Contents

8.0 CONSTRUCTION

8.1 Program Summary

8.1.1 Overview

Concern over construction sites as a major source of sediment and other pollutants is addressed in the federal stormwater regulations. Sediment controls for construction activity directly impacting a watercourse should address sediment transport issues in the watercourse so that the natural quantity of sediment is not significantly changed. Contaminated sediment must be prevented from reaching the watercourse. In addition to sediment, activities and materials used on construction sites may be a source of pollutants such as paints, lacquers, and primers; herbicides and pesticides; landscaping and soil stabilization residues; soaps and detergents; wood preservatives; equipment fuels, lubricants, coolants, and hydraulic fluids; and cleaning solvents. These pollutants can leak from heavy equipment, be spilled, or can be eroded by rain from exposed stockpiles. Once released, they may adsorb onto sediment particles and can be transported into the aquatic environment, where they may become available to enter aquatic food chains, cause fish toxicity problems, contribute to algal blooms, impair recreational uses, and degrade drinking water sources.

Under their Local Implementation Programs, Permittees will continue to require private development and public agency construction projects to implement BMPs that can significantly contribute to the control of pollution from construction sites. This section of the DAMP provides a Model Programs that Permittees can use to formulate their local programs.

The objectives of the Model Construction Program are to provide the following:

- A program framework for implementation of policies and practices that minimize the impacts of construction activities on the region's receiving waters and other environmentally sensitive areas;
- An iterative process to inventory, prioritize, and inspect construction sites and provide direction to construction contractors to correct problems as they are discovered during construction, and enforce applicable laws and regulations; and
- Methodologies to meet NPDES permit requirements and other applicable environmental laws and regulations.

This Construction Model Program presents requirements and guidelines for pollution prevention methods that shall be used by construction site owners, developers, contractors, and other responsible parties, in order to reduce pollutants discharged to the MS4 in stormwater runoff from construction sites. The Model Construction Program is intended to be implemented as described in Section A-8 of each Permittee's Local Implementation Plan (LIP). In developing its LIP, the Permittee may modify the Model Construction Program in response to local conditions. It is not the intent for this Model Construction Program to restrict city or county planning commissions, building officials or their governing bodies from imposing additional stormwater management requirements as a condition on construction projects.

8.1.2 Program Commitments and Responsibilities

The Model Construction Program provides the framework and a process for the following key construction program requirements:

- Inventory of construction sites;
- Prioritization of construction sites based upon water quality threat;
- Preparation of Storm Water Pollution Prevention Plans (SWPPP) and other documentation;
- Implementation of temporary BMPs for construction sites;
- Inspections of construction sites and enforcement;
- Development of data for the Annual Progress Report, based on the inventory, prioritization, and inspections and enforcement of construction sites; and
- Training for municipal staff.

The relationship between the requirements and responsibilities for the different parties involved in the program are briefly summarized in **Table 8-1**, below.

Table 8-1 Construction Program Summary of Requirements & Responsibilities

		Municipal Permittee	Private Owner/Developer	Regional Water Quality Control Board
PRIVATE PROJECTS	**General Permit Projects** (≥ 1 Acre)	▪ Issue grading or building permit ▪ Require proof of General Permit coverage ▪ Inspect and enforce local permit(s) and ordinances ▪ Notify Regional Board of non-compliance of local ordinances when the violation(s) pose(s) a threat to human or environmental health.	▪ Apply for local grading or building permit ▪ Submit Notice of Intent (NOI) for General Permit Coverage ▪ Comply with grading or building permit and local ordinances ▪ Prepare and implement SWPPP ▪ Submit Notice of Termination (NOT)	▪ Inspect and enforce General Permit on Owner/Developer ▪ Evaluate Permittee's Construction Program for compliance with municipal permit
	Other Projects	▪ Issue grading or building permit ▪ Inspect and enforce local permit(s) and ordinances	▪ Apply for local grading or building permit ▪ Comply with grading or building permit and local ordinances	▪ Evaluate Permittee's Construction Program for compliance with municipal permit

Table 8-1 Construction Program Summary of Requirements & Responsibilities

		Municipal Permittee	Private Owner/Developer	Regional Water Quality Control Board
MUNICIPAL PROJECTS Santa Ana Permit Area	**General Permit Projects** (≥ 1 Acre)	▪ Submit Notification of Construction to RWQCB ▪ Prepare and implement SWPPP consistent with General Permit ▪ Inspect and enforce contract documents ▪ Notify Regional Board of non-compliance with General Permit ▪ Submit notice of completion	N/A	▪ Inspect and enforce General Permit on Permittee's projects ▪ Evaluate Permittee's Construction Program for compliance with municipal permit
	Other Projects	▪ Inspect and enforce local permit(s) and ordinances	N/A	N/A
MUNICIPAL PROJECTS San Diego Permit Area	**General Permit Projects** (≥ 1 Acre)	▪ Submit Notice of Intent (NOI) for General Permit Coverage to the State ▪ Prepare and implement SWPPP ▪ Inspect and enforce contract documents ▪ Notify Regional Board of non-compliance with General Permit ▪ Submit Notice of Termination (NOT)	N/A	▪ Inspect and enforce General Permit on Permittee's projects ▪ Evaluate Permittee's Construction Program for compliance with municipal permit
	Other Projects	▪ Inspect and enforce local permit(s) and ordinances	N/A	N/A

8.1.3 Regulatory Requirements

The federal stormwater regulations specify that drainage area management plans include a description of a program to implement and maintain structural and nonstructural BMPs to reduce pollutants in stormwater runoff from construction sites to the Municipal Storm Drain System (MS4).

The Construction Program was developed as a model for fulfilling the construction activity requirements of:

- Section VIII and XV of the Santa Ana Regional Water Quality Control Board (RWQCB) Municipal NPDES Stormwater permit, Order No. R8-2002-0010 (to be updated);
- Section F.2 of the San Diego RWQCB Municipal NPDES Stormwater permit, Order No. R9-2002-0001 (to be updated); and

All public works construction contracts administered by the Permittees are governed by *Standard Specifications for Public Works Construction* (Green Book). The Green Book, Section 7 - "Responsibilities of the Contractor" imposes specific construction practices which are included within **Appendix H** as Best Management Practices (BMPs) for public works construction. In general, the Green Book requires the Contractor has to keep informed of, and at all times observe and comply with state and federal laws and county and municipal ordinances and regulations.

Certain public works construction contracts administered by the Permittees may include special provisions as required by the Permittees and approved municipal sediment control standard plans. Applicable special provisions and standard plans are hereby included as BMPs for public works construction.

