

# Construction Manual

## 1 Introduction

This *Construction Urban Runoff Requirements Manual* (Manual) details requirements developed by the City of Del Mar (City) as part of the City's Jurisdictional Runoff Management Program (JRMP). The City produced this Manual in conjunction with the amendments to the City's Municipal Code, Storm Water Management and Discharge Control Regulations and Grading Ordinance.



### 1.1 How to Use this Manual

This manual is provided to assist construction project proponents in complying with the City's Storm Water Management and Discharge Control Regulations and Grading Regulations. Information is provided here to assist project proponents determine their applicability to the City's requirements, and it details the requirements that applicable projects must comply with.

### 1.2 What is Urban Runoff and Storm Water?

The terms, urban runoff and storm water, are commonly used in discussions about the quality of water in urbanized areas. These terms are often used interchangeably and, therefore, are confusing. Urban runoff refers to water that originates in urbanized areas. Sources of urban runoff include precipitation, industry discharges, leaks, washing, irrigation, and natural springs. Storm water refers to water generated from precipitation during a storm event. However, in some cases inconsistent with its definition, storm water is used to refer to or to include urban runoff not exclusively resulting from precipitation. Inversely, the definition of non-storm water is water that is not the direct product of storm precipitation such as water from industry discharges, leaks, washing, irrigation, and springs. Therefore, urban runoff is composed of both storm water and non-storm water.

Regardless of the terminology, water located in urbanized areas and the quality of that water is of the utmost importance. The water in urbanized areas drains to the creeks, lakes, lagoons in the City, and ultimately to the ocean. Many people recreate and fish in these waters, and still others enjoy the plants and wildlife that these aquatic habitats support. All water used in the homes and businesses in the City drain to the ocean, creeks, and lakes. Spills, trash, and pollutants wash from properties and roads into the public drainage system, which flows directly to these water bodies.

## 2 Requirements of Regulated Construction Projects

This manual establishes BMP requirements for project owners and contractors of construction projects and activities in the City. A construction project is any construction activity that disturbs soil, structures or uses materials that may be discharged and enter the City's storm drain system, including streets, curbs, gutters and channels.



Responsible parties for regulated construction project and activities include the owner of the property where the activity is taking place (including offsite staging areas), the construction contractor (including subcontractors), and any other individual or entity performing construction activities.

### 2.1 Submittal Requirements

All regulated construction projects are required to obtain necessary permits, licenses, and other approvals for any construction activities as required by the City's Municipal Code. Such approvals include business licenses, development permits, grading permits, clearing and grubbing permits, building permits, and

demolition permits. The responsible parties for regulated construction projects should review the City regulations and permit/licensing requirements to determine which approvals are necessary.

## 2.2 General Requirements

Regulated construction projects are required to comply with two interrelated sets of directives:

- 1) Compliance with applicable discharge prohibition requirements; and
- 2) Implementation of BMPs to prevent non-storm water discharges and to reduce contaminants in storm water discharges. Regardless of their type, all sites and activities are subject to the generally applicable BMP requirements presented in this manual. Failure to comply with applicable discharge prohibitions is generally considered evidence of an inadequate BMP program, although BMPs can be determined inadequate prior to the occurrence of actual discharges.

### 2.2.1 Discharge Prohibitions

The City prohibits all non-storm water discharges unless a discharge is authorized by a separate NPDES permit or qualifies as a conditional discharge. Non-storm water discharges are runoff flows from any type of activity other than weather caused precipitation or naturally occurring groundwater. Typical non-storm water discharges related to construction activities include, but are not limited to discharges from:

- Concrete Washout
- Saw-Cutting Activities
- Dewatering Activities
- Power-Washing
- Dust control
- Port-O-Potties
- Equipment Washing

Without exception, discharges of both storm water and non-storm water to the Storm Water Conveyance System or Receiving Waters are prohibited if the discharge contains pollutants that have not been reduced to the Maximum Extent Practicable (MEP). This prohibition establishes a general BMP standard that must be met by all dischargers prior to the occurrence of storm water or allowable non-storm water discharges. In essence, it requires the application of BMPs to prevent discharges in violation of the Storm Water Ordinance.

### 2.2.2 Conditional Non-Storm water Discharges

The following categories of non-storm water discharges are conditionally allowed by the City if the discharge meets the criteria described below. If a discharge does not meet the criteria, then it is prohibited by the City.

