

STORMWATER AND NON-STORMWATER DISCHARGE INFORMATIONAL HANDOUT

Contract No. 04-172404



California Department of Transportation
District 4
Water Quality Program
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Oakland, California 94612

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Section 1 Purpose and Objective

The purpose of this Informational Handout is to highlight and summarize key elements of the Contract Plans and Special Provisions related to stormwater and non-stormwater discharge management within the project site for Contract No. 04-172404. This Handout also provides additional guidance and information to assist the Contractor in complying with stormwater and non-stormwater discharge requirements. Non-storm water includes groundwater or storm water combined with groundwater.

The objective of providing this information is to assist the Contractor in developing an approach to stormwater and non-stormwater management at the site that will ensure that all necessary elements are taken into account so that chances of discharges of contaminated stormwater and non-stormwater discharge offsite during construction activities and non-compliance with the California Department of Transportation (Department) stormwater permit are minimized. Proper stormwater and non-stormwater discharge management will be essential during the construction activities covered by this contract.

The site conditions and construction activities contain a number of elements that make stormwater and non-stormwater discharge management a significant challenge at this site. This Handout also provides guidance to assist the Contractor in eventual preparation of the Contractor Stormwater Pollution Prevention Plan (SWPPP) and the Dewatering and Discharge Plan (DDP).

It is critical that the Contractor makes every effort to ensure proper stormwater and non-stormwater discharge management at this complex and challenging site. The Contractor is responsible for penalties assessed or levied on the Contractor or the Department as a result of the Contractor's failure to comply with the provisions in the Water Pollution Control and Non-Stormwater Discharge Special provisions, including, but not limited to, compliance with the applicable provisions of the Permits, the Manuals, and Federal, State and local regulations and requirements as set forth therein.

This Handout does not relieve the Contractor from having to account for all stormwater and non-stormwater related discharges according to the special provisions for the full duration of the contract.

Section 2 Disclaimer

This Handout is designed to provide information to be used as guidance for the Contractor in preparing required contract documents related to stormwater and non-stormwater discharge requirements. This Handout is to be used in preparation of the SWPPP and the Dewatering and Discharge Plan (DDP), and is not a substitute for all other specific requirements in the contract Plans and Special Provisions.

Section 3 Relevant Documents within Plans and Special Provisions

There are a number of documents within the Plans and Special Provisions that cover stormwater and non-stormwater requirements. These documents include, but are not limited to, the following, for which brief summaries are provided below:

3.1 PROJECT PLANS

The Project Plans contain drawings of site features that are critical in providing the Contractor with information in developing an approach to stormwater management at the site. Key Plans are:

- Temporary Water Pollution Control Plans, Details and Quantities
- Erosion Control Plans, Details, and Quantities
- Drainage Plans, Profiles, Details, and Quantities

The drainage plans are important in showing storage systems that are intended to collect, store and convey natural runoff that flows through the work areas.

3.2 RELATIONS WITH CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

This Specification mentions about the RWQCB permit for the site, i.e., RWQCB Order No.R2-2006-0033 on Waste Discharge Requirements and Water Quality Certification for the California Department of Transportation for the Pigeon Pass Realignment Project. Key provisions include "Receivign Water Limitations" (Provision B). A copy of this permit is included in this Handout in Attachment 3.

3.3 ORDER OF WORK

The Order of Work specification references the other contract special provisions and activities, and in particular stipulates which special provisions and activities are to be performed first, i.e., prior to construction activities. Some of the initial activities that are relevant to storm water pollution prevention include:

- Delineation of Environmentally Sensitive Areas (ESAs) and installing the temporary perimeter fence on ESA;
- Compliance with "Relations with the Regional Water Quality Control Board" specification;
- Submittal and approval of the SWPPP;
- Submittal and approval of the DDP;
- Compliance with "Clearing and Grubbing" specification;
- Compliance with "Migratory Bird Protection" specification;
- Installation of fiber rolls and erosion control netting prior to the start of Erosion Control (Type D) work where applicable;
- Final erosion control treatments installed to all excavation and embankment disturbed soil areas (DSA) prior to November 1;

- Move-in/Move-out (Erosion Control and Hydraulic Mulch-Type Bonded Fiber Matrix) requires repeated application throughout the full duration of contract;
- Order of Work requires magnitude of work in stage 1 requires limited DSA of 90,000 m² unless approved by Engineer based on sufficient information clearly shows that all work can be completed in compliance with the special provision prior to November 1;
- Order of Work requires that no work on stages 2 and 3 will be allowed until all of stage 1 construction is completed unless approved by the Engineer.

