

**2.1 INTRODUCTION**

**2.1.1 Program Goal and Objectives**

This program component is applicable to all Permittees who conduct or contract out the planning, design, or construction of public facilities. One goal of this program component is that appropriate permanent BMPs are incorporated into the planning and design of public facility projects with the potential for having a significant effect on storm water quality when completed by virtue of their size, nature of on site activities, or other factors. The second goal of this program is that temporary best management practices (BMPs) are implemented to reduce the discharge of pollutants from the construction sites of public facility projects.

Each Permittee’s program must meet the requirements of the Los Angeles County municipal storm water permit (Permit), as described in Table 2-1.

<i>Table 2-1</i>		
<i>Permit Requirements - Public Construction Activities Management</i>		
<i>Report Section</i>	<i>Requirement (Summary)</i>	<i>Permit Section</i>
2.2.1	Implement the Development Planning Program requirements (Permit Part 4.D) at public construction projects.	IV.F.2.a
2.2.2	Implement the Development Construction Program requirements (Permit Part 4.E) at Permittee owned construction sites.	IV.F.2.b
2.2.3	Obtain coverage under the GCASP for public construction sites 5 acres or greater (or part of a larger area of development) except that a municipality under 100,000 in population (1990 U.S. Census) need not obtain coverage under a separate permit until March 10, 2003. Each Permittee, no later than March 10, 2003, shall obtain coverage under a statewide general construction storm water permit for public construction sites for projects between one and five acres.	IV.F.2.c-d

The objectives of this program component are to:

- Identify public facility projects that when completed (operational phase) have the potential for significantly effecting storm water quality.
- Select and incorporate appropriate permanent BMPs into the planning and design of public facility projects.

- Select and incorporate appropriate construction control measures for storm water quality management from construction sites.
- Conduct an inspection program, including enforcement procedures as necessary, to verify that construction control measures are implemented and performed effectively throughout the construction period.

### **2.1.2 Public Facilities Subject to the Model Program**

This program element applies to all public works Development Construction Projects in Los Angeles County owned or operated by a Permittee including, but not limited to, site development, building, roadway, drainage, utility and other infrastructure projects, except for projects determined to be exempt from this program.

A public works Development Construction Project is a site where construction activities such as clearing, grading, excavation, road construction, structure construction, or structure teardown results in soil disturbance. Construction activity does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility, nor does it include emergency construction activities required to immediately protect public health and safety.”

## **2.2 PROGRAM IMPLEMENTATION ELEMENTS**

### **2.2.1 Planning and Design Requirements**

The Permit (Part 4.F.2.a) requires that the storm water management requirements for the design and construction of public facilities be consistent with the requirements for private development projects. A Standard Urban Storm Water Mitigation Plan (SUSMP) was adopted by the Regional Board for eight enumerated categories of private development projects. Although public agencies do not plan and design these eight categories of projects, public facilities may have similar functions or characteristics or may conduct similar activities after construction is completed.

The planning, design, approval, and oversight of public facility projects differ from private development projects. For example, private development projects are regulated through a process of a development plan approval (i.e., conditions of approval), building or grading permit applications, and permit conditions. Public facility projects undergo design review by the contracting agency; are issued permits or similar administrative authorizations; and are then regulated through the enforcement of contract terms and approved plans and specifications.

Since the municipality is also the project owner, construction of public facilities according to approved plans and specifications is ensured through inspection and oversight by the project owner and enforcement of contract provisions. Review, approval, and inspection of public facilities and private development projects are generally performed by different municipal departments.

Each Permittee shall implement a planning and design program for their public facility projects that includes the following components:

- 1) a system for determining the appropriate category (Priority or Exempt) for a public facility project;
- 2) a recommended list of BMPs to be considered during planning and design of public facility projects; and
- 3) a process to ensure that public facility projects incorporate appropriate BMPs into project plans or design.

The Permit defines Priority and Exempt projects as follows:

- Planning Priority Projects are development and redevelopment projects requiring discretionary approval which the Building Official (or equivalent municipal authority) determines may have a potential significant effect on storm water quality;” and
- Planning Exempt Projects are development and redevelopment projects which the Building Official (or equivalent municipal authority) determines will not have a potential significant impact on storm water quality.” [Note: This definition of “exempt” projects differs from that found in the Public Agency Construction Model Program.]

The process for determining whether a public facility project is a Planning Priority Project or a Planning Exempt Project is shown on Figure 2-1 and is described in the remainder of this section.

### ***Project Determination as Planning Priority or Planning Exempt***

The factor in categorizing whether a public facility project is a Planning Priority Project or a Planning Exempt Project shall be based upon the contemplated project characteristics. The model checklist provided in Figure 2-2, or a substantially similar checklist, shall be completed for the proposed project.

The model checklist lists project characteristics that may be used to identify potentially significant sources of storm water pollutants. Those project characteristics<sup>1</sup> are:

- A public facility 100,000+ square feet or greater than? (*1 Ac starting March 10, 2003*)
- Vehicle or equipment maintenance areas or structures, including washing?
- Vehicle or equipment fueling areas?

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<sup>1</sup> Activities or materials potentially exposed to stormwater and not protected by storm-resistant sheltering. Such activities include public facilities operation and construction work. Such materials include material handling equipment, industrial machinery, raw materials, intermediate products, by-products, and waste products however packaged.

- Vehicle or equipment maintenance areas, including washing and repair?
- Commercial or industrial waste handling or storage?
- Outdoor handling or storage of hazardous materials?
- Outdoor food handling or processing?
- Outdoor animal care, confinement, or slaughter?
- Outdoor horticulture activities? or
- Parking lots  $\geq 5,000$  square feet or with  $\geq 25$  parking spaces and potentially exposed to storm water?

