**ORDINANCE No. 9426 (N.S.)**

**AN ORDINANCE AMENDING THE CODE OF REGULATORY ORDINANCES RELATING TO THE ADDITION OF THE STORMWATER STANDARDS MANUAL**

The Board of Supervisors of the County of San Diego ordains as follows:

Section 1. Purposes – The County of San Diego Watershed Protection, Stormwater Management and Discharge Control Ordinance regulates stormwater and non-stormwater discharges. This ordinance will add Appendix A, the Stormwater Standards Manual, to the Watershed Protection, Stormwater Management and Discharge Control Ordinance.

Section 2. Chapter 8 of Division 7 of Title 6 of the San Diego County Code of Regulatory Ordinances is hereby amended to add Appendix A to read as follows:

**APPENDIX A**

**County Of San Diego**

**Stormwater Standards Manual**

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**Summary Outline**


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# SECTION A. INTRODUCTION

## A.1 Manual a Part of Ordinance

This County Stormwater Standards Manual (Manual) is Appendix A to the County of San Diego Watershed Protection, Storm Water Management, and Discharge Control Ordinance (Ordinance). This Manual is not a stand-alone document, but must be read in conjunction with other parts of the Ordinance. In general, this Manual sets out in more detail, by project category, what Dischargers must do to comply with the Ordinance and to receive permits for projects and activities that are subject to the Ordinance.

## A.2 Purposes

The purposes of this Manual are to establish clear minimum stormwater management requirements and controls, and to support of the following objectives stated in section 67.802 of the Ordinance:

- Prohibiting polluted non-stormwater discharges to the Stormwater Conveyance System;
- Establishing minimum requirements for stormwater management, to prevent and reduce pollution;
- Establishing requirements for the management of stormwater flows from development projects, both to prevent erosion and to enhance existing water-dependent habitats;
- Establishing standards for the use of off-site facilities for stormwater management to supplement on-site facilities and practices at new development sites; and
- Establishing notice procedures and standards for adjusting stormwater management requirements where necessary.

## SECTION B. GENERAL REQUIREMENTS FOR ALL DISCHARGERS

## PART B.1—COMPLIANCE WITH DISCHARGE PROHIBITIONS

The County of San Diego Watershed Protection, Storm Water Management, and Discharge Control Ordinance addresses and defines two types of discharges, storm water, and non-storm water. "Storm water" is defined as "surface runoff and drainage associated with storm events." "Non-storm water" consists of all discharges (e.g., irrigation flows, wash water, etc.) that are not storm water.

### B.1.1 Prohibitions of Discharges

The Ordinance prohibits all non-stormwater discharges that are not specifically exempted. Illegal connections are also prohibited; and in some circumstances littering, dumps, and stockpiles are identified as illegal discharges. See Ordinance section 67.805.

The Ordinance also prohibits any discharge of pollutants in storm water, unless the applicable requirements of the Ordinance have been met. See Ordinance section 67.805.

The applicable requirements for the Ordinance vary by category of discharger. The Ordinance includes water-quality related prohibitions for discharges from land development activities. The Ordinance and also prohibits discharges from land disturbance and land development activities where pollutants in those discharges have not been prevented or reduced to the maximum extent practicable. For all other categories of stormwater dischargers, the objective of protecting receiving waters is pursued through the specification of required BMPs, and the preservation of authority to issue site-specific Orders where needed. See Ordinance section 67.804(i).

### B.1.2 Categorically Exempt Non-Stormwater Discharges

Ordinance section 67.806 provides exceptions to the prohibition in section 67.805 to the maximum extent permitted by state law. The following categories of non-stormwater discharge are currently allowable:

a. Diverted stream flows;
b. Rising ground waters;
c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to municipal separate storm sewer systems;
d. Uncontaminated pumped ground water;
e. Foundation drains;
f. Springs;
g. Water from crawl space pumps;
h. Footing drains;
i. Air conditioning condensation;

j. Flows from riparian habitats and wetlands;
k. Water line flushing;
l. Landscape irrigation;
m. Discharges from potable water sources other than main breaks;
n. Irrigation water;
o. Lawn watering;
p. Individual residential car washing; and
q. Dechlorinated swimming pool discharges.

By February 21, 2002, and periodically thereafter, the County will determine which of these discharge types it has determined to be a significant source of pollutants to waters of the United States. Based on this determination, the County will establish the types of discharges that will continue to be conditionally allowed, or which will be disallowed, into the Stormwater Conveyance System. At that time, the County may impose additional BMP requirements specific to those discharges that continue to be allowed.

## PART B.2—BMP REQUIREMENTS APPLICABLE TO ALL DISCHARGERS

### B.2.1 Overview of Best Management Practices (BMPs)

[RESERVED]

### B.2.2 Eroded Soils

B.2.2.1: Prior to the rainy season, Dischargers must remove or contain any significant accumulations of eroded soils from slopes previously disturbed by clearing or grading, if those eroded soils could otherwise enter the Stormwater Conveyance System or Receiving Waters during the rainy season.

### B.2.3 Pollution Prevention

B.2.3.1: Dischargers employing ten or more persons on a full-time basis shall implement those stormwater pollution prevention practices that are generally recognized in that Discharger's industry or business as being effective and economically advantageous.

### B.2.4 Prevention of Illegal Discharges

B.2.4.1: 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.

### B.2.5 Slopes

B.2.5.1: 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.

### B.2.6 Storage of Materials and Wastes

B.2.5.1: All materials and wastes with the potential to pollute urban runoff shall be stored in a manner that either prevents contact with rainfall and stormwater, or contains contaminated runoff for treatment and disposal.

### B.2.6 Use of Materials

B.2.6.1: 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 materials may be disposed of or rinsed into Receiving Waters or the Stormwater Conveyance System.

## SECTION C. COMMERCIAL ACTIVITIES AND FACILITIES

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4.18 Landscaping
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4.20 Equestrian Facilities

Part 5 BMP Alternatives

Part 6 Reference Materials

## PART C.1—GENERAL CONSIDERATIONS

### C.1.1 Commercial Facilities and Activities Subject to this Section

This section establishes tiered and progressively prescriptive BMP requirements for owners and operators of Regulated Commercial Facilities and Activities. These requirements includes three main elements; (1) standard requirements for all Regulated Commercial Facilities and Activities, (2) additional activity-specific requirements for all High Priority Commercial Facilities and Activities, and (3) additional requirements for specific categories of High Priority Commercial Facilities and Activities. Table C-1 below summarizes the applicable sections of this Manual that apply to specific groups of Dischargers and activities.

A Regulated Commercial Facility and Activity is defined as "any non-residential facility engaged in business or commerce, whether for profit or not-for-profit, or publicly or privately owned, except for Regulated Industrial Facilities and Municipal Facilities." This term is inclusive of both "High Priority Commercial Facilities and Activities" and "All Other Regulated Commercial Facilities and Activities" as defined in Ordinance section 67.809(a). Residences are also included in this definition if they are used for commercial repair, maintenance, cleaning, manufacturing, food preparation or painting activity if that activity has the potential to result in discharges of non-storm water or the discharge of pollutants to storm water. High Priority Commercial Facilities and Activities are those that are specifically designated in Ordinance section 67.809(b)(1). These are described further in Section C, Part Three of this Manual.

Incremental requirements applicable to High Priority Commercial Facilities and Activities are restricted to facilities and activities within the County Urban Area as defined in Ordinance section 87.806 and shown in Ordinance Appendix B. Some activities subject to these requirements (mobile car washing, pool and fountain cleaning, etc.) are conducted from a myriad of locations, i.e., not solely at a single fixed facility or location. For this reason, Regulated Commercial Facilities and Activities include both the facility at which a business is located (e.g., the home office) and all locations at which operations or activities are conducted.

### C.1.2 Responsibilities of Dischargers

Dischargers are required generally to comply with two inter-related sets of directives: (1) compliance with applicable discharge prohibition requirements, and (2) implementation of BMPs to prevent non-stormwater discharges and to reduce contaminants in stormwater discharges. Regardless of their categorization, all facilities and activities are subject to the generally applicable BMP requirements of Ordinance section 67.807 and section B of this Standards Manual, as well as the discharge prohibitions of Ordinance sections 67.805 and 67.806. Failure to comply with applicable discharge prohibitions is generally considered evidence of an inadequate BMP program, although BMPs can also be determined to be inadequate prior to the occurrence of actual discharges.

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 facility owner or operator. The County recognizes that the proper selection of BMPs depends on numerous factors that are specific to individual industry types and facilities, and therefore does not advocate or require the use of particular practices. Rather, the remainder of this section establishes standards that the County has determined are necessary to prevent discharges of pollutants to its conveyance system and receiving waters. In some instances, a wide range of potential BMP options is available to meet particular standards. In all instances, the County has endeavored to allow the greatest flexibility in determining the best means of compliance. Ultimately, the suitability of BMPs will be determined by their success in preventing polluted discharges from leaving the facility or work site.

At this time, the County does not require the application of structural treatment control BMPs (e.g., filtration, etc.) for existing commercial facilities as a standard measure. In most cases, compliance can be obtained through the use of an effective combination of source control BMPs. However, in some instances, businesses are required to evaluate the feasibility of such controls and to implement them if practicable. In other instances, the County may require the application of structural controls where significant or continued non-compliance is demonstrated. The categorical requirement of treatment control BMPs for any class of facility, however, would require an amendment of this Manual.

### C.1.3 Inspection and Verification

Under its municipal stormwater permit, the County must conduct inspections of High Priority Commercial Facilities as needed to verify compliance with its stormwater ordinance and other applicable laws and regulations. The County may therefore conduct inspections of any or all of the High Priority Commercial Facilities described in Ordinance section 67.809(b). The County also retains the discretion to conduct inspections of Other Regulated Commercial Facilities as needed to verify compliance with the Ordinance.

All discharge prohibition and BMP requirements described herein are applicable regardless of whether any facility or activity is subject to County inspections or any other form of compliance verification.

## PART C.2—GENERAL STANDARDS APPLICABLE TO ALL REGULATED COMMERCIAL FACILITIES AND ACTIVITIES (GROUP 1 STANDARDS)

Except as otherwise noted, the standards described in this Part C.2 are applicable to all Regulated Commercial Facilities and Activities. The purpose of this section is to establish a baseline of reasonable, achievable, "common sense" standards that must be met for all Regulated Commercial Facilities and Activities. These are termed Group 1 Standards. Additional, more prescriptive standards are provided for High Priority Commercial Facilities and Activities in Sections C.3 and C.4 below.