8.2 Model Construction Program Details

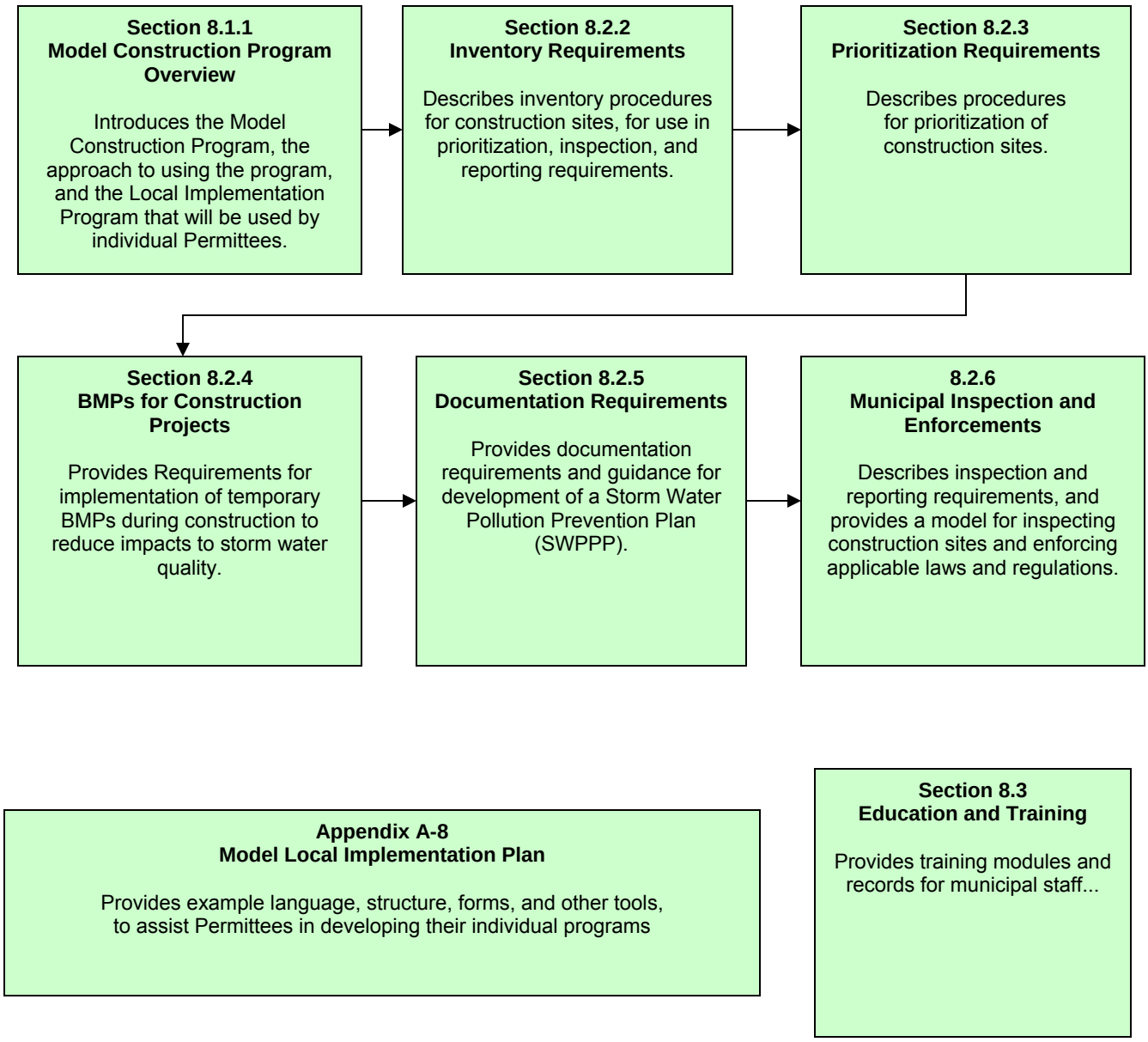
8.2.1 Model Program Overview

This model program provides guidance to Permittees in developing the Construction Activities element of their local stormwater programs for Permittees in the Santa Ana RWQCB region, and Jurisdictional Urban Runoff Management Programs (JURMPs) for Permittees in the San Diego RWQCB region, as required by the permits. **Figure 8-1** represents the flow of the model construction program with a brief description of each section. Information gathered for each section of the model program supports subsequent sections.

Model Local Implementation Plan

The Model LIP in **Appendix A-8** provides example language and structure, as well as forms and other tools, to assist Permittees in developing individual programs.

Figure 8-1
Model Construction Program Structure

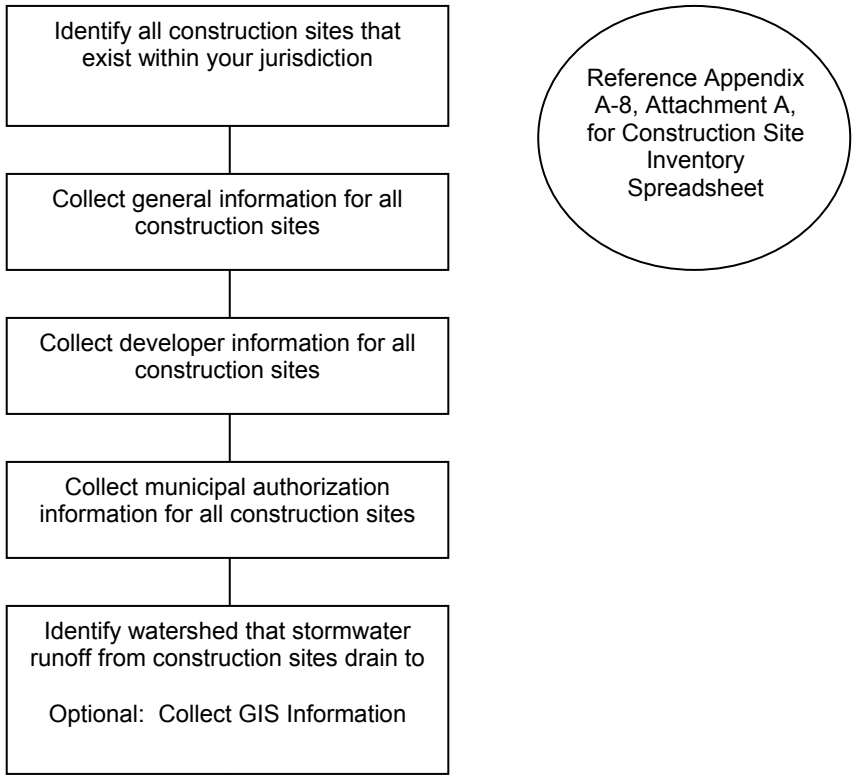


8.2.2 Inventory of Construction Sites

A watershed-based inventory of all construction sites, regardless of site size or ownership, will be developed and updated annually prior to the start of the wet season (October 1). These include all sites meeting the definition of a construction project provided in **Section 8.4**, covered by the General Permit, by a local Grading Permit or a local Building Permit, and public works construction with similar characteristics. This section describes the procedures that will be used to generate and maintain a comprehensive inventory.

This inventory will serve as the basis for prioritization, inspection, enforcement, and reporting elements of the program. Prioritization for construction sites is described in Section 8.2.3. The flow chart presented in **Figure 8-2** illustrates the process involved in compiling necessary inventory information for construction sites. The Construction Site Inventory Spreadsheet is provided in **Appendix A-8**.

Figure 8-2
Inventory Process for Construction Sites



8.2.2.1 Identification of Construction Sites and General Information

The first step in the inventory process will be to identify all construction sites (as defined in **Section 8.4**) that are within the jurisdiction of the city (county), regardless of site size or ownership. Next, baseline information about each construction site will be collected and entered into the inventory spreadsheet provided in **Appendix A-8**. General relevant construction site information includes:

- Project name;
- Project location – Full address (if known), city, zip code;
- Tract number(s) and lot number(s);
- Parcel map number(s) and parcel number(s);
- Total site area and actual developed (disturbed soil) project size (acres);
- General Permit WDID Number (if subject to the General Permit);
- Description of project (i.e., commercial, residential, industrial, etc.);
- Type of project (new or retrofit construction);
- Source activities (grading and soil movement, uncovered storage of construction materials, etc.);
- Construction start and end dates (if known);
- Developer information (name, address, phone, fax, on-site contact(s) ;
- Responsible party or emergency contact(s);
- Municipal Grading and/or Building Permit number(s); and
- Comments

Resources used to assemble the information for the inventory spreadsheet include:

- California General Permit for construction activities lists;
- Other individual NPDES Permit lists;
- Building Permits issued;
- Grading Permits issued;
- Clearing Permits issued;
- Other construction-related permits issued;
- Municipal capital improvement projects with similar characteristics; and
- Encroachment Permits issued with similar characteristics.

