

RE Responsibilities Before Construction

➔ Course Highlights

- ➔ Introduction
- ➔ Recent Fines
- ➔ Role of the Players
- ➔ Management Tools
- ➔ **RE Responsibilities Before Construction**
- ➔ RE Responsibilities During Construction
- ➔ Project Closeout Responsibilities

- ➔ Review the RE Pending File
- ➔ Appoint your SWPPP Inspector
- ➔ Conduct Pre-Construction Meetings
- ➔ **WPC Strategies**
- ➔ Review the SWPPP/WPCP

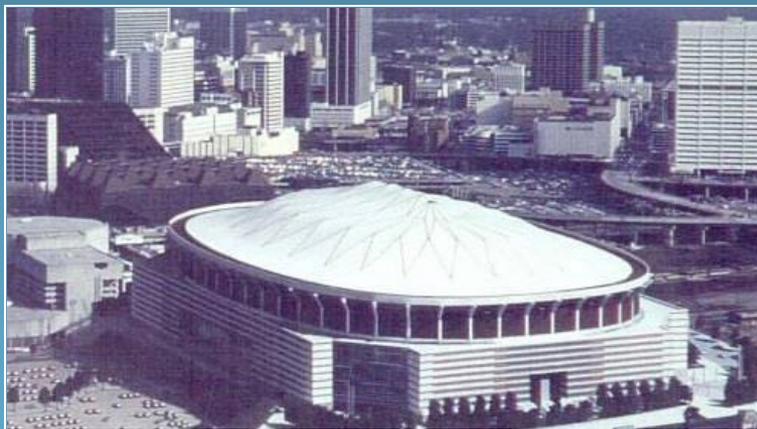
Water Pollution Control Strategies

- ➔ Prevent storm water contact with the construction site
- ➔ Protect disturbed soil areas (DSAs) from erosion
- ➔ Minimize sediment in storm water before discharge
- ➔ Prevent storm water contact with other pollutants
- ➔ Prevent non-storm water discharges



Prevent Storm Water Contact With The Construction Site

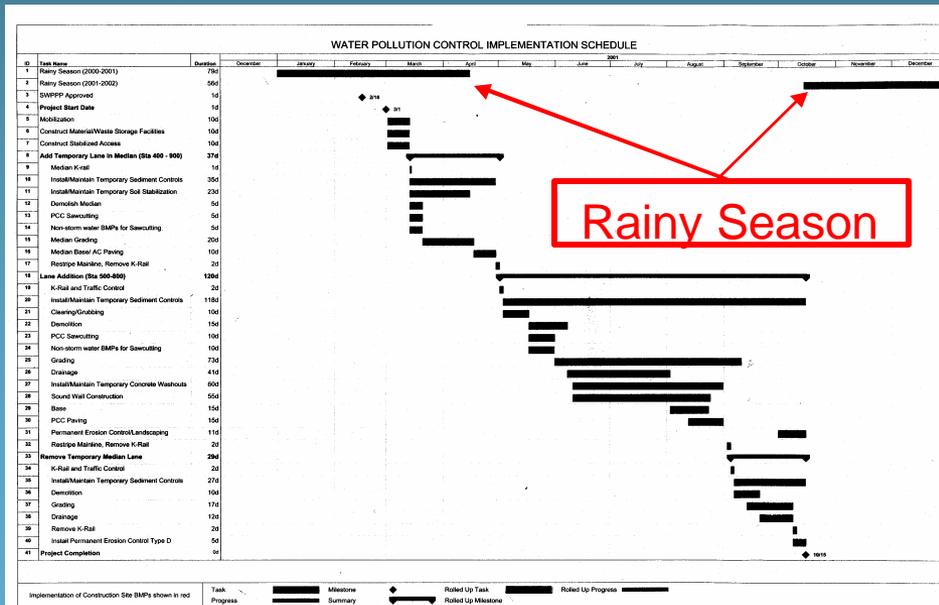
- ➔ Storm water from the sky - Rainfall
- ➔ Storm Water from adjacent areas - Run-on



Prevent Storm Water Contact With The Construction Site

➔ A BMP that is practicable to protect DSAs from rainfall is:

Scheduling



Prevent Storm Water Contact With The Construction Site

- ➔ BMPs practicable to protect DSAs from run-on are:

Earth dikes/drainage swales and lined ditches

Sandbag Barriers



Protect Disturbed Soil Areas From Erosion

➔ **BMPs to protect DSAs from erosion are:**

Temporary soil stabilization

Top of slope dikes

Slope drains

Gravel bag berms or fiber rolls



Minimize Sediment In Storm Water Before Discharge

➔ Sediment Barriers

Silt Fence

Sandbag barrier

Straw bale barrier

Fiber Rolls

Gravel Bag Berm

➔ Sediment/Desilting Basins and Sediment Traps



Prevent Storm Water Contact With Other Pollutants

- ➔ Minimize storage and non-essential activities
- ➔ Store materials/wastes in watertight containers
- ➔ Cover stored materials and wastes
- ➔ Prevent run-on
- ➔ Clean up spills of materials and wastes