### C.2.1 Employee Training

C.2.1.1: Dischargers employing ten or more persons on a full-time basis, and High Priority Commercial Facilities and Activities Dischargers, shall provide training at least annually to all employees with responsibility for actions required to implement the SWPPP. Training shall address notification requirements, inspections, record keeping, illicit connections and illegal discharge detection. Integration with other existing training programs is encouraged.

C.2.1.2: Documentation of training shall be maintained on-site at the location(s) where operations or activities are conducted, and shall be provided on request to County Authorized Enforcement Officials or Authorized Enforcement Staff.

C.2.1.3: Training shall be adequate to ensure compliance with the standards established in this Ordinance. Continued or significant non-compliance by facility employees with any condition of this Ordinance may be deemed evidence of an inadequate employee training program.

### C.2.2 Stormwater Pollution Prevention Plans (SWPPPs)

If preparation of an SWPPP is directed by an authorized enforcement official pursuant to Section 67.807(d) of the Ordinance, that SWPP shall include the applicable elements of a SWPPP specified in the State General Industrial Stormwater Permit.

### C.2.3 Storm Drain Tileage and Signing

C.2.3.1: The use of storm drain tiles or other labeling is encouraged, but not required, for Regulated Commercial Facilities and Activities. Where used, storm drain tiles and signs should contain a brief statement that prohibits the dumping of improper materials into the Stormwater Conveyance System. Graphical icons, either illustrating anti-dumping symbols or images of receiving water fauna, are effective supplements to the anti-dumping message. Naming the receiving water also has proven to increase the effectiveness of this signage by making it more personal (i.e. "flows to San Dieguito River Park").

## C.2.4 Annual Review of Facilities and Activities

C.2.4.1: Dischargers employing ten or more persons on a full-time basis, and High Priority Commercial Facilities and Activities Dischargers, shall review their facilities, activities, operations, and procedures at least annually to detect illicit connections and illegal discharges.

C.2.4.2: Illegal connections, as defined in Ordinance section 67.802, 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.

C.2.4.3: Corrective training shall be provided as needed (and documented in training records) whenever an illegal disposal practice is discovered.

## C.2.5 Pollution Prevention

C.2.5.1: Dischargers employing ten or more persons on a full-time basis shall implement those stormwater pollution prevention practices that are generally recognized in that Discharger's industry or business as being effective and economically advantageous.

## C.2.6 Materials and Waste Management

C.2.6.1: The following conditions apply to the storage, management, and disposal of hazardous materials and wastes at Regulated Commercial Facilities:

(a) Hazardous materials and wastes shall be stored, managed, and disposed in accordance with applicable federal, state and local laws and regulations.

(b) Hazardous materials must be stored off the ground. Where practicable, overhead coverage shall be provided for all outside hazardous materials or waste storage areas. If overhead coverage is not available, stored materials shall be covered with an impervious material (e.g., a tarp, etc.).

(c) Drums and other containers shall be kept in good condition, and shall be kept securely closed when not in use.

(d) Materials and equipment necessary for spill response shall be maintained and kept readily accessible, and all employees involved in the storage, management, or disposal of hazardous materials or wastes trained in their proper use.

(e) Significant spills shall be reported promptly to the County's Complaint hotline. Significant spills are those which discharge, or have the potential to discharge, contaminants directly or indirectly to the Stormwater

Conveyance System or Receiving Waters. Spills which have been completely contained and cleaned up on-site are not considered significant unless they pose a threat to human health or safety.

C.2.6.2: The following conditions apply to the storage of solid waste at Regulated Commercial Facilities:

(a) Trash storage and disposal areas shall be kept clean and free of debris.

(b) Dumpsters and other containers shall be maintained in good condition, and shall be kept securely closed when not in use.

(c) Materials and equipment necessary for the clean-up of trash and debris shall be maintained and kept readily accessible.

C.2.6.3: The following conditions apply to the loading and unloading of significant materials at Regulated Commercial Facilities:

(a) Where practicable, loading / unloading of materials shall only be allowed in designated areas.

(b) Spills and leaks shall be promptly cleaned up and the generated wastes disposed of properly.

(c) Loading / unloading areas shall be periodically inspected, and accumulations of debris, litter, waste, or other materials removed.

(d) Materials and equipment necessary for spill response shall be maintained and kept readily accessible and all employees conducting loading / unloading activities trained in their proper use.

(e) Significant spills shall be reported promptly to the County's Stormwater Hotline . Significant spills are those which discharge, or have the potential to discharge, contaminants directly or indirectly to the Stormwater Conveyance System or Receiving Waters. Spills of hazardous materials shall be reported to the County's Complaint Hotline. Spills that have been completely contained and cleaned up on-site are not considered significant unless they pose a threat to human health or safety.

**C.2.7 Vehicles and Equipment**

C.2.7.1: The following conditions apply to the fueling of vehicles and equipment at Regulated Commercial Facilities:

(a) Precautions shall be taken to prevent spills and leaks during fueling activities.

(b) Materials and equipment necessary for spill response shall be maintained and kept readily accessible, and staff conducting fueling activities instructed in their proper use.

(c) Significant spills shall be reported promptly to the County's Stormwater Hotline . Significant spills are those which discharge, or have the potential to discharge, contaminants directly or indirectly to the Stormwater Conveyance System or Receiving Waters. Spills of hazardous materials shall be reported to the County's Complaint hotline. Spills which have been completely contained and cleaned up on-site are not considered significant unless they pose a threat to human health or safety.

C.2.7.2: The following conditions apply to the maintenance and repair of vehicles and equipment at Regulated Commercial Facilities:

(a) Precautions shall be taken to prevent spills and leaks during maintenance and repair activities.

(b) Materials and equipment necessary for spill response shall be maintained and kept readily accessible, and staff conducting maintenance and repair activities instructed in their proper use.

(c) Significant spills shall be reported promptly to the County's Stormwater Hotline . Significant spills are those which discharge, or have the potential to discharge, contaminants directly or indirectly to the Stormwater Conveyance System or Receiving Waters. Spills of hazardous materials shall be reported to the County's Complaint hotline. Spills which have been completely contained and cleaned up on-site are not considered significant unless they pose a threat to human health or safety.

C.2.7.3: The following conditions apply to the washing of vehicles and equipment at Regulated Commercial Facilities:

(a) Storm drain inlets located within or down gradient of wash areas shall be covered or otherwise protected to prevent the entry of wash water or rinse water.

(b) Where practicable, the introduction of pollutants (soaps, degreasers, etc.) to wash water shall be reduced or eliminated.

C.2.7.4: The following conditions apply to the outdoor storage of equipment at Regulated Commercial Facilities:

(a) Drip pans or other methods of spill containment shall be used to prevent the discharge of materials to the Stormwater Conveyance System or Receiving Waters.

(b) Materials and equipment necessary for spill response shall be maintained and kept readily accessible.

(c) Significant spills shall be reported promptly to the County's Stormwater Hotline . Significant spills are those which discharge, or have the potential to discharge, contaminants directly or indirectly to the Stormwater Conveyance System or Receiving Waters. Spills which have been completely contained and cleaned up on-site are not considered significant unless they pose a threat to human health or safety.

**C.2.8 Outdoor Areas**

C.2.8.1: The following condition applies to rooftop areas at Regulated Commercial Facilities:

(a) Materials which may contaminate stormwater shall not be stored on rooftops unless adequate precautions have been taken to prevent their contact with stormwater.

C.2.8.2: The following conditions apply to parking areas at Regulated Commercial Facilities:

(a) Parking areas shall be periodically cleaned using dry methods (manual sweeping, street sweepers, etc.). Wet methods shall only be used where adequate precautions have been taken to prevent the entry of wash water and other contaminants into the Stormwater Conveyance System or Receiving Waters.

(b) Prior to any improvement or expansion project, parking areas designed to accommodate 100 or more vehicles shall be evaluated to establish the level of post-construction BMPs that will meet the MEP standards. Treatment or infiltration BMPs shall be installed if necessary to meet the MEP standard. Installed controls shall be inspected and maintained as necessary to ensure their continued proper functioning.

C.2.8.3: The following conditions apply to landscaping and grounds keeping conducted at Regulated Commercial Facilities:

(a) Precautions shall be taken to prevent spills, leaks, and over-application of chemical products during landscaping and grounds keeping activities.

(b) Precautions shall be taken to prevent over-irrigation of landscaped areas.

(c) Pesticides, herbicides, fertilizers, and other chemical products shall be used in accordance with label directions. These products shall not be disposed to streets or gutters, but shall be collected and properly disposed.

(d) Grounds and landscaped areas shall be periodically inspected. Litter, debris, organic matter (leaves, cut grass, etc.), and other materials with the potential to contaminate stormwater shall be collected and properly disposed.

(f) Materials and equipment necessary for spill response shall be maintained and kept readily accessible, and employees trained in their proper use.

(g) Significant spills shall be reported promptly to the County's Stormwater Hotline . Significant spills are those which discharge, or have the potential to discharge, contaminants directly or indirectly to the Stormwater Conveyance System or Receiving Waters. Spills of hazardous materials shall be reported to the County's Complaint hotline. Spills which have been completely contained and cleaned up on-site are not considered significant unless they pose a threat to human health or safety.

## PART C.3—ADDITIONAL REQUIREMENTS APPLICABLE TO ALL HIGH PRIORITY COMMERCIAL FACILITIES AND ACTIVITIES (GROUP 2 STANDARDS)

High Priority Commercial Facilities and Activities are those that are specifically designated in section 67.809(b)(1) of this Ordinance. That definition includes but is not limited to businesses in the County Urban Area primarily engaged in any of the following activities:

- Airplane mechanical repair, maintenance, fueling, or cleaning;
- Motor vehicle (or other vehicle) parking lots and storage facilities;
- Motor vehicle and other vehicle body repair or painting;
- Motor vehicle mechanical repair, maintenance, fueling, or cleaning;
- Boat mechanical repair, maintenance, fueling, or cleaning;
- Botanical or zoological gardens and exhibits;
- Cement mixing or cutting;
- Cemeteries
- Eating or drinking establishments;
- Equipment repair, maintenance, fueling, or cleaning;
- Golf courses, parks and other recreational areas/facilities;
- Landscaping;
- Marinas;
- Masonry installation;
- Mobile motor vehicle or other vehicle washing;
- Mobile carpet, drape or furniture cleaning;
- Nurseries and greenhouses;
- Painting and coating;
- Pest control services;
- Pool and fountain cleaning;
- Portable sanitary toilet servicing; or
- Retail or wholesale fueling.