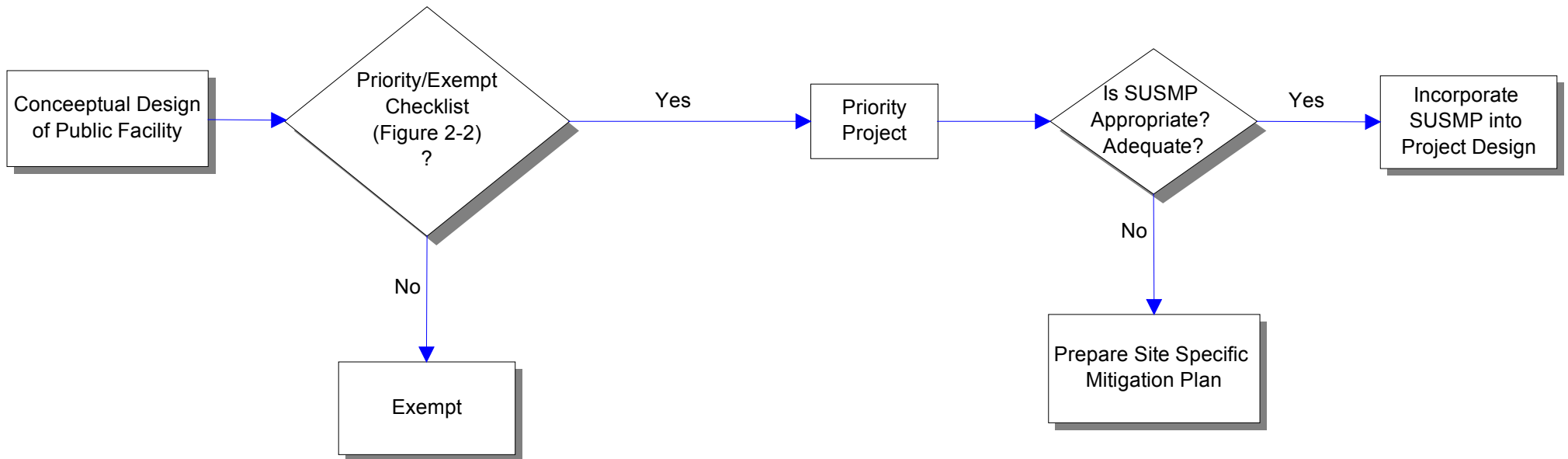
For consistency across the various component programs of the Countywide Storm Water Management Plan:

- The determination of the number of square feet for a public facility will be based on total impermeable area as opposed to lot size or building footprint. This interpretation is used because storm water runoff from paved areas associated with buildings must be managed.

If in completing the Planning Priority/Exempt Checklist, no project characteristics are identified, the project is exempt from the requirements of this Model Program.

If one or more project characteristics are identified in completing the Planning Priority/Exempt Checklist, the project is a Planning Priority Project subject to the requirements of this Model Program.

**Figure 2-1. Flow Diagram for Determination of Project as Priority or Exempt**



**Figure 2-2. Planning Priority / Exempt Checklist**

**MODEL CHECKLIST FOR CATEGORIZING  
PUBLIC FACILITY PROJECTS<sup>2</sup> AS PRIORITY OR EXEMPT**

Project Name: \_\_\_\_\_

Project Location: \_\_\_\_\_

Description of Project: \_\_\_\_\_

**PRIORITY PROJECT:** Any question is answered “YES.”

**EXEMPT PROJECT:** Every question is answered “NO.”

<b>Project Characteristics</b>	<b>Yes</b>	<b>No</b>
A public facility greater than 100,000+ square feet?		
Vehicle or equipment maintenance areas or structures, including washing?		
Vehicle or equipment fueling areas?		
Vehicle or equipment maintenance areas, including washing and repair?		
Commercial or industrial waste handling or storage?		
Outdoor handling or storage of hazardous materials?		
Outdoor animal care, confinement, or slaughter?		
Outdoor food handling or processing?		
Parking lots ≥ 5,000 square feet or with ≥ 25 parking spaces and potentially exposed to storm water?		
Outdoor horticulture activities		

<sup>2</sup> This model checklist applies only to Public Agency Planning Projects as defined in Section 2.1.2 of this Model Program.

***Storm Water Mitigation Plan***

Prior to administrative authorizations or issuance of permits for Planning Priority Projects, the Permittee shall require that the pertinent requirements of the SUSMP be incorporated into the planning and design of the Planning Priority Project.

***BMP Selection for Priority Projects***

The Permittee should address the potential water quality impacts of storm water discharges associated with public facilities early in the project planning and design process. In general, the sooner potential storm water impacts are considered, the greater the opportunity to include efficient and effective BMPs into project design and plans. A recommended BMP selection process is described in the remainder of this Section, and the recommended BMPs for consideration in Planning Priority Projects are provided in Appendix C.

**Goals and Objectives**

Site-specific conditions for a public facility project determine which BMPs are most appropriate for a site. Prior to selecting BMPs, a good understanding of post-construction activities and potential sources of storm water pollutants is needed. The BMPs considered should address the potential pollutants reasonably expected at the site once the facility is occupied or operational. The permanent BMPs planned for a public facility should fulfill the following goals and objectives:

- be appropriate for the given site constraints;
- be feasible to implement and maintain;
- ensure no adverse storm water quality impacts;
- promote improved water quality;
- provide effective pollutant source control or removal capability;
- meet regulatory requirements; and
- be economically feasible.