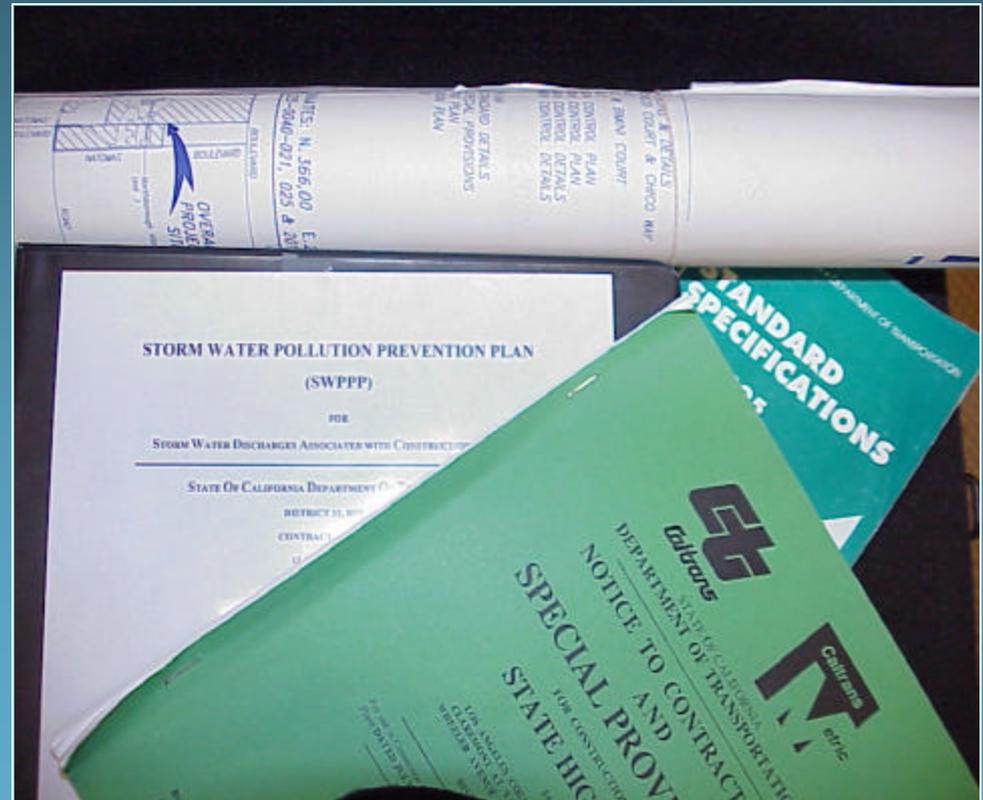
Prevent Non-Storm Water Discharges

- ➔ Paving and concrete waste
- ➔ Dewatering operations
- ➔ Vehicle and Equipment Cleaning, Fueling, maintenance
- ➔ Sanitary/septic waste
- ➔ Runoff from dust control
- ➔ Materials or chemicals leaks and spills
- ➔ Pile Driving
- ➔ Material and Equipment over water
- ➔ Structures demo over water



Contract Documents

- ➔ Standard Specifications
- ➔ Contract Special Provisions
- ➔ Project Plans



Standard Specifications

- ➔ Section 7-1.01G, Water Pollution
- ➔ Section 10, Dust Control
- ➔ Section 16, Clearing and Grubbing
- ➔ Section 18, Dust Palliative
- ➔ Section 20, Erosion Control and Highway Planting



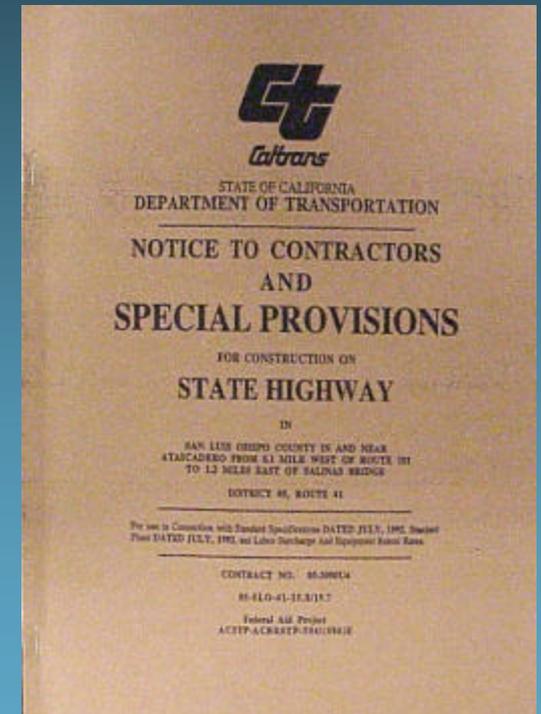
Contract Special Provisions

➔ Section 10-1. Water Pollution Control

Issued to satisfy the NPDES
Permit requirements

Requires use of the Storm Water
Quality Handbooks

Details water pollution control
requirements



Contract Special Provisions

➔ Contents of Water Pollution Control Specifications

Identifies plan required
(SWPPP or WPCP)