#### 2.2.2.1 Discharges Associated with Separate NPDES Permit

The RWQCB may permit a discharger to discharge water to the City's MS4, as long as the City does not determine that the discharge is a source of pollutants. For scheduled discharges, the discharger shall notify City Staff at least 30 days prior to the scheduled date of discharge.

#### *Pumping and Groundwater*

The following non-storm water discharges are allowed if the discharge has coverage under NPDES Permit No. CAG919002 (Order No. R9-2008-0002):

- Uncontaminated pumped ground water
- Discharges from foundation drains (i.e., If the system is located at or below the groundwater table to extract groundwater)
- Water from crawl space pumps

- Water from footing drains

### ***Water Line Flushing and Breaks***

The City considers non-storm water discharges associated with water line flushing or breaks as an illicit discharge, unless the discharge has coverage under NPDES Permit No. CAG 679001 (Order No. R9-2010-0003 or subsequent order). In addition, discharges from recycled or reclaimed water lines are illicit, unless covered under a separate NPDES Permit.

### **2.2.2.2 Discretionary Discharge**

The following discharges are not prohibited unless they are identified by the City or the RWQCB as pollutant sources to receiving waters:

- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration to MS4s
- Springs
- Flows from riparian habitats and wetlands
- Direct discharges from potable water sources
- Direct discharges from foundation drains
- Direct discharges from footing drains

### **2.2.3 BMP Implementation**

As previously stated, for all discharges of storm water and non-storm water to the City's MS4 or Receiving Waters, pollutant must be reduced to the MEP.

MEP is a standard that is commonly used by the RWQCB in requiring BMP implementation for municipalities. In general, it is defined as the implementation of all effective, technically and economically feasible BMPs. The BMPs that are generally emphasized to meet MEP are pollution-prevention and source-control BMPs that are proactive BMPs that you implement to avoid discharging or to avoid pollutants ever entering discharge. Treatment BMPs are then implemented, when appropriate, to serve as backups to remove any pollutants from discharges.

Because discharges are prohibited unless MEP is achieved, this general BMP standard must be met by all dischargers in the City, including Regulated Construction Projects. In general, a discharger can be generalized as any person or entity engaged in activities or operations, or owning or operating facilities that are exposed to precipitation that drains to the City's MS4 or Receiving Waters, or that discharges any other waters or materials to the City's MS4 or Receiving Waters. Therefore, basically if you own, rent, or operate any property in the City, or if you conduct any activities outdoors within the City, you are most likely a Discharger.

To assist dischargers the City has developed minimum BMP requirements. These requirements are standards themselves and dischargers are required to implement, at a minimum, these BMPs or equivalent measures, methods, or practices. The City recognizes that the proper selection of BMPs depends on numerous factors that are specific to individual sites and activities, and therefore does not advocate or require the use of particular practices. Rather, the City has established these minimum BMP standards that the City has determined are the minimum necessary measures to prevent discharges of pollutants to its storm drain system (including streets, curbs, gutters and channels) and receiving waters. The sole responsibility for selecting and implementing BMPs that are adequate to comply with the requirements of the Ordinance and this manual lies with the discharger. Therefore, the discharger may

select which BMPs are appropriate to implement, in order to meet the City's minimum BMP requirements. Furthermore, if MEP has not been met by meeting the minimum BMP requirements prescribed by the City, the discharger must implement additional BMPs until MEP is achieved.

The City may require the application of specific BMPs, additional BMPs, and/or structural controls, in addition to the minimum BMP requirements for a discharger or a group of discharges, if MEP has not been met.

The remainder of this manual provides the City's minimum BMP requirements to assist regulated construction projects and activities in meeting the MEP standard.

### **2.3 BMP Requirements for All Dischargers**

The following are BMP requirements for all discharges in the City. Each discharger, and therefore, all regulated construction projects, is required to implement these BMPs, or equivalent measures, methods, or practices.

#### ***Eroded Soils***

Prior to the rainy season, dischargers must remove or secure any significant accumulations of eroded soils from slopes previously disturbed by clearing or grading, if those eroded soils could otherwise enter the Storm Water Conveyance System or Receiving Waters during the rainy season.

#### ***Pollution Prevention***

Dischargers shall implement those storm water pollution prevention practices that are generally recognized in that discharger's industry or business as being effective and economically advantageous.