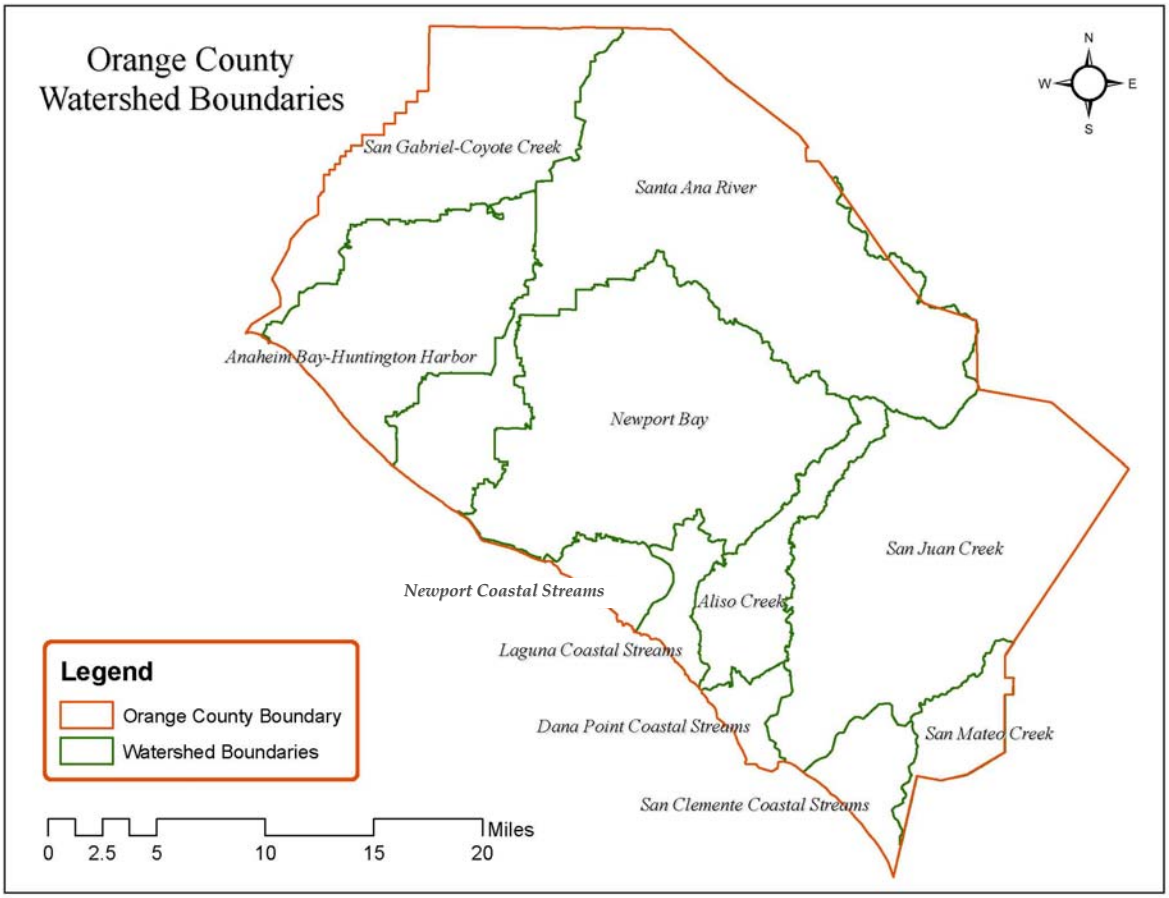
8.2.2.2 Watershed Information

For each construction site identified above, the watershed(s) in which the construction site is located can be determined and included in the inventory. Orange County contains 13 watersheds, which are summarized in **Table 8-2** and illustrated in **Figure 8-3**. Ocean sections along the shore of a watershed are still considered a part of that watershed.

Table 8-2 Orange County Watersheds

Region	Watershed
Santa Ana RWQCB (Region 8)	San Gabriel/Coyote Creek
	Anaheim Bay/Huntington Harbour
	Santa Ana River
	Newport Bay
	Newport Coastal Streams
San Diego RWQCB (Region 9)	Laguna Coastal Streams
	Aliso Creek
	Dana Point
	San Juan Creek
	San Clemente Coastal Streams
	San Mateo Creek

Figure 8-3 Watershed Boundary Map for Orange County



8.2.2.3 Inventory Update

At a minimum, the inventory will be updated prior to the start of the wet season (October 1) by adding new projects. During the update process, projects for which the building or grading permit(s) have expired or have been closed, and projects that have been completed, will be removed from the inventory.

8.2.3 Prioritization of Construction Sites

This section outlines the procedures for prioritizing construction. This will be used for BMP selection and for inspection frequency based on the threat to water quality. Priorities may be high, medium, or low. A current list of prioritized sites is in **Appendix A-8**. The construction site priority can be determined by using **Table 8-3**, below.

Table 8-3 Prioritization of Construction Sites

High Priority	Medium Priority	Low Priority
The construction site is 50 acres or more [and, for projects in the San Diego RWQCB jurisdiction, grading will occur during the wet season (October 1 – April 30)]; **OR**	Projects with between 1 and 50 disturbed acres and a prioritization rating less than 16 points (Section 8.2.3.6)	Projects that disturb less than one acre, and are not tributary to and/or within 500 feet of an ASBS within the Santa Ana RWQCB jurisdiction (minimal threat to water quality.)
The construction site is 5 acres or more and tributary to a Clean Water Act Section 303(d) water body impaired for sediment or turbidity; or water bodies for which a TMDL for sediment or turbidity has been established; **OR**		
The construction site is within the Santa Ana RWQCB jurisdiction, tributary to and within 500 feet of an area defined by the Ocean Plan as an Area of Special Biological Significance (ASBS); **OR**		
The construction site is 5 acres or more, within the San Diego RWQCB jurisdiction, and tributary to, directly adjacent to (within 200 feet), or discharging directly to, a receiving water within an Environmentally Sensitive Area (ESA); **OR**		
Construction sites with between 1 and 50 disturbed acres and a prioritization rating equal or greater to 16 points		

8.2.3.1 303(d) Water Bodies Listed for Sediment or Turbidity:

Any construction site five acres or greater and tributary to a Clean Water Act section 303(d) impaired water body listed for sediment or turbidity, or for which a TMDL for sediment or turbidity has been established, must be ranked as high priority. A summary of the 303(d) listed water bodies and associated pollutants of concern used as the basis for this program is provided in **Table 8-4**. The 303(d) (will update if 2006 list is finalized) listing is periodically updated by the State. Consequent adjustments to construction site priority will be updated in the unified Annual Report as needed for those sites still active as of June 30.

Table 8-4 Summary of the 2002 303(d) Listed Water Bodies and Associated Pollutants of Concern for Orange County

Region	Water Body	Watershed	Pollutant							
			Bacteria Indicators/ Pathogens	Metals	Nutrients	Pesticides	Toxicity	Trash	Salinity/TDS/ Chlorides	Turbidity
Region 8 Santa Ana	Anaheim Bay	C		X		X				
	Bolsa Chica			X						
	Buck Gully Creek	H	X							
	Huntington Beach State Park	C	X							
	Huntington Harbour	D	X	X		X				
	Los Trancos Creek (Crystal Cove Creek)	H	X							
	Newport Bay, Lower	G		X		X				
	Newport Bay, Upper (Ecological Reserve)	G		X		X				
	Santiago Creek Reach 4	E							X	
	San Diego Creek, Reach 1	F	X			X				
	San Diego Creek, Reach 2	F		X			X			
	Seal Beach	A	X							
	Silverado Creek	E	X						X	
Region 9 San Diego	Aliso Creek (Mouth)	J	X							
	Aliso Creek (20 Miles)	J	X		X		X			
	Dana Point Harbor	K	X							
	Pacific Ocean Shoreline, Aliso Beach HSA	J	X							
	Pacific Ocean Shoreline, Dana Point HSA	K	X							
	Pacific Ocean Shoreline, Laguna Beach and San Joaquin Hills HSAs	I	X							
	Pacific Ocean Shoreline, Lower San Juan HAS	L	X							
	Pacific Ocean Shoreline, San Clemente HAS	M	X							
	Prima Deshecha Creek	M			X					X
	San Juan Creek (Lower one Mile)	L	X							
	San Juan Creek (Mouth)	L	X							
	Segunda Deshecha Creek	M			X					X

8.2.3.2 Determine Site Watershed

After an inventory of construction sites is performed per Section 8.2.2, the watershed in which each construction site is located will have been determined.

A construction site is "tributary to" the 303(d) listed water body if it discharges runoff to ANY ONE of the following:

- Directly into the impaired water body as identified in the Basin Plan; OR
- Into concrete storm sewers that discharge directly into the impaired water body; OR
- Into streams that have water year-round due to groundwater, snow melt or other natural source, which reach the impaired water body even during the dry season.

Currently, San Diego Creek Reaches 1 and 2 in the San Diego Creek watershed and Upper Newport Bay in the Newport Bay watershed are the only water bodies listed for sediment. A construction site five acres or larger and tributary to watersheds for which a Total Maximum Daily Load (TMDL) for sediment or turbidity has been established shall be considered a high priority project.