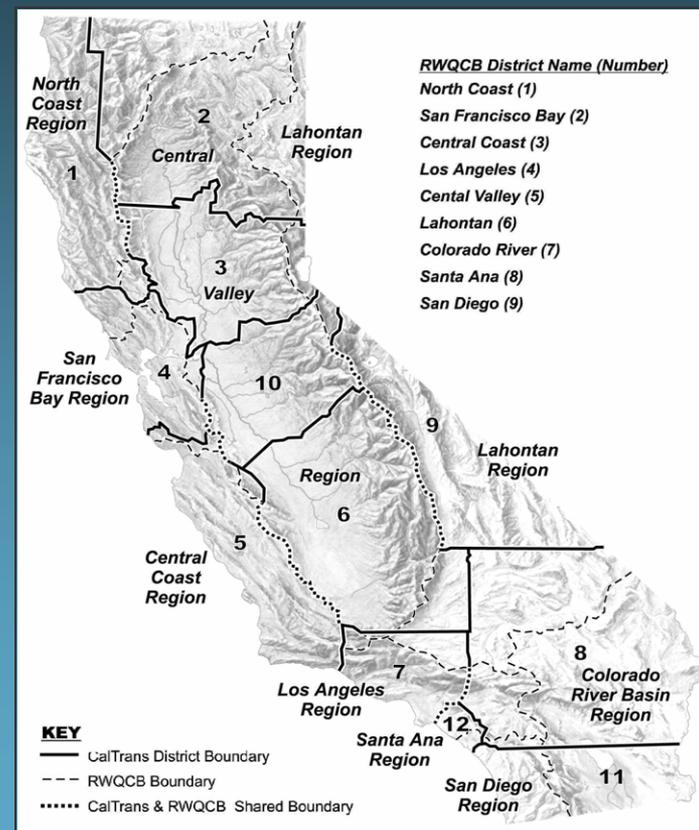
Identifies appropriate RWQCB

The SWPPP/WPCP contents
and approval process

Additional required BMPs

Identifies cost breakdown
requirements

Year round requirements



Contract Special Provisions

➔ Contents of Water Pollution Control Specifications (Cont.)

Defines active and non-active Disturbed Soil Areas (DSAs)

Defines the rainy and non-rainy seasons

Defines maximum active DSAs during the rainy season

Inspection and maintenance requirements

Contract Special Provisions

➔ Contents of Water Pollution Control Specifications (Cont.)

Winter Shutdown (if applicable)

Sampling and Analytical Requirements

Analytical Results and Evaluation

Move-In/Out for Permanent Erosion Control

50/50 BMP Maintenance Sharing

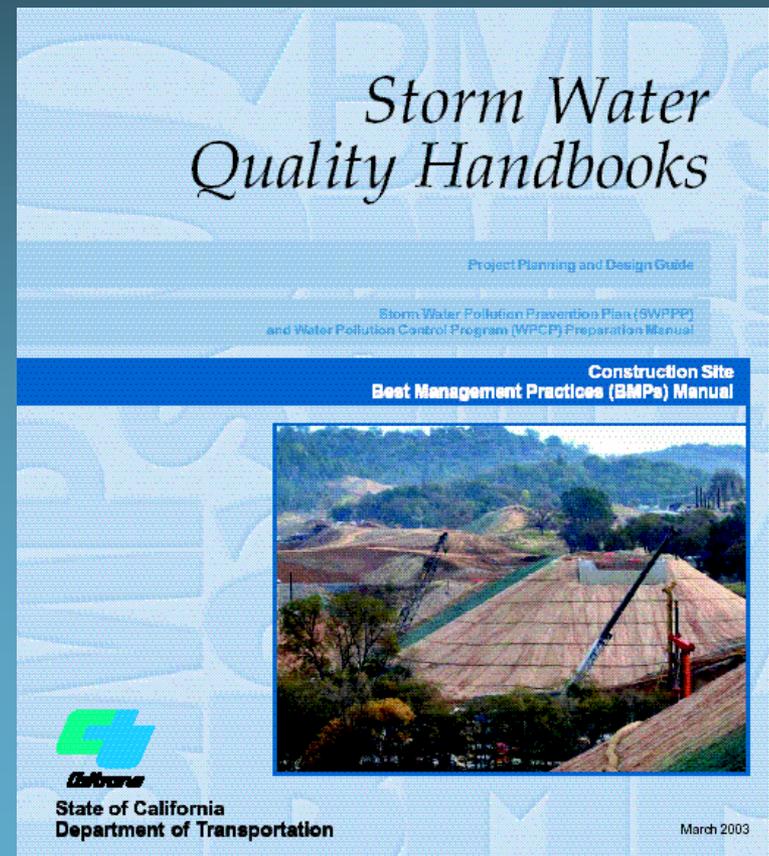
Progress Payments/Detention/Retention

Manuals

➔ Caltrans Storm Water Quality Handbooks

Construction Site BMPs Manual:

Know and understand this manual



RE Responsibilities Before Construction

➔ Course Highlights

Introduction

Recent Fines

Role of the Players

Management Tools

RE Responsibilities Before Construction

RE Responsibilities During Construction

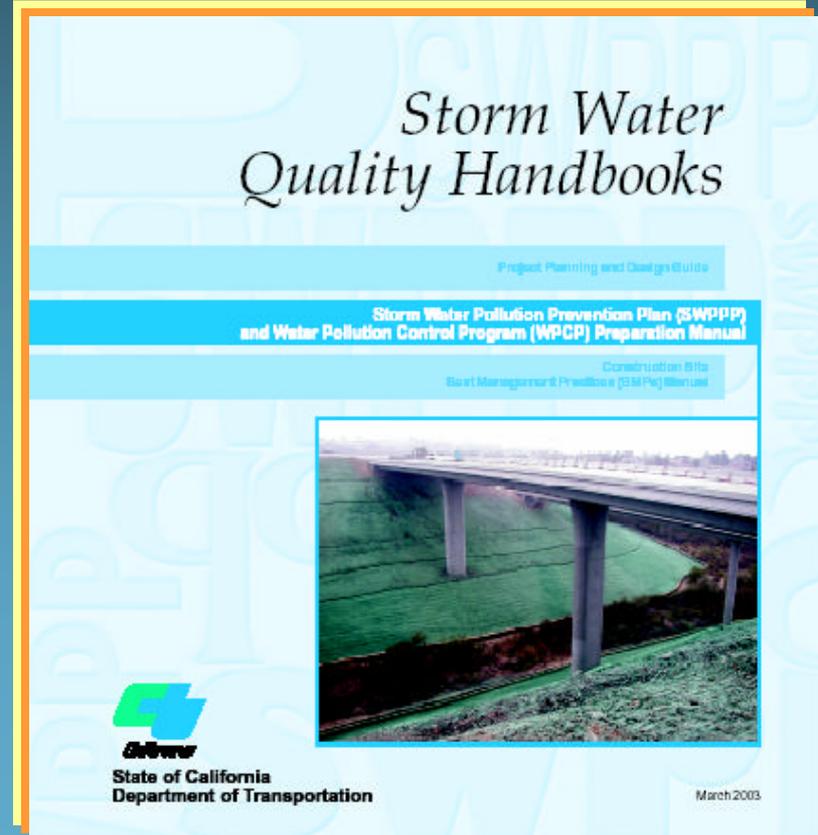
Project Closeout Responsibilities

- ➔ Review the RE Pending File
- ➔ Appoint your SWPPP Inspector
- ➔ Conduct Pre-Construction Meetings
- ➔ WPC Strategies
- ➔ Review the SWPPP/WPCP

Use the SWPPP/WPCP Preparation Manual

➔ Caltrans Storm Water Quality Handbooks

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



How is the Manual set up?

Each Section has:

INSTRUCTIONS

....Telling you what is
necessary in that section

REQUIRED TEXT

....Telling the contractor exactly
what verbiage to use in the document

Some sections have:

EXAMPLES

..... Showing you what the
section might include

Title Page

➔ **Section 2, page 9 of 97 of Prep Manual**

➔ **Required Information**

Storm Water Pollution Prevention Plan

Construction Project Name

Caltrans Contract Number

Identification of Lead Agency (Caltrans or Local Agency)

Resident Engineer name and Phone #

Contractors Name, Address, Telephone Number, and
Contact Person

Title page (continued)

➔ Required Information (continued)

Job Site Address and Telephone Number (if any)

Name of Contractors Water Pollution Control Manager (WPCM)

Name of Company that Prepared the SWPPP

SWPPP Preparation Date

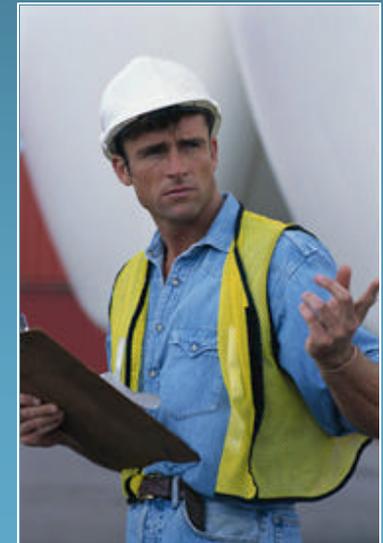


Table of Contents

- ➔ Preparation Manual page 11 of 97
- ➔ Include the Number and Names for each section
- ➔ List page number for each subsection
- ➔ Include a Tab for each Major Section and each Attachment

Section 100

- ➔ Preparation Manual page 14 of 97
- ➔ **SWPPP Certification and Approval**
 - 100.1 Initial SWPPP Certification
 - 100.2 SWPPP Approval
 - 100.3 Annual Compliance Certification

SWPPP Certification

➔ 100.1 Initial SWPPP Certification

Required Text

Project Name

Caltrans Contract Number

Contractors signature, Name, Title, Date,
and telephone number

Submit to the RE for review and approval

Complete SWPPP Checklist (Attachment L)