In addition to the general requirements set out for all Group 1 Dischargers in Section C.2, above, the requirements described below (Group 2 Standards) apply to each of these facility or activity types. Like the Group 1 Standards, they focus on a core set of activities that are common to many facilities and business types. However, because these facilities and activities are classified as High Priority, a correspondingly higher standard of compliance is required. Additional requirements (Group 3 Standards) that are specific to particular categories of facilities or businesses are provided in Part Four below.

## C.3.1 Materials and Waste Management

C.3.1.1: In addition to the requirements of section 2.6.1, the following conditions apply to the storage, management, and disposal of hazardous materials and wastes at High Priority Commercial Facilities:

(a) Secondary containment shall be provided around storage areas from which a significant potential exists to discharge materials or wastes to the Stormwater Conveyance System or Receiving Waters.

(b) Storage areas shall be inspected periodically, including at least once prior to the rainy season (October 1 – April 30) and quarterly during the rainy season,

C.3.1.2: In addition to the requirements of section 2.6.2, the following condition applies to the storage of solid waste at High Priority Commercial Facilities:

(a) Trash storage and disposal areas shall be inspected at least weekly.

(b) Wet cleaning (hosing, pressure washing, etc.) of trash storage and disposal areas shall only be allowed if adequate precautions have been taken to prevent the discharge of wash water into the Stormwater Conveyance System or Receiving Waters.

C.3.1.3: In addition to the requirements of section 2.6.3, the following conditions apply to the loading and unloading of significant materials at High Priority Commercial Facilities:

(a) Designated loading / unloading areas shall be regularly cleaned using dry methods (e.g., sweeping, vacuuming, etc.).

(b) Wet cleaning (hosing, pressure washing, etc.) of loading / unloading areas shall only be allowed if adequate precautions have been taken to prevent the discharge of wash water into the Stormwater Conveyance System or Receiving Waters, or to filter pollutants from the water prior to discharge.

(c) Storm drain inlets located within or downgradient of loading / unloading areas shall be covered or otherwise protected during loading / unloading activities to prevent the entry of materials.

(d) Loading / unloading equipment (forklifts, pallet jacks, etc.) shall be maintained in good condition, and preventive maintenance conducted as necessary to prevent leaks.

(e) Equipment and supplies stored in loading / unloading areas shall be properly maintained to prevent leaks and spills to the Stormwater Conveyance System or Receiving Waters, and to prevent their contact with rainfall and run-on.

**C.3.2 Vehicles and Equipment**

C.3.2.1: In addition to the requirements of section 2.7.1, the following conditions apply to the fueling of vehicles and equipment at High Priority Commercial Facilities:

(a) Storm drain inlets located within or downgradient of fueling areas shall be covered or otherwise protected (e.g., with an oil-water separator) to prevent the entry of spilled fuel.

(b) Vehicles and equipment shall only be fueled in areas where adequate precautions have been taken to prevent the entry of spills into the Stormwater Conveyance System or Receiving Waters. Designated fueling areas are required where practicable.

(c) The retrofitting of existing facilities with structural controls such as low-flow sumps or oil/water separators shall be considered to prevent the entry of spills into the Stormwater Conveyance System or Receiving Waters. The use of structural controls is not required, but is encouraged where practicable. Pursuant to Ordinance section 67.804(i), the County may order the use of structural controls.

C.3.2.2: In addition to the requirements of section 2.7.2, the following conditions apply to the maintenance and repair of vehicles and equipment at High Priority Commercial Facilities:

(a) Storm drain inlets located within or downgradient of maintenance and repair areas shall be protected to prevent the entry of spilled fluids (e.g., fuel, oil, grease, or antifreeze).

(b) Vehicle and equipment maintenance and repair shall only be conducted in areas where adequate precautions have been taken to prevent the entry of spills into the Stormwater Conveyance System or Receiving Waters. Designated maintenance and repair areas are required where practicable.

(c) Maintenance and repair equipment shall be kept clean to avoid the build up of grease and oil.

(d) Fluids shall be drained from any retired vehicles or equipment stored on site.

(e) Only dry cleaning methods shall be used on maintenance and repair areas unless adequate precautions have been taken to prevent the discharge of wash water to the Stormwater Conveyance System or Receiving Waters (e.g., the discharge is directed to the sanitary sewer, a sump, etc.).

(f) Drip pans, containers, or other methods of drip and spill containment shall be utilized at all times during the repair or maintenance of vehicles and equipment.

(g) The retrofitting of existing facilities with structural controls such as low-flow sumps or oil/water separators shall be considered to prevent the entry of spills into the stormwater conveyance system or receiving waters. The use of structural controls is not required, but is encouraged where practicable. Pursuant to Ordinance section 67.804(i), the County may order the use of structural controls.

(h) Vehicle maintenance shall be performed within covered areas.

C.3.2.3: In addition to the requirements of section 2.7.3, the following conditions apply to the washing of vehicles and equipment at High Priority Commercial Facilities:

(a) Vehicles and equipment shall only be washed in areas where adequate precautions have been taken to prevent the entry of wash water and other contaminants into the Stormwater Conveyance System or Receiving Waters. Designated wash areas and/or wash racks are required where practicable.

(b) Where practicable, wash areas shall drain or be plumbed to the sanitary sewer. Dischargers are responsible for obtaining all necessary approvals from sewering agencies prior to connecting or discharging to the sewer. In addition, oil/water separators will be installed prior to release into sanitary sewers.

(c) Infiltration of wash water or rinse water to pervious surfaces is generally allowed. However, vehicle wash water or rinse water generated from cleaning engines, mechanical parts, or heavy equipment may not be infiltrated. A minimum of ten feet separation between the groundwater and the pervious surface is required.

(d) Wash waters or rinse waters not discharged to sewer or infiltrated must be contained for treatment, re-use, or proper disposal.

C.3.2.4: In addition to the requirements of section 2.7.4, the following conditions apply to the outdoor storage of equipment at High Priority Commercial Facilities:

(a) Stored equipment shall be drained of lubricants and other petrochemicals, and these substances properly disposed.

(b) Where practicable, equipment storage areas shall be bermed and covered.

**C.3.3 Outdoor Areas**

C.3.3.1: In addition to the requirements of section 2.8.1, the following conditions apply to rooftop areas at High Priority Commercial Facilities:

(a) Equipment located on rooftops (e.g., emergency generators, HVAC systems, etc.) shall be periodically inspected, and preventive maintenance conducted as necessary to prevent leaks and spills.

(b) Materials and substances (bird droppings, grease, leaves, etc.) that have accumulated on rooftops shall be periodically inspected and removed as necessary to prevent or reduce the discharge of contaminants directly or indirectly to the Stormwater Conveyance System or Receiving Waters.

(c) Where practicable, roof downspouts shall be routed away from work areas. Unless filtered to remove pollutants, water from downspouts shall be routed toward pervious areas such as lawns where practicable.

C.3.3.2: In addition to the requirements of section 2.8.2, the following conditions apply to parking areas at High Priority Commercial Facilities:

(a) Where practicable, trash containers shall be provided in convenient locations to discourage littering.

(b) Vehicles stored in parking areas for extended periods shall be periodically inspected, and leaks and spills cleaned as necessary.

(c) Parking areas shall be periodically inspected, and significant accumulations of materials and substances (oil, fuel, grease, leaves, etc.) removed. All materials shall be properly disposed.

(d) Storm water run-on should be prevented from contacting stored materials and equipment that may contaminate storm water through the use of berms, dikes, or other diversion structures or through the use of measures to elevate waste from site surfaces.

C.3.3.3: In addition to the requirements of section 2.8.3, the following conditions apply to landscaping and grounds keeping conducted at High Priority Commercial Facilities:

(a) The application of pesticides, fertilizers, and other chemical products prior to irrigation or rainfall is discouraged.

(b) Product containers shall be kept in good condition, shall be kept securely closed when not in use, and shall be stored in a manner that protects them from contact with storm water.

(c) Protective measures shall be taken to ensure that stored pesticides, fertilizers, and other chemicals do not contact stormwater.

(d) Integrated Pest Management (IPM) practices and other non-chemical pest control methods (e.g., traps, sticky tape, hot-wire lamps, etc.) shall be considered where practicable.

(e) Exposed slopes shall be stabilized as soon as possible.

(f) Paved surfaces such as sidewalks shall be cleaned regularly using dry methods (e.g., sweeping, vacuuming, etc.). Hosing is permissible only after surfaces have previously been cleaned using dry methods.

(g) Stockpiles shall be covered during windy and rainy conditions.

## PART C.4—ADDITIONAL BMP REQUIREMENTS APPLICABLE TO SPECIFIC HIGH PRIORITY COMMERCIAL FACILITIES AND ACTIVITIES (GROUP 3 STANDARDS)

In addition to the requirements of Section C.2 and Section C.3 above, the following requirements (Group 3 Standards) apply to specific categories of High Priority Commercial Facilities and Activities for the activities in which they are primarily engaged. Because these activities are the primary focus of the regulated businesses, a higher standard is generally expected than that applied to other operators which conduct such activities only incidentally or occasionally.

### C.4.1 Vehicle and Equipment Repair and Maintenance

In addition to the applicable requirements of Sections C.2 and C.3, especially sections C.2.7.2 and C.3.2.2, the conditions in this subsection apply to the repair and maintenance of vehicles and equipment. The term "Motor vehicle" is defined in Ordinance section 67.803. In the context of these requirements, it includes all categories of vehicle contained in that definition plus airplanes.

C.4.1.1: Repair and maintenance activities shall be conducted only in designated work areas.

C.4.1.2: Repair and maintenance work must be conducted indoors or under cover whenever practicable. If this work cannot be conducted indoors or under cover, other precautions must be taken to prevent the discharge of contaminants into the Stormwater Conveyance System or Receiving Waters.

C.4.1.3: Significant repair and maintenance work on boats may not be conducted over water. Minor engine work and routine changing of oil or other fluids are not considered significant, but may only be conducted over water if adequate precautions have been taken to prevent the entry of pollutants into the water.

C.4.1.4: As necessary to prevent the entry of pollutants into the Stormwater Conveyance System or Receiving Waters, designated work areas shall utilize structural controls to (1) prevent the discharge of spills from the work area, (2) prevent run-on from contacting work surfaces and pollutants, and (3) prevent rainfall from contacting work surfaces and pollutants. Pursuant to Ordinance section 67.804(i), the County may order the use of structural controls.