8.2.3.3 Areas of Special Biological Significance (ASBS):

The Water Quality Control Plan for Ocean Waters of California (California Ocean Plan) designates 35 ASBS, 2 of which lie within the Irvine and Newport Coast areas.

- Newport Beach Marine Life Refuge (HU801.110)
- Irvine Coast Marine Life Refuge (HU801.110)

Any construction site within the Santa Ana RWQCB jurisdiction, which is tributary to and within 500 feet of an ASBS, must be ranked as high priority. A third ASBS in Orange County, Heisler Park Ecological Reserve (HU801.110), lies within the San Diego RWQCB. The San Diego Permit includes ASBS within the definition of ESA.

8.2.3.4 Environmentally Sensitive Areas (Applies to San Diego Region Permittees Only):

Any construction site five acres or greater located within the San Diego RWQCB jurisdiction, which is tributary to, directly adjacent to (within 200 feet of ESA), or discharging directly into a receiving water within an ESA must be ranked as high priority.

An ESA exists within the San Diego Region if any of the following designations have been applied to the water body of concern:

- All Clean Water Act 303(d) listed impaired water bodies;
- Areas designated as ASBS by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments);
- Water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments);

- Water bodies located within areas designated as preserves or equivalent under the Natural Community Conservation Planning Program;
- Areas designated within **Appendix K** as Critical Aquatic Resources (CARS); and
- Any other equivalent ESAs that contain water bodies, which have been identified by the Permittee to be of local concern.

The map provided in **Appendix A-8** may be used to assist in the identification and classification of construction sites in order to determine if they potentially impact an ESA. The 303(d) listing is periodically updated by the State. For 303(d) updates finalized prior to June 30, consequent adjustments to ESA mapping and prioritizations will be updated in the subsequent Annual Report.

8.2.3.5 Low Priority Construction Sites

Low priority construction sites are those that pose a minimal threat to water quality, and a minimal risk of discharge to receiving waters. These are defined as sites that are less than 1 acre and are not tributary to and/or within 500 feet of an ASBS within the Santa Ana RWQCB jurisdiction.

8.2.3.6 Ranking Other Construction Sites

Generally, projects between 1 and 50 disturbed acres are not categorically high or low priority. Construction sites that do not meet the mandatory criteria that automatically designates them as either high or low priority (Section 8.2.3) must be evaluated according to the ranking criteria described below to determine if they will be a medium or high priority site. Prioritization is performed by applying steps A through D. A point value (1, 2, 3, 4, or 5) will be assigned from each step, which will be totaled for a ranking score (**Table 8-5**).

Table 8-5 Ranking Criteria

Criteria	Points
Size Construction sites less than 50 acres are ranked based upon the size of the area being developed. (1–5 points) 1pt = 1 – 10 acres 2 pt = 11 – 25 acres 3 pt = 26 – 40 acres 4 pt = 41 – 49 acres 5 pt = > 50 acres	
Proximity to ASBS/ESA Construction sites are ranked based upon distance from an ASBS or an ESA. (1–5 points) Santa Ana RWQCB 1 pt = > 5,000 feet 2 pt = 2,001 – 5,000 feet 3 pt = 1,001 – 2,000 feet 4 pt = 501 – 1,000 feet 5 pt = <500 feet San Diego RWQCB 1 pt = > 5,000 feet 2 pt = 1,001 – 5,000 feet 3 pt = 501 – 1,000 feet 4 pt = 201 – 500 feet 5 pt = <200 feet	
Maximum Slopes Construction sites are ranked based upon the maximum finished slopes within the site. (1–5 points) 1 pt = Slopes 20: 1 or flatter 2 pt = Slopes greater than 20:1 but less than 5:1 3 pt = Slopes greater than 5:1 but less than 3:1 4 pt = Slopes greater than 3:1 but less than 2:1 5 pt = Slopes 2: 1 or steeper	
Non-Stormwater Discharges Construction sites are ranked based upon potential non-stormwater discharges (1–5 points). 0 = Zero or low potential of non-stormwater discharges 3 = Potential non-stormwater discharges from uncovered construction materials on site (if known) 5 = Potential non-stormwater discharges from dewatering activities or use of soil amendments.	
Total Points	
Priority High Priority 16 pts or greater, Medium Priority less than 16 pts	

8.2.4 Best Management Practices for Construction Projects

This section presents minimum requirements for all projects, temporary BMPs for construction projects, and site management requirements for the various priorities of construction projects. The requirements apply equally to private development and public works projects. Permanent post-construction BMPs are discussed in detail within Section 7, Model New Development/Significant Redevelopment Program.

All construction projects, regardless of size or priority, must implement BMPs to reduce the discharge of pollutants into the storm drain system or waterbodies. Construction projects will be prioritized as presented in Section 8.2.3 of this document. The basic BMP implementation requirements are shown below in **Table 8-6**. Documentation requirements are further discussed in Section 8.2.5.

Table 8-6 BMP Implementation Requirements for Construction Sites

PRIORITY	BMP REQUIREMENT
LOW	▪ Meet minimum requirements (**Table 8-7**)
MEDIUM	▪ Meet minimum requirements (**Table 8-7**) ▪ Implement Site Management Requirements ▪ Implement all appropriate Construction BMPs
HIGH	▪ Meet minimum requirements (**Table 8-7**) ▪ Implement Site Management Requirements ▪ Implement all appropriate Construction BMPs
	▪ Meet minimum requirements (**Table 8-7**) ▪ Implement all appropriate Construction BMPs

8.2.4.1 Minimum Requirements

The minimum requirements apply to all construction projects, regardless of priority. All private and public works construction projects are required, at a minimum, to implement and be protected by an effective combination of erosion and sediment controls and waste and materials management BMPs. These minimum requirements must be conveyed to construction contractors as part of the plan notes and are summarized in **Table 8-7**.

Table 8-7 Minimum Requirements for All Construction Sites

CATEGORY	MINIMUM REQUIREMENTS
Erosion and Sediment Control	Sediments from areas disturbed by construction shall be retained on site using an effective combination of erosion and sediment controls to the maximum extent practicable, and stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.
Waste and Materials Management Control	Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented and retained on site to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.

BMPs that may be used to meet the minimum requirements are described later in this section.

8.2.4.2 Site Management Requirements for Medium and High Priority Construction Sites

The following requirements are for deployment of selected construction BMPs and apply to all medium and high priority projects. BMPs that may be used to meet the site management requirements are described later in this section.

Dry Season Requirements (May 1 through September 30)

A. Wind erosion BMPs (dust control) shall be implemented.

B. Sediment control BMPs shall be installed and maintained at all operational storm drain inlets.

C. BMPs to control off-site sediment tracking shall be implemented and maintained.

D. Appropriate waste management and materials pollution control BMPs shall be implemented to prevent the contamination of stormwater by wastes and construction materials.

E. Appropriate non-stormwater BMPs shall be implemented to prevent the contamination of stormwater from construction activities.

F. There shall be a "weather triggered" action plan and the ability to deploy standby sediment control BMPs as needed to completely protect the exposed portions of the site within 48 hours of a predicted storm event (a predicted storm event is defined as a forecasted, 50% chance of rain).

G. Sufficient materials needed to install standby sediment control BMPs (at the site perimeter, site slopes and operational inlets within the site) necessary to prevent sediment discharges from exposed portions of the site shall be stored on site. Areas that have already been protected from erosion using physical stabilization or established

vegetation stabilization BMPs as described in item H below are not considered to be "exposed" for purposes of this requirement.

H. Deployment of permanent erosion control BMPs (physical or vegetation) should commence as soon as practical on slopes that are completed for any portion of the site. Standby BMP materials should not be relied upon to prevent erosion of slopes that have been completed.

Wet Season Requirements (October 1 through April 30)

In addition to the Dry Season Requirements:

A. Where appropriate sediment control BMPs shall be implemented at the site perimeter, at all operational storm drain inlets and at all non-active slopes, to provide sufficient protection for storms likely to occur during the rainy season.