Attach NOC (Attachment F)

SWPPP Attachments

➔ Attachment F, Notification of Construction

Provided by Caltrans

Project identification

Regional boards RWQCB

Caltrans District

Field office location

Construction site information

State of California - Department of Transportation (Caltrans) CP-CEM-2002 4/10/2001

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, 1/2 size copy of Title Sheet

Project ROUTE 02		Check One: <input checked="" type="checkbox"/> First Submittal or <input type="checkbox"/> Amendment No. _____	Contract Number EA 08-405804	Date MM/DD/YY 1-15-01
City (if applicable)	County SAN BERNARDINO	Tentative Start Date 3-1-01	Tentative End Date 5-01-02	
Route 02	Post Mile	Kilometer Dist 6.8/8.1	Tentative Date SWPPP Available 2-01-01	

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 checked="" 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 CALTRANS DISTRICT 08	Project Contact WALT GRIFFITH
Address 464 West 4th Street	Position Title Construction SW Coordinator
City San Bernardino Zip 92401	Phone (909) 383-4561

IV. CONSTRUCTION FIELD OFFICE- Attach Location Map

Street Address 13911 Park Ave #105B	Construction Contact Mohsen Parvajah
Physical Location if Different than address above	Position Title Resident Engineer
City Victorville State CA Zip 92392	Phone (760) 245-8825

V. CONSTRUCTION SITE INFORMATION

Description and Type of Work Typical roadway section widening, drainage facilities, and tree transplanting.

Additional related required approvals: DTSC Variance CWA 404/401 DFG 1601 NPDES/WDRs Other

Describe:

Total Construction Area: 10 Acres	Hectares	Total Disturbed Area: 8 Acres	Hectares
Receiving Water Name:	Project In Or Adjacent to Receiving Water?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Project Discharges to?: <input type="checkbox"/> Groundwater Infiltration	Basic Location: <input checked="" type="checkbox"/> Municipal/Other System Name: San Bernardino		

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: Walt Griffith Date: **1-15-01**
 Print/Type Name: **Walt Griffith** Title: **Construction SW Coord.**

SWPPP Attachments

➔ Attachment L, SWPPP and Monitoring Program Checklist

Provides a checklist for all item that shall be identified in the SWPPP

Insures that all required elements are addressed

SWPPP Approval

⇒ 100.2 SWPPP Approval

Required Text

Local Agency Administration (Yes/No)

RE name, signature, telephone number and date

Local Agency Administration

- Name
- Local Agency RE name, signature, and telephone number, and date

SWPPP Certification and Approval

➔ 100.3 Annual Compliance Certification

Preparation Manual page 17 of 97

Required text for this section

Prepared by qualified person

- List person's name and contact number in the SWPPP

Completed by June 15th

- Job starting on or after June 15th requires certification on the following June 15th

Keep completed and signed copies of the annual compliance certification in this section

Include blank copies of forms in Attachment M

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17 <i>Memorial Day</i>	18	19	20	21	22	23
24	25	26	27	28	29	30

Section 200

➔ **SWPPP Preparation Manual page 18 of 97**

➔ **SWPPP Amendments**

200.1 SWPPP Amendment Certification and Approval

200.2 Amendment Log

200.1 SWPPP Amendment Certification and Approval

➔ Required Text

➔ SWPPP shall be Amended when:

Changes in construction or operations which may affect the discharge of pollutants to surface waters, ground water, or municipal separate storm sewer system

If any conditions of the Permit are violated

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, changes must be implemented in 14 days

When required by the Special Provisions

When deemed necessary by the RE

200.1 SWPPP Amendment Certification and Approval

➔ Required Text

➔ The following items will be included in each amendment:

Who requested the amendment;

The location of proposed change;

The reason for change;

The original BMP proposed, if any; and

The new BMP(s) proposed

200.2 Amendment Log

➔ Required text for the Amendment Log:

Project Name

Caltrans Contract Number

Amendment Number

Date

Brief description of Amendment

Prepared By

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

300.1 and 300.2

➔ 300.1 Introduction and Project Description

Provide legal description of the project

Proximity to receiving waters

Identify who owns the drainage system



➔ 300.2 Unique Site Features

Provide a brief description of unique features

- Significant or high-risk construction activities
- Any features or activities within or adjacent to water bodies

300.3

➔ Construction Site Estimates

Required text

Construction site area

Runoff coefficient before and after construction

- Include calculations in Attachment D

Percentage impervious area before and after construction

Anticipated storm water flow on to site

- Include run-on calculations in Attachment E

SWPPP Attachments

➔ Attachment D

Computation Sheet for determining Runoff Coefficients

- Determines the amount off runoff before and after construction



SWPPP Attachments

➔ Attachment E

Calculation for Storm Water Run-on

- Determines the amount of anticipate storm water run-on
- Helps in designing temporary BMPs to control erosion



300.4

➔ Project Schedule / Water Pollution Control Schedule

Written and graphical schedule

- Show how the rainy season relates to soil disturbing and re-stabilization activities