**BMP Selection Criteria**

Appropriate BMPs may be selected by using selection criteria that identify the capabilities and limitations of each BMP. Common criteria used in screening and selecting BMPs during the planning and design stage are:

- project characteristics (e.g., potential sources of storm water pollutants after construction is completed);
- site factors (e.g., slope, high water table, soils, etc.);
- pollutant removal capability;
- short-term and long-term costs;
- responsibility for maintenance;
- contributing watershed area; and
- environmental impact and enhancement.

The BMP selection criteria listed above should be applied in accordance with the overall objective of this Model Program, i.e., to reduce pollutants in discharges to the MEP to achieve water quality objectives and protection of the beneficial uses of receiving waters. Some BMPs will clearly be more appropriate and effective in some site-specific situations than others, and BMP selections should reflect this variability. These factors are described in more detail in Appendix D.

**Select Best Alternatives**

Using the list of recommended BMPs for Planning Priority Projects, the designer should use the selection criteria to select the best alternatives for the project conditions, characteristics, and concerns. This may be done numerically, by rating and then ranking the BMPs. Or the selection process may be done in a more subjective, non-numerical way using experience and professional judgment to select the best alternative BMPs. Either way, the designer should document the selection process to provide justification for the system of BMPs incorporated into project plans and designs.

**Design and Installation**

After the appropriate BMPs are selected for a given project, the designer should design the BMPs and incorporate them into the project plans and specifications. It is important that the project plans and specifications include adequate information for the BMPs to be properly installed. Improper installation is one of the most common reasons for water quality controls to not function as designed.

**Maintenance**

Maintenance is crucial to the proper and continued functioning and effectiveness of the BMPs. Designers should provide guidance on the proper maintenance of the BMPs so that it may be provided to the entity responsible for BMP maintenance.

***Changes in Project after Initiation of Construction***

Prior to final administrative authorization or approval of project permits, projects previously designated as Planning Exempt may become subject to the requirements of Planning Priority Projects. If the proposed changes would add project characteristics included in the model Planning Priority/Exempt Checklist, the project shall be required to incorporate appropriate permanent BMPs into the project's revised design and plans.

**2.2.2 Construction Activity Requirements*****2.2.2.1 Overview of Development Construction Projects Subject to the Model Program***

The overall process of determining what requirements are applicable to a public agency Development Construction Project is depicted in the flowchart shown in Figure 2-3.

***Construction Project***



A Development Construction Project is a site where activities such as clearing, grading, excavation, road construction, structure construction, or structure demolition results in the disturbance of soil. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility; emergency construction activities required to immediately protect public health and safety; interior remodeling with no outside exposure of construction material or construction waste to storm water; mechanical permit work; or sign permit work.<sup>1</sup> Activity are called Construction Priority Projects. Three conditions determine a Construction Priority Project:

Construction projects are divided into two categories according to the amount of soil disturbance:

1. Construction projects with less than one acre of disturbed soil.
2. Construction projects with one acre and greater of disturbed soil. The category is further subdivided into two subcategories:
  - a. Construction projects between one acre and five acres of soil disturbance.
  - b. Construction projects with five acres and greater of soil disturbance.

*Beginning March 10, 2003, the requirements for construction projects with five acres and greater of soil disturbance shall apply to construction projects with one acre and greater of soil disturbance.*

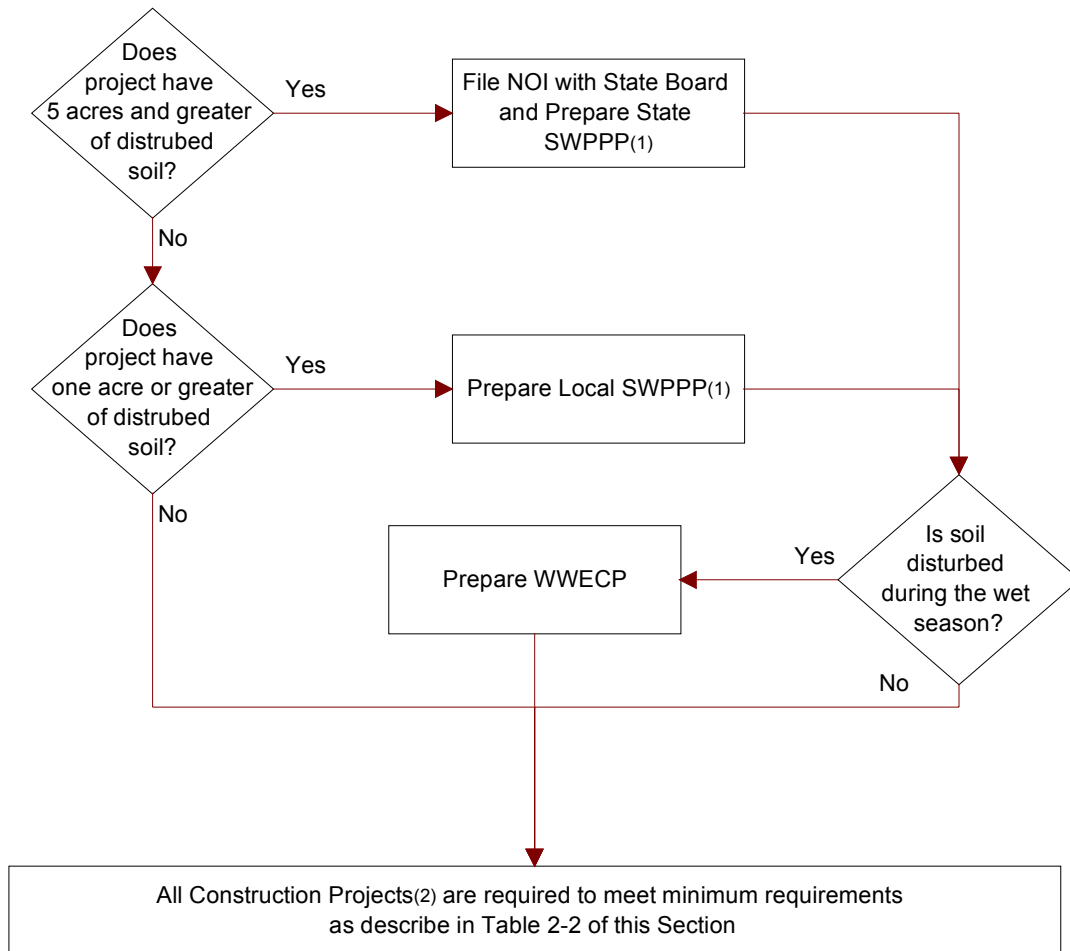
### ***Projects Subject to the General Construction Permit***