B. Adequate physical or vegetation erosion control BMPs (temporary or permanent) shall be installed and established for all completed slopes prior to the start of the rainy season. These BMPs must be maintained throughout the rainy season. If a selected BMP fails, it must be repaired and improved, or replaced with an acceptable alternate as soon as it is safe to do so. The failure of a BMP may indicate that the BMP, as installed, was not adequate for the circumstances in which it was used. Repairs or replacements must result in a more robust BMP, or additional BMPs should be installed to provide adequate protection.

C. The amount of exposed soil allowed at one time shall not exceed that which can be adequately protected by deploying standby erosion control and sediment control BMPs prior to a predicted rainstorm.

D. A disturbed area that is not completed but that is not being actively graded (non-active area) shall be fully protected from erosion with temporary or permanent BMPs (erosion and sediment control). The ability to deploy standby BMP materials is not sufficient for these areas. Erosion and sediment control BMPs must actually be deployed. This includes all building pads, unfinished roads and slopes.

E. Sufficient materials needed to install standby erosion and sediment control BMPs necessary to completely protect the exposed portions of the site from erosion and to prevent sediment discharges shall be stored on site. Areas that have already been protected from erosion using permanent physical stabilization or established vegetation stabilization BMPs are not considered to be "exposed" for purposes of this requirement.

8.2.4.3 Construction BMPs

In order to meet the Model Construction Program requirements, construction contractors must select, install and maintain appropriate BMPs on all construction projects. BMPs must be installed in accordance with an industry recommended standard, or in accordance with the General Permit. BMPs are tools which are use to ensure sites meet the requirements outlined above. Selection of BMPs is a site-specific process and as such, no specific BMPs or number of BMPs are required. Fact sheets are provided to assist site managers in selection of BMPs for compliance with the requirements of the DAMP.

Table 8-8 shows the listing of all construction BMPs from the California Stormwater Best Management Practice Handbook, Construction, 2003 Edition, (errata Sept. 2004), which has BMP fact sheets for six major categories shown below and guidelines on how to select erosion and sediment controls.
Erosion Control

- Sediment Control
- Wind Erosion Control
- Tracking Control
- Non-Stormwater Management
- Waste Management & Materials Pollution Control

Table 8-8 Construction BMPs

CATEGORY	BMP #	BMP NAME
Erosion Control BMPs	EC-1	Scheduling
	EC-2	Preservation of Existing Vegetation
	EC-3	Hydraulic Mulch
	EC-4	Hydroseeding
	EC-5	Soil Binders
	EC-6	Straw Mulch
	EC-7	Geotextiles and Mats
	EC-8	Wood Mulching
	EC-9	Earth Dikes & Drainage Swales
	EC-10	Outlet Protection/ Velocity Dissipation Devices
	EC -11	Slope Drains
	EC-12	Streambank Stabilization
	EC-13	Polyacrylamide
Sediment Control BMPs	SE-1	Silt Fence
	SE-2	Sediment Basin
	SE-3	Sediment Trap
	SE-4	Check Dam
	SE-5	Fiber Rolls
	SE-6	Gravel Bag Berm
	SE-7	Street Sweeping and Vacuuming
	SE-8	Sandbag Barrier
	SE-9	Straw Bale Barrier
	SE-10	Storm Drain Inlet Protection
Wind Erosion Control BMPs	WE-1	Wind Erosion Control
Tracking Control BMPs	TR-1	Stabilized Construction Entrance/ Exit
	TR-2	Stabilized Construction Roadway
	TR-3	Entrance/Outlet Tire Wash

Table 8-8 Construction BMPs (continued)

CATEGORY	BMP #	BMP NAME
Non-Stormwater Management BMPs	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/Discharge
	NS-7	Potable Water/Irrigation
	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	Concrete Finishing
	NS-14	Material Over Water
	NS-15	Demolition Adjacent to Water
	NS-16	Temporary Batch Plants
Waste Management BMPs	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-7	Contaminated Soil Management
	WM-8	Concrete Waste Management
	WM-9	Sanitary/ Septic Waste Management
	WM-10	Liquid Waste Management

8.2.4.4 Other References

The following sources contain useful information on construction BMPs:

- State of California Department of Transportation (Caltrans), Storm Water Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual, November 2000.
- Urban Runoff Quality Management, Water Environment Federation (WEF) Manual of Practice No.23/American Society of Civil Engineers (ASCE) Manual and Report on Engineering Practice No. 87, 1998.
- Erosion and Sediment Control Handbook. Goldman, S.J., K. Jackson, and T.A. Bursztynsky. McGraw-Hill, 1986.
- Urban Storm Drainage Criteria Manual, Volume 3 – Best Management Practices, Urban Drainage Flood Control District, Denver, Colorado, September 1999.
- Construction Stormwater Pollution Prevention. Vol. II. Storm Water Management Manual for Western Washington, August 2001. Washington State Department of Ecology.
- Highway Runoff Manual, M31-16. Washington State Department of Transportation, Environmental and Engineering Service Center, February 1995.

- Erosion and Sediment Control Planning and Design Manual. North Carolina Sedimentation Control Commission, NC Dept. of Natural Resources and Community Development, Raleigh, NC. Smolen, M.D., D.W. Miller, L.C. Wyatt, J. Lichthardt, A.L. Lanier, W.W. Woodhouse, and S.W. Broome, 1988.
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- Field Manual on Sediment and Erosion Control Best Management Practices for Contractors and Inspectors, Jerald S. Fifield, Ph.D., CPECS.
- Storm Water Pollution Control, Municipal, Industrial and Construction NPDES Compliance, Second Edition. Roy D. Dodson, P.E., 1999.

8.2.5 Documentation Requirements

This section presents documentation requirements for all projects. The documentation requirements are summarized in **Table 8-9.** These requirements apply equally to private development and public works projects.

Table 8-9 Documentation Requirements for Construction Sites

PRIORITY	DOCUMENTATION REQUIREMENT
LOW	Minimum Requirements as Standard Conditions in Permit or Plan Notes
MEDIUM	Storm Water Pollution Prevention Plan (SWPPP)
HIGH	Storm Water Pollution Prevention Plan (SWPPP)
	Minimum Requirements as Standard Conditions or Plan Notes (< 1 acre)

8.2.5.1 Documentation Requirements for General Permit Sites

Construction sites that are subject to the General Permit are required to prepare and implement a SWPPP meeting the requirements of the General Permit.

Private Construction Projects Covered by the General Permit

For private projects, the project owner, developer or contractor will prepare the NOI and submit it to the State Water Resources Control Board (SWRCB). Before issuing a grading or building permit, the city or county will require proof of General Permit coverage. Before the developer or contractor begins construction, the SWPPP must be prepared and must be implemented year-round throughout the duration of the project's construction.

Once construction begins, the city or county will inspect and enforce local permit(s) and ordinances, and will notify the appropriate RWQCB of any non-compliance with local permits or ordinances when the non-compliant condition meets the criteria of posing a threat to human or environmental health as discussed in Section 8.2.6.7.

It is important to note that city or county staff is not responsible for reviewing, approving or enforcing the SWPPP; these are responsibilities of the RWQCB. Cities (or county) may elect to have inspector(s) use the SWPPP as an internal tool for on-site inspections. Once project construction is completed and the site fully complies with the final stabilization requirements of the General Permit, the owner/developer will submit an NOT to the SWRCB.

Public Works Construction Projects Covered by the General Permit

For public works projects within the jurisdiction of the San Diego RWQCB, the city or county will prepare the NOI and submit it to the SWRCB. The SWPPP will then be prepared before the contractor is allowed to start construction activities. During construction, the city or county will inspect and enforce the contract documents and will notify the RWQCB of any non-compliance with the General Permit. Once the project is completed, the city or county will submit an NOT to the SWRCB.

For public works projects within the jurisdiction of the Santa Ana RWQCB, the city or county will notify the RWQCB via an informal Notification of Construction Activity. The SWPPP will then be prepared before the contractor is allowed to start construction activities. During construction, the city or county will inspect and enforce the contract documents and will notify the RWQCB of any non-compliance with the General Permit.

It is important to note that city or county inspectors are not responsible for reviewing, approving or enforcing the SWPPP; these are responsibilities of the RWQCB. Inspectors of public works projects will enforce the contract documents and should be familiar with the SWPPP as it is part of the contract documents. Once the project is completed, the city or county will inform the RWQCB when the project is completed.

