone Number

INSTRUCTIONS

The Caltrans Resident Engineer, as the authorized owner's representative, shall provide and sign the following certification upon approval of the WPCP.

REQUIRED TEXT

For Use by Caltrans Only

RESIDENT ENGINEER'S APPROVAL OF WPCP

I, and/or personnel acting under my direction and supervision, have reviewed this WPCP and find that it meets the requirements set forth in the Special Provisions, the Caltrans Construction Site Best Management Practices Manual, and the Standard Specifications Section 7-1.01G - Water Pollution.



Section 3
Preparing a Water Pollution Control Program (WPCP)

RE's Signature

Date of WPCP Approval

RE's Name (printed)

() -
RE's Phone Number



Section 20.0 Project Information

INSTRUCTIONS

Answer the following questions in a narrative format that can be easily understood by a person who is not familiar with the project.

- R Introduction and Project Description: Provide a brief description of the project.
 - R Describe the type(s) of work that will be performed.
 - R Provide a brief description of the project location, including descriptive items such as county, route, post mile, city, and street names.
 - R Describe proximity to receiving waters to which the project will discharge, including surface waters, drainage channels, and drainage systems.
 - R Identify drainage system owners (municipality or agency).
- R Unique Site Features:
 - R Provide a brief description of any unique site features (water bodies, wetlands, environmentally sensitive area, endangered or protected species, etc.)
 - R Describe significant or high-risk activities that may impact storm water quality. Include any unique features or activities within or adjacent to water bodies (such as dredging, re-use of aerially deposited lead material, large excavations, or work within a water body).
- R Project Schedule: Provide a written and a graphical project schedule. The schedule shall clearly show how the rainy season relates to soil-disturbing and re-stabilization activities. The schedule only needs to be detailed enough to show major activities sequenced with the implementation of construction site BMPs, including:
 - R project start and finish dates
 - R rainy season dates
 - R mobilization dates
 - R mass clearing and grubbing, roadside clearing dates
 - R major grading and excavation dates
 - R dates for special activities named in other permits, such as Fish and Game
 - R rainy season implementation schedule
 - R deployment of temporary soil stabilization BMPs
 - R deployment of temporary sediment control BMPs
 - R deployment of non-storm water BMPs
 - R deployment of waste management and materials pollution control BMPs
 - R paving, sawcutting, and any other pavement related operations



R planned stockpiling operations

R dates for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.

Note: Projects located in the Lake Tahoe, Truckee River, East Fork Carson River, or West Fork Carson River Hydrologic Units, and projects above 1,500 meters (5,000 ft) in elevations in the portions of Mono County or Inyo County within the Lahontan RWQCB are not allowed to perform removal of vegetation nor disturbance of existing ground surface conditions between October 15 of each year and May 1 of the following year; except when there is an emergency situation that threatens the public health or welfare, or when the project is granted a variance by the RWQCB Executive Officer.

R Pollutant Source Identification:

R Review the contract documents and associated environmental documents to determine the known site contaminants and list them in this section.

R Review proposed construction activities and associated materials and wastes. Provide a list of those that have the potential to contribute to the discharge of pollutants to storm water.

EXAMPLE

1. Introduction and Project Description

The project consists of sound wall construction, shoulder work, and PCC pavement removal and replacement along approximately 400 m of highway. The project is located on northbound I-5 in Stockton (San Joaquin County), north from W. March Lane. Project runoff is conveyed approximately 800 m south to the Calaveras River via a combination of Caltrans-owned roadside ditches and underground drainage facilities. The Calaveras River discharges to the San Joaquin River approximately 3 km downstream from I-5. The total disturbed area is about 1 ha.

2. Unique Site Features

Relative proximity to Calaveras and San Joaquin rivers.

3. Schedule

The attached project schedule shows the projected progress of the project and includes implementation of water pollution control items.

4. Potential Pollutant Sources:

The primary construction activities, related materials, and wastes that have the potential to pollute storm water include:

- a) Soil disturbing activities and resulting exposed soil areas, including minor grading along the shoulder and trenching for conduits and sound wall footings.
- b) Slurries from mortar mixing and PCC saw-cutting and placement
- c) Solid wastes from PCC demolition and removal, sound-wall construction, and form work
- d) Temporary on-site storage of construction materials, including mortar mix, raw landscaping and soil stabilization materials, and treated lumber.
- e) General site litter

REQUIRED TEXT

1. Introduction and Project Description:

2. Unique Site Features:

3. Project Schedule:

4. Potential Pollutant Sources :

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Insert SAMPLE WATER POLLUTION CONTROL SCHEDULE here



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Section 30.0 Pollution Sources and Control Measures

INSTRUCTIONS

In this section, the Contractor shall describe the construction activities and the control practices (BMPs) that will be used to reduce or eliminate pollutant discharges from the construction site. The BMP selection process is an iterative process that first identifies the potential sources of pollution and then selects the tools (BMPs) to develop an effective WPCP.

- R For each of the following BMP categories:
 - R Identify all contract required BMPs (BMPs included as separate contract items or otherwise required by the Special Provisions)
 - R Identify minimum required BMPs (as indicated in the BMP selection tables)
 - R Select any additional BMPs necessary to eliminate or reduce the pollutants identified in "Potential Pollutant Sources" in Section 20.
 - R See Section 2 of the Caltrans *Storm Water Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual*, for instructions for selection and implementation of BMPs, and working details for construction site BMPs.
- R Complete the BMP consideration checklists and descriptions in each of the following sections:
 - 30.1 Soil Stabilization (Erosion Control) and Sediment Control
 - 30.2 Non-Storm Water Management BMPs
 - 30.3 Materials Handling and Waste Management BMPs
- R Show the selected BMPs on the Water Pollution Control Drawings (WPCDs) as described in Section 30.4.

30.1 Soil Stabilization (Erosion Control) and Sediment Control

INSTRUCTIONS

Use each of the following sections to evaluate, select, and identify erosion and sediment controls that will be implemented during the project.

- 30.1.1 Soil Stabilization Practices
- 30.1.2 Sediment Control Practices
- 30.1.3 Sediment Tracking Controls
- 30.1.4 Wind Erosion Controls



30.1.1 Soil Stabilization Practices

INSTRUCTIONS

Soil stabilization consists of source control measures that are designed to prevent soil particles from detaching and becoming suspended in storm water runoff. Soil stabilization BMPs protect the soil surface by covering and/or binding the soil particles.

Provide a brief description of soil-disturbing activities, such as clearing and grubbing, grading, excavation, trenching, etc. Show the limits of the soil-disturbed areas on the WPCDs.

Complete the following selection table for temporary soil stabilization BMPs. All listed BMPs shall be considered for the project.

If the project will not create soil disturbed areas, state as such and check "Not Used" for all BMPs in the soil stabilization selection table and enter "N/A" as the reason not used.

If soil stabilization practices are not applicable, check "Not Used", and state why (i.e., no soil disturbed areas, soil stabilization BMPs not required based on project location, season and slopes) and state N/A (not applicable) in the table below.

EXAMPLE

Soil disturbing activities consist of minor grading along the shoulder and trenching for utilities and sound wall footings as shown on WPCD-2. Existing vegetation will be preserved outside the immediate construction zone as shown. Sub-base materials will be left in place during PCC removal and replacement, thus site soils will not be exposed in those areas.

REQUIRED TEXT

BMP No.	BMP	MINIMUM REQUIREMENT	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
SS-1	Scheduling	9				
SS-2	Preservation of Existing Vegetation	9				
SS-3	Hydraulic Mulch	9 ⁽¹⁾				
SS-4	Hydroseeding	9 ⁽¹⁾				
SS-5	Soil Binder	9 ⁽¹⁾				
SS-6	Straw Mulch	9 ⁽¹⁾				
SS-7	Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats	9 ⁽¹⁾				
SS-8	Wood Mulching					
SS-9	Earth Dikes/Drainage Swales & Lined Ditches					
SS-10	Outlet Protection/ Velocity Dissipation Devices					
SS-11	Slope Drains					

⁽¹⁾ The Contractor shall select one of the five measures listed or a combination thereof to achieve and maintain the contract's disturbed soil area (DSA) protection requirements.

30.1.1.1 Selected Soil Stabilization BMPs

INSTRUCTIONS

Describe the locations and scheduled applications for each selected soil stabilization BMP.

EXAMPLE

SS-2 Preservation of Existing Vegetation

Clearing and grubbing will be limited to the boundaries of active construction as shown on WPCD-2. Surrounding areas of existing vegetation will be protected in conformance with SS-2, Preservation of Existing Vegetation.

SS-5 Soil Binders (Copolymer)



BMP SS-5 was selected to minimize interference with the final (permanent) erosion control measures (paving and decorative landscaping). Soil binders will be applied to all non-active soil disturbed areas during the rainy season in conformance with the DSA protection requirements in the Construction Site BMP Manual.

REQUIRED TEXT

30.1.2 *Sediment Control Practices*

INSTRUCTIONS

Sediment controls are used to complement and enhance the selected soil stabilization measures. Sediment controls are designed to intercept runoff and capture suspended soil particles through a settlement or filtration process.

Provide a brief description of soil-disturbed areas that will necessitate sediment control BMPs. References to the WPCDs and/or Section 30.1.1 are often sufficient.

Complete the following selection table for temporary sediment control BMPs. All listed BMPs shall be considered for the project.

Show selected BMPs on the WPCDs.

If sediment controls are not applicable, state why (no soil disturbed areas, sediment controls not required based on project location, season, and slopes). Check "Not Used" for all BMPs in the sediment control BMP selection table and enter "N/A" for reason not used.

EXAMPLE 1

Disturbed soil areas are discussed in Section 30.1.1 and are shown on WPCD-2.

EXAMPLE 2

Fiber rolls will be used at the toe of slopes and as perimeter sediment controls. According to Table X-X of the Construction Site BMPs Manual, sediment controls are required on all non-active and active slopes during the rainy season within Area 1.



REQUIRED TEXT

BMP No.	BMP	MINIMUM REQUIREMENT	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
SC-1	Silt Fence ⁽¹⁾	9				
SC-2	Desilting Basin					
SC-3	Sediment Trap					
SC-4	Check Dam					
SC-5	Fiber Rolls ⁽¹⁾	9				
SC-6	Gravel Bag Berm					
SC-7	Street Sweeping and Vacuuming	9				
SC-8	Sandbag Barrier					
SC-9	Straw Bale Barrier					
SC-10	Storm Drain Inlet Protection	9				

⁽¹⁾ The Contractor shall select either sediment control measure or a combination thereof to achieve and maintain the contract's disturbed soil area (DSA) protection requirements

30.1.2.1 Selected Sediment Control BMPs

INSTRUCTIONS

Describe the locations and scheduled applications for each selected sediment control BMP.

EXAMPLE

According to the Construction Site BMP Manual, sediment controls for this project are required during the rainy season - continuously on non-active DSAs and before rain on active DSAs. Deployment locations will be as follows:

SC-1 Silt Fence

Silt fence will be deployed along the downstream (southern) construction site perimeter as shown on WPCD-2. Once the drainage channel is constructed and lined, silt fence will be extended north, along each side of the channel. See SC-4, Check Dam, below.

SC-4 Check Dams

Concentrated flows will be conveyed by the drainage channel that runs north-south, adjacent to the shoulder. During channel construction, sediment control will be provided by sand bag check dams, spaced at 10 m. Once the channel is lined, silt fence will be installed along the channel banks to prevent sediment from entering the channel.

REQUIRED TEXT

30.1.3 Tracking Control

INSTRUCTIONS

Sediment tracking controls are intended to minimize off-site sediment tracking and/or clean up tracked sediment before it enters the storm drain system or becomes a public nuisance. Sediment tracking control BMPs must be considered for each site exit point where vehicles and/or equipment may track sediment onto public or private roads.

Show site entrance/exit locations on the WPCDs.

Provide a brief description of any site-specific conditions, such as clayey soils, that may make tracking particularly troublesome.

If tracking controls are not required, state why (no disturbed soil areas). Check "Not Used" for each BMP in the sediment tracking selection table and enter "N/A" for reason not used.

EXAMPLE

Site exit locations are shown on WPCD-2.

REQUIRED TEXT

REQUIRED TEXT

Complete the following table. The Contractor shall consider using all BMPs listed hereon.						
BMP No.	BMP	MINIMUM REQUIREMENT	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
TC-1	Stabilized Construction Entrance/Exit					
TC-2	Stabilized Construction Roadway					
TC-3	Entrance/Outlet Tire Wash					
SC-7	Street Sweeping and Vacuuming	9				

30.1.3.1 Selected Tracking Control BMPs

INSTRUCTIONS

Describe the locations and scheduled applications for each selected sediment tracking control BMP.



EXAMPLE

SC-7 Street Sweeping and Vacuuming

Sediment sweeping and vacuuming will be provided year-round at the site entrance/exit locations shown on WPCD-2.

REQUIRED TEXT

30.1.4 Wind Erosion Controls

INSTRUCTIONS

The objective of wind erosion controls is to prevent soil from being transported off-site by wind.
Wind erosion controls shall be applied as necessary to prevent nuisance dust as required by the Standard Specifications, the Special Provisions, BMP WE-1, Wind Erosion Control, and as directed by the Engineer. Soil stabilization BMPs also provide wind erosion control benefits.
Remove the "required text" if the project will not create disturbed soil areas.
Remove the last sentence of the "required text" if the project will create soil disturbed areas but soil stabilization BMPs are not required.