Adequate details for major activities sequenced with implementation of BMPs

- Project start and finish dates
- Rainy seasons dates
- Annual certification
- Mobilization dates
- Mass clearing and grubbing/road side clearing dates
- Major grading/excavation dates
- Special dates in other permits (Army Corp, Fish and Game)

300.4

⇒ Project Schedule (continued)

Adequate details for major activities sequenced with implementation of BMPs (continued)

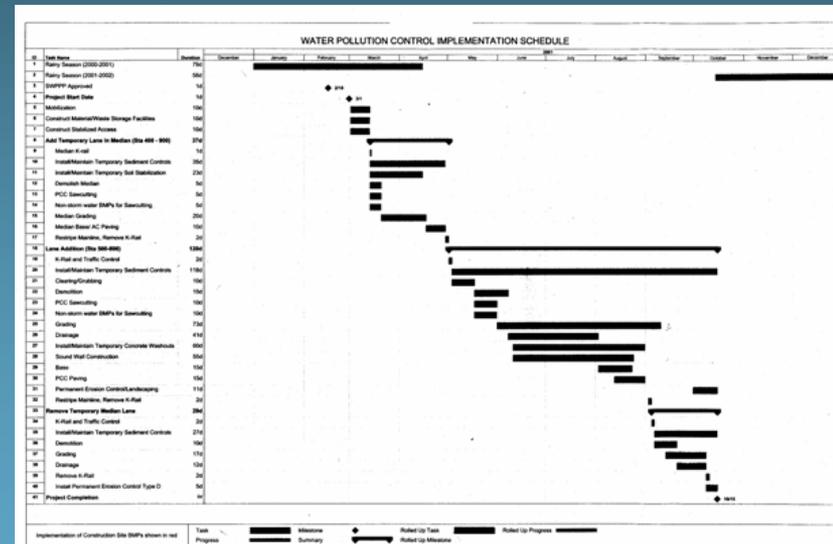
- Annual submittal of rainy season implementation - if required
- Pre-rainy season temporary soil stabilization or Sediment control BMPS (if required by the Special Provisions)
- Rainy season implementation schedule for soil stabilization, sediment controls, wind erosion controls, tracking controls, non-storm water, waste management and materials BMPs
- Non-rainy season implementation schedule of same
- Pavement operations

300.4

➔ Project Schedule (continued)

Adequate details for major activities sequenced with implementation of BMPs (continued)

- Major planned stockpiling operations
- Non-storm water discharges, dewatering or grinding operations
- Final stabilization activities (staged)
- See page 25 and 26 of SWPPP Preparation Manual (11x17 foldout)
- Lahontan RWQCB prohibits removal of vegetation or ground disturbance in specific areas (October 15 through May 1)



300.5

- ⇒ Page 30 of 97 of the Manual
- ⇒ Required text
- ⇒ Contact Information/List of Responsible Parties

List contractors person(s) responsible for water pollution controls during construction including name, company, address, and telephone number

300.5

➔ **Water Pollution Control Manager (WPCM) duties**

Must be available at all times throughout the duration of the project

Ensuring full compliance with the SWPPP and Permit

Implementation of erosion and sediment control measures

Implement all non storm water, materials and waste management activities

Storm event inspections (pre-, post-, and during)

Routine inspections

Preparing annual compliance certification

Ensuring elimination of all unauthorized discharges

Authority to mobilize crews for immediate repairs

Coordinate with the RE

Submit Notice of Discharge and report IC/ID

Section 400

➔ References

Page 32 of 97 of the SWPPP Preparation Manual

Required text

Identify all Documents Referenced in the SWPPP

- Project Plans and Specifications
- NPDES permits
- Other permits Army Corp, DF&G, DTSC ADL variance, etc.
- Handbooks, references, manuals, guidance
- Project reports: geotechnical, soils, materials, drainage
- Include complete reference name, number, author, date, and revision dates that apply

All referenced materials not attached to SWPPP must be kept on-site and be readily available for review

Section 500 Body of SWPPP

- ➔ 500.1 Objectives
- ➔ 500.2 Vicinity Map
- ➔ 500.3 Pollutant Source Identification and BMP Selection
- ➔ 500.4 Water Pollution Control Drawings
- ➔ 500.5 Construction BMP Maintenance, Inspection and Repair
- ➔ 500.6 Post-Construction Storm Water Management
- ➔ 500.7 Training
- ➔ 500.8 List of Subcontractors
- ➔ 500.9 Other Plans or Permits

500.1

➔ Objectives

➔ Required text

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

Identify non-storm water discharges

Identify, construct, implement in accordance with a time schedule, and maintain BMPs to reduce or eliminate pollutants in storm water and non storm water discharges during construction

Develop a maintenance schedule for BMP installed during construction to reduce or eliminate pollutants after construction

500.1

⇒ Objectives

⇒ Required text

Conforms with Caltrans and General Permits

Amendment requirements

SWPPP will be readily-available on-site for duration of the project

500.2

➔ Vicinity Map

Required text, map size

A vicinity map and site map are required.