### C.4.2 Retail and Wholesale Fueling

In addition to the applicable requirements of Sections C.1 and C.2, especially sections C.2.7.1 and C.3.2.1, the following conditions apply to the fueling of vehicles and equipment:

C.4.2.1: Where practicable, fueling areas shall be under permanent cover.

C.4.2.2: Where practicable, all storm drain inlets shall be connected to an oil/water separator and to the sanitary sewer.

**Table C-1: Applicable Requirements by Standards Manual Section**

This table summarizes broadly applicable minimum requirements. It is intended as a reference only. Dischargers are responsible for identifying the specific requirements that are applicable to their particular operations as described in the text of this Manual.

| ACTIVITY TYPE | Group 1 Standards<br>Applicable to All Regulated Commercial Dischargers<br>(Activity-Specific) | Group 2 Standards<br>Applicable to All High Priority Commercial Dischargers<br>(Activity-Specific) | Group 3 Standards<br>Applicable to Specific High Priority Commercial Dischargers<br>(Categorical) |
|---|---|---|---|
| **Materials and Waste Management** | | | |
| Hazardous materials and waste | 2.6.1 | 3.1.1 | |
| Solid waste | 2.6.2 | 3.1.2 | |
| Loading / unloading | 2.6.3 | 3.1.3 | |
| **Vehicles and Equipment** | | | |
| Fueling | 2.7.1 | 3.2.1 | |
| Maintenance / repair | 2.7.2 | 3.2.2 | |
| Washing / cleaning | 2.7.3 | 3.2.3 | |
| Outdoor storage | 2.7.4 | 3.2.4 | |
| Outdoor Areas | | | |
| Rooftops | 2.8.1 | 3.3.1 | |
| Parking areas | 2.8.2 | 3.3.2 | |
| Landscaping / grounds keeping | 2.8.3 | 3.3.3 | |
| **Specific High Priority Facilities and Activities** | | | |
| Vehicle and Equipment Repair and Maintenance | | | 4.1 (plus 2.7.2 and 3.2.2) |
| Retail and Wholesale Fueling | | | 4.2 (plus 2.7.1 and 3.2.1) |
| Vehicle and Body Repair and Painting | | | 4.3 |
| Painting and Coating | | | 4.4 |
| Eating and Drinking Establishments | | | 4.5 |
| Marinas | | | 4.6 |
| Botanical and Zoological Gardens and Exhibits | | | 4.7 (plus 4.1, 4.5, 4.17, and 4.18) |
| Golf Courses, Parks, and Other | | | 4.8 (plus 4.5, |

| | | | |
|---|---|---|---|
| Recreational Facilities | | | 4.17, and 4.18) |
| Nurseries and Greenhouses | | | 4.9 |
| Parking Lots and Storage Facilities | | | 4.10 (plus 2.8.2 and 3.3.2) |
| Cement Mixing and Cutting | | | 4.11 |
| Mobile Carpet, Drape, and Furniture Cleaning | | | 4.12 |
| Masonry | | | 4.13 |
| Pool and Fountain Cleaning | | | 4.14 |
| Portable Sanitary Toilet Cleaning | | | 4.15 |
| Mobile Vehicle Washing | | | 4.16 |
| Pest Control | | | 4.17 |
| Landscaping | | | 4.18 (plus 2.8.3 and 3.3.3) |
| Power Washing | | | 4.19 |
| Equestrian Facilities | | | 4.20 |

C.4.2.3: Fueling and parking areas shall be periodically inspected, and significant accumulations of materials and substances (oil, fuel, grease, etc.) removed. All materials shall be properly disposed.

C.4.2.4: Only dry cleaning methods shall be used on fueling and parking areas unless adequate precautions have been taken to prevent the discharge of washwater to the Stormwater Conveyance System or Receiving Waters (e.g., the discharge is directed to the sanitary sewer, a sump, etc.).

C.4.2.5: Spill clean-up kits shall be maintained and kept readily accessible, and employees trained in their proper use. Absorbents and other materials used to clean spills shall be collected and properly disposed.

C.4.2.6: As necessary to prevent the entry of pollutants into the Stormwater Conveyance System or Receiving Waters, designated work areas shall utilize structural controls to (1) prevent the discharge of spills from the work area, (2) prevent run-on from contacting work surfaces and pollutants, and (3) prevent rainfall from contacting work surfaces and pollutants. Pursuant to Ordinance section 67.804(i), the County may order the use of structural controls.

### C.4.3 Vehicle Body Repair and Painting

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to vehicle body repair and painting:

C.4.3.1: Bodywork and painting must be conducted indoors or under cover whenever practicable. If this work cannot be conducted indoors or under cover, other precautions must be taken to prevent the discharge of contaminants into the Stormwater Conveyance System or Receiving Waters.

C.4.3.2: Painting work shall be conducted in approved, enclosed areas equipped with vacuum hoods and filters.

C.4.3.3: The recycling and re-use of solvents is encouraged.

C.4.3.4: Work areas shall be periodically cleaned using dry methods (sweeping, vacuuming, etc.). Wet methods shall only be used where adequate precautions have been taken to prevent the entry of wash water and other contaminants into the Stormwater Conveyance System or Receiving Waters.

C.4.3.5: Spill clean-up kits shall be maintained and kept readily accessible, and employees trained in their proper use.

C.4.3.6: As necessary to prevent the entry of pollutants into the Stormwater Conveyance System or Receiving Waters, designated work areas shall utilize structural controls to (1) prevent the discharge of spills from the work area, (2) prevent run-on from contacting work surfaces and pollutants, and (3) prevent rainfall from contacting work surfaces and pollutants. Pursuant to Ordinance section 67.804(i), the County may order the use of structural controls.

**C.4.4 Painting and Coating**

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to painting and coating activities:

C.4.4.1: When not in use, paints, coatings, and solvents shall always be stored under cover and in a contained area.

C.4.4.2: Containers shall be kept in good condition, and shall be kept securely closed when not in use.

C.4.4.3: Where practicable, work areas shall be enclosed in a building, or with tarping or plastic sheeting to prevent drift.

C.4.4.4: Storm drain inlets located within or down gradient of areas where painting or coating are conducted shall be covered or otherwise protected to protect them from dust, chips, and rinsate during hours of operation.

C.4.4.5: Areas where painting and coating work is being actively conducted shall be cleaned daily using dry methods (e.g., sweeping, wiping, vacuuming, etc.). Wet methods (e.g., hosing, etc.) may only be used if adequate precautions have been taken to prevent the discharge of wash water to the Stormwater Conveyance System or Receiving Waters.

C.4.4.6: Drop cloths and drip pans shall be used in mixing areas.

C.4.4.7: Paints, coatings, thinners, and other materials shall not be disposed to the Stormwater Conveyance System or Receiving Waters. The Stormwater Conveyance System includes driveways, streets, and gutters.

C.4.4.8: Water-based paints may be disposed to the sanitary sewer. Dischargers are responsible for obtaining all necessary approvals from sewering agencies prior to discharging to the sewer.

C.4.4.9: Filtering, re-use, and recycling of thinners and other solvents is encouraged. All materials must be properly disposed.

C.4.4.10: Materials and equipment necessary for spill response shall be maintained and kept readily accessible, and all employees involved in painting or coating activities trained in their proper use.

C.4.4.11: Significant spills shall be reported promptly to the County's Stormwater Hotline . Significant spills are those which discharge, or have the potential to discharge, contaminants directly or indirectly to the Stormwater Conveyance System or Receiving Waters. Spills of hazardous materials shall be reported to the County's Complaint hotline. Spills which have been completely contained and cleaned up on-site are not considered significant unless they pose a threat to human health or safety.

**C.4.5 Eating and Drinking Establishments**

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to eating and drinking establishments:

C.4.5.1: Dumpsters and grease bin areas shall be kept securely closed when not in use, and shall be inspected and cleaned regularly. Leaking dumpsters shall be repaired or replaced as soon as possible.

C.4.5.2: Parking areas and other outside surfaces shall be routinely cleaned using dry methods (e.g., sweeping, etc.) to prevent the accumulation of significant materials. Accumulated materials shall be properly disposed.

C.4.5.3: Parking areas and other surfaces shall not be cleaned using wet methods (e.g., hosing, steam-cleaning, pressure-washing, etc.) unless adequate precautions have been taken to prevent the entry of wash water and other contaminants into the Stormwater Conveyance System or Receiving Waters.

C.4.5.4: Outdoor grease interceptors shall be properly maintained, and routinely inspected to ensure their proper functioning. Any problems noted shall be corrected as soon as possible.

C.4.5.5: Equipment (mats, grease filters, etc.) shall not be washed in areas where wash water or rinse water will drain to the Stormwater Conveyance System or Receiving Waters. Dischargers are responsible for obtaining all necessary approvals from sewering agencies prior to discharging to the sewer.

C.4.5.6: As necessary to prevent the entry of pollutants into the Stormwater Conveyance System or Receiving Waters, designated work areas shall utilize structural controls to (1) prevent the discharge of spills from the work area, (2) prevent run-on from contacting work surfaces and pollutants, and (3) prevent rainfall from contacting work surfaces and pollutants. Pursuant to Ordinance section 67.804(i), the County may order the use of structural controls.

## C.4.6 Marinas

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to marinas:

C.4.6.1: Only minor over-water maintenance and repair work (e.g., touch-up painting, tune-ups, etc.) may be conducted by tenants or boat owners in marinas. In all instances, adequate precautions must be taken to ensure that materials and wastes are not spilled to the water. Major maintenance or repair work may not be conducted over water, and is subject to all applicable requirements of sections 4.1, 4.2, and 4.3 above.

C.4.6.2: Where practicable, trash receptacles and recycling bins shall be made readily accessible to tenants and customers.

C.4.6.3: If provided, pump-out services must be conducted in a manner that prevents the release of sewage to the Stormwater Conveyance System or Receiving Waters.

C.4.6.4: Materials and equipment necessary for spill response shall be maintained and kept readily accessible both to employees and tenants, and all employees trained in their proper use.

C.4.6.5: Significant spills shall be reported promptly to the County's Stormwater Hotline . Significant spills are those which discharge, or have the potential to discharge, contaminants directly or indirectly to the Stormwater Conveyance System or Receiving Waters. Spills of hazardous materials shall be reported to the County's Complaint hotline. Spills which have been completely contained and cleaned up on-site are not considered significant unless they pose a threat to human health or safety.