#### ***Prevention of Illegal Discharges***

Illicit connections must be eliminated (even if the connection was established pursuant to a valid permit and was legal at the time it was constructed), and illegal discharge practices eliminated.

#### ***Slopes***

Completed slopes that are more than five feet in height, more than 250 square feet in total area, and steeper than 3:1 (run-to-rise) that have been disturbed at any time by clearing, grading, or landscaping, shall be protected from erosion prior to the first rainy season following completion of the slope, and continuously thereafter.

#### ***Storage of Materials and Wastes***

All materials and wastes with the potential to pollute urban runoff shall be stored in a manner either prevents contact with rainfall and storm water, or contains contaminated runoff for treatment and disposal.

#### ***Use of Materials***

All materials with the potential to pollute urban runoff (including but not limited to cleaning and maintenance products used outdoors, fertilizers, pesticides and herbicides, etc.) shall be used in accordance with label directions. No such material may be disposed of or rinsed into Receiving Waters or the Storm Water Conveyance System.

## **3 Threat Prioritization of Regulated Construction Projects**

Should a project involve disturbance of soil or have the potential to pose a threat to urban storm water runoff, the project will be subject to requirements to prevent effects to water quality. Every regulated

construction projects prioritized with respect to the threat the site poses to urban runoff water quality. Based on the assigned priority, the project proponent will be able to determine the SWPPP and BMP requirements for the subject project.

In order to determine the prioritization of a project, it is necessary to characterize the site with regards to size, planned period of grading, vicinity to environmentally sensitive water bodies, project type, erosion potential, and potential to produce non-storm water or polluted discharges. To guide the project proponent through this process, and to assist the City in reviewing the project, a Project Storm Water Threat Assessment Form must be completed and submitted with the project's permit application.

## **4 Storm Water Pollution Prevention Plan Preparation Requirements**

This section provides minimum SWPPP requirements for all High and Low Priority Construction Projects. The City requires SWPPPs depending on the priority of the project. In addition to, or as part of the SWPPP, the permittee must also submit a site plan depicting the location of all BMPs to be used on the site.



### **4.1 Low Priority Construction Project Requirements**

Projects determined to be a Low Priority Construction Project must submit a signed and completed Low Priority Urban Runoff Management Plan with the applicable permit application. This Low Priority Urban Runoff Management Plan lists the minimum BMPs to be implemented onsite of the regulated construction project. The BMPs are to be installed and maintained in accordance with the Caltrans Storm Water Quality Handbooks, Construction Site Best Management Practices Manual. In addition to submitting a Low Priority Urban Runoff Management Plan the proponent must submit an erosion control plan depicting the location of each physical BMP on the project site. By signing and dating the Low Priority Urban Runoff Management Plan, the proponent agrees to implement and maintain the minimum BMPs and acknowledges that the responsible parties for the regulated construction project have read and understand the Urban-Runoff-regulations and procedures presented in this Manual and the City's Ordinance.

City Capital Improvement Projects are required to develop and implement a Construction Water Pollution Control Plan (WPCP). The Construction WPCP must, at a minimum, meet the requirements of the latest Caltrans SWPPP-WPCP Preparation Manual. The Caltrans, Storm Water Quality Handbooks, SWPPP and WPCP Preparation Manual is available for purchase by contracting Caltrans directly, or can be accessed online at <http://www.dot.ca.gov/hq/construc/stormwater/>.

### **4.2 High Priority Construction Project Requirements**

Projects determined to be a High Priority Construction Project, must submit a SWPPP prepared in general accordance with Caltrans, Storm Water Quality Handbooks, SWPPP and Water Pollution Control Program (WPCP) Preparation Manual at the time of application for building or grading permit for review by the City. Projects requiring coverage under the State Construction General Permit may submit a SWPPP prepared to meet the requirements of that permit, however coverage under the State Construction General Permit does not relieve the permittee of meeting the minimum BMP requirements presented in this manual. In addition to the SWPPP, projects requiring coverage under the State Construction General Permit must also submit a copy of the Notice of Intent for the project and the Waste Discharge Identification Number (WDID #) issued for the project.

The Caltrans, Storm Water Quality Handbooks, SWPPP and WPCP Preparation Manual is available for purchase by contracting Caltrans directly, or can be accessed online at <http://www.dot.ca.gov/hq/construc/stormwater/>.