SWPPP Template

The SWPPP is the document that addresses water pollution control during construction. A SWPPP Template has been developed and is included in the Local Implementation Plan (**Appendix A-8)** as an assistance tool. The template contains all elements required by the General Permit, but individual agencies may develop their own SWPPP template. It is important to note that a SWPPP does not need to match the template provided. The template is

directly applicable for public projects subject to the General Permit and is provided as a guidance document that was developed with the following objectives:

- Meet the requirements of the General Permit; and
- Provide easy data entry for owners, developers and/or contractors to prepare SWPPPs.

8.2.5.2 Documentation Requirements for Other Sites

Private Construction Projects Not Covered by the General Permit

Private construction projects not covered by the General Permit, but covered under a grading permit, are required to develop Erosion and Sediment Control Plans (ESCPs). These ESCPs must show proposed locations of the erosion and sediment control BMPs that will be implemented during the construction project to comply with the minimum requirements listed in **Table 8-7**.

Public Works Construction Projects Not Covered by the General Permit

Public works construction projects not covered by the General Permit are required to comply with appropriate pollution prevention control practices in accordance with the current Green Book and the provisions of this section, and shall develop and implement ESCPs. Low priority construction sites shall meet the minimum requirements listed in **Table 8-7**.

8.2.6 Municipal Inspections and Enforcements

Both public and private construction projects will be inspected by municipal inspectors or other Permittee or contract staff with enforcement authority to verify that the construction activities are being performed in accordance with the project plans, building and grading permits, and applicable municipal codes, regulations and ordinances. The inspection program includes inspection frequencies, inspection documentation procedures, municipal inspections of private and public construction sites, enforcement procedures, and non-compliance reporting.

8.2.6.1 Inspection Documentation Procedures

In order to properly document all inspection information and gather the necessary information for reporting results of the program, a sample basic construction site inspection checklist is included in **Appendix A-8**.

For public works projects covered by the General Permit, records of all inspections and non-compliance reporting will be retained for a period of at least three years. With the exception of non-compliance reporting, these records need not be submitted to the State.

8.2.6.2 Inspections of Private Construction Projects

Inspections of private construction projects will be conducted at the frequencies shown in **Table 8-10**. At a minimum, inspectors will address the following during inspections:

- Ensure that the owner/developer/contractor is meeting these construction program requirements;

- Ensure that there is an effective combination of erosion, sediment and non-stormwater BMPs being implemented and maintained in order to prevent or reduce pollutants in stormwater runoff from construction sites into stormwater conveyances or receiving waters;
- Ensure that the owner/developer/contractor implements and maintains appropriate BMPs on a year round basis; and
- Ensure that, if issues are noted during the inspections, appropriate corrective actions are taken.

The primary mechanism that inspectors will use to determine if the minimum requirements and BMPs for construction activities are being met will be to assess the site against the minimum requirements **(Table 8-7**). The minimum requirements are intended to be easy to interpret field observations that allow an assessment of site conditions during both dry and wet season conditions.

The inspector will utilize the following framework when conducting an inspection of private construction projects:

- Review the erosion and sediment control plans (if applicable) and determine whether they are being properly implemented;
- Determine if BMPs are being effectively implemented and maintained in accordance with the approved erosion and sediment control plans; and
- Determine whether the owner/developer/contractor is making appropriate adjustment when ineffective BMPs are found.

If BMPs are either not implemented or not being maintained properly, enforcement actions may be imposed on the contractor as discussed later in this section. Inspections of construction sites will be documented using the sample checklists provided in Appendix A-8. These forms are provided as guidelines and can be edited by the city or county to meet their own needs.

8.2.6.3 Inspections of Public Works Construction Projects

Inspections of public works construction projects will be conducted at the frequencies shown in **Table 8-10**. At a minimum, inspectors will address the following during inspections:

- Ensure that the contractor is meeting these construction program requirements;
- Ensure that there is an effective combination of erosion, sediment and non-stormwater BMPs being implemented and maintained in order to prevent;
- Ensure that the contractor implements and maintains appropriate BMPs on a year round basis; and
- Ensure that, if issues are noted during the inspections, appropriate corrective actions are taken.

The primary mechanism that inspectors will use to determine if minimum requirements and BMPs for construction activities are being met will be to assess the site against the minimum requirements (**Table 8-7**) and the contract documents. The minimum requirements are

intended to be easy to interpret field observations that allow an assessment of site conditions during both dry and wet season conditions.

The inspector will utilize the following framework when conducting an inspection of public works construction projects:

- Review the SWPPP (if applicable), erosion and sediment control plans and contract documents and determine whether they are being properly implemented;
- Determine if BMPs are being effectively implemented in accordance with the approved plans, and maintained properly; and
- Determine whether the contractor is making appropriate adjustment when ineffective BMPs are found.

If BMPs are either not implemented or not being maintained properly, contract enforcement actions may be imposed on developers/contractors as discussed later in this section. Inspections of public works construction sites will be documented using the sample checklists provided in **Appendix A-8**. These forms are provided as guidelines and can be edited by the municipality to meet their own needs.

8.2.6.4 Inspection of Construction Sites

Inspection of construction sites will be performed based upon the priority of the project. The frequency of routine construction site inspections is shown in **Table 8-10** below.

Table 8-10
Inspection Frequency of Construction Projects Based on Construction Site Priority

Construction Site Priority	Rainy Season (October 1 - April 30)		Dry Season (May 1 - September 30)
	Projects within the jurisdiction of the Santa Ana RWQCB	Projects within the jurisdiction of the San Diego RWQCB	
HIGH	Once per month	Once per week *	As needed
MEDIUM	Twice during the season		As needed
LOW	Once during the season	Twice during the season	As needed

* OR

Monthly for any site that the responsible Permittee certifies in a written statement to the SDRWQCB all of the following (certified statements may be submitted to the SDRWQCB at any time for one or more sites):

i. Permittee has record of construction site's Waste Discharge Identification Number (WDID#) documenting construction site's coverage under the statewide General Construction Permit; and
ii. Permittee has reviewed the constructions site's Storm Water Pollution Prevention Plan (SWPPP); and
iii. Permittee finds SWPPP to be in compliance with all local ordinances, permits, and plans; and
iv. Permittee finds that the SWPPP is being properly implemented on site.

8.2.6.5 Re-inspection Frequencies

If the inspected site is in violation of these permits or codes, does not meet the minimum requirements (**Table 8-7**), or there is a prohibited discharge related to construction activities, inspectors will immediately direct compliance and conduct follow-up inspections to confirm that compliance is attained. Sites will be re-inspected if deficiencies are found. The inspector can quantify the level of non-compliance and the required re-inspection frequency based on the rating system below (**Table 8-11**).

1 Rating - There are no significant deficiencies that require correction. Criteria meeting this rating include:

- Appropriate treatment controls provided for dewatering operations (if needed).
- Non-stormwater and waste management BMPs properly implemented.
- Sediment tracking is minimal to non-existent.
- No evidence of wind erosion.
- All temporary soil stabilization BMPs implemented in accordance with the SWPPP and the minimum requirements.
- Sediment control BMPs are implemented in accordance with the SWPPP and the minimum requirements.

2 Rating - The project has minor deficiencies. The inspector will list each of the minor deficiencies and can include corrective actions to be taken prior to the next scheduled inspection. Minor deficiencies include the following:

- Site inspections by private development are not being conducted in accordance with expected frequencies.
- Any non-stormwater or waste management BMPs improperly maintained.
- Soil stabilization or sediment controls are not properly maintained.
- Evidence of active wind erosion on unstabilized slopes/stock piles.
- Minor tracking less than approximately 50 feet from project entrance or exit points.

3 Rating - Excessive minor deficiencies and/or major deficiencies are encountered. Excessive minor deficiencies are a total of six or more minor deficiencies requiring correction. Major deficiencies are defined as follows:

- Hazardous materials or waste is stored within the project without implementation of BMPs.
- Any discharge of sediment or deleterious substances resulting from dewatering operations conducted without implementation of required BMPs for dewatering.
- Sediment tracking from the project construction equipment or vehicles approximately 50 feet from project entrances or exits.

- Soil stabilization and sediment BMPs are not installed in accordance with the minimum requirements and.
- Dust from construction visibly blowing off the site and into drainage conveyances or adjacent water bodies.