C.4.6.6: As necessary to prevent the entry of pollutants into the Stormwater Conveyance System or Receiving Waters, designated work areas shall utilize structural controls to (1) prevent the discharge of spills from the work area, (2) prevent run-on from contacting work surfaces and pollutants, and (3) prevent rainfall from contacting work surfaces and pollutants. Pursuant to Ordinance section 67.804(i), the County may order the use of structural controls.

## C.4.7 Botanical and Zoological Gardens and Exhibits

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to botanical and zoological gardens and exhibits:

C.4.7.1: The requirements of section 4.1 above (Vehicle and Equipment Repair and Maintenance) apply to botanical and zoological gardens and exhibits.

C.4.7.2: The requirements of section 4.5 above (Eating and Drinking Establishments) apply to botanical and zoological gardens and exhibits.

C.4.7.3: The requirements of section 4.17 below (Pest Management) apply to botanical and zoological gardens and exhibits.

C.4.7.4: The requirements of section 4.18 below (Landscaping) apply to botanical and zoological gardens and exhibits.

C.4.7.5: As necessary to prevent the entry of pollutants into the Stormwater Conveyance System or Receiving Waters, designated work areas shall utilize structural controls to (1) prevent the discharge of spills from the work area, (2) prevent run-on from contacting work surfaces and pollutants, and (3) prevent rainfall from contacting work surfaces and pollutants. Pursuant to Ordinance section 67.804(i), the County may order the use of structural controls.

C.4.7.6: Animal wash racks may not discharge to the stormwater conveyance system or receiving waters.

**C.4.8 Golf Courses, Parks, and Other Recreational Facilities**

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to golf courses, parks, and other recreational facilities:

C.4.8.1: The requirements of section 4.5 above (Eating and Drinking Establishments) apply to golf courses, parks, and other recreational facilities.

C.4.8.2: The requirements of section 4.17 below (Pest Management) apply to golf courses, parks, and other recreational facilities.

C.4.8.3: The requirements of section 4.18 below (Landscaping) apply to golf courses, parks, and other recreational facilities.

C.4.8.4: As necessary to prevent the entry of pollutants into the Stormwater Conveyance System or Receiving Waters, designated work areas shall utilize structural controls to (1) prevent the discharge of spills from the work area, (2) prevent run-on from contacting work surfaces and pollutants, and (3) prevent rainfall from contacting work surfaces and pollutants. Pursuant to Ordinance section 67.804(i), the County may order the use of structural controls.

**C.4.9 Nurseries and Greenhouses**

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to nurseries and greenhouses:

C.4.9.1: Product containers shall be kept in good condition, shall be kept securely closed when not in use, and shall be stored in a manner that protects them from contact with storm water.

C.4.9.2: Integrated Pest Management (IPM) practices and other non-chemical pest control methods (e.g., traps, sticky tape, hot-wire lamps, etc.) shall be considered where practicable.

C.4.9.3: Nozzles, intermitters, and other application equipment shall be maintained in good working condition.

C.4.9.4: Pesticides, fertilizers, and other chemical products shall be used and disposed in accordance with applicable federal, state, and local laws and regulations.

C.4.9.5: Pesticides, fertilizers, and other chemical products shall be applied and disposed in accordance with label instructions and material safety data sheet(s).

Do not over-apply fertilizers and pesticides. Prepare only the amount needed. Follow strictly the recommended usage instructions. Apply surface dressings in smaller applications, as opposed to one large application, to allow time for it to work in and to avoid excess materials being carried off-site by runoff.

C.4.9.6: Pesticides, fertilizers and other chemical products shall be stored in closed, labeled containers, under cover and off the ground.

C.4.9.7: Appropriate methods (e.g., timed application, combination slow-release and constant liquid fertilizer, etc.) shall be utilized to reduce excessive fertilization.

C.4.9.8: Where practicable, low volume watering methods (e.g., drip-, sub-, and pulse-irrigation, etc.) shall be used to minimize the potential for excess flows.

C.4.9.9: Where practicable, tail-water recovery systems or subsurface drains shall be used to recycle irrigation water.

C.4.9.10: Stockpiles shall be placed away from watercourses, bermed, and covered to prevent the release of materials to the Stormwater Conveyance System or Receiving Waters.

C.4.9.11: Areas where work is being actively conducted shall be routinely cleaned up using dry methods (e.g., sweeping, raking, etc.). Wet methods (e.g., hosing, etc.) may only be used if adequate precautions have been taken to prevent the discharge of wash water or other materials to the Stormwater Conveyance System or Receiving Waters.

C.4.9.12: Weather conditions and irrigation schedules shall be considered prior to the outdoor application of fertilizers and pesticides. Where practicable, these products shall

not be applied outdoors prior to irrigation or rainfall. Their outdoor application during rainfall is prohibited.

C.4.9.13: As necessary to prevent the entry of pollutants into the Stormwater Conveyance System or Receiving Waters, designated work areas shall utilize structural controls to (1) prevent the discharge of spills from the work area, (2) prevent run-on from contacting work surfaces and pollutants, and (3) prevent rainfall from contacting work surfaces and pollutants. Pursuant to Ordinance section 67.804(i), the County may order the use of structural controls.

## C.4.10 Parking Lots and Storage Facilities

In addition to the applicable requirements of Sections C.2 and C.3, especially sections C.2.8.2 and C.3.3.2, the following conditions apply to the parking lots and storage facilities:

C.4.10.1: Parking facilities shall not be cleaned using wet methods (e.g., hosing, steam-cleaning, pressure-washing, etc.) unless adequate precautions have been taken to prevent the entry of wash water and other contaminants into the Stormwater Conveyance System or Receiving Waters.

C.4.10.2: Parking areas shall be periodically cleaned using dry methods (e.g., sweeping, scraping, etc.) to prevent the accumulation of significant materials. Accumulated materials shall be properly disposed.

C.4.10.3: Signs shall be posted which prohibit littering and dumping.

C.4.10.4: Vehicle maintenance and repair operations with the potential to release pollutants are prohibited at commercial parking lots and storage facilities.

## C.4.11 Cement Mixing and Cutting

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to cement mixing and cutting:

C.4.11.1: Loose aggregate, mortar, and dust shall be routinely cleaned up using dry methods (e.g., sweeping, vacuuming, etc.). Wet methods may be used if adequate precautions have been taken to prevent the entry of wash water and other contaminants into the Stormwater Conveyance System or Receiving Waters. All materials shall be re-used, recycled, or properly disposed.

C.4.11.2: Storage of cement shall be above ground and covered.

C.4.11.3: Gutters, alleys, streets, and sidewalks should be swept rather than hosed.

C.4.11.4: Slurries should be diverted to a collection area or sedimentation basin, and shoveled or vacuumed daily. Slurries may not be disposed to the Stormwater Conveyance System or Receiving Waters under any circumstances. The Stormwater Conveyance System includes driveways, streets, and gutters.

Portland concrete cement and asphalt concrete waste should not be allowed to enter storm drains or watercourses.

Portland concrete cement and asphalt concrete waste should be collected and properly disposed of outside the highway right of way, or placed in a temporary concrete washout facility.

A sign should be installed adjacent to each temporary concrete washout facility to inform concrete equipment operators to utilize the proper facilities.

Below grade concrete washout facilities are typical. Above grade facilities are used if excavation is not practical.

C.4.11.5: Rinsate must be confined to a designated area (e.g., to sanitary sewer, a dead-end sump, process treatment system, or a hole where water percolates/evaporates and solids are removed for disposal and collected). Rinsate and solids must be re-used, recycled, or properly disposed.

## C.4.12 Mobile Carpet, Drape, and Furniture Cleaning

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to mobile carpet, drape, and furniture cleaning:

C.4.12.1: Wastewater may not be disposed to the Stormwater Conveyance System or Receiving Waters under any circumstances. The Stormwater Conveyance System includes driveways, streets, and gutters.

C.4.12.2: Wastewater may not be infiltrated or disposed to the ground.

C.4.12.3: Wastewater must be disposed to the sanitary sewer at the job site or to a holding tank. Wastewater contained in holding tanks must be disposed to the sanitary sewer at company headquarters or at an approved location. Dischargers are responsible for obtaining all necessary approvals from sewering agencies prior to discharging to the sewer.

C.4.12.4: Tanks, hoses, and fittings must be maintained in leak-proof condition.

## C.4.13 Masonry

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to masonry operations:

C.4.13.1: Storm drain inlets located within or downgradient of work areas shall be covered or otherwise protected to prevent the entry of wash water or other materials.

C.4.13.2: Work areas shall be routinely cleaned using dry methods (e.g., sweeping, etc.).

C.4.13.3: Work areas shall not be cleaned using wet methods (e.g., hosing, steam-cleaning, pressure-washing, etc.) unless adequate precautions have been taken to prevent the entry of wash water and other contaminants into the Stormwater Conveyance System or Receiving Waters.

C.4.13.4: Wash water shall be diverted from storm drains, and directed to sanitary sewer or landscaping, where approved.

C.4.13.5: Materials shall be covered (e.g., with a tarp) and stored above ground to prevent contact with stormwater.

C.4.13.6: Stock piles of sand shall be kept out of drainage systems. Prior to the onset of predicted rain, stockpiles shall be covered and bermed to prevent contact with stormwater.

**C.4.14 Pool and Fountain Cleaning**

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to pool and fountain cleaning:

C.4.14.1: Chemicals shall be stored in leak-proof containers and under cover.

C.4.14.2: Backwash wastewater may not be discharged to the Stormwater Conveyance System or Receiving Waters. Acceptable disposal options include the following: (1) discharge to sanitary sewer, (2) allowing infiltration to the soil, (3) discharging to a holding tank or settling pond.

C.4.14.3: Pool and fountain water must be dechlorinated to less than 1.0 ppm free chlorine prior to discharge. Discharge to the Stormwater Conveyance System is discouraged.

C.4.14.4: Pool water discharged after acid washing must be neutralized to a pH of 7.2-8.0. Discharge to the Stormwater Conveyance System is discouraged.

## C.4.15 Portable Sanitary Toilet Servicing

In addition to the applicable requirements of Sections C.2 and C.3, the following conditions apply to portable sanitary toilet servicing:

C.4.15.1: Rinse water from the cleaning of closets may not be disposed to the Stormwater Conveyance System or Receiving Waters.

C.4.15.1: If rinse water cannot be properly disposed at a job site, it must be contained for proper disposal.

C.4.15.2: Paper trash shall be removed prior to cleaning closets.