3.4 ENVIRONMENTALLY SENSITIVE AREAS (ESA)

The project site contains several ESA areas. The Contractor must keep in mind the restrictions on access and use of these ESA areas when selecting the location, designing, and maintaining BMPs at the site. Installing the temporary perimeter fence on ESA is the first order of work.

3.5 CLEARING AND GRUBBING

The Clearing and Grubbing Specification describes procedures to clear and grub vegetation from areas of construction activities. The Specification requires that vegetation be cleared and grubbed only within the excavation and embankment slope lines. Existing vegetation outside the areas to be cleared and grubbed are to be protected from damage resulting from the Contractor's operations.

3.6 EARTHWORK

The Earthwork Specification describes the properties of the materials required for the embankment construction. This specification requires that all construction slopes outside of the established roadbed be constructed true to grade and finished within the stage for that season prior to the period when no ground disturbing activities are allowed. This specification also provides estimated settlement periods during which adequate water pollution control practices will be required to prevent erosion and sediment discharges to the storm drain system or surface water body.

3.7 WATER POLLUTION CONTROL

The Water Pollution Control Specification discusses basic requirements for water pollution control and stormwater management at the site during all seasons. This specification also discusses procedures for the SWPPP preparation, approval and amendments.

This Informational Handout describes the overall approach to stormwater control at the site, emphasizing the key temporary BMP design elements, stormwater management, and monitoring activities that are most important to ensure construction activities can occur without causing illegal discharges of contaminants from the site during storm events, to ensure permit compliance.

Water pollution control work shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications and the special provisions. The work related to stormwater and non-stormwater management should also be performed in conformance with RWQCB, U.S. Army Corps of Engineers, California Department of Fish and Game permits for

the construction work. Key project elements that relate to stormwater and non-stormwater management are:

- Temporary Perimeter Fence to limit encroach onto ESAs
- Procedures for handling surplus excavated material;
- Placement of embankment material and its stabilization using temporary and permanent water pollution control practices to prevent erosion and scouring during the settlement periods;
- Prevention of stormwater run-on onto the DSAs;
- Construction of a treatment system to remove turbidity from the groundwater and surface water runoff discharges from construction work areas

Two key criteria discussed below that will affect the contractor's approach to stormwater management efforts are the presence of Environmentally Sensitive Areas (ESAs) at the site and RWQCB Permit Discharge Limitations.

As part of the water pollution control work, SWPPP is required for this contract. The SWPPP shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications, the requirements in the Manuals, the requirements of the Permits, and the contract special provisions.

The SWPPP shall apply to the areas within and those outside of the highway right of way that are directly related to construction operations including, but not limited to, asphalt batch plants, material borrow areas, concrete plants, staging areas, storage yards, and access roads.

For this project, the following temporary BMPs, specified in the SWPPP Preparation section of the Water Pollution Control specification, are required to be addressed in the SWPPP:

- Dewatering and Non-Storm Water Discharge Control
- Temporary Concrete Washout Facility
- Temporary Construction Entrance
- Temporary Check Dam
- Temporary Silt Fence
- Temporary Drainage Inlet Protection

In addition to the temporary BMPs listed above, the BMPs listed in the Water Pollution Control Cost Breakdown within the Water Pollution Control special provision will also need to be included in the SWPPP and the Water Pollution Control Drawings (WPCDs).