REQUIRED TEXT

Wind erosion controls will be applied as necessary to prevent nuisance dust as required by the Standard Specifications, the Special Provisions, BMP WE-1, Wind Erosion Control, and as directed by the Engineer. The soil stabilization BMPs selected for the project will also provide wind erosion control benefits.

30.2 Non-Storm Water Management BMPs

INSTRUCTIONS

Non-storm water discharges which are not authorized under the Caltrans Permit or authorized under a separate NPDES permit are prohibited. Examples of prohibited discharges common to construction activities include:

- Vehicle and equipment wash water, including concrete washout water
- Slurries from concrete cutting and coring operations or AC grinding operations
- Slurries from concrete or mortar mixing operations
- Blast residue from high-pressure washing of structures or surfaces
- Wash water from cleaning painting equipment
- Runoff from dust control applications of water or dust palliatives
- Sanitary and septic wastes

List all activities that have the potential to produce non-storm water discharges. (Consider dewatering operations and any construction activity that requires water use.) Discuss planned dewatering operations with the RE to determine possible requirement for permits and/or treatment. Discuss how mobile operations, such as maintenance and fueling for large or stationary equipment, will be addressed.

Use the following table to select BMPs as necessary to contain, remove, and dispose potential non-storm water discharges.

Show BMP locations on the WPCDs.

EXAMPLE

The project will include the following activities that have the potential to generate non-storm water discharges:

PCC Saw-cutting

PCC Paving activities and washout of concrete mixing, placing, and finishing equipment

Mortar mixing associated with sound wall construction.

Dust control/watering for soil compaction



REQUIRED TEXT

BMP No.	BMP	MINIMUM REQUIREMENT	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
NS-1	Water Conservation Practices					
NS-2	Dewatering Operations					
NS-3	Paving and Grinding Operations					
NS-4	Temporary Stream Crossing					
NS-5	Clear Water Diversion					
NS-6	Illicit Discharge/Illegal Dumping Reporting	9				
NS-7	Potable Water/Irrigation					
NS-8	Vehicle and Equipment Cleaning	9				
NS-9	Vehicle and Equipment Fueling	9				
NS-10	Vehicle and Equipment Maintenance	9				
NS-11	Pile Driving Operations					
NS-12	Concrete Curing					
NS-13	Material and Equipment Use Over Water					
NS-14	Concrete Finishing					

BMP No.	BMP	MINIMUM REQUIREMENT	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
NS-15	Structure Demolition/Removal					

30.2.1 Selected Non-Storm Water Management BMPs

INSTRUCTIONS

Describe the scheduled application of the selected BMPs.

EXAMPLE

The following BMPs will be implemented for PCC Saw-cutting, PCC Paving Activities, and mortar mixing activities. A 3 m by 3 m below-grade concrete washout facility will be constructed and maintained at the location shown on the plan to contain and cure all concrete/mortar slurries and wash waters.

- NS-3 Paving and Grinding Operations
- NS-12 Concrete Curing
- WM-8 Concrete Waste Management

The following BMPs will be implemented to reduce/eliminate discharged from dust control activities:

- WE-1 Wind Erosion Control
- NS-1 Water Conservation Practices

REQUIRED TEXT



30.3 Waste Management and Materials Pollution Control BMPs

INSTRUCTIONS

Waste management consists of implementing procedural and structural BMPs for collecting, handling, storing and disposing of wastes generated by a construction project to prevent the release of waste materials into storm water discharges. Wastes are going to be generated during construction; however, the methods in which the wastes are collected, stored, and removed will determine the success of the waste management activities. Construction site wastes can range from residues collected from non-storm water discharges (i.e. paint removal) to general site litter and debris (i.e. empty marker paint cans).

Material pollution control (materials handling) consist of implementing procedural and structural BMPs for handling, storing and using construction materials to prevent the release of those materials into storm water discharges. The amount and type of construction materials to be utilized at the site will be dependent upon the type of construction and the length of the construction period. The materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as fertilizer for landscaping.

Waste management and materials pollution control BMPs must be implemented to minimize storm water contact with construction materials, wastes and service areas, and to prevent materials and wastes from being discharged off-site.

Review project activities to identify likely construction materials and wastes. Identify materials and wastes with special handling or disposal requirements, such as lead contaminated soils. List anticipated materials and wastes below.

Based on the listed materials and wastes, use the following materials handling and waste management BMP consideration checklist to select appropriate BMPs.

Locate storage, waste, and handling locations and facilities on the WPCDs.

EXAMPLE

The following construction materials and wastes, which have the potential to cause storm water pollution, will be generated on-site or brought on-site for immediate use or temporary storage:

- Mortar mix
- Raw landscaping materials and wastes (topsoil, plant materials, herbicides, fertilizer, mulch)
- BMP materials (sandbags, liquid copolymer)
- Treated lumber (materials and wastes)
- PCC rubble
- Masonry block rubble
- General litter

REQUIRED TEXT

BMP No.	BMP	MINIMUM REQUIREMENT	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
WM-1	Material Delivery and Storage	9				
WM-2	Material Use	9				
WM-3	Stockpile Management	9				
WM-4	Spill Prevention and Control	9				
WM-5	Solid Waste Management	9				
WM-6	Hazardous Waste Management					
WM-7	Contaminated Soil Management					
WM-8	Concrete Waste Management					
WM-9	Sanitary/Septic Waste Management	9				
WM-10	Liquid Waste Management					

30.3.1 Selected Waste Management and Materials Pollution Control BMPs

INSTRUCTIONS

Describe the scheduled application of the selected BMPs.

EXAMPLE

The BMPs checked above will be implemented on the project. Because of site constraints, most materials and wastes will be immediately used and removed, respectively. BMP materials will be mixed/prepared off-site and only brought on-site by the erosion control contractor for immediate application/deployment. PCC rubble



will be loaded directly into trucks for immediate removal. Raw wall construction materials will be stockpiled for use that day and stored on pallets.

REQUIRED TEXT

30.4 Water Pollution Control Drawings (WPCDs)

INSTRUCTIONS

The contractor will include water pollution control drawings (WPCDs) in the WPCP to illustrate the locations, applications, and deployment of the BMPs checked in the preceding sections.

The WPCDs shall include one or more drawings at a scale sufficient to clearly show on-site drainage patterns and the location of erosion and sediment control BMPs. The WPCDs shall be no smaller than the "reduced plans" (approximately 11" x 17") issued by Caltrans. A sample WPCD is included in Appendix A to the "SWPPP and WPCP Preparation Manual", Attachment B. The sample WPCD is shown smaller than actual reduced plans.

The WPCDs shall include:

- Detail sheets showing construction details for the BMPs that will be used.
- Location sheets, usually modified layout, grading, stage construction, and/or drainage sheets, showing the locations of BMPs that will be used. Delineation of BMPs to be implemented during project construction will be in the form of construction notes and/or symbols.

Include the WPCDs as an attachment to the WPCP.

REQUIRED TEXT

The water pollution control drawings are included as an attachment to this Water Pollution Control Program.

30.5 Construction BMP Maintenance, Inspection, and Repair

INSTRUCTIONS

A program for the regular inspection, maintenance, and repair of BMPs will be included in the WPCP on the form that follows. The contractor's attention is directed to the Caltrans "*Construction Site Best Management Practices Manual*" where the working details describe requirements for maintenance and inspection of BMPs.

Appendix A, Attachment G of this SWPPP and WPCP Preparation Manual, shows a sample Maintenance, Inspection and Repair Program.

At a minimum, the contractor must inspect the site before and after storm events, and at 24-hour intervals during extended storms. The project Special Provisions may require additional inspections.

The results of the inspection and assessment shall be recorded on the Construction Site Inspection Checklist included in Appendix A to the "SWPPP and WPCP Preparation Manual", Attachment H.

A copy of each completed Construction Site Inspection Checklist shall be provided to the RE within 24-hours of an inspection, and a copy attached to the on-site WPCP.

A tracking or follow-up procedure must follow any inspection that identifies deficiencies in BMPs.

REQUIRED TEXT

Inspections will be conducted as follows:

- x Prior to a forecast storm
- x after a rain event that causes runoff from the construction site
- x at 24-hour intervals during extended rain events
- x weekly during the rainy season
- x every 2 weeks during the non-rainy season
- x at any other time(s) or intervals of time specified in the project Special Provisions

Completed inspection checklists will be submitted to the RE within 24 hours of inspection. Copies of the completed checklists will be kept with the SWPPP. A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs. The inspection, maintenance and repair program is shown in below.

WPCP			
Inspection, Maintenance, and Repair Program			
BMP	Inspection Frequency		Maintenance/Repair Measures
	Rainy	Non-Rainy	



Section 40.0 Amendments

INSTRUCTIONS

The WPCP shall be amended whenever there is a change in construction or operations that may cause the discharge of significant quantities of pollutants to surface waters, ground waters, municipal storm drain systems, or when deemed necessary by the RE. All WPCP amendments shall be documented in letter format and include revised WPCD sheets, as appropriate. WPCP amendments shall be certified by the contractor and require approval by the RE. Approved amendments shall be attached to the Contractor's on-site WPCP.

The following items will be included in the amendment, as appropriate:

- Discuss who requested the amendment.
- Describe location of proposed change.
- Describe reason for change.
- Describe the original BMP proposed, if any.
- Describe the new BMP proposed.
- Include any revised WPCDs for detail or location changes.

The following certification by the contractor and RE approval block will be included for each amendment.

EXAMPLE

This amendment was requested by the Regional Water Quality Board, Caltrans, or the Contractor.

The change is to relocate the concrete washout away from the drainage intake at Miller Ave. It is now located on the northeast section of the construction site, see revised map.

The reason the change is necessary is that water from concrete washout had the potential to enter the nearby drainage inlet.

See the revised WPCDs.

REQUIRED TEXT

Construction Contractor's Certification of the WPCP Amendment

"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."



Signature	Date
-----------	------

Name and Title	Phone Number
----------------	--------------

For Use by Caltrans Only

RESIDENT ENGINEER'S APPROVAL OF WPCP AMENDMENT

I, and/or personnel acting under my direction and supervision, have reviewed this WPCP amendment and find that it meets the requirements set forth in the Special Provisions, the Construction Site Best Management Practices Manual, and the Standard Specifications Section 7-1.01G - Water Pollution.

RE's Signature	Date of WPCP Amendment Approval
----------------	---------------------------------

RE's Name (printed)	() - RE's Phone Number
---------------------	--------------------------------

Section 50.0 Reporting

50.1 Discharge Reporting

INSTRUCTIONS:

Discharges will be reported in writing to the Resident Engineer verbally upon discovery and in writing within 7 days of occurrence or as required in the Special Provisions. A sample form for reporting discharges is shown in Attachment K.

Note: USEPA has issued regulations that define Reportable Quantity (RQ) levels for oil and hazardous substances. These regulations are found in the Code of Federal Regulations at 40 CFR Part 110, Part 117, or Part 302.

- For example, an oily sheen in storm water runoff as a result of a spill or release is an exceedance of a RQ level. The RQ level for dieldrin, a pesticide, is 1 kilogram. A spill or release of one or more kg of dieldrin is an exceedance of the RQ threshold.

REQUIRED TEXT:

If a discharge occurs or if the project receives a written notice or order from any regulatory agency, the contractor will immediately notify the Engineer and will file a written report to the RE within 7 days of the discharge event, notice, or order. Corrective measures will be implemented immediately following the discharge, notice or order. A sample discharge form is provided in Attachment K.