## 5 Minimum BMP Requirements

The City has designated a set of minimum BMPs for Low and High Priority construction projects. Table 1 presents the minimum BMP requirements for each priority. The BMPs referenced in this section are presented in the Caltrans, *Storm Water Quality Handbooks, Construction BMPs Manual*. The BMPs presented in Table 1 are to be installed and maintained in accordance with the Caltrans manual.



The Caltrans, *Storm Water Quality Handbooks, Construction BMPs Manual* can be obtained by contacting Caltrans directly, or can be accessed online at [www.dot.ca.gov/hq/construc/stormwater.html](http://www.dot.ca.gov/hq/construc/stormwater.html).

Stabilization of exposed slopes must be installed within 14 days of completion of the slope, and at least within 48 hours prior to a predicted storm event. Vegetation stabilization using hydroseed (SS-4) may be used only April 1 to September 30. Vegetation proposed to stabilize slopes must be installed by August 15, watered, and established prior to October 1. The permittee shall show on the plan a contingency physical BMP to be installed by October 1 if hydroseed establishment does not occur by that date.

The BMPs presented above represent the minimum BMPs that must be implemented for all projects. The implementation of the minimum BMPs does not relieve the permittee from complying with any other requirements of the City Municipal Code. It is the permittee's responsibility to develop and implement an effective plan, incorporating any and all BMPs deemed necessary by the permittee to meet the MEP standard and all other applicable requirements. In addition, the City may require additional BMPs be incorporated into the plan if the City determines that additional BMPs are necessary to ensure that discharge requirements will be met.

**Table 1: Minimum Construction Site BMPs**

ID	BMP Name	BMPs for Low Priority Projects	BMPs for High Priority Projects	BMPs to be Used When Applicable
<b>TEMPORARY SOIL STABILIZATION</b>				
SS-1	Scheduling	◆	◆	
SS-2	Preservation of Existing Vegetation	◆	◆	
SS-3	Hydraulic Mulch	◆(a)	◆(a)	
SS-4	Hydroseeding	◆(a)	◆(a)	
SS-5	Soil Binders	◆(a)	◆(a)	
SS-6	Straw Mulch	◆(a)	◆(a)	
SS-7	Geotextiles, Plastic Covers, and Erosion Control Mats	◆(a)	◆(a)	
SS-8	Wood Mulching			
SS-9	Earth Dikes/Drainage Swales and Ditches	◆	◆	
SS-10	Outlet Protection/Velocity Dissipation Devices			
SS-11	Slope Drains			
<b>TEMPORARY SEDIMENT CONTROL</b>				
SC-1	Silt Fence	◆(c)	◆(c)	
SC-2	Desilting Basin	◆(c)	◆(c)	
SC-3	Sediment Trap			
SC-4	Check Dam			
SC-5	Fiber Rolls		◆	
SC-6	Gravel Bag Berm			
SC-7	Street Sweeping and Vacuuming		◆	
SC-8	Sandbag Barrier			
SC-9	Straw Bale Barrier	◆(c)	◆(c)	
SC-10	Storm Drain Inlet Protection	◆	◆	
<b>WIND EROSION CONTROL</b>				
WE-1	Wind Erosion Control	◆	◆	
<b>TRACKING CONTROL</b>				
TC-1	Stabilized Construction Entrance/Exit	◆	◆	
TC-2	Stabilized Construction Roadway			
TC-3	Entrance/Outlet Tire Wash			

ID	BMP Name	BMPs for Low Priority Projects	BMPs for High Priority Projects	BMPs to be Used When Applicable
<b>NON-STORM WATER MANAGEMENT</b>				
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/Illegal Discharge		◆	
NS-7	Potable Water/Irrigation			◆
NS-8	Vehicle and Equipment Cleaning	◆	◆	
NS-9	Vehicle and Equipment Fueling	◆	◆	
NS-10	Vehicle and Equipment Maintenance	◆	◆	
<b>WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL</b>				
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			◆

- a. The permittee shall select one of the five measures listed or a combination thereof to achieve and maintain temporary soil stabilization.
- b. The permittee shall select one of the two measures or combination thereof to achieve site perimeter protection.
- c. The permittee shall select one of the three measures or combination thereof to achieve site perimeter protection.