For this project, the following permanent BMPs, specified in the SWPPP Preparation section of the Water Pollution Control specification, are required to be addressed in the SWPPP:

- Erosion Control (Type B and Type D)
- Erosion control netting
- Fiber Rolls

- Move-In/Move-out (Hydraulic Mulch-Bonded Fiber Matrix)

These permanent BMPs can also serve as temporary BMPs during the construction period.

The SWPPP shall incorporate water pollution control practices in the following categories:

- Soil stabilization
- Sediment control
- Wind erosion control
- Tracking control
- Non-storm water management
- Waste management and materials pollution control

The SWPPP is also to include the Sampling and Analysis Plan as required by the Permits, and a Water Pollution Control Schedule that describes the timing of grading or other work activities that could affect water pollution. The Cost Break-down section in the Water Pollution Control Specification presents a Water Pollution Control Cost Break-down table which provides a complete list of all construction site BMPs for the project.

The critical sections of the SWPPP are Sections 500 and 600. The table included in section 4 of this Information Handout provides guidance as to what references in the Plans and Special Provisions, in addition to this Handout, should be referenced to complete the respective section of the SWPPP.

3.8 DEWATERING AND NON-STORM WATER DISCHARGE CONTROL

Non-storm water includes groundwater or storm water combined with groundwater. This special provision covers work related to groundwater and non-storm water dewatering from, but not limited to construction work areas, sediment traps and basins, streams and creeks and excavations. This work involves collection, conveyance, treatment and disposal of dewatering discharges. Collection and conveyance may require temporary holding tanks, and will require pumps and piping to convey water from the holding tanks to the treatment system for turbidity removal and to the disposal location.

As part of the non-storm water discharge control work, the Contractor is to prepare a Dewatering and Discharge Plan (DDP) In general, the DDP should cover: construction areas and activities related to excavation and embankment areas that would result in a non-storm water discharges; collection and conveyance systems for conveying the discharges to the treatment system for turbidity removal; staging areas for treatment systems; disposal of solids removed from the treatment systems; and the reuse of treated water for dust control and construction water for fill compaction.

The DDP will be reviewed by the Regional Water Quality Control Board and the Engineer. Until the DDP is approved, no discharges will be allowed from any dewatering operations.

The treatment system for turbidity will need to include, but not be limited to the following components: temporary holding tanks, sediment traps and/or basins, weir tanks, settling tanks, gravity bag filters, sand media filters, pressurized bag filters, cartridge filters, in-line flocculants, or a combination of these.

Reuse of treated water for dust control or fill compaction is required prior to considering discharges to the storm drain system or surface water body. Discharges for dust will need to be accomplished in a manner promotes infiltration and not cause runoff to be generated.

If treatment does not result in compliance with Water Quality Requirements listed in this special provision, the water will need to be disposed off-site outside the right-of-way at a Publicly Owned Treatment Works (POTW). Information on the POTWs within Alameda County, and – the contact information/location for obtaining a permit for discharge to the POTW is provided in Attachment 2.

Inspection, monitoring and reporting requirements include visual inspections, flow rate monitoring and water quality monitoring. Water quality measurements are required for effluent turbidity and pH. In the event of an exceedance of the WQRs, all discharges will need to be terminated, and the Engineer will need to be notified. Discharges from dewatering operations shall commence after corrective actions are taken and verification sampling is done to ensure compliance with WQRs.

3.9 CONTRACTOR CERTIFICATION AND TRAINING REQUIREMENTS

The following requirements apply to Contractor Certification and Training.

Contractor. The Contractor shall submit to the Caltrans Engineer a statement of qualifications, describing the training, previous work history and expertise of the individual selected by the Contractor to serve as Water Pollution Control Manager.

Water Pollution Control Manager (WPCM)- The WPCM shall be a Certified Professional in Erosion and Sediment Control (CPESC).

Water Pollution Control Crew. The Water Pollution Control Manager shall have a minimum of six workers, in addition to the Water Pollution Control Manager, identified in the SWPPP as the crew responsible for implementation and maintenance of water pollution control work. In addition, this group shall be responsible for implementing work when notified by the Engineer within a 24-hour period and to sustain necessary work continuously to completion as determined by the Engineer.

