

**Day 1
Preventing Storm Water Pollution from Construction Site
And Proper Installation of Construction BMPs**

Introduction to the regulatory and potential storm water pollutant effects associated with construction activity. A discussion of the history and enforcement of storm water requirements in the Clean Water Act, Porter-Cologne Water Quality Act, Construction NPDES Permits. Presentation of the environmental impacts of erosive storm water runoff and the potential to transport sediments and other construction-related pollutants to receiving waters. Covers the erosion and sedimentation process and appropriate methods of control. Discusses the use of Best Management Practices (BMPs) to control erosion and sedimentation, and to prevent pollutants from entering waterways. Presents information on the proper selection, installation, inspection, and maintenance of BMPs. Discussion of BMPs installation, effectiveness, and service life. Strategies for selecting appropriate BMPs and alternative and unique applications of BMPs. Identification of new BMP technology. A review of the compliance inspection procedures and checklist.

Course Outline:

- I. Introduction and History
 - A. Storm Water Regulations
 - B. Storm Water Pollution Sources and Effects
 - C. Approved Construction Site BMPs

- II. Selecting and Implementing Construction Site BMP Practices
 - A. Definitions
 - B. Temporary Soil Stabilization and Sediment Control Implementation Guidance
 - C. Guidance for Implementation of Other BMPs
 - D. BMP Inspections
 - E. BMP Warm-Up Exercise

- III. Temporary Soil Stabilization BMPs

- IV. Temporary Sediment Control BMPs

- V. Wind Erosion BMPs

- VI. Tracking Control BMPs

- VII. Non-Storm Water Management BMPs

- VIII. Waste Management and Materials Pollution Control BMPs

- IX. Inspection Program

DAY 2

Preparation of the SWPPP/WPCP

Understanding Water Pollution Control Specifications and Standard Special Provisions

Comprehensive presentation of the SWPPP Preparation Guidance documents and the use of the electronic SWPPP template. The 2007 Caltrans SWPPP template will be introduced. Discussion of the following topics: preparation of a water pollution schedule, pollutant identification, BMP selection based on minimum BMPs, identification of soil stabilization and sediment control BMPs from the Guidance Manuals, procedures to develop water pollution control drawings, etc. Presents information on water pollution control specifications and standard special provisions. Discussion of recent changes and modifications. Options for payment, adjustment clauses, and retention provisions. Strategies for estimating the SWPPP cost breakdown and water pollution control implementation costs.

Course Outline:

- I. Introduction and History
 - A. Regulations and Permits
 - B. Recent Revisions/Modifications

- II. Roles and Responsibilities
 - A. Contractor
 - B. Resident Engineer

- III. Preparing a Storm Water Pollution Prevention Plan (SWPPP)
 - A. Preparation and Approval of a SWPPP
 1. Schedule of Values (SWPPP Cost Breakdown)
 2. Conceptual SWPPP
 3. Minimum BMP Requirements for Construction Sites
 - B. SWPPP Template

- IV. Preparing a Water Pollution Control Program (WPCP)
 - A. Preparation and Approval of a WPCP
 - B. Minimum Requirements for Construction Sites
 - C. WPCP Template

- V. Requirements for the Approval of SWPPP

- VI. Penalties for Non-Compliance
 - A. Progress Payments
 - B. Retention of Funds
 - C. Enforcement

- VII. Water Pollution Control Drawing Exercise

DAY 3

**Preparation of a Sampling and Analysis Plan (SAP)
Water Quality Sampling Techniques, Reporting and Analysis of Water Quality
DataForms, Inspection, and Estimating for SWPPP Cost Breakdown**

Part 1 discusses the regulatory requirements for monitoring and the criteria to determine when a SAP is required for a construction site. Discusses the regulatory requirements for preparation and collection of water quality samples. Reviews the required elements of a SAP. Identifies the specific pollutants that must be analyzed on the construction site. Presents detailed procedures for selecting sampling locations, collecting water quality samples and for transporting samples to the laboratory. Addresses requirements for reporting and interpreting laboratory results and taking corrective measures, if necessary.

Part 2 discusses forms required for water pollution control documentation. The class will actually fill out the forms with provided information. Inspection techniques will be reviewed and a mock inspection will be conducted and the class will fill out a report. Cost estimating for BMPs and SWPPP breakdown will be discussed. Highlight of the 2007 predraft NPDES Construction permit will be presented.

Course Outline:

Part 1

- I. Introduction, History and Storm Water Regulations
- II. Sampling and Analysis Requirements
 - A. Direct Discharge to 303(d) Water Bodies
 - B. Non-Visually Detectable Pollutants
- III. Sampling and Analysis Plan
 - A. Project Overview/Description
 - B. Monitoring Sites
 - C. Analytical Constituents
 - D. Data Quality Objectives
 - E. Field Equipment Maintenance
 - F. Monitoring Preparation and Logistics
 - G. Sample Collection, Preservation, and Delivery
 - H. Quality Assurance/Quality Control
 - I. Laboratory Sample Preparation and Analytical Methods
 - J. Data Management and Reporting Procedures

Part 2

- IV. Forms
 - A. Computation of Storm Water Runoff and Run-on
 - B. SWPPP Amendment
 - C. Subcontractor's List and Letter
 - D. Notice of Discharge
 - E. Annual Certification of Compliance
 - F. Training Log
- V. BMP Inspection Techniques, Mock Project Inspection and Report
- VI. BMP Cost Estimating
- VII. 2007 predraft NPDES Construction Permit