The report to the RE will contain the following items:

The date, time, location, nature of operation, and type of discharge, including the cause or nature of the notice or order;

The BMPs deployed before the discharge event, or prior to receiving notice or order;

The date of deployment and type of BMPs deployed after the discharge event, or after receiving the notice or order, including additional BMPs installed or planned to reduce or prevent re-occurrence, and

An implementation and maintenance schedule for any affected BMPs

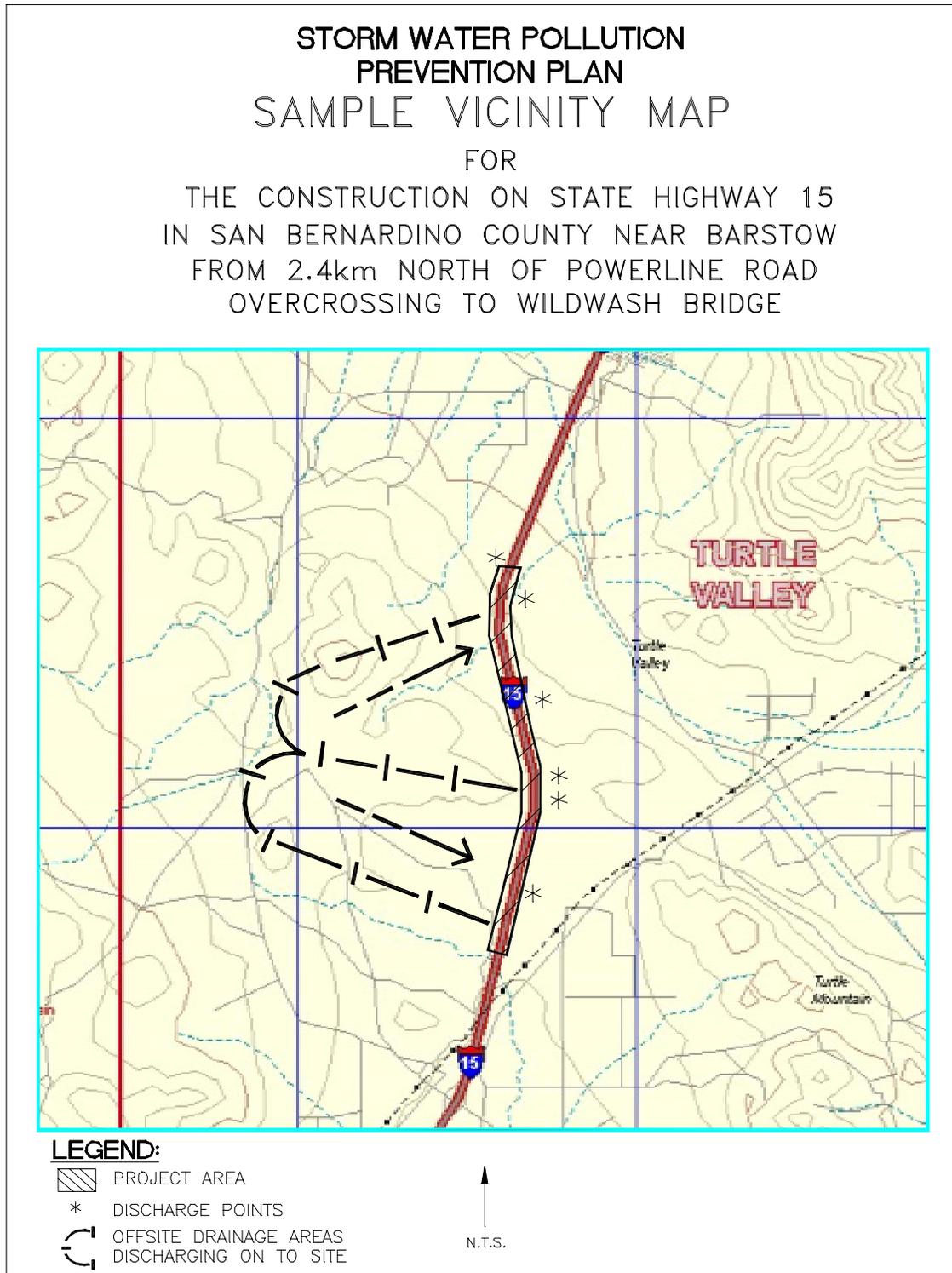
Appendix A

Attachments for use in Preparing a SWPPP



Attachment A

Vicinity Map/Site Map (Sample)



Attachment B

Water Pollution Control Drawings



Attachment C

BMP Consideration Checklist

CONSTRUCTION SITE BMPs CONSIDERATION CHECKLIST						
The Contractor shall consider using all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as "Not Used" with a brief statement describing why it is not being used. All selected BMPs shall be included in the Schedule of Values, except for those items shown on the plans and paid for as a separate item or work						
BMP No.	BMP	MINIMUM REQUIREMENT ⁽²⁾	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
SS-1	Scheduling	9				
SS-2	Preservation of Existing Vegetation	9				
SS-3	Hydraulic Mulch	9 ⁽¹⁾				
SS-4	Hydroseeding	9 ⁽¹⁾				
SS-5	Soil Binders	9 ⁽¹⁾				
SS-6	Straw Mulch	9 ⁽¹⁾				
SS-7	Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats	9 ⁽¹⁾				
SS-8	Wood Mulching					
SS-9	Earth Dikes/Drainage Swales & Lined Ditches					
SS-10	Outlet Protection/ Velocity Dissipation Devices					
SS-11	Slope Drains					

⁽¹⁾ The Contractor shall select one of the five measures listed or a combination thereof to achieve and maintain the contract's rainy season disturbed soil area (DSA) requirements.

⁽²⁾ Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the Contractor or determined by Caltrans.

<p align="center">CONSTRUCTION SITE BMPs CONSIDERATION CHECKLIST</p>						
<p>The Contractor shall consider using all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as "Not Used" with a brief statement describing why it is not being used. All selected BMPs shall be included in the Schedule of Values, except for those items shown on the plans and paid for as a separate item or work</p>						
BMP No.	BMP	MINIMUM REQUIREMENT ⁽²⁾	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
SC-1	Silt Fence	9				
SC-2	Desilting Basin					
SC-3	Sediment Trap					
SC-4	Check Dam					
SC-5	Fiber Rolls	9				
SC-6	Gravel Bag Berm					
SC-7	Street Sweeping and Vacuuming	9				
SC-8	Sand Bag Barrier					
SC-9	Straw Bale Barrier					
SC-10	Storm Drain Inlet Protection	9				
SC-11	Sediment/Desilting Basin					
WE-1	Wind Erosion Control	9				
TC-1	Stabilized Construction Entrance/Exit					
TC-2	Stabilized Construction Roadway					
TC-3	Entrance/Outlet Tire Wash					

⁽²⁾ Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the contractor or determined by Caltrans.

⁽³⁾ The Contractor shall select either sediment control measure or a combination thereof to achieve and maintain the contract's disturbed soil area (DSA) protection requirements

CONSTRUCTION SITE BMPs CONSIDERATION CHECKLIST

The Contractor shall consider using all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as "not used" with a brief statement describing why it is not being included. All selected BMPs shall be included in the Schedule of Values, except for those items shown on the plans and paid for as a separate item or work

BMP No.	BMP	MINIMUM REQUIREMENT ⁽²⁾	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
NS-1	Water Conservation Practices					
NS-2	Dewatering Operations					
NS-3	Paving and Grinding Operations					
NS-4	Temporary Stream Crossing					
NS-5	Clear Water Diversion					
NS-6	Illicit Connection/Illegal Discharge Detection and Reporting	9				
NS-7	Potable Water/Irrigation					
NS-8	Vehicle and Equipment Cleaning	9				
NS-9	Vehicle and Equipment Fueling	9				
NS-10	Vehicle and Equipment Maintenance	9				
NS-11	Pile Driving Operations					
NS-12	Concrete Curing					
NS-13	Material and Equipment Use Over Water					
NS-14	Concrete Finishing					
NS-15	Structure Demolition/Removal					

⁽²⁾ Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the contractor or determined by Caltrans.

CONSTRUCTION SITE BMPs CONSIDERATION CHECKLIST						
<p>The Contractor shall consider using all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as "not used" with a brief statement describing why it is not being used.</p> <p>All selected BMPs shall be included in the Schedule of Values, except for those items shown on the plans and paid for as a separate item or work</p>						
BMP No.	BMP	MINIMUM REQUIREMENT ⁽²⁾	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
WM-1	Material Delivery and Storage	9				
WM-2	Material Use	9				
WM-3	Stockpile Management	9				
WM-4	Spill Prevention and Control	9				
WM-5	Solid Waste Management	9				
WM-6	Hazardous Waste Management					
WM-7	Contaminated Soil Management					
WM-8	Concrete Waste Management					
WM-9	Sanitary/Septic Waste Management	9				
WM-10	Liquid Waste Management					

⁽²⁾ Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the contractor or determined by Caltrans.

Attachment D

Computation Sheet for Determining Runoff Coefficients

INSTRUCTIONS

The runoff coefficient ("C" value) is used to estimate the impact on stormwater runoff due to development of a site. The C value is the amount of rainfall that becomes runoff. The less runoff that is absorbed into the ground, the higher the C value. This information may be provided by Caltrans.

Refer to the Caltrans Highway Design Manual, Topic 819 – Estimating Design Discharge, for a more detailed explanation on calculating weighted runoff coefficients for areas containing varying amounts of different cover.

Refer to Figure 819.2A, "Runoff Coefficients for Undeveloped Areas", and Table 819.2B, "Runoff Coefficients for Developed Areas" provided with this Attachment.

EXAMPLE

$$\text{Total Site Area} = 171,965 \text{ m}^2 \quad (\text{A})$$

Existing Site Conditions

$$\text{Impervious Area}^1 = 88,157 \text{ m}^2 \quad (\text{B})$$

$$\text{Impervious Area Runoff Coefficient}^{2,4} = 0.95 \quad (\text{C})$$

$$88157 \times 0.95 = 83,749 \text{ m}^2 \quad (\text{B} \times \text{C})$$

$$\text{Pervious Area}^3 = 83,808 \text{ m}^2 \quad (\text{D})$$

$$\text{Pervious Area Runoff Coefficient}^4 = 0.4 \quad (\text{E})$$

$$83808 \times 0.4 = 33,523 \text{ m}^2 \quad (\text{D} \times \text{E})$$

$$\text{Sum: } 83749 + 33523 = 117,272 \quad (\text{B} \times \text{C}) + (\text{D} \times \text{E})$$

$$\text{Divide: } 140738/171965 = 0.68 \quad \frac{\text{BuC} + \text{DuE}}{(\text{A})}$$

$$\text{Existing Area Runoff Coefficient} = 0.68 \quad (\text{F})$$



Proposed Site Conditions

Impervious Area ¹	=	100,036 m ²	(G)
Impervious Area Runoff Coefficient ^{2, 4}	=	0.95	(H)
100036 x 0.95	=	95,034 m ²	(G x H)
Pervious Area ³	=	71,929 m ²	(I)
Pervious Area Runoff Coefficient ⁴	=	0.4	(J)
71929 x 0.4	=	28,771 m ²	(I x J)
Sum: 95034 + 28771	=	123,805	(G x H) + (I x J)
Divide: 123805/171965	=	0.72	$\frac{GuH + IuJ}{(A)}$
Existing Area Runoff Coefficient	=	0.72	(F)

REQUIRED TEXT:

Total Site Area = _____ (A)

Existing Site Conditions

Impervious Site Area¹ = _____ (B)

Impervious Site Area Runoff Coefficient^{2,4} = _____ (C)

Pervious Site Area³ = _____ (D)

Pervious Site Area Runoff Coefficient⁴ = _____ (E)

Existing Site Area Runoff Coefficient $\frac{B u C + D u E}{(A)}$ = _____ (F)

Proposed Site Conditions (after construction)

Impervious Site Area¹ = _____ (G)

Impervious Site Area Runoff Coefficient^{2,4} = _____ (H)

Pervious Site Area³ = _____ (I)

Pervious Site Area Runoff Coefficient⁴ = _____ (J)

Proposed Site Area Runoff Coefficient $\frac{G u H + I u J}{(A)}$ = _____ (K)

1. Includes paved areas, areas covered by buildings, and other impervious surfaces.
2. Use 0.95 unless lower or higher runoff coefficient can be verified.
3. Includes areas of vegetation, most unpaved or uncovered soil surfaces, and other pervious areas.
4. See the table on the following page for typical C values.



Table 819.2B
Runoff Coefficients for
Developed Areas

Type of Drainage Area	Runoff Coefficient
Business:	
Downtown areas	0.70 - 0.95
Neighborhood areas	0.50 - 0.70
Residential:	
Single-family areas	0.30 - 0.50
Multi-units, detached	0.40 - 0.60
Multi-units, attached	0.60 - 0.75
Suburban	0.25 - 0.40
Apartment dwelling areas	0.50 - 0.70
Industrial:	
Light areas	0.50 - 0.80
Heavy areas	0.60 - 0.90
Parks, cemeteries:	0.10 - 0.25
Playgrounds:	0.20 - 0.40
Railroad yard areas:	0.20 - 0.40
Unimproved areas:	0.10 - 0.30
Lawns:	
Sandy soil, flat, 2%	0.05 - 0.10
Sandy soil, average, 2-7%	0.10 - 0.15
Sandy soil, steep, 7%	0.15 - 0.20
Heavy soil, flat, 2%	0.13 - 0.17
Heavy soil, average, 2-7%	0.18 - 0.25
Heavy soil, steep, 7%	0.25 - 0.35
Streets:	
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Drives and walks	0.75 - 0.85
Roofs:	0.75 - 0.95

Attachment E

Computation Sheet for Determining Run-on Discharges

INSTRUCTIONS

Item A. The runoff coefficient represents the percent of water, which will run off the ground surface during the storm. Values of the coefficient, "C", can be determined from Figure 819.2A, "Runoff Coefficients for Undeveloped Areas", and Table 819.2B, "Runoff Coefficients for Developed Areas", from Caltrans, Highway Design Manual, Fifth Edition, provided with this Attachment.

Refer to the Caltrans Highway Design Manual, Topic 819 – Estimating Design Discharge, for a more detailed explanation on calculating weighted runoff coefficients for areas containing varying amounts of different cover.

Item B. Rainfall intensity, in millimeters per hour, is the average rainfall intensity for the selected frequency. Refer to the County Flood Control, or U. S. Army Corps of Engineers manuals for rainfall intensity values.

Item C. Drainage area in square kilometers includes impervious and pervious areas and surfaces covered by buildings.

SWPPP preparer shall provide calculations for offsite run-on if flow quantities are not available via the project design documents (Drainage Report, Hydrology Report, etc.)

The rational method should not be used for drainage areas greater than 1.3 km² (130 ha). See Caltrans, Highway Design Manual, Fifth Edition, Section 819.2.