Sampling Personnel. Only trained personnel shall collect water quality samples. Qualifications of designated sampling personnel shall describe training and experience, and shall be included in the SAP, which is part of the SWPPP.

Section 4 Storm Water Pollution Prevention Plan

SWPPP Section	Special Provision Reference	Plans Reference
500.1 Objectives	Water Pollution Control Spec	
500.2 Vicinity Map	Drawings	Title and Location Map
500.3 Pollutant Source Identification and BMP Selection	All Specs	
500.3.1 Inventory of Materials and Activities that May Pollute Storm Water	All Specs	
500.3.2 Nature of Fill Material and Existing Data Describing the Soil	Earthwork Spec, Clearing and Grubbing Spec	Contour Grading Plans
500.3.4 Soil Stabilization (Erosion Control)	Water Pollution Control (Cost Breakdown); Erosion Control (:Type B and Type D); Move-In/Move-Out P(Hydraulic Mulch-Bonded Fiber Matrix); Erosion Control Netting; Fiber Rolls	Erosion Control and Temporary Water Pollution Control Plan, Details, and Quantities
500.3.5 Sediment Control	Earthwork Spec; Water Pollution Control (Cost Breakdown); Temporary Check Dam; Temporary Silt Fence; Temporary Drainage Inlet Protection	Erosion Control and Temporary Water Pollution Control Plan, Details, and Quantities
500.3.6 Tracking Control	Earthwork Spec; Water Pollution Control (Cost Breakdown); Temporary Construction Entrance	
500.3.7 Wind Erosion Control	Water Pollution Control (Cost Breakdown);	
500.3.8 Non-Storm Water Control	Water Pollution Control (Cost Breakdown); Dewatering and Non-storm Water Discharge Control	
500.3.9 Waste Management and Materials Pollution Control	Water Pollution Control (Cost Breakdown);	Construction Details, Erosion Control Plans and Details
500.3.10 Cost Breakdown for Water Pollution Control	Water Pollution Control (Cost Breakdown);	Water Pollution Control Details
500.4 Water Pollution Control Drawings (WPCDs)	Water Pollution Control (Cost Breakdown); Erosion Control (:Type B and Type D); Move-In/Move-Out P(Hydraulic Mulch-Bonded Fiber Matrix); Erosion Control Netting; Fiber	Erosion Control and Temporary Water Pollution Control Plan, Details, and Quantities

SECTION TEN

Storm Water and Non-Stormwater Discharge Informational Handout

SWPPP Section	Special Provision Reference	Plans Reference
	Rolls; Temporary Check Dam; Temporary Silt Fence; Temporary Drainage Inlet Protection	
500.5 Construction BMP Maintenance, Inspection and Repair	Water Pollution Control Spec	Water Pollution Control Details
500.6 Post-Construction Storm Water Management	Water Pollution Control Spec; Erosion Control (:Type B and Type D); Move-In/Move-Out P(Hydraulic Mulch-Bonded Fiber Matrix); Erosion Control Netting; Fiber Rolls	Drainage Plans, Grading Plans
500.7 Training	Water Pollution Control Spec	N/A
500.8 List of Subcontractors	N/A	N/A
500.9 Other Plan/Permits	Relations with California Regional Water Quality Control Board; Relations with Department of Fish and Game; Relations with U.S. Army Corps of Engineers	
600.1 Site Inspections	Water Pollution Control Spec; Dewatering and Non-storm Water Discharge Control	N/A
600.2 Discharge Reports	Water Pollution Control Spec; Dewatering and Non-storm Water Discharge Control	N/A
600.3 Record Keeping and Reports	Water Pollution Control Spec; Dewatering and Non-storm Water Discharge Control	N/A
600.4 Sampling and Analysis Plan for Sediment	N/A	N/A
600.5 Sampling and Analysis Plan for Non-Visible Pollutants	Water Pollution Control Spec	N/A

Notes:
 Spec = Specification
 N/A = Not Applicable