C.4.15.3: Service facility wash areas must have perimeter control and properly slope to a grated floor drain.

C.4.15.4: Service facility wash areas shall be drained to the sanitary sewer or to a holding tank. Dischargers are responsible for obtaining all necessary approvals from sewering agencies prior to discharging to the sewer.

C.4.15.5: Service facility wash area surfaces shall be kept clean and maintained in good condition.

C.4.15.6: Materials and equipment necessary for spill response shall be maintained and kept readily accessible, and all employees conducting cleaning of closets trained in their proper use.

C.4.15.7: Hoses, couplings, tanks, etc., shall be maintained in good condition to prevent leaks or spills.

C.4.15.8: Where practicable, closets shall be located away from Stormwater Conveyances and Receiving Waters. They should also be located away from high vehicular traffic areas.

C.4.15.9: Closets shall be posted or otherwise labeled to encourage reporting of needed cleaning or repair.

## C.4.16 Mobile Vehicle Washing

In addition to the applicable requirements of Section C.2 and C.3, the following conditions apply to mobile vehicle washing:

C.4.16.1: Wash water and rinse water may not be disposed to the Stormwater Conveyance System or Receiving Waters under any circumstances. The Stormwater Conveyance System includes driveways, streets, and gutters.

C.4.16.2: Storm drain inlets located within or downgradient of wash areas shall be covered or otherwise protected to prevent the entry of wash water or rinse water.

C.4.16.3: Vehicles shall be washed over porous surfaces such as lawns and gravel areas where feasible.

C.4.16.4: Wash water and rinse water may be infiltrated or disposed to the ground (e.g., soaked into a lawn or landscaped area, etc.) if adequate precautions have been taken to prevent the entry of wash water and other contaminants into the Stormwater Conveyance System or Receiving Waters.

C.4.16.5: Wash water and rinse water that cannot be properly disposed at a job site shall be collected and contained for recycling, re-use, or proper disposal (e.g., sanitary sewer, etc.). Dischargers are responsible for obtaining all necessary approvals from sewering agencies prior to discharging to the sewer.

C.4.16.6: The use of hose off or single use engine degreasing chemicals is prohibited, unless captured and properly disposed.

C.4.16.7: Where practicable, the introduction of pollutants (soaps, degreasers, etc.) to wash water shall be reduced or eliminated.

C.4.16.8: Dry cleaning methods are encouraged.

**C.4.17 Pest Control**

In addition to the applicable requirements of Section C, Parts Two and Three, the following conditions apply to pest control services:

C.4.17.1: Pest control businesses must be supervised by a currently certified Qualified Applicator Licensee.

C.4.17.2: Pesticides and other chemical products shall be applied and disposed in accordance with label instructions and material safety data sheet(s).

C.4.17.3: Pesticides and other chemical products shall be used and disposed in accordance with applicable federal, state, and local laws and regulations.

C.4.17.4: Pesticides and other chemical products shall be stored in closed, labeled containers, under cover and off the ground.

C.4.17.5: Weather conditions shall be considered prior to the outdoor application of pesticides and other chemical products. Where practicable, these products shall not be

applied outdoors prior to a predicted rainfall. Their outdoor application during rainfall is prohibited.

C.4.17.6: Precautions shall be taken during the application of pesticides and other chemical products to prevent drift into non-target areas or onto non-target vegetation, insects, or animals.

C.4.17.7: Pesticide use shall be reduced to the MEP in areas where recurring applications of pesticides are needed.

**C.4.18 Landscaping**

In addition to the applicable requirements of Sections C.2 and C.3, especially sections C.2.8.3 and C.3.3.3, the following conditions apply to landscaping activities:

C.4.18.1: Pesticides, fertilizers and other chemical products shall be used in accordance with applicable federal, state, and local laws and regulations.

C.4.18.2: Pesticides, fertilizers and other chemical products shall be stored in closed, labeled containers, under cover and off the ground.

C.4.18.3: Landscaping waste shall be properly disposed by composting on-site or at an approved composting location or permitted landfill.

C.4.18.4: Stockpiles shall be placed away from watercourses, bermed, and covered to prevent the release of materials to the Stormwater Conveyance System or Receiving Waters.

C.4.18.5: Where practicable, native vegetation shall be retained or planted to reduce water, fertilizer and pesticide needs.

C.4.18.6: Areas where work is being actively conducted shall be routinely cleaned up using dry methods (e.g., sweeping, raking, etc.). Wet methods (e.g., hosing, etc.) may only be used if adequate precautions have been taken to prevent the discharge of wash water or other materials to the Stormwater Conveyance System or Receiving Waters.

C.4.18.7: The use of blowers is permitted so long as materials are collected and properly disposed. Leaving blown materials in the Stormwater Conveyance System or Receiving Waters is a violation of Ordinance section 67.805(a). The Stormwater Conveyance System includes driveways, streets, and gutters.

C.4.18.8: Measures shall be taken to reduce or eliminate landscaping and irrigation runoff. Examples of practices include proper irrigation programming, programming shorter irrigation cycle times, and decreasing frequency after the application of fertilizers and pesticides.

C.4.18.9: Where practicable, fertilizers and pesticides shall not be applied prior to storm events. These products may not be applied during storm events.

### C.4.19 Building and Pavement Washing

C.4.19.1 Wash water and rinse water from building and pavement washing may not be disposed to the stormwater conveyance system or receiving waters. The stormwater conveyance systems includes driveways, streets and gutters. Where washing could result in discharges to streets and gutters despite precautions to prevent such discharges, storm drain inlets located down gradient of washing activities shall be covered or otherwise protected to prevent the entry of wash water or rinse water.

C.4.19.2 Wash and rinse water that cannot be property disposed at the job site shall be collected and contained for recycling, reuse, or proper disposal.

C.4.19.3 To the maximum extent practicable, the introduction of pollutants (soaps, degreasers, etc.) to wash water shall be reduced or eliminated.

### C.4.20 Equestrian Facilities

Animal wash racks at equestrian facilities may not discharge to the stormwater conveyance system or receiving waters.

## PART C.5—BMP ALTERNATIVES

The particular BMPs and BMP options prescribed in this Section C can be replaced with alternative BMPs that are at least as effective in preventing or reducing the discharge of pollutants and in meeting the other requirements of the Ordinance. The cost of the BMP may be considered in making this determination, but alternative selections may not be made solely on the basis of economic feasibility.

## PART C.6—REFERENCES

[RESERVED]

## SECTION D INDUSTRIAL ACTIVITEIS AND FACILITIES

### Section D Outline

Part 1. General Considerations

- 1.1 Industrial Facilities Subject to this Section
- 1.2 Responsibilities of Dischargers

Part 2 Requirements Applicable to All Regulated Industrial Facilities

- 2.1 High Priority Status Assessment and Verification
- 2.2 Annual Review of Facilities and Activities
- 2.3 Employee Training
- 2.4 Compliance with the Requirements of High Priority Commercial Facilities

Part 3 Additional Requirements Applicable to High Priority Industrial Facilities

- 3.1 Notice of Intent (NOI) / Waste Discharge Identification Number (WDID)
- 3.2 Stormwater Pollution Prevention Plans (SWPPPs)
- 3.3 Best Management Practice (BMP) Requirements
- 3.4 Monitoring Requirements

Part 4 Facility Inspections

Part 5 Alternatives to Required BMPs

- 5.1 Alternative BMPs
- 5.2 Waiver of Structural BMP Requirements

Part 6 Reference Materials

## PART D.1—GENERAL CONSIDERATIONS

### D.1.1 Industrial Facilities Subject to this Section

This section establishes requirements for Regulated Industrial Facilities that are in addition to those already established for High Priority Commercial Facilities and Activities in Section C of this Manual. As a rule, Regulated Industrial Facilities are required to meet all standards which are applicable to Regulated Commercial Facilities and Activities. Table C-1provides a reference of Manual sections containing standards applicable to Regulated Commercial Facilities. Regulated Industrial Facilities must also meet additional requirements that reflect the higher threat to water quality of industrial activities.

As defined in Ordinance section 67.803, Regulated Industrial Facility includes any facility meeting one or more of the following criteria:

- The facility is subject to the State General Industrial Stormwater Permit;
- The facility is primarily engaged in manufacturing, processing, storage or handling of raw materials, processed bulk materials, or refuse;
- The facility has a total outdoor uncovered area of more than two acres that is used for an Industrial Activity.

This term is inclusive of High Priority, Medium Priority, and Low Priority Industrial Facilities. Regulated Industrial Facilities which are also High Priority are specifically defined in Ordinance section 67.810(b). These are described further in Section D.3 of this Manual. Medium and Low Priority Industrial Facilities are defined in Ordinance sections 67.810(c) and 67.810(d), respectively. These are also described further in Section D.2 of this Manual.

### D.1.2 Responsibilities of Dischargers

Dischargers are required generally to comply with two inter-related sets of directives; (1) compliance with applicable discharge prohibition requirements, and (2) implementation of BMPs to prevent non-stormwater discharges and to reduce contaminants in stormwater discharges. Regardless of their categorization, all Regulated Industrial Facilities are subject to the generally applicable BMP requirements of Ordinance section 67.807 and section B of this Standards Manual, as well as the discharge prohibitions of Ordinance sections 67.805 and 67.806. Failure to comply with applicable discharge prohibitions is generally considered evidence of an inadequate BMP program, although BMPs can also be determined to be inadequate prior to the occurrence of actual discharges.

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 facility owner or operator. The County recognizes that the proper selection of BMPs depends on numerous factors that are specific to individual industry types and facilities, and therefore

does not advocate or require the use of particular practices. Rather, the remainder of this section establishes standards that the County has determined are necessary to prevent discharges of pollutants to its conveyance system and receiving waters. In some instances, a wide range of potential BMP options is available to meet particular standards. In all instances, the County has endeavored to allow the greatest flexibility in determining the best means of compliance. Ultimately, the suitability of BMPs will be determined by their success in preventing polluted discharges from leaving the facility or work site.

## PART D.2—REQUIREMENTS APPLICABLE TO ALL REGULATED INDUSTRIAL FACILITIES

This section defines the compliance obligations incurred by Regulated Industrial Facilities Dischargers. Regulated Industrial Facilities include (1) High Priority Industrial Facilities, (2) Medium Priority Industrial Facilities, and (3) Low Priority Industrial Facilities. Low and Medium Priority Industrial Facilities are those which do not meet the criteria established for High Priority in Ordinance section 67.810(b). Otherwise, Low and Medium Priority Facilities are differentiated only by the number of persons employed at each; Medium Priority Facilities have 50 or more full-time employees, and Low Priority Facilities 49 or less.