A project is subject to the California General Permit for Storm Water Discharges Associated with Construction Activity (hereinafter referred to as the General Construction Permit) if it disturbs 5 acres or more of soil, or the project results in the disturbance of less than 5 acres but is part of a larger common plan of development or sale that exceeds 5 acres.

### ***Exempt Projects***

Permittees may exempt certain types of Development Construction Projects that pose minimum risk of storm water pollution as defined in Section 2.2.2.1.5.

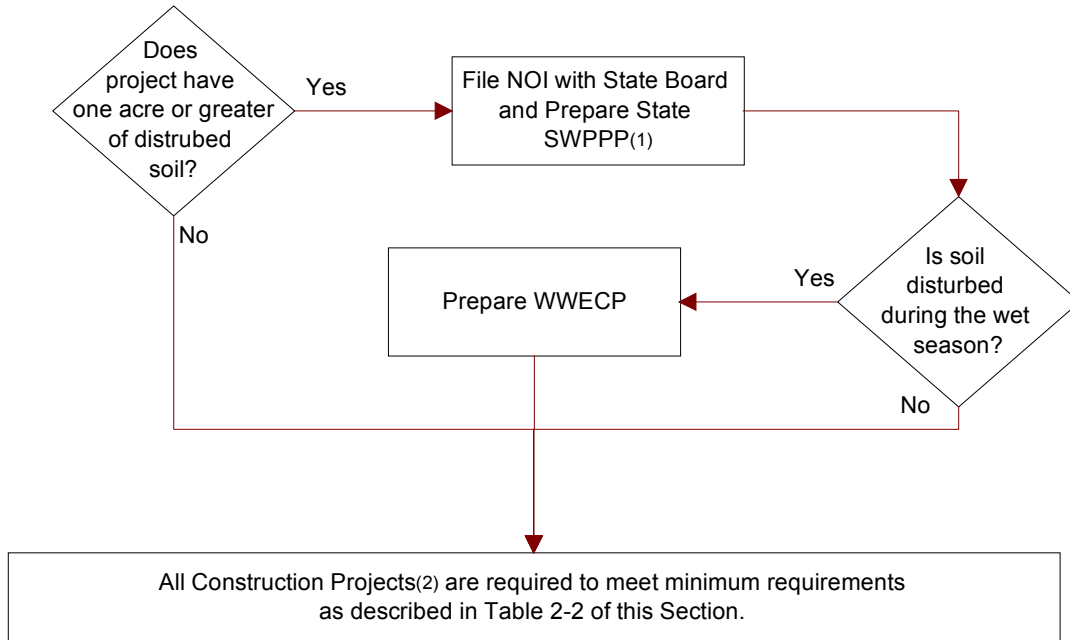
**Figure 2-3. Construction Control Measures  
Effective Prior to March 10, 2003**



(1) A Local SWPPP may substitute for a State SWPPP if the Local SWPPP is at least as inclusive in controls and BMPs as the State SWPPP.

(2) Construction Project is defined in Section 1.2 of this model program.

Effective March 10, 2003



(1) A Local SWPPP may substitute for a State SWPPP if the Local SWPPP is at least as inclusive in controls and BMPs as the State SWPPP.

(2) Construction Project is defined in Section 1.2 of this model program.

## 2.2.2.1.1 Minimum Requirements

All public agency Development Construction Projects covered under this program must implement BMPs as necessary to reduce pollutants to the Maximum Extent Practicable<sup>3</sup> (MEP) to meet the minimum water quality protection requirements as defined in Table 2-2. Construction contract documents (plans and specifications) for all covered projects will include these minimum requirements.

Category	Minimum Requirements	BMPs <sup>(1)</sup>
1. Sediment Control	Sediments generated on the project site shall be retained using adequate Treatment Control or Structural BMPs.	Sediment Control
2. Construction Materials Control	Construction-related materials, wastes, spills or residues shall be retained at the project site to avoid discharge to streets, drainage facilities, receiving waters, or adjacent properties by wind or runoff. Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project sites.	Site Management; Material and Waste Management
3. Erosion Control	Erosion from slopes and channels shall be controlled by implementing an effective combination of BMPs, such as the limiting of grading scheduled during the wet season; inspecting graded areas during rain events; planting and maintenance of vegetation on slopes; and covering erosion susceptible slopes.	Erosion Control

(1) BMPs that may be used to meet the minimum requirements are described in Section 2.2.2.1.5.