Existing Site Conditions

Area Runoff Coefficient	=	_____	(A)
Area Rainfall Intensity	=	_____ mm/hr	(B)
Drainage Area	=	_____ km ²	(C)
Site Area Run-on Discharge	0.28x (A) x (B) x (C)	=	_____ m ³ /sec (D)



Table 819.2B

**Runoff Coefficients for
Developed Areas**

Type of Drainage Area	Runoff Coefficient
Business:	
Downtown areas	0.70 - 0.95
Neighborhood areas	0.50 - 0.70
Residential:	
Single-family areas	0.30 - 0.50
Multi-units, detached	0.40 - 0.60
Multi-units, attached	0.60 - 0.75
Suburban	0.25 - 0.40
Apartment dwelling areas	0.50 - 0.70
Industrial:	
Light areas	0.50 - 0.80
Heavy areas	0.60 - 0.90
Parks, cemeteries:	0.10 - 0.25
Playgrounds:	0.20 - 0.40
Railroad yard areas:	0.20 - 0.40
Unimproved areas:	0.10 - 0.30
Lawns:	
Sandy soil, flat, 2%	0.05 - 0.10
Sandy soil, average, 2-7%	0.10 - 0.15
Sandy soil, steep, 7%	0.15 - 0.20
Heavy soil, flat, 2%	0.13 - 0.17
Heavy soil, average, 2-7%	0.18 - 0.25
Heavy soil, steep, 7%	0.25 - 0.35
Streets:	
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Drives and walks	0.75 - 0.85
Roofs:	0.75 - 0.95

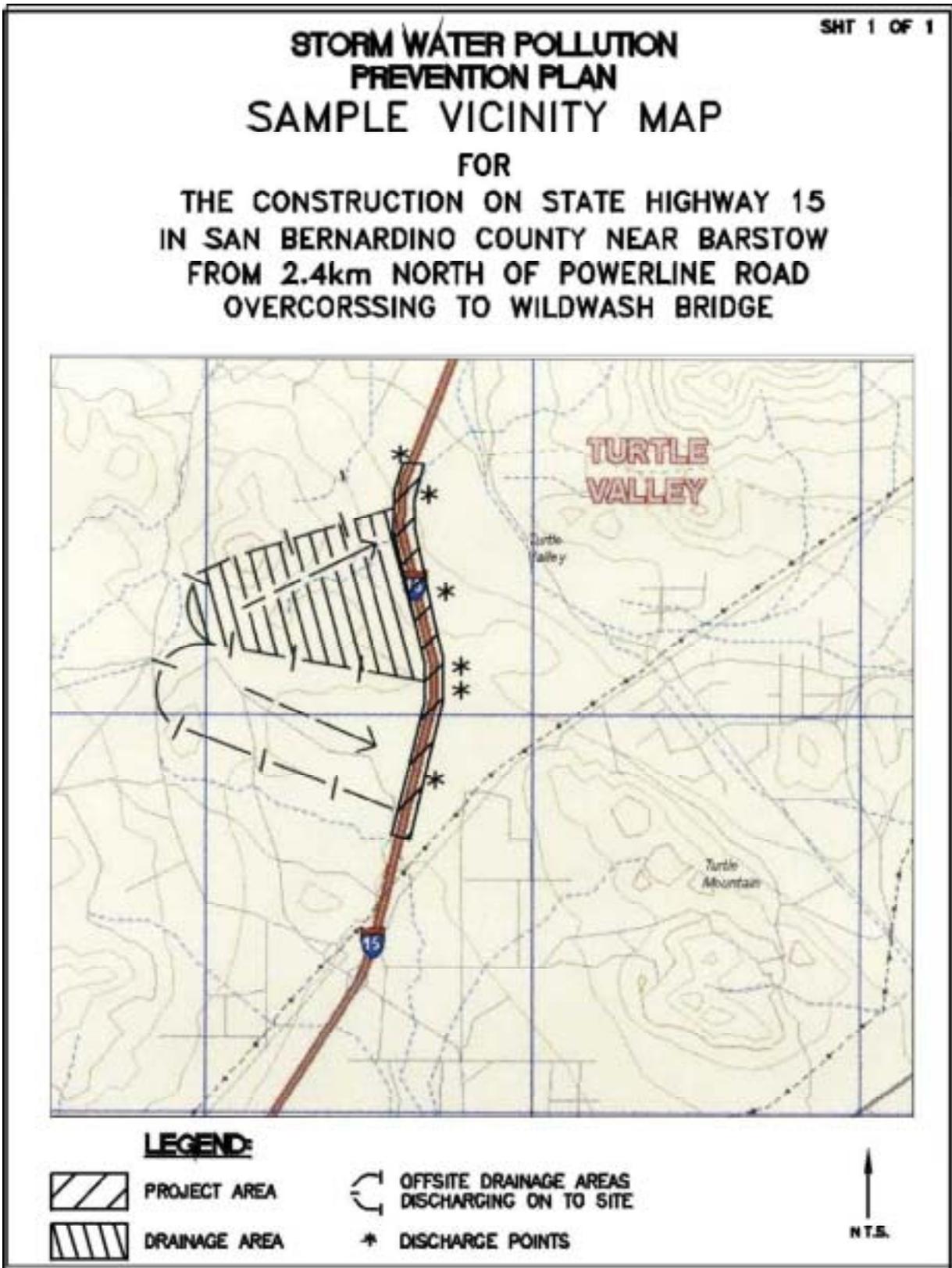
Attachment E -Example

Computational Sheet for Determining Run-on Discharges

Existing Site Conditions

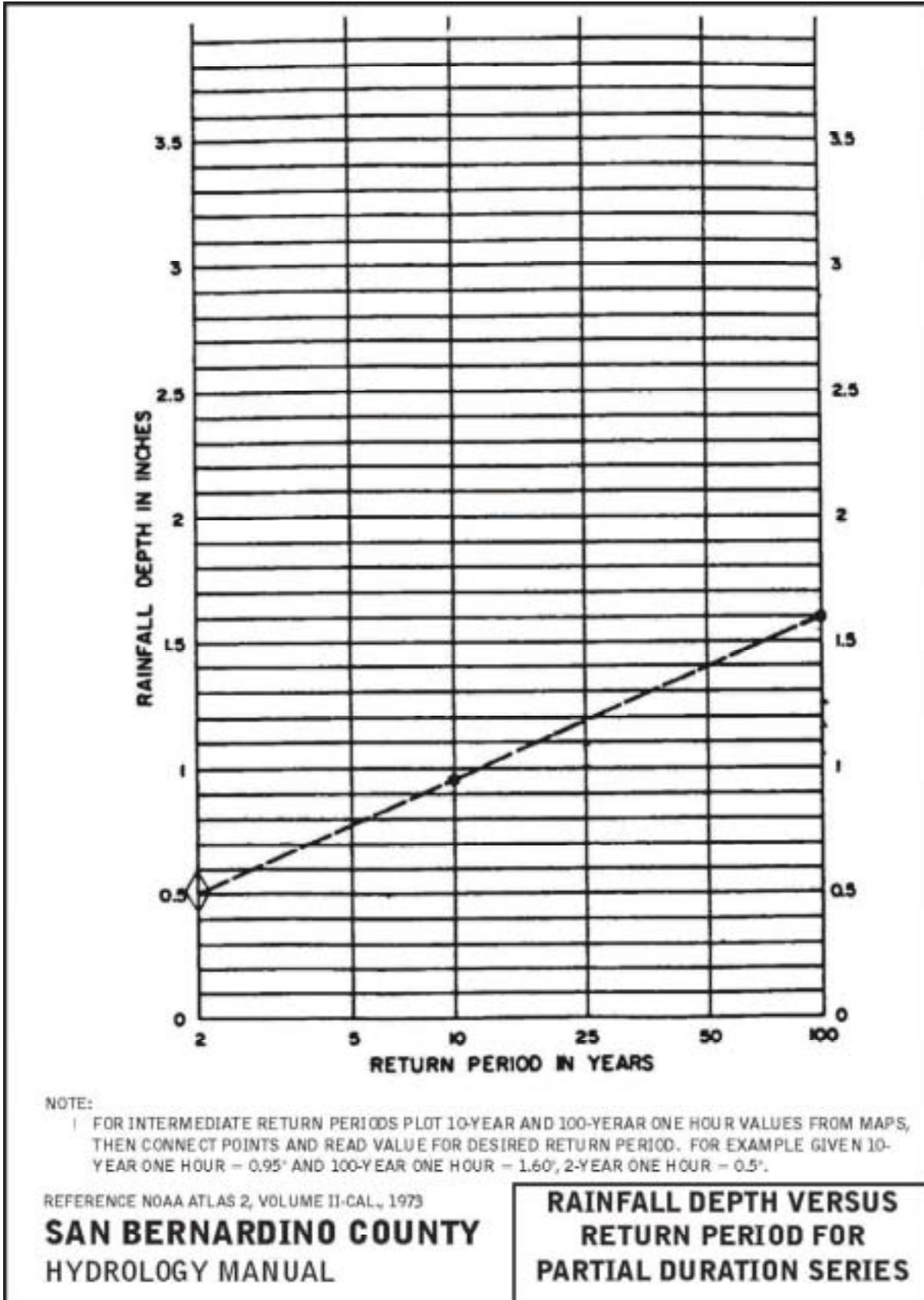
$$\begin{aligned} \text{Area Runoff Coefficient}^1 &= \underline{\quad 0.32 \quad} \quad (\text{A}) \\ \text{Area Rainfall Intensity}^2 &= \underline{\quad 12.7 \text{ mm/hr} \quad} \quad (\text{B}) \\ \text{Drainage Area}^3 &= \underline{\quad 0.71 \text{ km}^2 \quad} \quad (\text{C}) \\ \text{Site Area Run-on Discharge } 0.28 \times (\text{A}) \times (\text{B}) \times (\text{C}) &= \underline{\quad 0.81 \text{ m}^3/\text{sec} \quad} \quad (\text{D}) \end{aligned}$$

1. The runoff coefficient represents the percent of water, which will run off the ground surface during the storm for the area depicted on page 7. The value for the runoff coefficient, .32, was determined from Figure 819.2A, page 5, based on the site characteristics (terrain, type of soil, vegetation, etc.) for an undeveloped area.
2. Rainfall intensity, in millimeters per hour, is the average rainfall intensity for the selected frequency and duration (2 year, 1 hour storm). The Rainfall Depth versus Return Period chart, page 7, from the San Bernardino County Flood Control Hydrology Manual gives a value of 0.5 in/hr (12.7 mm/hr) for the site area.
3. Drainage area, in square kilometers, depicted on page 5 is 0.71 km².



Q:\52807\GDM\ VicinityMap(8.5x11).dwg 08/12/00 16:38





Attachment F

Notification of Construction (NOC)

INSTRUCTIONS

The NOC form shown in the following page is a blank form. The completed Notification of Construction (NOC) will be provided by Caltrans.



NOTIFICATION OF CONSTRUCTION

IN COMPLIANCE WITH CALTRANS STATEWIDE NPDES STORM WATER PERMIT Order No. 99-06 DWQ, NPDES No. CAS000003

I. IDENTIFICATION-Attach Vicinity Map, ½ size copy of Title Sheet

Project		Check One: <input type="checkbox"/> First Submittal or <input type="checkbox"/> Amendment No. ___		Contract Number EA	Date MM/DD/YY
City(if applicable)		County		Tentative Start Date	Tentative End Date
Route	Post Mile	Kilometer Post		Tentative Date SWPPP Available	

II. CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARDS

<input type="checkbox"/> Region 1, North Coast	<input type="checkbox"/> Region 5, Central Valley	<input type="checkbox"/> Region 6, Lahontan	<input type="checkbox"/> Region 7, Colorado River
<input type="checkbox"/> Region 2, San Francisco Bay	<input type="checkbox"/> Sacramento	<input type="checkbox"/> South Lake Tahoe	<input type="checkbox"/> Region 8, Santa Ana
<input type="checkbox"/> Region 3, Central Coast	<input type="checkbox"/> Fresno	<input type="checkbox"/> Victorville	<input type="checkbox"/> Region 9, San Diego
<input type="checkbox"/> Region 4, Los Angeles	<input type="checkbox"/> Redding		

III. CALTRANS DISTRICT

Name/Number	Project Contact
Address	Position Title
City	Zip
	Phone ()

IV. CONSTRUCTION FIELD OFFICE- Attach Location Map

Street Address	Construction Contact
Physical Location if Different than address above	Position Title
City	State
	Zip
	Phone ()

V. CONSTRUCTION SITE INFORMATION

Description and Type of Work	
Additional related required approvals: <input type="checkbox"/> DTSC Variance <input type="checkbox"/> CWA 404/401 <input type="checkbox"/> DFG 1601 <input type="checkbox"/> NPDES/WDRs <input type="checkbox"/> Other	
Describe:	
Total Construction Area:	Acres
	Hectares
Total Disturbed Area:	Acres
	Hectares
Receiving Water Name:	Project In Or Adjacent to Receiving Water?: <input type="checkbox"/> Yes <input type="checkbox"/> No
Project Discharges to?: <input type="checkbox"/> Groundwater Infiltration	Basin Location: <input type="checkbox"/> Municipal/Other System Name:

VI. 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 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.

Signature: _____ Date: _____

Print/Type Name: _____ Title: _____

NOTIFICATION OF CONSTRUCTION (DESERT AREAS)

(APPLIES TO PROJECTS BELOW ELEVATION 1200 METERS IN RWQCB 6 & 7 JURISDICTION)

CEM-2004 (New 08/30/02)