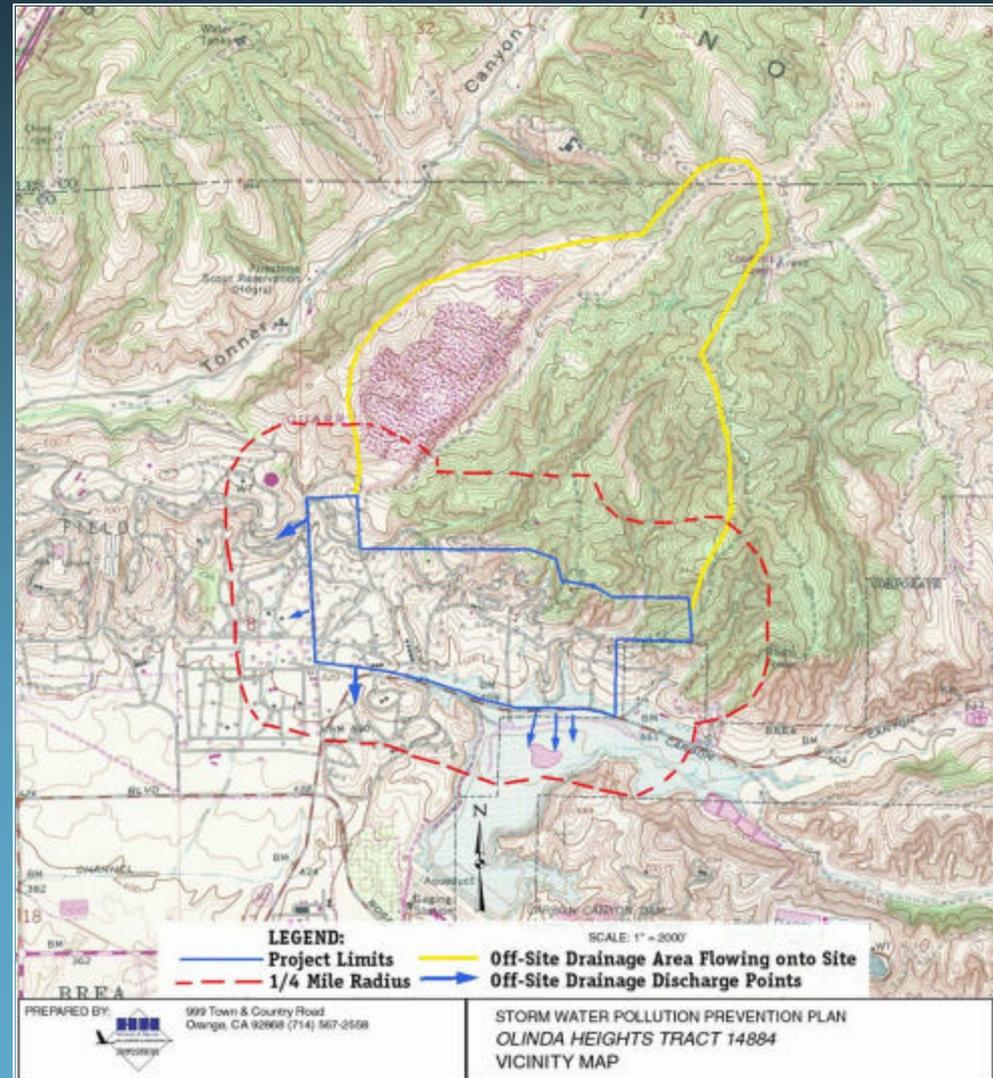
Included as Attachment A to SWPPP

- Vicinity Map
 - Use a USGS map or equivalent
 - Extend approximately 400 M or one-quarter mile of project boundary
 - Shows all necessary information
- Site Map
 - Include title sheet from project plans