## 2.2.2.1.2 Developer Requirements for Construction Projects with One Acre and Greater of Disturbed Soil

In addition to the minimum BMPs requirements in Section 2.2.2.2, construction Projects between one acre and five acres of disturbed soil will require preparation of a Local Storm Water Pollution Prevention Plan (SWPPP) covering construction materials and waste management control prior to beginning construction and implementation of the Local SWPPP year-round. A copy of the Local SWPPP must be kept on the project site at all times after the start of construction. It shall include:

- The name, location, period of construction, and a brief description of the project;
- Contact information for the owner and contractor;
- The building permit number for the project;

<sup>3</sup> Maximum Extent Practicable (MEP) is the standard for implementation of storm water management programs to reduce pollutants in storm water. CWA § 402(p)(3)(B)(iii) requires that municipal permits “ shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and such other provisions as the

- The grading permit number for the project (where applicable);
- A list of major construction materials, wastes, and activities at the project site;
- A list of best management practices to be used to control pollutant discharges from major construction materials, wastes, and activities;
- A site plan (construction plans may be used) indicating the selection of BMPs and their location where appropriate;
- Non-storm water discharges, their locations, and the BMPs necessary to prevent the discharge;
- A maintenance and self-inspection schedule of the BMPs to determine the effectiveness and necessary repairs of the BMPs; and

Construction projects between one acre and five acres of disturbed soil will also require preparation and implementation of a Wet Weather Erosion Control Plan (WWECP) if the project will leave soil disturbed during the rainy season, defined as November 1 through April 15. The WWECP must be prepared not later than 30 days prior to the beginning of each rainy season (i.e., by October 1) during which soil will be disturbed, and implemented throughout the entire rainy season. The WWECP shall include the following information:

- The name, location, period of construction, and a brief description of the project
- Contact information for the owner and contractor
- A site map (construction plans may be used) showing the location of erosion control and sediment control BMPs that will be implemented for the rainy season
- A certification statement that all required and selected BMPs will be effectively implemented.

For construction projects between one acre and five acres of disturbed soil, Permittees may elect to prepare the Local SWPPP and the WVECP (if required) as part of the construction contract bid package, or they may include the requirement in the contract documents for the contractor to prepare these plans. In either case, the contract documents must require the contractor to implement the Local SWPPP throughout the duration of the construction project and the WVECP throughout the duration of the rainy season. Construction contract documents will require that:

- (1) The Local SWPPP be prepared before any work can start on the project and be kept on the project site at all times after the start of construction, and
- (2) The WVECP (if required) be prepared within 30 days of the start of the rainy season before any soil disturbing activity can start and be kept on the project site through the end of the rainy season.

*Commencing March 10, 2003, the requirements listed below for construction projects with five acres and greater of soil disturbance shall apply to construction projects with one acre and greater of soil disturbance.*

#### 2.2.2.1.3 Developer Requirements for Construction Projects with Five Acres and Greater of Disturbed Soil

Construction projects with five acres and greater of disturbed soil must comply with all conditions in Sections 2.2.2.1.1 and 2.2.2.1.2 above as well as the requirements for projects subject to the General Construction Permit in Section 2.2.2.1.4 below.

#### 2.2.2.1.4 Projects Subject to the General Construction Permit

A project is subject to the General Construction Storm Water Permit will require the preparation and implementation of a state SWPPP meeting the requirements of the General Construction Storm Water Permit. The state SWPPP must address all categories of control measures, and has specific documentation requirements. The General Construction Storm Water Permit can be viewed or downloaded from the SWRCB's web page: [www.swrcb.ca.gov/stormwtr/construction.htm](http://www.swrcb.ca.gov/stormwtr/construction.htm).<sup>4</sup> A properly prepared state SWPPP satisfies all requirements of a Local SWPPP and WVECP required under this model program.

For public agency Development Construction Projects subject to General Construction Storm Water Permit, Permittees must file a Notice of Intent with the SWRCB and prepare the state SWPPP (or require the construction contractor to prepare it) before construction can begin.

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<sup>4</sup> A copy of the General Construction Permit can also be obtained from the Los Angeles Regional Board at 320 W. 4<sup>th</sup> Street, Suite 200, Los Angeles, CA 90013; telephone 213.576.6600.

## 2.2.2.1.5 Exempt Projects

Permittees may exempt certain types of projects from the program that pose a minimum risk of storm water pollution as determined by the local building official or equivalent municipal authority. Exemptions established for public agency Development Construction Projects shall be the same as those established for private development construction projects.

A list of specific types of projects that are deemed to be exempt include:

- Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility (permit definition)
- Emergency construction activities required to protect public health and safety (permit definition)
- Interior remodeling with no outside exposure of construction materials or construction waste to storm water
- Mechanical work
- Sign work

The local building official (or equivalent municipal authority) may designate additional types of projects as exempt projects. Types of Development Construction Projects may be designated exempt if the project type meets all of the following criteria:

- No significant soil disturbing activity
- No outside storage or exposure of construction materials or construction wastes to storm water

The activity poses a minimal risk of storm water pollution

## **2.2.2.2 Best Management Practices**

BMPs that may be implemented for construction projects one acre and greater of disturbed soil to meet the minimum water quality protection requirements are summarized in Table 2-3. These BMPs have been organized into four major categories:

- ***Sediment Control.*** Feasible methods of trapping eroded sediment so as to prevent a net increase in sediment load in storm water discharges from the site.
- ***Erosion Control.*** Measures that prevent erosion and keep soil particles from entering storm water, lessening the eroded sediment that must be trapped, both during and after the completion of construction.