IN COMPLIANCE WITH CALTRANS STATEWIDE NPDES PERMIT, Order No. 99-06 DWQ, NPDES No. CAS000003

I. IDENTIFICATION – Attach Vicinity Map, ½ Size Copy of Title Sheet

PROJECT	NOC SUBMITTAL (Check One) <input type="checkbox"/> First Submittal or <input type="checkbox"/> Amendment No. _____		CONTRACT NUMBER EA	DATE MM/DD/YY
CITY (if applicable)	COUNTY	TENTATIVE START DATE	TENTATIVE END DATE	
ROUTE	POST MILE	KILOMETER POST	TENTATIVE DATE SWPPP AVAILABLE	

II. CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

<input type="checkbox"/> REGION 6, LAHONTAN RWQCB South VICTORVILLE OFFICE 15428 Civic Drive, Ste 100 Victorville, CA 92392 Ph: (760) 241-6583 Fax: (760) 241-7308	<input type="checkbox"/> REGION 7, COLORADO RIVER BASIN RWQCB 73-720 Fred Waring Drive, Ste. 100 Palm Desert, CA 92260 Ph: (760) 346-7491 Fax: (760) 341-6820
---	---

III. CALTRANS DISTRICT

NAME/NUMBER	PROJECT CONTACT
POSITION TITLE	ADDRESS
CITY	PHONE

IV. CONSTRUCTION OFFICE – Attach Location Map

STREET ADDRESS		CONSTRUCTION CONTACT	
PHYSICAL LOCATION IF DIFFERENT THAN ABOVE ADDRESS		POSITION TITLE	
CITY	STATE	ZIP	PHONE

V. CONSTRUCTION SITE INFORMATION

DESCRIPTION AND TYPE OF WORK:			
BMPs TO BE IMPLEMENTED (CHECK BOXES THAT APPLY OR ATTACH SWPPP)			
Temporary Soil Stabilization BMPs:		Temporary Sediment Control BMPs:	
<input type="checkbox"/> SS-1 Scheduling	<input type="checkbox"/> SS-7 Geotextiles, Plastic Covers & Erosion Control Blankets	<input type="checkbox"/> SC-1 Silt Fence	<input type="checkbox"/> SC-6 Gravel Bag Berm
<input type="checkbox"/> SS-2 Pres. of Existing Vegetation	<input type="checkbox"/> SS-8 Wood Mulching	<input type="checkbox"/> SC-2 Desilting Basin	<input type="checkbox"/> SC-7 Street Sweeping & Vacuuming
<input type="checkbox"/> SS-3 Hydraulic Mulch	<input type="checkbox"/> SS-9 Earth Dikes/Drainage Swales & Lined Ditches	<input type="checkbox"/> SC-3 Sediment Trap	<input type="checkbox"/> SC-8 Sandbag Barrier
<input type="checkbox"/> SS-4 Hydroseeding	<input type="checkbox"/> SS-10 Outlet Protection & Velocity Dissipation Devices	<input type="checkbox"/> SC-4 Check Dam	<input type="checkbox"/> SC-9 Straw Bale Barrier
<input type="checkbox"/> SS-5 Soil Binders	<input type="checkbox"/> SS-11 Slope Drains	<input type="checkbox"/> SC-5 Fiber Rolls	<input type="checkbox"/> SC-10 Storm Drain Inlet Protection
<input type="checkbox"/> SS-6 Straw Mulch			
<input type="checkbox"/> Wind Erosion Control BMPs	<input type="checkbox"/> Tracking Control BMPs	<input type="checkbox"/> Non-Storm Water Management BMPs	<input type="checkbox"/> Waste Mgmt. & Materials Pollution Control BMPs
USGS COORDINATES	NORTHING:	EASTING:	
TOTAL CONSTRUCTION AREA:	ACRES	HECTARES	TOTAL DISTURBED AREA:
			ACRES
			HECTARES
RECEIVING WATER NEAREST PROJECT SITE:	APPROXIMATE CLOSEST DISTANCE TO RECEIVING WATER?		

VI. CERTIFICATION

I certify under a 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, 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.

SIGNATURE	DATE
PRINT/TITLE NAME	TITLE

Attachment G

Program for Maintenance, Inspection, and Repair of Construction Site BMPs

INSTRUCTIONS

Use this form as an outline for the maintenance, inspection and repair program described in SWPPP Section 500.5.

Certain projects may require increased inspection frequencies. Refer to the project Special Provisions for additional requirements.

Inspection frequency and maintenance/repair program must be included for all BMPs selected for the project.

Include maintenance and inspections for both rainy and non-rainy seasons.

<i>The contractor shall use the following guidelines for maintenance, inspection, and repair of BMPs identified in the SWPPP</i>		
BEST MANAGEMENT PRACTICES (BMPs)	INSPECTION FREQUENCY (all controls)	MAINTENANCE/REPAIR PROGRAM
TEMPORARY SOIL STABILIZATION BMPs		
TEMPORARY SEDIMENT CONTROL BMPs		



<i>The contractor shall use the following guidelines for maintenance, inspection, and repair of BMPs identified in the SWPPP</i>		
BEST MANAGEMENT PRACTICES (BMPs)	INSPECTION FREQUENCY (all controls)	MAINTENANCE/REPAIR PROGRAM
WIND EROSION CONTROL BMPs		
TRACKING CONTROL BMPs		
NON-STORM WATER MANAGEMENT BMPs		
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs		



Attachment H

Storm Water Quality Construction Site Inspection Checklist

INSTRUCTIONS

Use this form for inspecting BMPs as described in SWPPP Section 500.5.

This inspection form shall be completed and signed by the Contractor's Water Pollution Control Manager (WPCM).

The Conceptual SWPPP (CSWPPP) or the Special Provisions may require the Contractor to use a different inspection form

The weather information shall be the best estimate of beginning of the storm event, duration of the event, time elapsed since the last storm, and approximate amount of rainfall.

List observations of all BMPs: temporary soil stabilization (erosion control), temporary sediment controls, wind erosion controls, tracking controls, non-storm water controls and waste management and materials pollution controls.

Evaluate BMPs for adequacy and proper implementation and whether additional BMPs are required in accordance with the terms of the Permits.

Verify implementation of non-storm water discharge BMPs and evaluate their effectiveness.

One time discharges of non-storm water shall be inspected when such discharges occur.

Describe any inadequate BMPs.

Note the corrective actions required, including any changes to the SWPPP, and implementation dates.

If you answer "No" to any of the questions, describe the corrective action(s) to be taken and when the corrective action(s) are to be completed. Should you need more space to describe corrective actions, identify your response numerically and use additional sheets as necessary.

GENERAL INFORMATION	
Project Name	
Caltrans Contract N ^o	
Contractor	
Inspector's Name	
Inspector's Title	
Signature	



GENERAL INFORMATION				
Date of Inspection				
Inspection Type (Check Applicable)	Prior to forecast rain	After a rain event		
	24-hr intervals during extended rain	Other _____		
Season (Check Applicable)	Rainy		Non-Rainy	
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (mm)	

PROJECT AREA SUMMARY AND DISTURBED SOIL AREA (DSA) SIZE LIMITS FROM SPECIAL PROVISIONS			
Total Project Area	_____ Hectares	_____ Acres	
Rainy Season DSA Limit	_____ Hectares	_____ Acres	
Field Estimate of Non-Active DSAs	_____ Hectares	_____ Acres	
Field Estimate of Active DSAs	_____ Hectares	_____ Acres	

OTHER REQUIREMENTS				
				Corrective Action
Preservation of Existing Vegetation				
Is temporary fencing provided to preserve vegetation in areas where no construction activity is planned?				
Location:				
Temporary Soil Stabilization				
Does the applied temporary soil stabilization provide 100% coverage for the required areas?				
Are any non-vegetated areas that may require temporary soil stabilization?				
Is the area where temporary soil stabilization required free from visible erosion?				



OTHER REQUIREMENTS				
				Corrective Action
Location:				
Temporary Linear Sediment Barriers				
Are temporary linear sediment barriers properly installed in accordance with the details, functional and maintained?				
Are temporary linear sediment barriers free of accumulated litter?				
Is the built-up sediment less than 1/3 the height of the barrier?				
Are cross barriers installed where necessary and properly spaced?				
Are fiber rolls installed and maintained on required slopes in accordance with the details, functional and maintained?				
Location:				
Storm Drain Inlet Protection				
Are storm drain inlets internal to the project properly protected with either Type 1, 2 or 3 inlet protection?				
Are storm drain inlet protection devices in working order and being properly maintained?				
Location:				
Desilting Basins				
Are basins maintained to provide the required retention/detention?				
Are basin controls (inlets, outlets, diversions, weirs, spillways, and racks) in working order?				
Location:				
Stockpiles				
Are all locations of temporary stockpiles, including soil, hazardous waste, and construction materials in approved areas?				
Are stockpiles protected from run-on, run-off from adjacent areas and from winds?				

OTHER REQUIREMENTS				
				Corrective Action
Are stockpiles located at least 15 m from concentrated flows, downstream drainage courses and storm drain inlets?				
Are required covers and/or perimeter controls in place?				
Location:				
Concentrated Flows				
Are concentrated flow paths free of visible erosion?				
Location:				
Tracking Control				
Are points of ingress/egress to public/private roads inspected, swept, and vacuumed daily?				
Are all paved areas free of visible sediment tracking or other particulate matter?				
Location:				
Wind Erosion Control				
Is dust control implemented in conformance with Section 10 of the Standard Specifications?				
Location:				
Dewatering Operations				
Is dewatering handled in conformance with the dewatering permit issued by the RWQCB?				
Is required treatment provided for dewatering effluent?				
Location:				
Vehicle & Equipment Fueling, Cleaning, and Maintenance				



OTHER REQUIREMENTS			
			Corrective Action
Are vehicle and equipment fueling, cleaning and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious material?			
Are vehicle and equipment fueling, cleaning and maintenance activities performed on an impermeable surface in dedicated areas?			
If no, are drip pans used?			
Are dedicated fueling, cleaning, and maintenance areas located at least 15 m away from downstream drainage facilities and watercourses, and protected from run-on and runoff?			
Is wash water contained for infiltration/ evaporation and disposed of outside the highway right of way?			
Is on-site cleaning limited to washing with water (no soap, soaps substitutes, solvents, or steam)?			
On each day of use, are vehicles and equipment inspected for leaks and if necessary, repaired?			
Location:			
Waste Management & Materials Pollution Control			
Are material storage areas and washout areas protected from run-on and runoff, and located at least 15 m from concentrated flows and downstream drainage facilities?			
Are all material handling and storage areas clean; organized; free of spills, leaks, or any other deleterious material; and stocked with appropriate clean-up supplies?			
Are liquid materials, hazardous materials, and hazardous wastes stored in temporary containment facilities?			
Are bagged and boxed materials stored on pallets?			
Are hazardous materials and wastes stored in appropriate, labeled containers?			
Are proper storage, clean-up, and spill-reporting procedures for hazardous materials and wastes posted in open, conspicuous and accessible locations adjacent to storage areas?			
Are temporary containment facilities free of spills and rainwater?			
Are temporary containment facilities and bagged/boxed materials covered?			
Are temporary concrete washout facilities designated and being used?			
Are temporary concrete washout facilities functional for receiving and containing concrete waste and are concrete residues prevented from entering the drainage system?			
Do temporary concrete washout facilities provide sufficient volume and freeboard for planned concrete operations?			
Are the temporary concrete washout facilities' PVC liners free from punctures and holes?			
Are concrete wastes, including residues from cutting and grinding, contained and disposed of off-site or in concrete washout facilities?			

OTHER REQUIREMENTS				
				Corrective Action
Are spills from mobile equipment fueling and maintenance properly contained and cleaned up?				
Is the site free of litter?				
Are trash receptacles provided in the Contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods?				
Is litter from work areas within the construction limits of the project site collected and placed in watertight dumpsters?				
Are waste management receptacles free of leaks?				
Are the contents of waste management receptacles properly protected from contact with storm water or from being dislodged by winds?				
Are waste management receptacles filled at or beyond capacity?				
Location:				
Temporary Water Body Crossing or Encroachment				
Are temporary water body crossings and encroachments constructed as shown on the plans or as approved by the engineer?				
Does the project conform to the requirements of the 404 permit and/or 1601 agreement?				
Location:				
Illicit Connection/Illegal Discharge Detection and Reporting				
Is there any evidence of illicit discharges or illegal dumping on the project site?				
If yes, has the Engineer been notified?				
Location:				
Discharge Points				
Are discharge points and discharge flows free from noticeable pollutants?				
Are discharge points free of any significant erosion or sediment transport?				
Location:				
Location:				
Location:				



OTHER REQUIREMENTS				
				Corrective Action
Location:				
WPCP/SWPPP Update				
Do the WPCP/SWPPP, Project Schedule/Water Pollution Control Schedule and WPCDs adequately reflect the current site conditions and contractor operations?				
Are all BMPs shown on the WPCDs installed in the proper location(s) and according to the details for the plan?				
Location:				
General				
Are there any other potential water pollution control concerns at the site?				
Location:				
Storm Water Monitoring				
Does storm water discharge directly to an water body listed as impaired for sediment/sedimentation or turbidity in the General Construction Activity Permit?				
If yes, were samples for sediment/sedimentation or turbidity collected pursuant to the sampling and analysis plan, if required, during rain events?				
Were there any BMPs not properly implemented, or breaches, malfunctions, leakages or spills observed, which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				
Were soil amendments (e.g., gypsum) used on the project?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				
Did storm water contact stored materials or waste and resulted in a discharge from the construction site? (Materials not in watertight containers, etc.)				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				

Attachment I

Trained Contractor Personnel Log

INSTRUCTIONS

Use this sheet to record individuals attending formal training programs specified in section 500.7 of the SWPPP. This form may also be used to record informal tailgate on-site meetings on storm water management.