4 Rating - There are critical deficiencies that would likely result in a violation of the permit if a stormwater runoff event were to occur. The inspector will note the deficiencies and make recommendations for corrective action. Critical deficiencies are defined as follows:

- Any observed discharge of stormwater or non-stormwater from the project that, in the judgment of the inspector, is generated by the construction activity, and is uncontrolled.
- Excessive sediment tracking from project site for more than 50 feet from project access points
- Absence of erosion and sediment controls.
- Absence of waste and materials management controls.
- There are identified stormwater inlets or receiving waters within or adjacent to the project site in close proximity to disturbed surface areas without control measures in place that pose an immediate threat of untreated stormwater discharges.
- Evidence of non-stormwater discharges into stormwater inlets or receiving waters within or adjacent to the project site
- Working in an active stream channel or other water body without proper implementation of required BMPs.
- No corrective action taken for potential hazardous materials/waste deficiencies noted in (3) above.

Table 8-11
Re-inspection Frequency of Construction Projects Based on Construction Site Priority

Construction Site Priority	Season	Level of Compliance at Construction Site			
		1 No significant deficiencies	2 Minor deficiencies	3 Excessive minor deficiencies, and/or major deficiencies	4 Critical deficiencies
HIGH	Rainy	Continue inspections	As needed	Within one week	Within one week
	Dry		As needed	As needed	Within one week
MEDIUM	Rainy		As needed	Within two weeks	Within one week
	Dry		As needed	As needed	Within one week
LOW	Rainy		As needed	Within one month	Within one week
	Dry		As needed	As needed	Within one week

8.2.6.6 Enforcement Actions

Enforcement of construction projects will be undertaken by the city or county inspectors and/or other staff who possess internal enforcement authority through established policies and procedures. There are several enforcement mechanisms and penalties to ensure compliance with local ordinances and permits. It is important to note that city staff is not responsible for enforcing the SWPPP for private contracts, these are responsibilities of the SWRCB; but inspectors are required to become familiar with the SWPPP as it is part of public contract documents.

The levels of enforcement and associated penalties are typically issued at the discretion of the authorized municipal officer with consideration of relevant circumstances regarding the violation. Different types of enforcement actions are summarized below (**Table 8-12**).

Table 8-12 Enforcement Actions for Construction Projects

PRIVATE CONSTRUCTION PROJECTS	← WARNING PROGRESSION	PUBLIC WORKS CONSTRUCTION PROJECTS
Verbal Warning		Verbal Warning
Written Warning ▪ Notice of Non-Compliance ▪ Administrative Compliance Order ▪ Administrative Citations or Fines ▪ Cease and Desist Order		Written Warning ▪ Notice of Non-Compliance
Stop Work Order		Enforcement of Contract ▪ Stop Work Order ▪ Withholding of Payment ▪ Bond ▪ Fines ▪ Revocation of Contract
Revocation of Permit(s) and/or Denial of Future Permits		
Civil and Criminal Court Actions		Civil and Criminal Court Actions

Enforcement of Private Construction Projects

Inspectors will enforce compliance with the construction program, grading or building permit and local ordinances such as the Water Quality Ordinance. Depending on the severity of the violation(s), enforcement could range from a verbal warning, to a written notice, revocation of permit(s), stop work order and civil and/or criminal court actions or prosecution.

- Verbal Warnings

  The initial method of requesting corrective action and enforcing compliance will be a verbal warning from the inspector to the contractor. Verbal warnings are often sufficient to achieve correction of the violation, often while the inspector is present at the construction site. The inspector will notify the developer/contractor's project supervisor of the violation, and document the violation and the notification to the contractor's project supervisor in the inspection file. A specific time frame for correcting the problem and a follow-up inspection date will be documented by the inspector. In judging the degree of severity, the inspector may also take into account any history of similar or repeated violations by the same developer or contractor at this or other sites.

- Written Warnings

  If a deficiency that was noted in a prior verbal warning is not corrected by the next inspection, or the severity of the violation is such that a verbal warning is not strong enough, a written warning will be issued. The written warning will describe the deficiency that is to be corrected, suggested corrective action(s), and the specific time frame for correction and a date for a follow-up inspection.

  A copy of the written warning will be provided to the contractor's project supervisor and another copy will be provided to the owner/developer. A copy will be placed in the active inspection file. Once the violation has been corrected to the satisfaction of the inspector, the inspector will document compliance in the inspection file.

  Depending on the severity of the violation(s), the options for issuing written warnings for enforcement of local ordinances and grading/building permits on private construction projects are illustrated in **Figure 8-7**. Various examples of written warning forms are in **Appendix A-8** (note that use of the specific forms provided as examples is not required).

- Stop Work Orders:

  If a written warning has not been addressed by the next inspection, or if the developer/contractor has not complied with their permit requirements, or if a significant threat to water quality is observed (such as a failure of BMPs resulting in a significant release of sediment or other pollutants off site), a stop work order will be issued by the inspector or the appropriate official. Stop work orders prohibit further construction activity until the problem is resolved and provide a time frame for correcting the problem.

  The stop work order will describe the infraction and specify what corrective action must be taken. A copy of the stop work order will be given to the contractor's project supervisor and placed in the active inspection file. For a private construction project, a copy of the stop work order will also be sent to the owner/developer. To restart work once a stop work order has been issued, the contractor's project supervisor must request the inspector to re-inspect the project and verify that the deficiencies have been satisfactorily corrected. If the inspector is satisfied with the corrections, the inspector may sign off on that phase of the project, and work may proceed. In severe cases, the

building or grading permit may be revoked. A sample Stop All Work notice is provided in **Appendix A-8**.

Figure 8-7
Enforcement of Private Construction Sites

ENFORCEMENT OPTIONS	ACTIONS			CRIMINAL ACTIONS
	NOTICE OF NON-COMPLIANCE	ADMINISTRATIVE COMPLIANCE ORDER	CEASE & DESIST STOP WORK ORDER REVEOCATION OF PERMIT(S)	INFRACTIONS AND MISDEMEANORS
COMPLIANCE STRATEGY	EDUCATE VIOLATOR	AUTHORIZED INSPECTORS JUDGEMENT	CRIMINAL PROSECUTION	
Threat Level	Insignificant	Not Significant	May be Significant	Significant
Environmental Harm	None	Not Immediate	Potential/IImmediate	Actual/Immediate
Event Duration	Short	Short	Long/Continuous	Long/Continuous
Event Frequency	Isolated	Infrequent	Frequent/Ongoing	Frequent/Ongoing
Cooperation	Readily Complies	Working to Comply	Uncooperative/ Slow to Comply	Non-Responsive
Intent	Unknowingly	Not Willful	Possibly Willful	Willful

- Revocation of Permit(s) and/or Denial of Future Permits:
- In severe cases of non-compliance or significant discharges, it may be necessary to revoke the grading and/or building permit that a developer/contractor is working under, withhold final approval, or deny future permits on the project. The developer/contractor would then have to re-apply for permits and meet any requirements that the Permittee may place on the project. Criteria and procedures will be developed in the permit-issuing program to implement this enforcement tool. Legal counsel should be sought before proceeding with revocation or denial of permits.
- Civil and Criminal Court Actions:
- In severe cases, the Permittee may also use Civil and or Criminal court actions under local ordinances, such as the Water Quality Ordinance, which may result in significant fines levied upon the non-compliant responsible parties.

Enforcement of Public Works Construction Projects

Authorized inspectors will enforce compliance with the contract documents and local ordinances such as the Water Quality Ordinance. Depending on the severity of the violation(s),

enforcement could range from a verbal warning, to a written notice of non-compliance, enforcement of the contract and or criminal court actions or prosecution.

- Verbal Warnings:

  The initial method of requesting corrective action and enforcing compliance will be a verbal warning from the inspector to the contractor. Verbal warnings are often sufficient to achieve correction of the violation, often while the inspector is present at the construction site. The inspector will notify the contractor's project supervisor of the violation, and document the violation and the notification to the contractor's project supervisor in the inspection file. A specific time frame for correcting the problem and a follow-up inspection date will be documented by the inspector. In judging the degree of severity, the inspector may also take into account any history of similar or repeated violations by the same contractor at this or other sites.