- **Site Management.** Methods to manage the construction site and construction activities in a manner that prevent pollutants from entering storm water, drainage systems or receiving waters.
- **Materials and Waste Management.** Methods to manage construction materials and wastes that prevent their entry into storm water, drainage systems, or receiving waters.

For projects less than one acre any combination of BMPs that meet the minimum water quality protection requirements may be utilized. Construction Priority Projects must prepare a Local SWPPP and WVECP that considers all listed BMPs, and, at a minimum, must include the following BMPs:

- **Sediment Control.** At site perimeters, below significant slopes (at a minimum applied to grades of 1:5 V:H or greater), and at other similar locations, the use of at least one type of BMP such as silt fence, straw bale or sand bag barrier to minimize the transport of sediment. At interior storm drain inlets the use of at least one type of inlet protection BMP to minimize the transport of sediment offsite.
- **Erosion Control.** On completed disturbed surfaces, the use of at least one type of erosion control (soil stabilization) BMP during the rainy season.
- **General Site Management and Materials and Waste Management.** All BMPs applicable to specific construction operations, if such construction operations will occur at the site.

Guidance material about the BMPs that may be implemented to meet minimum water quality protection requirements will be provided by the Permittees to contractors. Similar guidance material will also be provided to site inspectors for use in assisting contractors to meet the minimum requirements. Three forms of guidance material are included in this model program:

- **BMP Selection Matrix** in Table 2-3 provides guidance for selecting BMPs for different types of construction activities. The columns on Table 2-3 list the types of construction activities that pose a risk of causing storm water pollution. Each "x" within a column indicates a BMP that should be considered for this type of construction activity.
- **BMP Selection Guidance** is provided in Appendix E.
- **BMP Fact Sheets** describing each BMP are found in the California Storm Water Best Management Practice Handbooks, Construction Activities and are included in the model program for private Development Construction.

Additional informational materials will be developed and provided to developers/contractors through the Developer Information Program conducted under Part 2.III.A of the Permit and through the Five-Year Storm Water Public Education strategy, under Part 2.V.C. of the Permit.



**Table 2-3. Stormwater Pollution Controls for Construction**

Storm Water Best Management Practices BMP <sup>(1)</sup>		Categories of Activities																					
		Site Preparation/ Earthmoving		Construction of Underground Structures			Construction of Above Ground Structures				Construction of Roadways, Walkways & Parking Lots			Waterways			Planting & Landscaping						
		Clearing & Grubbing	Earthwork	Foundations	Conduits (Open Cut)	Drilling	Tunnels	Wood Frame	Structural Steel	Masonry & Concrete	Roofing & Coating	Concrete	Asphalt	Base & Subgrade	Channel Improvement	Water & Sediment Impoundment	Over Crossing	Under Crossing	Waterfront Construction	Irrigation Facilities	Seeding & Sodding	Mulching	Planting
<b>General Site Management</b>																							
Construction Practices																							
Dewatering Operations	CA01		X	X	X	X	X							X	X	X	X	X					
Paving Operations	CA02										X	X	X	X		X	X						
Structure Construction & Painting	CA03			X			X	X	X	X						X	X	X					
Vehicle & Equipment Management																							
Vehicle & Equipment Cleaning	CA30	X	X	X	X	X	X				X	X	X					X					
Vehicle & Equipment Fueling	CA31	X	X	X	X	X	X				X	X	X					X					
Vehicle & Equipment Maintenance	CA32	X	X	X	X	X	X				X	X	X					X					
Contractor Training																							
Employee/Subcontractor Training	CA40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Construction Materials &amp; Waste Management <sup>(2)</sup></b>																							
Material Management																							
Material Delivery & Storage	CA10			X	X			X	X	X	X	X	X	X		X	X	X			X	X	X
Material Use	CA11			X	X			X	X	X	X	X	X	X		X	X	X			X	X	X
Spill Prevention & Control	CA12									X	X		X										
Waste Management																							
Solid Waste Management	CA20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hazardous Waste Management	CA21									X	X	X	X										
Contaminated Soil Management	CA22	X	X	X	X	X	X							X	X								
Concrete Waste Management	CA23			X	X		X			X				X		X	X			X			
Sanitary/Septic Waste Management	CA24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

(1) Numbers refer to California Best Management Practices Handbook

(2) Some practices are also covered under other regulatory programs.