Storm Water Management Training Log

Project Name: _____

Caltrans Contract Number: _____

Storm Water Management Topic: (check as appropriate)

Temporary Soil Stabilization

Temporary Sediment Control

Wind Erosion Control

Tracking Control

Non-storm water management

Waste Management and Materials Pollution Control

Storm Water Sampling

Specific Training Objective: _____

Location: _____

Date: _____

Instructor: _____

Telephone: _____

Course Length (hours): _____

Attendee Roster (attach additional forms if necessary)

Name	Company	Phone



Attachment I
Trained Contractor Personnel Log Sheet

Name	Company	Phone

COMMENTS:

Attachment J

Subcontractor Notification Letter (Sample) and Notification Log

INSTRUCTIONS

Use this sample to prepare the subcontractor letter and log required in Section 500.8 of the SWPPP.

SWPPP Notification

ABC Construction Inc,
123 Sunset Blvd., Suite 456
Hollywood, CA 90000

Dear Sir/Madam,

Please be advised that the California State Water Resources Control Board has adopted the NPDES Statewide Storm Water Permit (Permit) to the State of California, Department of Transportation (Caltrans) in 1999 (CAS000003, Order No. 99-06-DWQ); and the General Permit (General Permit) for Storm Water Discharges Associated with Construction Activity (CAS000002, Order No. 99-08-DWQ), and modifications thereto. The goal of these permits is prevent the discharge of pollutants associated with construction activity from entering the storm drain system, ground and surface waters.

[Contractor] has developed a Storm Water Pollution Prevention Plan (SWPPP) in order to implement the requirements of the Permits.

As a subcontractor, you are required to comply with the SWPPP and the Permits for any work that you perform on site. Any person or group who violates any condition of the Permits may be subject to substantial penalties in accordance with state and federal law. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP and the Permits. A copy of the Permits and the SWPPP are available for your review at the construction office. Please contact me if you have further questions.

Sincerely,

John Doe
Project Superintendent



Attachment K

Notice of Discharge, Written Notice, or Order

INSTRUCTIONS

This form will be used to report instances of discharges. The completed form will be submitted to the Resident Engineer within 7 days, or as specified by the Special Provisions, of the assessment of discharge, written notice or orders from a regulatory agency.

It is recommended that photographs (before and after the discharge) are also submitted with this report.

Note that number of days is 3 for District 11.

To: Name of Caltrans Resident Engineer

Date: Insert Date

Subject: Notice of Discharge

Project Name: Insert Project Name

Caltrans Contract Number: contract number

In accordance with the Caltrans NPDES Statewide Permit for Storm Water Discharges Associated with Construction Activity, the following instance of discharge is noted:

Date, time, and location of discharge

Insert description and date of event

Nature of the operation that caused the discharge

Insert description of operation

Initial assessment of any impact cause by the discharge

Insert assessment

Existing BMP(s) in place prior to discharge event

List BMPs in place

Date of deployment and type of BMPs deployed after the discharge.

BMPs deployed after the discharge (with dates)



Steps taken or planned to reduce, eliminate and/or prevent recurrence of the discharge

Insert steps taken to prevent recurrence

Implementation and maintenance schedule for any affected BMPs

Insert implementation and maintenance schedule

If further information or a modification to the above schedule is required, notify the contact person below.

Name of Contact Person

Title

Company

Telephone Number

Signature

Date



Attachment L

Storm Water Pollution Prevention Plan (SWPPP) and Monitoring Program Checklist

FOR CALTRANS CONSTRUCTION ACTIVITIES

INSTRUCTIONS

This form provides a checklist of all items that shall be included in the SWPPP.

The checklist shall be completed by the contractor to ensure that all required elements of the SWPPP have been addressed.

The completed SWPPP Checklist shall be included as Appendix L of the final SWPPP.

CONSTRUCTION PROJECT: _____

CONTRACTOR: _____

CONTRACT NO: _____

SECTION A: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
	100	SWPPP Certification and Approval	C.10	
	100.1	SWPPP Certification	C.10	
	100.2	SWPPP Approval	C.10	
	200	SWPPP Amendments	A.4.a, A.16	
	200.1	Amendment number and date entered into SWPPP – Amendment Log	A.4.a, A.16	
	200.2	Amendment Certification and Approval	A.4.a, A.16	
	300	Introduction/Project Description	A.5	
	300.1	Project Description and Location (narrative)	A.5.a.1	
	300.2	Unique Site Features (narrative)	A.5.a.1	
	300.4	Project Schedule/Water Pollution Control Schedule (narrative or graphical)	A.5.c.5	



SECTION A: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
	400	References	A.14	
	500.2	Vicinity Map (narrative or graphic)	A.5.a.1	
	500.2	Site perimeter	A.5.a.1	
	500.2	Geographic Features	A.5.a.1	
	500.2	General topography	A.5.a.1	
	500.4	Water Pollution Control Drawings (WPCDs) (graphic or narrative)	A.5.a.2	
	500.4	Site perimeter	A.5.a.2	
	500.4	Existing and proposed buildings, lots, and roadways	A.5.a.2	
	500.4	Storm water collection and discharge points	A.5.a.2	
	500.4	General topography before and after construction	A.5.a.2	
	500.4	Anticipated discharge location(s)	A.5.a.2	
	500.4	Drainage patterns including the entire relevant drainage areas	A.5.a.2	
	500.4	Temporary on-site drainage(s)	A.5.a.2	
	500.3	Pollutant Source and BMP Identification (narrate/ or indicate on site map)	A.5.b	
		Drainage	A.5.b.1	
	500.4	Drainage patterns after major grading	A.5.b.1	
	500.4	Slopes after major grading	A.5.b.1	
	Attach. E	Calculations for storm water run-on	A.5.b.1	
	500.4	BMPs that divert off-site drainage from passing through site	A.5.b.1	
	500.4	Storm Water Inlets	A.5.b.2	
	500.4	Drainage patterns to storm water inlets or receiving water	A.5.b.2	
	500.4	BMPs that protect storm water inlets or receiving water	A.5.b.2	
		Site History (narrative; if possible, indicate location(s) on the Water Pollution Control Drawings)	A.5.b	
	500.3.3	Nature of fill material and data describing the soil. Description of toxic materials treated, stored, disposed, spilled or leaked on site	A.5.b.3	
	500.3.8 & 500.3.9	BMPs that minimize contact of contaminants with storm water	A.5.b.3	
		Location of Areas Designated for:	A.5.b.4	
	500.3.8 & 500.4	Vehicle storage & service	A.5.b.4	
	500.3.8 & 500.4	Equipment storage, cleaning, maintenance	A.5.b.4	
	500.3.9 & 500.4	Soil or waste storage	A.5.b.4	



SECTION A: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
	500.3.9 & 500.4	Construction material loading, unloading, storage and access	A.5.b.4	
	500.3.8 & 500.3.9	Areas outside of Owners right-of-way (yards, borrow areas, etc.)	A.5.b.5	
		<i>BMP Locations or Descriptions for:</i>	A.5.b.5	
	500.3.9 & 500.4	Waste handling and disposal areas	A.5.b.5	
	500.3.9 & 500.4	On-site storage and disposal of construction materials and waste	A.5.b.5	
	500.3.8, 500.3.9 & 500.4	Minimum exposure of storm water to construction materials, equipment, vehicles, waste	A.5.b.5	
	500.6	<i>Post Construction BMPs</i>	A.5.b.6	
	500.6.1	Listing or Description of Post-construction BMPs	A.5.b.6	
	500.4	Location of post-construction BMPs	A.5.b.6	
	500.6.2	Parties responsible for long-term maintenance	A.5.b.6	
		<i>Additional Information</i>	A.5.c	
	500.3.1	Description of other pollutant sources and BMPs	A.5.c.1	
	500.3.2	Pre-construction control practices	A.5.c.1	
	500.3.1	Inventory of materials and activities that may pollute storm water	A.5.c.2	
	500.3.8 & 500.3.9	BMPs to reduce/eliminate potential pollutants listed in the inventory	A.5.c.2	
	300.4	Runoff coefficient (before & after)	A.5.c.3	
	300.4	Percent impervious (before & after)	A.5.c.3	
	Attach. F	Copy of the NOC	A.5.c.4	
	300.3	Construction activity schedule	A.5.c.5	
	300.5	Contact information	A.5.c.6	
	500.4.1	SOIL STABILIZATION (EROSION CONTROL)	A.6	
		<i>The SWPPP shall include:</i>	A.6.a-c	
	500.4	Areas of vegetation on site	A.6.a.1	
	500.4	Areas of soil disturbance that will be stabilized during rainy season	A.6.a.2	
	500.4	Areas of soil disturbance which will be exposed during any part of the rainy season	A.6.a.3	
	300.4	Implementation schedule for erosion control measures	A.6.a.4	
	500.3.4	BMPs for erosion control	A.6.b	
	500.3.7	BMPs to control wind erosion	A.6.c	
	500.3.5	SEDIMENT CONTROL	A.8	



SECTION A: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
	500.3.5 & 500.4	Description/Illustration of BMPs to prevent increase of sediment load in discharge	A.8	
	300.4, 500.3.5	Implementation schedule for sediment control measures	A.8	
	500.3.6	BMPs to control sediment tracking	A.8	
	500.3.8 & 500.3.9	NON-STORM WATER MANAGEMENT	A.9	
	500.3.8 & 500.3.9	Description of non-storm water discharges to receiving waters	A.9	
	500.3.8 & 500.3.9	Locations of discharges	A.9	
	500.3.8 & 500.3.9	Description of BMPs	A.9	
	300.5	Name and phone number of person responsible for non-storm water management	A.9	
	500.6	POST-CONSTRUCTION	A.10	
	500.6.1	Description of post-construction BMPs	A.10	
	500.6.2	Operation/Maintenance of BMPs after project completion (including short-term funding, long-term funding and responsible party)	A.10	
	500.5	MAINTENANCE, INSPECTIONS, AND REPAIR	A.11	
	300.5, 600.1	Name and phone number of person(s) responsible for inspections	A.11	
	600.1, Attach. H	Complete inspection checklist: date, weather, inadequate BMPs, visual observations of BMPs, corrective action, inspector's name, title, signature	A.11.a-f	
		OTHER REQUIREMENTS	A.12-16	
	500.7	Documentation of all training	A.12	
	500.8	List of Contractors/Subcontractors	A.13	



SECTION B: MONITORING AND REPORTING REQUIREMENTS				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
	600.1	Description of Site Inspection Plans	B.3	
	100.3	Compliance certification (annually 6/15)	B.4	
	600.2	Discharge reporting	B.5	
	600.3	Keep records of all inspections, compliance certifications, and noncompliance reports on site for a period of at least three years	B.6	
	600.4	Sampling and Analysis Plan for Sediment	B.7	
	600.5	Sampling and Analysis Plan for Non-Visible Pollutants	B.8	

SECTION C: STANDARD PROVISIONS FOR CONSTRUCTION ACTIVITIES				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
	100.1	Signed SWPPP Certification	C.9,10	

CALTRANS NPDES PERMIT No. CAS000003 REQUIREMENTS				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	CALTRANS PERMIT REF.	COMMENTS
	500.3 & 500.4	SWPPP references and/or includes permanent and temporary BMPs	H.1.b	
	100 – 600	SWPPP contains all elements required in the State General Permit. CAS000002	H.2.b	
	100.1 & Attach. F	SWPPP limits application, generation, & migration of toxic substances	H.6	
	500.3.4 & 500.3.5	Implementation of adequate Erosion and Sediment Controls after construction	H.7	
	100.1 & Attach. F	Copy of the Notification of Construction (NOC)	H.8.a	
	500.3.8	SWPPP contains BMPs for mobile operations (material production or recycling operations) including AC recycling, PCC Recycling, Concrete Mixing, Crushing, & storage of materials that are established by the contractor on the construction site or on other property specifically arranged for by Caltrans.	H.8.b	
	500.4	SWPPP applies to all areas that are directly related to construction including but not limited to staging & storage yards, material borrow areas, or access roads whether or not they reside in CT R/W.	H.8.b	

CALTRANS NPDES PERMIT No. CAS000003 REQUIREMENTS				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	CALTRANS PERMIT REF.	COMMENTS
	500.3.8	The SWPPP contains RWQCB WDR requirements for projects that reuse Aerially Deposited Lead. (Applicable only for projects that reuse ADL soils.)	H.9	



Attachment M

Annual Certification of Compliance Form

INSTRUCTIONS

By June 15th of each year, the Contractor shall complete and submit this form to the Resident Engineer for approval as required in Section 100.3 of the SWPPP. Annual certification of compliance is based on the site inspections required in the SWPPP.

Completed and signed Annual Certifications and Approvals shall be included in Section 100.3 of the SWPPP following the required text of the section.

This Annual Certification of Compliance form does not need to be completed at the initial approval, but it shall be submitted during the first year of the initial SWPPP approval.