- Written Warnings:

  Depending on the severity of the violation(s), the options for issuing written warnings for enforcement of public works construction projects are illustrated in **Figure 8-8**.

Figure 8-8
Enforcement of Public Works Construction Sites

ENFORCEMENT OPTIONS	ACTIONS			CRIMINAL ACTIONS
	NOTICE OF NON-COMPLIANCE	CONTRACT REMEDIES		INFRACTIONS AND MISDEMEANORS
COMPLIANCE STRATEGY	INFORM CONTRACTOR	AUTHORIZED INSPECTORS JUDGEMENT	CRIMINAL PROSECUTION	
Threat Level	Insignificant	Not Significant	May be Significant	Significant
Environmental Harm	None	Not Immediate	Potential/IImmediate	Actual/Immediate
Event Duration	Short	Short	Long/Continuous	Long/Continuous
Event Frequency	Isolated	Infrequent	Frequent/Ongoing	Frequent/Ongoing
Cooperation	Readily Complies	Working to Comply	Uncooperative/ Slow to Comply	Non-Responsive
Intent	Unknowingly	Not Willful	Possibly Willful	Willful

- Notice of Non-Compliance:

  If a deficiency that was noted in a prior verbal warning is not corrected by the next inspection, or the severity of the violation is such that a verbal warning is not strong

enough, a notice of non-compliance will be issued. The Notice of Non-Compliance is given when the violation occurred unknowingly; the threat level is insignificant; there is no environmental harm; the violation was isolated and had a short duration; and the contractor readily complies and corrects the problem. The notice will describe the deficiency that is to be corrected, suggested corrective action(s), and the specific time frame for correction and a date for a follow-up inspection.

- Contract Enforcement Mechanisms:
- If a contractor is performing construction of a public works project, the provisions within the contract will be used for enforcement of non-compliance. Language will be included into construction contracts that give the municipality the right to enforce established policies and procedures such as withhold payment(s), use contractor's bonds, apply fines, stop work (without time penalties) or termination of contracts if the contractor performing the construction activities does not comply with appropriate Permits, laws, regulations and ordinances.
- Civil and Criminal Court Actions:
- As a final resort, the Permittee may use Civil and or Criminal court actions under local ordinances, such as the Water Quality Ordinance, which may result in significant fines levied upon the non-compliant responsible parties.

8.2.6.7 Non-Compliance Reporting

Sites are considered non-compliant when one or more violations of local ordinances, or permits, are observed on the site. If a non-compliant private construction project meets the criteria of posing a threat to human or environmental health as discussed below, then the appropriate RWQCB will be notified by the city or county NPDES Program Manager or NPDES Coordinator as required in this section.

In the case of public works projects subject to the General Permit, the RWQCB will be notified if compliance with the General Permit cannot be certified and/or if there are other instances of non-compliance and if the non-compliance meets the criteria of posing a threat to human or environmental health as discussed below. For public works projects not subject to the General Permit, the NPDES Program Manager or NPDES Coordinator will notify the appropriate RWQCB when the project is found to be in non-compliance with contract requirements and if the non-compliant condition meets the criteria of posing a threat to human or environmental health as discussed below.

Oral notification to the RWQCB of non-compliant private construction sites that are determined to pose a threat to human or environmental health will be provided by the NPDES Program Manager or NPDES Coordinator within 24-hours of the discovery of non-compliance. Such oral notification shall be followed up by a written report and submitted to the RWQCB within 5 days of the incidence of non-compliance. Written notification(s) will identify the type(s) of non-compliance, describe the actions necessary to achieve compliance, and include a time schedule, subject to the modifications by the RWQCB, indicating when compliance will be achieved.

For the purpose of compliance with the NPDES Permits, instances of non-compliance will be summarized and reported in the annual status report. The monitoring records will be kept in the project files on each private and public works project.

Emergency Construction Projects

Emergency Construction Projects are defined here as construction projects deemed necessary for the protection of human health, safety and property. Any and all BMPs described in this section should be deployed to the Maximum Extent Practicable in order to reduce potential harmful effects offsite and/or downstream. If an Emergency Construction Project should arise, notify any all appropriate agencies, such as the SWRCB, Fish & Game, local law enforcement, local fire departments, Orange County Health Care Agency and Orange County PF&RD.

The County will not require a WQMP for public agency projects consisting of routine maintenance or emergency construction activities required to protect public health and safety.

Criteria for Evaluating Potential Impacts to Human or Environmental Health

Erosion and sediment transport are the primary pathways for introducing key pollutants such as nutrients (i.e. phosphorus), metals, and organic compounds into aquatic systems. Release of pollutants through spills, dumping, or other unauthorized non-stormwater discharges can also occur. Based on the potential for impacts by sediment transport to human or environmental health, the inspector will evaluate events of non-compliance to determine whether they pose a threat to human or environmental health.

Threat to water quality will be assessed by inspectors for construction site runoff that will not be reasonably controlled by the BMPs in place or if a failure of BMPs is resulting in the release of sediments or other pollutants. Violations observed will be documented by the inspectors. If a significant and/or immediate threat to water quality is observed by an inspector, action will be taken to require the developer/contractor to immediately cease the discharge.

The criteria to be used during evaluation of an event producing non-compliance, whether from stormwater or non-stormwater runoff, are as follows:

- If toxic materials were discharged from site (including estimated volume of discharge);
- Proximity of site to impaired water body (303d listed);
- Proximity of site to sensitive habitat/endangered species, ESAs, ASBSs;
- Proximity of site to a water body (i.e. is discharge to ocean, creek, river, etc);
- Beneficial uses for affected water bodies;
- Proximity of site to public water supply (well head, monitoring wells);
- If discharge to storm drain, condition of storm drain (clog, etc.);
- Other materials discharged from site (concrete washout, sanitary washes, etc.).

A sample form for evaluating the potential impacts to human or environmental health and sample notice of non-compliance are provided in **Appendix A-8** (note that use of the specific forms provided as examples is not required).

8.3 Education and Training

Education and training is one of the keys to a successful stormwater program. To assist responsible municipal and contract staff in understanding the Construction Program, training modules have developed and can be found in **Appendix B, Section B-8**.

- General Program Management training - consists of overall program administration and implementation materials tailored for the NPDES Program Manager(s), NPDES Coordinator(s) and other program management staff. The content of the training will include:
  - Goals and objectives of the revised program;
  - Overview of inventory of construction sites;
  - Overview of construction site prioritization;
  - Overview of BMPs for construction sites;
  - Overview of the SWPPP requirements and SWPPP template; and
  - Overview of the inspection program and reporting requirements, and how inspections are tied to the prioritization of construction projects.
- Construction Inspection Training - will consist of procedure materials for inspecting construction sites and what to look for in the field when inspecting BMPs. This training will be tailored to train building and grading permit inspectors and/or other staff involved in inspections of construction sites.

Non-Permittee Sponsored Training

In addition to the Permittee sponsored training, city or county staff may also attend various other workshop or training events as they take place throughout the year. These types of events may include local or national organization sponsored training.

8.4 Definitions

The following definitions are used for the purposes of this model construction program:

Adjacent - located within 200 feet of the ESA.

Construction project - Any site for which building or grading permits are issued and where an activity results in the disturbance of soil such as soil movement, grading, excavation, clearing, road construction, structure construction, or structure demolition; and sites where uncovered storage of materials and wastes such as dirt, sand or fertilizer occurs; or exterior mixing of cementaceous products such as concrete, mortar or stucco will occur.

Pollution Prevention - Any practice that reduces or eliminates the creation of pollutants.

Storm Water Pollution Prevention Plan (SWPPP) - Document required to be developed and implemented by the General Permit. The SWPPP emphasizes the use of appropriately selected, correctly installed and maintained pollution reduction BMPs.

This approach provides the flexibility necessary to establish BMPs that can effectively address source control of pollutants during changing construction activities.

Discharging directly to - discharge from a drainage conveyance system that is composed entirely of flows from the subject construction site and not commingled with flows from adjacent lands (i.e. discharge from an urban area that co-mingles with downstream flows prior to an Environmental Sensitive Area (ESA) is not subject to this requirement).