**Table 2-3. Stormwater Pollution Controls for Construction** (continued)

Storm Water Best Management Practices BMP <sup>(1)</sup>		Categories of Activities																						
		Site Preparation/Earthmoving		Construction of Underground Structures			Construction of Above Ground Structures				Construction of Roadways, Walkways & Parking Lots			Waterways			Planting & Landscaping							
		Clearing & Grubbing	Earthwork	Foundations	Conduits (Open Cut)	Drilling	Tunnels	Wood Frame	Structural Steel	Masonry & Concrete	Roofing & Coating	Concrete	Asphalt	Base & Subgrade	Channel Improvement	Water & Sediment Impoundment	Over Crossing	Under Crossing	Waterfront Construction	Irrigation Facilities	Seeding & Sodding	Mulching	Planting	
<b>Erosion Control</b>																								
Site Planning Considerations																								
Scheduling	ESC01	X	X		X								X	X	X	X	X	X	X	X	X	X	X	X
Preservation of Existing Vegetation	ESC02	X	X		X		X						X	X	X	X	X	X	X	X	X		X	X
Vegetation Stabilization																								
Temporary Seeding & Planting	ESC10	X	X											X	X	X			X					
Temporary Mulching	ESC11	X	X											X	X	X			X					
Physical Stabilization																								
Geotextiles & Mats	ESC20	X	X											X	X	X	X	X	X					
Dust Control	ESC21	X	X		X								X	X	X	X	X	X	X	X	X	X	X	
Temporary Stream Crossing	ESC22	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	
Construction Road Stabilization	ESC23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Diversion of Runoff																								
Earth Dike	ESC30	X	X		X									X	X			X	X		X	X		
Temporary Drains & Swales	ESC31	X	X		X									X	X			X	X					
Slope Drain	ESC32	X	X		X									X	X			X	X					
Velocity Reduction																								
Outlet Protection	ESC40	X	X		X									X	X							X		
Check Dams	ESC41	X	X		X									X	X							X		
Slope Roughening/Terracing	ESC42	X	X		X									X	X							X		

(1) Numbers refer to California Best Management Practices Handbook  
 (2) Some practices are also covered under other regulatory programs.

**Table 2-3. Stormwater Pollution Controls for Construction** (continued)

Storm Water Best Management Practices BMP <sup>(1)</sup>		Categories of Activities																					
		Site Preparation/ Earthmoving		Construction of Underground Structures			Construction of Above Ground Structures				Construction of Roadways, Walkways & Parking Lots			Waterways			Planting & Landscaping						
		Clearing & Grubbing	Earthwork	Foundations	Conduits (Open Cut)	Drilling	Tunnels	Wood Frame	Structural Steel	Masonry & Concrete	Roofing & Coating	Concrete	Asphalt	Base & Subgrade	Channel Improvement	Water & Sediment Impoundment	Over Crossing	Under Crossing	Waterfront Construction	Irrigation Facilities	Seeding & Sodding	Mulching	Planting
<b>Sediment Control</b>																							
Silt Fence	ESC50	X	X		X									X	X		X	X					
Straw Bale Barrier	ESC51	X	X		X									X	X		X	X					
Sand Bag Barrier	ESC52	X	X		X									X	X		X	X					
Brush or Rock Filter	ESC53	X	X		X									X	X		X	X					
Storm Drain Inlet Protection	ESC54	X	X		X									X	X		X	X					
Sediment Trap	ESC55	X	X		X									X	X		X	X					
Sediment Basin	ESC56	X	X		X									X	X		X	X					
Stabilized Construction Entrance	ESC24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

(1) Numbers refer to California Best Management Practices Handbook  
 (2) Some practices are also covered under other regulatory programs.

**2.2.2.3 Site Inspection**

Permittees will implement a site inspection program will to evaluate if the minimum water quality protection requirements are being met and to evaluate if Local SWPPPs and WWCs or state SWPPPs are being implemented. Permittees will adopt and implement enforcement procedures to require that corrective actions be undertaken when the minimum water quality protection requirements are not being met. The site inspection program will include the following elements:

- Contractor self-inspections
- Permittee inspections
- Enforcement procedures.

**2.2.2.1.1 Inspection Procedures**

Public agency development construction projects are routinely checked by municipal inspectors to verify that the construction work is being done in accordance with the contract documents and applicable municipal codes. When a project is not in compliance with the contract documents or municipal codes, the inspectors have the authority to enforce the contract by issuing verbal warnings, written notices, withholding progress payments, or suspending work. Additional contract remedies may be taken for extreme cases, such as contract termination, or assessing penalties. Inspections may be conducted for various reasons, and at various times, and include inspections by the Permittee and routine contractor self-inspections.

**2.2.2.3.2 Permittee Inspections**

During the rainy season Permittees (or their designated agent) must conduct at least one inspection of all construction projects one acre and greater. Designated inspectors (municipal or contracted consultant staff) will verify compliance with storm water quality requirements in the construction contract documents as part of the regular inspection process for public agency projects. When conducting inspections, the inspector will verify that the contractor is conducting the required self-inspections and will observe whether storm water quality management requirements are being met using the criteria discussed below in Section 2.2.2.3.3.

**2.2.2.3.3 Contractor Self-Inspections**

Permittee construction contract documents will require the contractor to perform self-inspections for Construction projects one acre and greater. (Contractor self-inspections are a requirement of

the General Construction Storm Water Permit.) Construction is a dynamic operation where changes are expected. BMPs for construction sites are usually temporary measures that require frequent maintenance to maintain effectiveness and may require relocation and re-installation, particularly as project grading progresses. Therefore, contractor self-inspections are required, particularly during the rainy season.

There are two primary purposes of contractor self-inspections:

- To ensure that BMPs are properly implemented and functioning effectively, and
- To identify maintenance (e.g., sediment removal) and repair needs.

Self-inspection records must be kept on site and made available for review by municipal inspectors during all inspections. At a minimum, contractor self-inspection records must note the inspection date, time, and observed conditions. An example form is included in Appendix E that may be provided to contractors by the Permittee for use in recording contractor self-inspection results.

At a minimum, contractor self-inspections must be performed according to the following schedule:

- Before every rainfall event that is predicted to produce observable runoff and after every rainfall event that produces observable runoff, and
- At 24-hour intervals during extended rainfall events (except weekends or holidays when there is no ongoing site activity on those days).

More frequent inspections would be effective to verify that contractors are maintaining BMPs in good condition, and Permittees may elect to require additional inspections. Suggested frequencies for additional inspections include monthly during the dry season and weekly during the rainy season.