Annual Certification of Compliance for the Construction Contractor

Project Name: _____

Caltrans Contract Number: _____

Contractor Company Name: _____

Contractor Address: _____

Construction Start Date: _____ **Completion Date:** _____

Description of Work:

description of work

Work Now in Progress:

work in progress

Work Planned for Next 12 Months:

work planned

"I certify under penalty of law that this SWPPP 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. Further, I certify that this SWPPP conforms to the requirements set forth in the Special Provisions, the Caltrans SWPPP/WPCP Preparation Manual, the Construction Site Best Management Practices Manual, and the Standard Specifications Section 7-1.01G – Water Pollution. 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."

Contractor Signature: _____

Date: _____



Approval by the Resident Engineer for the Annual Certification of Compliance

Resident Engineer's Findings

I, and/or personnel acting under my direction and supervision, have inspected the project site and the work described above and find as follows:

1. YES NO Storm water pollution control measures are being implemented in accordance with the SWPPP approved for the project.

2. YES NO The project site and activities thereon are in compliance with the Caltrans Statewide NPDES Permit No. CAS000003, the NPDES General Permit No. CAS000002, or local NPDES permits, which ever is applicable.

When both 1 and 2 above are checked "yes", the resident engineer must complete the annual certification below.

If either 1 or 2 above are checked "no", the resident engineer must:

File a notice of non-compliance within 30 days of identification of the noncompliance;
Document follow up actions below;
Notify the contractor; and
Initiate corrective actions in accordance with the contract.

Resident Engineer's Follow up Actions:

I, and or personnel acting under my direction and supervision, have reviewed this SWPPP and find that it conforms to the requirements set forth in the Special Provisions, the SWPPP/WPCP Preparation Manual, the Construction Site Best Management Practices Manual, and the Standard Specifications Section 7-1.01G – Water Pollution. However, the Contractor remains responsible and liable at all times for compliance with applicable requirements for which compliance is ultimately determined by the Regional Water Quality Control Board and/or the State Water Resources Control Board, and/or the EPA.

CERTIFICATION BY CALTRANS

Resident Engineer's Name and Signature

Date



Attachment N

Other Plans and Permits

INSTRUCTIONS

Include in this attachment a copy of the Caltrans Statewide Permit CAS000003.

Include in this attachment a copy of the General Construction Permit CAS000002

Also include copies of other local, state, and federal plans and permits page. List of other plans and permits shall be included in Section 500.9 of the SWPPP.



Attachment O

Water Pollution Control Cost Breakdown

INSTRUCTIONS

The following Water Pollution Control Cost Breakdown shall be used as the basis for estimating the lump sum item for "Water Pollution Control." Modify the table as follows:

Caution: Do not use "Strike and Hide" to eliminate rows; delete rows. Do not "underline" text in the table.

If a Temporary Water Pollution Control Practice is included as a separate bid item, such as Temporary Silt Fence, delete that Item from the table as it is not to be duplicated in the cost break down.

For all Items in the table, delete those that are not applicable for water pollution control for the specific project as per the Construction Site BMPs Manual. The Contractor will select from among the remaining Items per the "Construction Site BMPs Consideration Checklist" in the Preparation Manual and designate an Estimated Quantity, Value, and Amount for each Item selected on the cost break down submitted with the SWPPP.

Project Name: _____

Caltrans Contract Number: _____

ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	VALUE	AMOUNT
SS-3	Hydraulic Mulch	M ²			
SS-4	Hydroseeding	M ²			
SS-5	Soil Binders	M ²			
SS-6	Straw Mulch	M ²			
SS-7	Geotextiles	M ²			
SS-7	Plastic Covers	M ²			
SS-7	Erosion Control Blankets/Mats				
SS-8	Wood Mulching	M ²			
SS-9	Earth Dikes/Drainage Swales & Lined Ditches	M			
SS-10	Outlet Protection/Velocity Dissipation Devices	EA			
SS-11	Slope Drains	EA			
SC-1	Silt Fence	M			
SC-2	Desilting Basin	EA			



Attachment O
Water Pollution Control Cost Breakdown

ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	VALUE	AMOUNT
SC-3	Sediment Trap	EA			
SC-4	Check Dam	EA			
SC-5	Fiber Rolls	M			
SC-6	Gravel Bag Berm	M			
SC-7	Street Sweeping and Vacuuming	LS			
SC-8	Sandbag Barrier	M			
SC-9	Straw Bale Barrier	M			
SC-10	Storm Drain Inlet Protection – Type 1	EA			
SC-10	Storm Drain Inlet Protection – Type 2	EA			
SC-10	Storm Drain Inlet Protection – Type 3	EA			
WE-1	Wind Erosion Control	LS			
TC-1	Stabilized Construction Entrance/Exit	EA			
TC-2	Stabilized Construction Roadway	EA			
TC-3	Entrance/Outlet Tire Wash	EA			
NS-1	Water Conservation Practices	LS			
NS-2	Dewatering Operations	EA			
NS-3	Paving and Grinding Operations	LS			
NS-4	Temporary Stream Crossing	EA			
NS-5	Clear Water Diversion	EA			
NS-6	Illicit Connection/Illegal Discharge Detection and Reporting	LS			
NS-7	Potable Water/Irrigation	LS			
NS-8	Vehicle and Equipment Cleaning	LS			
NS-9	Vehicle and Equipment Fueling	LS			
NS-10	Vehicle and Equipment Maintenance	LS			
NS-11	Pile Driving Operations	LS			
NS-12	Concrete Curing	LS			
NS-13	Material and Equipment Use Over Water	LS			
NS-14	Concrete Finishing	LS			
NS-15	Structure Demolition/Removal	LS			
NS-16	Streambank Protection	LS			
WM-1	Material Delivery and Storage	LS			
WM-2	Material Use	LS			

ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	VALUE	AMOUNT
WM-3	Stockpile Management	LS			
WM-4	Spill Prevention and Control	LS			
WM-5	Solid Waste Management	LS			
WM-6	Hazardous Waste Management	LS			
WM-7	Contaminated Soil Management	LS			
WM-8	Concrete Waste Management	LS			
WM-9	Sanitary/Septic Waste Management	LS			
WM-10	Liquid Waste Management	LS			
			TOTAL		



Attachment P

Notice of Completion of Construction

INSTRUCTIONS

The Notice of Completion of Construction will be inserted by Caltrans at the end of the project.



Attachment Q

BMPs Selected for the Project

INSTRUCTIONS

Insert copies of BMPs from the Caltrans *Construction Site Best Management Practices (BMPs) Manual* selected for this project after this page, or reference copies available in onsite BMPs Manual.



Attachment R

Sample Activity Log

INSTRUCTIONS

Use this form to log sampling activities.

RAIN EVENT GENERAL INFORMATION				
Project Name				
Caltrans Contract N°				
Contractor				
Sampler's Name				
Signature				
Date of Sampling				
Season (Check Applicable)	Rainy		Non-Rainy	
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (mm)	

For rainfall information: <http://cdec.water.ca.gov/weather.html> or <http://www.wrh.noaa.gov/wrhg/nwspage.html>

SAMPLE LOG		
Sample Identification	Sample Location	Sample Collection Date and Time

Specific sample locations descriptions may include: 30m upstream from discharge at eastern boundary, runoff from northern waste storage area, downgradient of inlet 57 at kilometer post 36, etc.

FIELD ANALYSIS		
	Yes	No
Sample Identification	Test	Result



Attachment S

Pollutant Testing Guidance Table

INSTRUCTIONS

The following Table will be updated periodically as more information becomes available.



Attachment S
Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory	
Asphalt Products (Sections 37, 39, 92, 93, 94, and Special Provisions)	Hot Asphalt	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required	Visually Observable - No Testing Required	Visually Observable - No Testing Required	
	Asphalt Emulsion					
	Liquid Asphalt (tack coat)					
	Cold Mix					
	Crumb Rubber	Yes – Black, solid material	Visually Observable - No Testing Required	Visually Observable - No Testing Required	Visually Observable - No Testing Required	
	Asphalt Concrete (Any Type)	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required	Visually Observable - No Testing Required	Visually Observable - No Testing Required	
Cleaning Products	Acids	No	Anions (acetic acid, phosphoric acid, sulfuric acid, nitric acid, hydrogen chloride)	pH Meter Acidity Test Kit	EPA 150.1 (pH)	
					SM 2310B (Acidity)	
					EPA 300.0 (Anion)	
	Bleaches	No	Residual Chlorine	Chlorine	SM 4500-CL G (Res. Chlorine)	
	Detergents	Yes - Foam	Visually Observable - No Testing Required			
	TSP	No	Phosphate	Phosphate	EPA 365.3 (Phosphate)	
	Solvents	No	No	VOC	None	EPA 601/602 or EPA 624 (VOC)
SVOC						None



Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory	
Portland Concrete Cement & Masonry Products (Section 27, 28, 29, 40, 41, 42, 49, 50, 51, 53, 63, 65, 72, 73, 80, 81, 83, 90, and Special Provisions)	Portland Cement (PCC)	Yes - Milky Liquid	Visually Observable - No Testing Required			
	Masonry products	No	pH Alkalinity	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH) SM 2320 (Alkalinity)	
	Sealant (Methyl Methacrylate - MMA)	No	Methyl Methacrylate Cobalt Zinc	None	EPA 625 (SVOC) EPA 200.8 (Metal)	
	Incinerator Bottom Ash Bottom Ash Steel Slag Foundry Sand Fly Ash Municipal Solid Waste	No	Aluminum Calcium Vanadium Zinc	Calcium Test	EPA 200.8 (Metal) EPA 200.7 (Calcium)	
	Mortar	Yes - Milky Liquid	Visually Observable - No Testing Required			
	Concrete Rinse Water	Yes - Milky Liquid	Visually Observable - No Testing Required			
	Non-Pigmented Curing Compounds		No	Acidity	pH Meter Alkalinity or Acidity Test Kit	SM 2310B (Acidity)
				Alkalinity		SM 2320 (Alkalinity)
				pH		EPA 150.1 (pH)
				VOC		EPA 601/602 or EPA 624 (VOC)
				SVOC		EPA 625 (SVOC)

Attachment S
Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory	
Landscaping and Other Products (Section 20, 24, and Special Provisions)	Aluminum Sulfate	No	Aluminum	TDS Meter Sulfate	EPA 200.8 (Metal)	
			TDS		EPA 160.1 (TDS)	
			Sulfate		EPA 300.0 (Sulfate)	
	Sulfur-Elemental	No	Sulfate	Sulfate	EPA 300.0 (Sulfate)	
			Nitrate	Nitrate	EPA 300.0 (Nitrate)	
			Phosphate	Phosphate	EPA 365.3 (Phosphate)	
	Fertilizers-Inorganic ⁴	No	Organic Nitrogen	None	None	EPA 351.3 (TKN)
			Potassium	None	None	EPA 200.8 (Metal)
			TOC	None	None	EPA 415.1 (TOC)
			Nitrate	Nitrate	EPA 300.0 (Nitrate)	
	Fertilizers-Organic	No	Organic Nitrogen	Nitrate	Nitrate	EPA 351.3 (TKN)
			COD	None	None	EPA 410.4 (COD)
Herbicide			None	Check lab for specific herbicide or pesticide		
Pesticide						
Natural Earth (Sand, Gravel, and Topsoil)	Yes - Cloudiness and turbidity	Visually Observable - No Testing Required				
		Herbicide	None	Check lab for specific herbicide or pesticide		
		Pesticide				
Lime	No	Alkalinity	pH Meter Alkalinity or Acidity Test Kit	SM 2320 (Alkalinity)		
		pH	None	EPA 150.1 (pH)		



Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
Painting Products (Section 12-3.08, 20-2.32, 50-1.05, 59, 91, and Special Provisions)	Paint	Yes	Visually Observable - No Testing Required		
	Paint Strippers	No	VOC	None	EPA 601/602 or EPA 624 (VOC)
			SVOC	None	EPA 625 (SVOC)
	Resins	No	COD	None	EPA 410.4 (COD)
			SVOC		EPA 625 (SVOC)
	Sealants	No	COD	None	EPA 410.4 (COD)
	Solvents	No	COD	None	EPA 410.4 (COD)
			VOC		EPA 601/602 or EPA 624 (VOC)
			SVOC		EPA 625 (SVOC)
	Lacquers, Varnish, Enamels, and Turpentine	No	COD	None	EPA 410.4 (COD)
			VOC		EPA 601/602 or EPA 624 (VOC)
			SVOC		EPA 625 (SVOC)
Thinners	No	VOC	None	EPA 601/602 or EPA 624 (VOC)	
		COD		EPA 410.4 (COD)	
Portable Toilet Waste Products	Portable Toilet Waste	Yes	Visually Observable - No Testing Required	None	EPA 601/602 or EPA 624 (VOC) EPA 410.4 (COD)