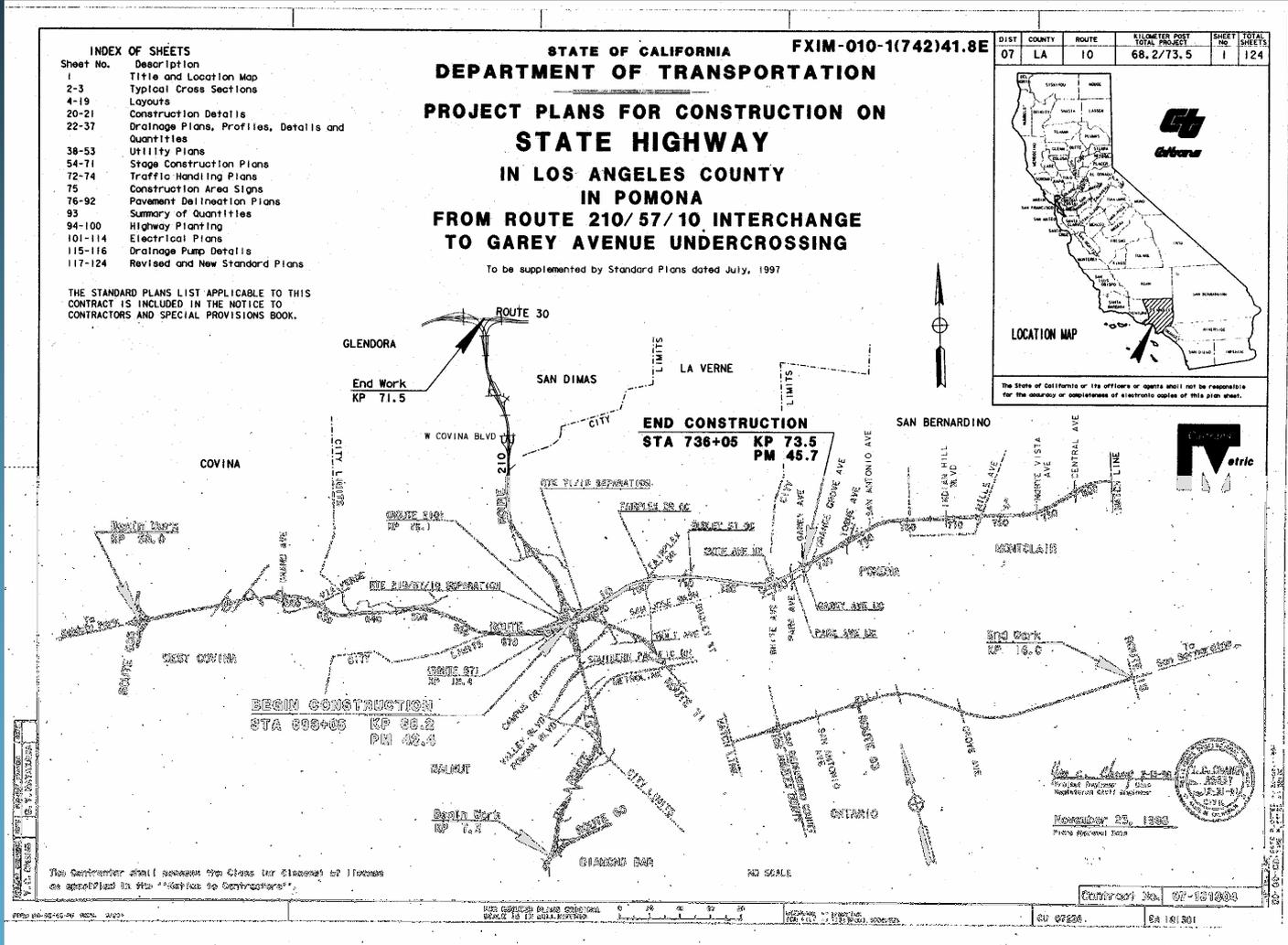
Vicinity Map

Vicinity Map shows:

- Outline of site perimeter
- Easily identifiable major roadways
- Geographic features or landmarks
- Water bodies within or adjacent to the project site
- Construction site perimeter
- Known wells
- Outline of offsite drainage areas discharging to the construction site
- Discharge locations
- General topography and geographical features surrounding the site



Site Map



1. The Contractor shall observe the Class or Classes of Vehicles as specified in the "Restrictions on Construction".

CONTRACT NO. **07-101004**

CU 07226 SA 181301

November 25, 1998

Printed on Recycled Paper



500.3

- ➔ **Page 37 of 97 of the SWPPP Preparation Manual**
- ➔ **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 Soil
 - 500.3.4 Soil Stabilization
 - 500.3.5 Sediment Controls
 - 500.3.6 Tracking Controls
 - 500.3.7 Wind Erosion Controls
 - 500.3.8 Non-Storm Water Controls
 - 500.3.9 Waste Management and Materials Pollution Controls

500.3.1

➔ Inventory of Materials and Activities that may Pollute Storm Water

Required text

List all construction materials that have the potential to contribute to the discharge of pollutants to storm water

- Vehicle fluids, including oil, grease, petroleum, and coolants
- Asphaltic emulsions associated with paving operations
- Cement materials associated with PCC operations
- Joint and curing compounds
- Paints, solvents, thinners, acids
- Treated lumber, mortar mix
- Landscape materials
- Masonry block
- General litter



500.3.1

➔ List all construction activities that may have the potential to contribute sediment to storm water discharges

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

➔ Insert additional bullets as necessary to complete the inventory



500.3.2

➔ Existing (pre-construction) Control Measures

Required text

Identify any existing control measures in place prior to construction including but not limited to:

- Detention basins
- Infiltration basins
- Sediment basins
- Oil water separators
- Bridge and Rock slope protection
- Existing erosion control measures
- Existing landscaping
- Energy dissipaters
- Lined ditches



500.3.3

➔ Nature of Fill Material and Existing Data describing Soil

Required text

Describe the conditions of fill material and soil on the construction site

- Type of soil
- Groundwater location

Show and/or describe existing site features that, as a result of past usage may contribute pollutants to storm water

- Toxic materials
- Aerially Deposited Lead (ADL)