#### ***2.2.2.4 Inspection Criteria***

##### **2.2.2.4.1 Criteria for All Sites**

When conducting inspections, the most important element of the inspection is to ensure that appropriate controls are in place that reduce pollutants from entering the storm drainage system. If the inspector cannot affirmatively find that the minimum water quality protection requirements are being achieved, the inspector shall require the contractor to conform with those requirements.

The inspector may utilize the following framework when conducting an inspection:

- (1) Determine what BMPs are necessary to meet the minimum requirements;
- (2) Determine if BMPs are being used;
- (3) Determine whether BMPs are being implemented properly; and
- (4) Review developer's self-inspection checklist to determine whether minimum self-inspections have been performed.

An example checklist for documenting deficiencies and identifying corrective actions when conducting Permittee inspections is provided in Appendix E. If BMPs are either lacking or being implemented improperly, Section 2.2.4.5 provides a discussion of appropriate enforcement actions.

#### **2.2.2.4.2 Criteria for Construction One Acre and Greater**

During the rainy season Permittees must conduct at least one inspection of all active construction projects one acre and greater of disturbed soil. If the inspected site is not meeting minimum water quality protection requirements, Permittee inspectors must immediately direct compliance with these requirements and conduct a follow-up inspection within 2 weeks to confirm that compliance is attained.

When conducting inspections of construction projects one acre and greater of disturbed soil, the inspector will use the inspection checklist (or an equivalent) to evaluate conformance with minimum requirements and required BMPs and to document deficiencies and corrective actions. Appendix E provides an example checklist for site inspections.

If BMPs are either lacking or improperly implemented, Section 2.2.4.5 provides a discussion of appropriate enforcement actions. For sites subject to the General Construction Storm Water Permit, if storm water quality requirements are not being implemented, enforcement of local code is required. Referral of continue non-compliance to the Regional Board is necessary for further joint enforcement. Guidance regarding referral to the Regional Board is provided in Section 2.2.4.6.

#### **2.2.2.5 Procedures for Corrective and Enforcement Actions**

Enforcement of storm water pollution prevention requirements for public agency Development Construction Projects will be done by municipal inspectors or contract inspection staff. Any conditions observed that constitute non-compliance with the contract documents are subject to

enforcement action. Municipal or contract inspectors will conduct a follow-up inspection within 2 weeks to determine if corrective actions have been taken in accordance with minimum requirements. Escalating enforcement steps, leading up to the issuance of stop work orders and providing flexibility for the inspector to establish appropriate compliance time frames on a case-by-case basis, are to be used as needed to ensure compliance. Existing inspection/enforcement procedures should be used to achieve this result. Depending on the severity of the violation, enforcement can range from a verbal warning to a written notice, withholding payment or suspension of work.

*If a significant and/or immediate threat to water quality is observed by an inspector, action should be taken to require the contractor to immediately cease the discharge. A threat to water quality shall be based on an assessment by the inspector that runoff from a construction site will not be reasonably controlled by the protective measures in place or if a failure of BMPs is resulting in the release of sediments or other pollutants to a degree that may be substantially degrading water quality.*

The following subsections contain an overview of typical enforcement steps that each Permittee should consider. However, each Permittee's program should be consistent with existing contract enforcement mechanisms while generally conforming to the elements described below.

### ***Verbal Warnings***

The most common initial method of requesting corrective action and enforcing compliance is 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 site. The inspector will notify the contractor's project supervisor of the violation, and document the violation and the notification of the project supervisor in the inspection file. In judging the degree of severity, the inspector may also take into account past history of similar or repeated violations by the same contractor at other sites.

### ***Written Notices***

If the deficiency noted in the verbal warning is not corrected within the time given, a written notice of violation may be issued describing the condition that is to be corrected and the time frame for correction and the follow-up inspection. A copy of the written notice will be given to the contractor's project supervisor and placed in the project file.

***Withholding Payment***

If deficiencies noted in written notices are not corrected within the required time frame, monies may be withheld from monthly progress payments until the contractor corrects the deficiency and comes into compliance with the contract.

***Suspension of Work***

If a written notice of violation is not addressed within the required time frame and a major violation is observed, such as a failure of BMPs that results in a significant release of sediment or other pollutants off site, the work may be suspended. A suspension of work order prohibits further construction activity until the problem is resolved and provides a time frame for correcting the problem. The suspension order may describe the infraction and specify what corrective action must be taken. To resume work the inspector must verify that the deficiencies have been satisfactorily corrected.

***2.2.2.6 Referral of Continue Non-Compliance to the Regional Board***

For projects subject to compliance with the General Construction Storm Water Permit or for which the Permittee has elected optional coverage under the municipal Permit, significant violations of storm water quality requirements or conditions that are producing an immediate impact on receiving waters may be observed. Such significant violations may include, but are not limited to, the absence of a SWPPP on site and negligence in BMP implementation. If violations are observed during the inspection, the Permittee must perform a follow-up inspection to ensure compliance within 2 weeks. The Regional Board shall be notified for further enforcement actions after two follow-up inspections within three months and two warning letters or notices of non-compliance.



**2.2.3 General Construction Activities Storm water Permit**

Each Permittee shall obtain coverage under the GCASP for public construction sites 5 acres or greater (or part of a larger area of development) except that a municipality under 100,000 in population (1990 U.S. Census) need not obtain coverage under a separate permit until March 10, 2003.

Each Permittee, no later than March 10, 2003, shall obtain coverage under a statewide general construction storm water permit for public construction sites for projects between one and five acres.