Attachment S
Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²		Suggested Analyses Field ³	Laboratory
			Lead	None		
Contaminated Soil ⁵	Aerially Deposited Lead ³	No	Visually Observable - No Testing Required		None	EPA 200.8 (Metal)
	Petroleum	Yes – Rainbow Surface Sheen and Odor	Visually Observable - No Testing Required		None	EPA 410.4 (COD)
	Mining or Industrial Waste, etc.		Contaminant Specific	Contaminant Specific – Check with laboratory	Contaminant Specific – Check with laboratory	
Line Flushing Products	Chlorinated Water	No	Total chlorine	Chlorine	SM 4500-CL G (Res. Chlorine)	
		Adhesives	COD	None	EPA 410.4 (COD)	
Phenols	Phenol		EPA 420.1 (Phenol)			
SVOC	None		EPA 625 (SVOC)			
Dust Palliative Products (Section 18)	Salts (Magnesium Chloride, Calcium Chloride, and Natural Brines)	No	Chloride	Chloride	EPA 300.0 (Chloride)	
			TDS	TDS Meter	EPA 160.1 (TDS)	
			Cations (Sodium, Magnesium, Calcium)	None	EPA 200.7 (Cations)	
			Visually Observable - No Testing Required			
Vehicle	Antifreeze and Other Vehicle Fluids	Yes - Colored Liquid	Visually Observable - No Testing Required		None	EPA 300.0 (Sulfate)
			Sulfuric Acid	None	EPA 200.8 (Metal)	
	Batteries	No	Visually Observable - No Testing Required		None	EPA 150.1 (pH)
			pH	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH)	
Fuels, Oils, Lubricants		Yes - Rainbow Surface Sheen and Odor	Visually Observable - No Testing Required			



Attachment S
Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
Soil Amendment/Stabilization Products	Polymer/Copolymer ^{6,7}	No	Organic Nitrogen	None	EPA 351.3 (TKN)
			BOD	None	EPA 405.1 (BOD)
			COD	None	EPA 410.4 (COD)
			DOC	None	EPA 415.1 (DOC)
			Nitrate	Nitrate	EPA 300.0 (Nitrate)
			Sulfate	Sulfate	EPA 300.0 (Sulfate)
			Nickel	None	EPA 200.8 (Metal)
	Straw/Mulch	Yes - Solids	Visually Observable - No Testing Required		
	Lignin Sulfonate	No	Alkalinity	Alkalinity	SM 2320 (Alkalinity)
	Psyllium	No	TDS	TDS Meter	EPA 160.1 (TDS)
			COD	None	EPA 410.4 (COD)
	Guar/Plant Gums	No	TOC	None	EPA 415.1 (TOC)
			COD	None	EPA 410.4 (COD)
			TOC	None	EPA 415.1 (TOC)
	Gypsum	No	Nickel	None	EPA 200.8 (Metal)
			pH	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH)
			Calcium	Calcium	EPA 200.7 (Calcium)
Sulfate			Sulfate	EPA 300.0 (Sulfate)	
Aluminum					
Barium					
Manganese			None	EPA 200.8 (Metal)	
Vanadium					



Attachment S
Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
Treated Wood Products (Section 58, 80-3.01B(2), and Special Provisions)	Ammoniacal-Copper-Zinc-Arsenate (ACZA) Copper-Chromium-Arsenic (CCA) Ammoniacal-Copper-Arsenate (ACA) Copper Naphthenate	No	Arsenic	Total Chromium	EPA 200.8 (Metal)
			Total Chromium		
			Copper		
	Creosote	Yes - Rainbow Surface or Brown Suspension	Zinc		
			Visually Observable - No Testing Required		

Notes:

- 1 If specific pollutant is known, analyze only for that specific pollutant. See MSDS to verify.
- 2 For each construction material, test for one of the pollutant indicators. Bolded pollutant indicates lowest analysis cost or best indicator. However, the composition of the specific construction material, if known, is the first criterion for selecting which analysis to use.
- 3 See www.hach.com, www.lamotte.com, www.ysi.com and www.chemetrics.com for some of the test kits
4. If the type of inorganic fertilizer is unknown, analyze for all pollutant indicators listed.
5. Only if special handling requirements are required in the Standard Special Provisions for aerially deposited lead (ADL)
6. If used with a dye or fiber matrix, it is considered visually observable and no testing is required.
7. Based upon research conducted by Caltrans, the following copolymers/polymers do not discharge pollutants and water quality sampling and analysis is **not** required: Super Tak™, M-Binder™, Fish Stik™, Pro40dc™, Fisch-Bond™, and Soil Master WR™.



Acronyms:

BOD – Biochemical Oxygen Demand
COD – Chemical Oxygen Demand
DOC – Dissolved Organic Carbon
EPA – Environmental Protection Agency
HACH – Worldwide company that provides advanced analytical systems and technical support for water quality testing.
SM – Standard Method
SVOC – Semi-Volatile Organic Compounds
TDS – Total Dissolved Solids
TKN – Total Kjeldahl Nitrogen
TOC – Total Organic Carbon
TSP – Tri-Sodium Phosphate
VOC - Volatile Organic Compounds

References:

Construction Storm Water Sampling and Analysis Guidance Document, California Stormwater Quality Task Force, October 2001.
Environmental Impact of Construction and Repair Materials on Surface and Ground Waters, Report 448, National Cooperative Highway Research Program, 2001
Soil Stabilization for Temporary Slopes, Environmental Programs, California Department of Transportation, October 1, 1999.
Statewide Storm Water Management Plan, Division of Environmental Programs, California Department of Transportation, April 2002.
Statewide Storm Water Quality Practice Guidelines, Environmental Program, California Department of Transportation, August 2000.
Soil Stabilization for Temporary Slopes and District 7 Erosion Control Pilot Study, June 2000.
Stormwater Monitoring Protocols, Guidance Manual, California Department of Transportation, May 2000.

Attachment T

Sampling Data Reporting Form

INSTRUCTIONS

This reporting form shall be submitted electronically to the RE and/or another person designated by Caltrans. Copies of all reporting forms shall be kept in the SWPPP.

The contractor shall sign and certify all sampling data reporting forms.

REQUIRED TEXT:

"I certify under a 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, 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."

Contractor's Signature

Date

Contractor's Name and Title

Contractor's Telephone Number



Appendix B

Abbreviations, Acronyms, and Definition of Terms

Abbreviations

ac	acre(s)
cfs	cubic feet per second
cy	cubic yard(s)
ft	feet
gal	gallon(s)
gpm	gallons per minute
ha	hectare(s)
hr	hour(s)
in	inch(es)
kg	kilogram(s)
l	liter(s)
lbs	pound(s)
lf	linear feet
m	meter(s)
m ²	square meter(s)
m ³	cubic meter(s)
m ³ /s	cubic meters per second
mm	millimeter(s)
mph	miles per hour
psi	pounds per square inch
s	second(s)

Acronyms

AC	Asphalt Concrete
CFR	Code of Federal Regulations
CSWPPP	Conceptual Storm Water Pollution Prevention Plan
CWA	Clean Water Act
DSA	Disturbed Soil Area
EPA	Environmental Protection Agency (US EPA)
NPDES	National Pollutant Discharge Elimination System
NOC	Notification of Construction
PCC	Portland Cement Concrete
RE	Resident Engineer
RWQCB	California Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
US EPA	United States Environmental Protection Agency
USGS	United States Geological Service
WDR	Waste Discharge Requirement
WPCM	Water Pollution Control Manager
WPCP	Water Pollution Control Program



Definition of Terms

Active Construction Area: The area where the contractor intends to be actively involved in soil disturbing work during the ensuing 21 day period during the rainy season. This may include areas where soils have been disturbed as well as areas where soil disturbance has not yet occurred.

Best Management Practice (BMP): Any program, technology, process, siting criteria, operating method, measure, or device that controls, prevents, removes, or reduces pollution.

Construction Activity: Includes clearing, grading, or excavation and contractor activities that result in soil disturbance.

Construction Site: The area involved in a construction project as a whole.

Construction Site BMPs: Temporary control practices (BMPs) that are required only temporarily to address a short-term storm water contamination threat. For example, silt fences are located near the base of newly graded slopes that have a substantial area of exposed soil. Then, during rainfall, the silt fences filter and collect sediment from runoff flowing off the slope.

Contamination: An impairment of the quality of the waters of the state by waste to a degree that creates a hazard to the public health through poisoning or through the spread of disease including any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.

Contractor: Party responsible for carrying out the contract per plans and specifications. The Standard Specifications and Special Provisions contain storm water protection requirements the contractor must address.

Discharge: Any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid or solid substance.

Disturbed Areas: Areas that have been purposefully cleared, grubbed, excavated, or graded by the contractor; ground surface that has been disrupted by construction activities, including construction access/roads, producing significant areas of exposed soil and soil piles. Staging and storage sites are considered as part of the total disturbed land area, if they are located on erodible soil within state right-of-way.

Environmental Protection Agency (EPA): Agency that issued the regulations to control pollutants in storm water runoff discharges (The Clean Water Act and NPDES permit requirements).

Erosion: The wearing away of land surface primarily by wind or water. Erosion occurs naturally as a result of weather or runoff but can be intensified by clearing, grading, or excavation of the land surface.

Exempt Construction Activities: Activities exempt from the General Permit, including routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the

facility; and emergency construction activities required to protect public health and safety. Local permits may not exempt these activities.

Existing vegetation: Any vegetated area that has not already been cleared and grubbed.

Fair Weather Prediction: When there is no precipitation in the forecast between the current calendar day and the next working day. The National Weather Service NOAA Weather Radio forecast shall be used. The contractor may propose an alternative forecast for use if approved by the Engineer.

Feasible: Economically achievable or cost-effective measures which reflect a reasonable degree of pollutant reduction achievable through the application of available nonpoint pollution control practices, technologies, processes, site criteria, operating methods, or other alternatives.

General Permit: The General Permit for Storm Water Discharges Associated with Construction Activity (NPDES Permit CAS000002) and modifications there to issued by the State Water Resources Control Board.

Good Housekeeping: A common practice related to the storage, use, or cleanup of materials, performed in a manner that minimizes the discharge of pollutants.

Local permit: An NPDES storm water permit issued to a District by the RWQCB having jurisdiction over the job site. Requirements of the local permit are generally similar to, but supersede the requirements of the General Permit. The District Storm Water Coordinator should be consulted to identify and to incorporate variances between the local permit and General Permit.

National Pollutant Discharge Elimination System (NPDES) Permit: A permit issued pursuant to the Clean Water Act that requires the discharge of pollutants to Waters of the United States from storm water be controlled.

Non-active Construction Area: Any area not considered to be an active construction area. Active construction areas become non-active construction areas whenever construction activities are expected to be discontinued for a period of 21 or more days.

Non-Storm Water Discharge: Any discharge to a storm drain system or receiving water that is not composed entirely of storm water.

Permit: The Caltrans Statewide NPDES Permit (see Statewide Permit), General Construction Permit, or local permit, whichever is applicable to the construction project.

Pollution: The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water. An alteration of the quality of the water of the state by waste to a degree which unreasonably affects either the waters for beneficial uses or facilities that serve these beneficial uses.

Rainy Season: The dates of the rainy season shall be as specified: use dates in the local permit if a local permit is applicable to the project site and rainy season dates are specified therein; or, if the

local permit does not specify rainy season dates and/or in areas of the state not subject to a local permit, the rainy season dates shall be determined using Figure 2-1 of the *Caltrans Storm Water Quality Handbooks – Construction Site Best Management Practices Manual*.

Receiving Waters: All surface water bodies within the permit area.

Regional Water Quality Control Board (RWQCB): California agencies that implement and enforce Clean Water Act Section 402(p) NPDES permit requirements, and are issuers and administrators of these permits as delegated by EPA. There are nine regional boards working with the State Water Resources Control Board.

Resident Engineer (RE): The Caltrans representative charged with administration of construction contracts. The RE decides questions regarding acceptability of material furnished and work performed. The RE has "contractual authority" to direct the contractor and impose sanctions if the contractor fails to take prompt and appropriate action to correct deficiencies. The following contractual sanctions can be imposed by the RE: (a) withholding payments (or portions of payments), (b) suspending work, (c) bringing in a separate contractor to complete work items (the contractor is billed for such costs), (d) assessing liquidated damages including passing along fines for permit violations, (e) initiating cancellation of the construction contract.

Sampling and Analysis Plan: A document or portion of the SWPPP that describes how the samples will be collected and under what conditions, where and when the samples will be collected, what the samples will be tested for, what test methods and detection limits will be used, and what methods/procedures will be maintained to insure the integrity of the sample during collection, storage, shipping, and testing (i.e., quality assurance/quality control protocols).

Sediment: Organic or inorganic material that is carried by or suspended in water and that settles out to form deposits in the storm drain system or receiving waters.

Statewide Permit: The National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waster Discharge Requirements (WRDs) for the State of California Department of Transportation (Caltrans). Order No. 99-06-DWQ, NPDES No. CAS000003.

State Water Resources Control Board (SWRCB): California agency that implements and enforces Clean Water Act Section 402(p) NPDES permit requirements, is issuer and administrator of these permits as delegated by EPA. Works with the nine Regional Water Quality Control Boards.

Storm Drain System: Streets, gutters, inlets, 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.

Storm Water: Rainfall runoff, snowmelt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

Storm Water Pollution Prevention Plan (SWPPP): A plan required by the Permit that includes site map(s), an identification of construction/contractor activities that could cause pollutants in the

storm water, and a description of measures or practices to control these pollutants. It must be prepared and approved before construction begins. A SWPPP prepared in accordance with the Special Provisions and the Handbooks will satisfy Standard Specifications Section 7-1.01G - Water Pollution, requirement for preparation of a program to control water pollution.

Water Pollution Control Program (WPCP): A program that must be prepared and implemented by the construction contractor under Standard Specifications Section 7-1.01G - Water Pollution.