In addition to the general requirements stated in section D.1.2 above, this section sets out basic standards that are generally applicable to Regulated Industrial Facilities. Additional, more prescriptive standards are provided for High Priority Industrial Facilities in Section D, Part Three below.

### D.2.1 High Priority Status Assessment and Verification

D.2.1.1: Pursuant to Ordinance section 67.810(g), Medium Priority Industrial Facility Dischargers must prepare and retain on site, and make available for inspection, a written report verifying that they have assessed their status with respect to the criteria for classifying High Priority Industrial Facilities. This report must be completed and available for review within one year of Ordinance adoption.

Failure to complete this evaluation in the specified period is a violation of this Ordinance, and may result in a presumption by the County that a facility is High Priority. In such case, all requirements of High Priority Industrial Facilities shall apply unless the Discharger satisfies the County that they are not High Priority. Irrespective of a Discharger's self-assessment, the County may also assign a High Priority status to any Facility that it determines meets any of the criteria of Ordinance section 67.810(b).

D.2.1.2: Dischargers required by state law to obtain coverage under the State Industrial General Stormwater Permit shall obtain that coverage, and shall maintain on site and make available for inspection on request by the County the state-issued Waste Discharge Identification Number (WDID) for the facility, and a copy of the Notice of Intent (NOI) filed with the SWRCB pursuant to that permit.

D.2.1.3: Regulated Industrial Facilities employing less than 50 persons, if directed to do so by an Authorized Enforcement Official or Authorized Enforcement Staff, shall prepare and retain on site, and make available for inspection, a written report verifying that they have assessed their status with respect to the criteria for classifying High Priority Industrial Facilities. This report must be completed and available for review within 180 days of written request.

Regulated Industrial Facilities employing less than 50 persons are not categorically required to assess their status as potential High Priority Facilities. However, since many facilities with less than 50 employees are potentially High Priority, the County reserves the right to direct any Regulated Industrial Discharger to conduct this evaluation. The County may alternatively designate a facility as High Priority in the absence of a completed assessment if it determines that sufficient evidence exists to conclude that the facility meets any of the criteria set out in Ordinance section 67.810(b).

**D.2.2 Annual Review of Facilities and Activities**

D.2.2.1: Pursuant to Ordinance section 67.810(a), all Regulated Industrial Facilities Dischargers shall review their facilities, activities, operations, and procedures at least annually to detect illicit connections and illegal discharges.

D.2.2.2: 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.

D.2.2.3: Corrective training shall be provided as needed (and documented in training records) whenever an illegal disposal practice is discovered.

The purpose of this requirement is to actively engage Dischargers in the identification and elimination of connections and practices that might otherwise lead to discharge violations. This is especially important for Low and Medium Priority Industrial Facilities are not routinely inspected by County staff or which may be inspected less frequently.

**D.2.3 Employee Training**

D.2.3.1: Regulated Industrial Facilities Dischargers shall provide training at least annually to all employees with responsibility for actions required to implement the SWPPP. Training shall address notification requirements, inspections, record keeping, illicit connections and illegal discharge detection. Integration with other existing training programs is encouraged.

D.2.3.2: Documentation of training shall be maintained on-site at the location(s) where operations or activities are conducted, and shall be provided on request to County Authorized Enforcement Officials.

D.2.3.3: Training shall be adequate to ensure compliance with the standards established in this Ordinance. Continued or significant non-compliance by facility employees with any condition of this Ordinance may be deemed evidence of an inadequate employee training program.

**D.2.4 Compliance with the Requirements of High Priority Commercial Facilities**

D.2.4.1: Unless specifically exempted, either individually or categorically, Regulated Industrial Facilities Dischargers must meet the applicable minimum BMP requirements of High Priority Commercial Facilities. This requirement is applicable to any activities or operations conducted at a Regulated Industrial Facility which are subject to Group 1, Group 2, or Group 3 Standards described in Section C of this Manual. Group 3 Standards are applicable to Regulated Industrial Facilities even where the activities under consideration are not the primary focus of the regulated business.

## PART D.3—ADDITIONAL REQUIREMENTS APPLICABLE TO HIGH PRIORITY INDUSTRIAL FACILITIES

High Priority Industrial Facilities are those which are specifically designated in section 67.810(b) of this Ordinance. In addition to all obligations incurred by Low and Medium Priority Industrial Facilities Dischargers, High Priority Industrial Facilities Dischargers must comply with the requirements discussed below.

### D.3.1 Notice of Intent (NOI) / Waste Discharge Identification Number (WDID)

D.3.1.1: High Priority Industrial Facilities required to comply with the State Industrial General Stormwater Permit shall maintain on site and make available for inspection on request by the County the state-issued Waste Discharge Identification Number (WDID) for the facility, and a copy of the Notice of Intent (NOI) filed with the SWRCB pursuant to that permit.

### D.3.2 Stormwater Pollution Prevention Plans (SWPPPs)

D.3.2.1: Pursuant to Ordinance section 67.810(e)(2), Dischargers required to prepare a Stormwater Pollution Prevention Plan (SWPPP) under the State General Industrial Stormwater Permit must prepare and submit that Plan within 90 days. The plan shall be deemed approved 90 days after submission unless the County requires more information or requires modification to the Plan within that time period. The Discharger must implement the Plan, and maintain it at the site readily available for review.

D.3.2.2: Pursuant to Ordinance section 67.810(e)(2), if a High Priority Industrial Facility is not required to prepare a state SWPPP, the facility shall prepare a SWPPP, submit that SWPPP for County approval or modification and approval, implement the SWPPP, and maintain it on site. Any Industrial SWPPP submitted to the County shall meet the requirements of the State General Industrial Stormwater Permit.

D.3.2.3: The development and implementation of Stormwater Pollution Prevention Plans (SWPPPs) is encouraged for all Regulated Industrial Facilities. Business operators are responsible for demonstrating compliance with all applicable provisions of the Ordinance and this Manual, regardless of whether or not a SWPPP is utilized.

### D.3.3 Best Management Practice (BMP) Requirements

Best Management Practice (BMP) programs for High Priority Industrial Facilities must incorporate each of the following elements:

- Activity-specific BMPs,
- Pollution prevention practices,
- Non-structural BMPs, and
- Structural controls

D.3.3.1: Activity-Specific BMPs. High Priority Industrial Facilities shall incorporate into the SWPPP, and install and maintain BMPs as specified in this Manual for any commercial activities conducted at the facility, and for areas at the facility where industrial activities are conducted. BMP requirements applicable to commercial activities are the Group 1, Group 2, and Group 3 Standards described in Section C of this Manual. Group 3 Standards are applicable to High Priority Industrial Facilities even where the activities under consideration are not the primary focus of the regulated business. The minimum industrial activities that must be considered are those defined in Ordinance section 67.810(e)(5).

Ordinance section 67.810(e)(5) defines, but does not limit, the types of industrial activities that must be considered as the following:

- Raw or processes materials bulk storage,
- Mixing, where there is a potential for release of a pollutant,
- Cutting, trimming or grinding in connection with a production process,
- Casting, forging or forming,
- Hazardous materials storage (including tanks),
- Construction, painting and coating,
- Pesticide or other chemical products formulation or packaging,
- Process water pre-treatment,
- Welding,
- Blasting,
- Chemical treatment, and
- Power washing.

The County has not established BMP requirements that are specific to these or other industrial activities. Dischargers are responsible, as part of their SWPPP development, to review their facilities and identify these or other industrial activities that are conducted. Based on this review, BMPs that are appropriate to these activities must be identified and implemented. Where possible, practices that are recognized as being effective and economically feasible for the particular industry should be utilized.

D.3.3.2: Pollution Prevention Practices. Pursuant to Ordinance section 67.810(e)(3), High Priority Industrial Facilities shall consider and, where determined to be appropriate by the facility, implement pollution prevention practices. At a minimum, the following types of pollution prevention measures must be considered:

- The use of smaller quantities of toxic materials or substitution of less toxic materials,
- Changes to production processes to reduce waste,
- Decreases in waste water flows,
- Recycling of wastes as part of the production process,
- Segregation of wastes, and
- Treatment of wastes on site to decrease volume and/or toxicity.

This requirement is also applicable to Low and Medium Priority Industrial Facilities with 10 or more employees.

D.3.3.3: Non-structural BMPs. Pursuant to Ordinance section 67.810(e)(4), High Priority Industrial Facilities shall incorporate into their SWPPPs, and install and maintain, the following non-structural BMPs in accordance with the specifications of this Manual:

- Best management practices for material handling and storage of significant materials,
- Best management practices for non-hazardous waste handling and recycling,
- Employee training programs,
- Good housekeeping practices,
- Preventive maintenance practices,
- Self inspection and quality assurance practices, and
- Spill responses planning.

D.3.3.4: Structural Controls. Pursuant to Ordinance section 67.810(e)(6), High Priority Industrial Facilities shall incorporate into their SWPPPs, and install and maintain, one or more of the following structural BMPs where practicable, if the use of such BMPs would significantly reduce pollution in run-off from the facility:

- Overhead coverage of outdoor work areas or chemical storage,
- Retention ponds, basins, or surface impoundments that confine stormwater to the site,
- Berms and concrete swales or channels that divert run-on and runoff away from contact with pollutant sources,
- Secondary containment structures, and
- Treatment controls, e.g., infiltration devices and oil/water separators, to reduce pollutants in stormwater or authorized non-stormwater discharges.

As described in section 5.1 below, the County may waive requirements for some or all structural controls under specified conditions.

### D.3.4 Monitoring Requirements

D.3.4.1: Pursuant to Ordinance section 67.810(f), Dischargers owning or operating High Priority Industrial Facilities required to conduct monitoring under the State Industrial General Stormwater Permit shall make records of such monitoring available for inspection, and submit a copy of such records to the County if directed to do so by an Authorized Enforcement Official or Authorized Enforcement Staff. The County may direct that records be submitted in a specified electronic format.

D.3.4.2: Pursuant to Ordinance section 67.810(f), Dischargers owning or operating manned High Priority Industrial Facilities that are not required to conduct monitoring under the State Industrial General Stormwater Permit, and which would not qualify for an

exemption from monitoring under the terms of that permit, must develop and implement a monitoring program that meets the criteria of Ordinance sections 67.810(f)(1) and (2).

D.3.4.3: Pursuant to Ordinance section 67.810(f), State exceptions from monitoring requirements are applicable to those of the County.

## PART D.4—FACILITY INSPECTIONS

The County may conduct inspections of any or all Regulated Industrial Facilities as defined in Ordinance section 67.803 to verify compliance with this Ordinance. High Priority Industrial Facilities will be inspected either annually or biannually. Other Regulated Industrial Facilities will be inspected as needed.

All discharge prohibition and BMP requirements described herein are applicable regardless of whether any facility or activity is subject to County inspections or any other form of compliance verification.

## PART D.5—ALTERNATIVES TO REQUIRED BMPs

### D.5.1 Alternative BMPs

The particular BMPs and BMP options prescribed in this Section D can be replaced with alternative BMPs that are at least as effective in preventing or reducing the discharge of pollutants and in meeting the other requirements of the Ordinance. The cost of the BMP may be considered in making this determination, but alternative selections may not be made solely on the basis of economic feasibility.

### D.5.2 Waiver of Structural BMP Requirements

The County may at its discretion waive the structural BMP requirements of Ordinance section 67.810(e)(6) for a facility or portion of a facility for which "no exposure" circumstances have been demonstrated. The County may accept No Exposure Certification under the State General Industrial Stormwater Permit as acceptable evidence of no exposure conditions, providing the conditions of that certification are maintained and documentation provided to the County as requested. For High Priority Industrial Facilities that are not subject to the State General Industrial Stormwater Permit, the County may accept No Exposure Certifications in the same form as under the State General Industrial Stormwater Permit as acceptable evidence of no exposure conditions, providing the conditions of that certification are maintained and documentation provided to the County as requested.

In any instance where structural BMP requirements are waived, the discharge prohibition requirements of section 67.805, the minimum BMP requirements of section 67.807(b), and all non-structural BMP requirements, including pollution prevention, will continue to apply. Inspection and monitoring requirements are also not affected.

## PART D.6—REFERENCES

[RESERVED]

## SECTION E: MUNICIPAL ACTIVITIES AND FACILITIES

[RESERVED]

## SECTION F: LAND DISTURBANCE ACTIVITIES

### Section F Outline

Part 1 Introduction

1.1 Affected Projects and Applicable Requirements
1.2 Control to the Maximum Extent Practicable

Part 2 General Instructions

2.1 County Requirements and Performance Standards
2.2 Additional Responsibilities

Part 3 Standards Applicable to Discretionary Permit Activities

3.1 Erosion Control
3.2 Sediment Control
3.3 Offisite Sediment Control
3.4 Velocity Reduction
3.5 Materials Management
3.6 Structural BMP Sizing
3.7 Plan Notes

Part 4 Standards Applicable to Ministerial Permit Activities

4.1 Building Permit – Residential New Construction, Additions, and Accessory Structures
4.2 Building Permit – Residential Multi-Family Construction
4.3 Building Permit – Commercial or Industrial New Construction or Addition
4.4 Right-of-way Permit
4.5 On-site Waste Water Disposal System Permit
4.6 Underground Storage Tank Permit
4.7 Permit-Exempt Grading
4.8 Well Permits

Part 5 References

Attachment F-1 Stormwater Management Plan (certification form)

Attachment F-2 Ministerial and Minor Permit Required Construction BMPs

## PART F.1—INTRODUCTION

### F.1.1 Affected Projects and Applicable Requirements

Section F of this Manual sets out additional construction-phase requirements and provides guidelines for stormwater management for land disturbance activities. Most such activities require a County permit, but some do not.

Parts F.1, F.2 and F.3 of this Section apply to projects that require or seek a discretionary County permit. Part F.4 applies to projects that are entitled to receive and that seek a ministerial County permit. Subsection F.4.7 applies to land disturbance activities associated with projects that do not require any County permit. All land disturbance activities are also subject to the applicable requirements of the Ordinance, including but not limited to sections 67.807 and 67.817, whether or not a County permit is required or obtained.

Many projects that are subject to this Section will also be subject to the requirements for project design and post-construction stormwater management set out below in Section G. In addition to applicable County requirements, projects that disturb five acres or more of land (and projects that are part of a larger common plan of development that will disturb five acres or more) may have responsibilities directly to the State Regional Water Quality Control Board. See subsection F.2.2 below.

### F.1.2 Control to the Maximum Extent Practicable

All Dischargers engaged in land disturbance activities must install, implement and maintain BMPs to prevent or reduce discharges in storm water from land disturbance activities to the maximum extent practicable.

## PART F.2—GENERAL INSTRUCTIONS

### F.2.1 County Requirements and Performance Standards

F.2.1.1. Land disturbance activities that require a discretionary County permit are subject to the applicable requirements in the Ordinance and this manual, and to any additional requirements imposed in County permits or Orders. Those additional requirements may implement the Ordinance or other County ordinances, or may be imposed to reduce or mitigate the environmental impacts of the permitted activity.

F.2.1.2. County permits for sites subject to a State General Construction Stormwater Permit shall include a condition requiring compliance with that permit.

F.2.1.3. Land disturbance activities that require a discretionary County permit must install maintain and repair the minimum BMPs specified in Part F.3 below, unless permit conditions specify that the discharger may instead rely on specific alternative BMPs proposed by the discharger and approved by the County. Any such alternative BMP must be at least as effective as the BMP the alternative replaces.

F.2.1.4. County permits or orders approving or requiring the use of alternative BMPs may take into account any guidance issued pursuant to section 67.804(h) of the Ordinance, in the manner authorized by that section.

F.2.1.5. Dischargers shall identify and implement BMPs to address all potential non-stormwater discharges from the permitted activity.

F.2.1.6. Land disturbance activities that require a discretionary County permit must install maintain and repair any additional BMPs required to prevent construction pollutants from contacting storm water to the maximum extent practicable, and to prevent to the maximum extent practicable all products of erosion from moving off site into receiving waters.

F.2.1.7. BMPs must be installed in accordance with industry recommended standards (Caltrans or California Stormwater BMP handbooks, etc.).

F.2.1.8. Stormwater discharges from the site may not contain sediments in amounts in excess of the sediments that would have been discharged from the site in an undisturbed condition. Monitoring of turbidity and suspended solids at similar undisturbed sites under similar storm conditions may be used to establish baselines for applying this standard.

F.2.1.9. Permit applications shall include details and drawings of the BMPs proposed to be implemented, and any other stormwater-related forms designated by the issuing Department. See, e.g., the sample "Stormwater Management Plan Certification" form and the "Ministerial and Minor Permit / Required Construction BMPs" forms attached hereto.

F.2.1.10. At the time a permit application is submitted, the applicant shall certify that the BMPs proposed to support the permit application will be installed, monitored, maintained or revised as appropriate to ensure continued effectiveness.

## F.2.2 Additional Responsibilities

Owners of property where soil-disturbing activities occur may have other responsibilities to the State Water Resources Control Board in addition to those identified in this Ordinance. Some examples of these include:

- Submittal of a Notice Of Intent (NOI) to the State, preparation of a Storm Water Pollution Prevention Plan (SWPPP), continuous updating of the SWPPP to keep it functional and current, and preparation of an annual compliance certification on sites where the disturbed area exceeds 5 acres.
- Responsibility for pre-storm, post-storm, and storm event BMP inspections by qualified person(s) to ensure full compliance with the state permit and implementation of all elements of the SWPPP.
- Sampling and analysis program (under specific conditions) for sedimentation, siltation, turbidity, or pollutants not visually detectable, which could cause or contribute to an exceedance of water quality objectives in the receiving water.
- Additional record keeping, pollutant identification, reporting, and maintenance/repair responsibilities.

## PART F.3—STANDARDS APPLICABLE TO DISCRETIONARY PERMIT ACTIVITIES

Many County soil disturbance permits and approvals (including "major" and "minor" grading permits) are discretionary and allow for site-specific design features to accomplish pollution protection. For these types of permits, this manual establishes performance standards and provides a menu of available options to allow the project designers to incorporate the BMP features that are most practical and effective for their site.

The application for any of the following discretionary permits or approvals shall be accompanied by plans demonstrating how pollution protection requirements will be met. The permit or approval shall not be approved unless the decision maker determines that the application complies with the requirements of applicable ordinances and this manual:

a. Administrative Permit for Clearing
b. Agricultural Exemption
c. Lot Line Adjustment
d. Final Map Modification
e. Grading Plan (including Modification or Renewal)
f. Improvement Plan (including Modification)
g. Landscape Plan
h. Major Use Permit (including Modification, Minor Deviation, or Extension)
i. Minor Use Permit (including Modification, Minor Deviation, or Extension)
j. Parcel Map Modification
k. Reclamation Plan
l. Site Plan (including Amendment)
m. Solid Waste Facility Permit
n. Tentative Map (including Resolution Amendment or Time Extension)
o. Tentative Parcel Map
p. Variance
q. Watercourse Permit

### F.3.1 Erosion Control

The Property Owner must implement the following minimum Physical Stabilization BMPs or Vegetation Stabilization BMPs, or both, to prevent erosion from exposed slopes. All slopes and disturbed flat areas must be stabilized and protected, including areas disturbed by clearing operations. The County will not accept: tracking, mulch, wood chips, hydroseeding without watering, jute matting or jute netting as a means to protect exposed slopes from erosion, but such measures may be used to protect disturbed soil areas that are flat and level (less than 5% slope).

F.3.1.1: Physical Stabilization through use of geotextiles, mats, fiber rolls (SS-7 or ESC20), Bonded Fiber Matrix or Stabilized Fiber Matrix, or other material approved by the County for stabilizing slopes, or Vegetation Stabilization using hydroseed (SS-4 or ESC10) or acceptable landscaping may be used only May 1 to August 15. Vegetation proposed to stabilize slopes must be installed by August 15, watered, and established prior to October 1. The property owner shall show on the plan a contingency physical BMP to be installed by October 1 if hydroseed establishment does not occur by that date. If landscaping is proposed, erosion control measures must also be used while landscaping is being established. Established vegetation shall have a subsurface mat of intertwined mature roots with a uniform vegetative coverage of 70 percent of the natural vegetative coverage or more on all disturbed areas.

F.3.1.2: All manufactured slopes and cleared slopes of 3:1 (horizontal to vertical) and steeper are to be protected with a BMP approved by the County of San Diego, as described in subsection F.3.1.1 above. During the rainy season cleared slopes flatter than 3 to 1 must still be protected from erosion using either an approved BMP or by using hydromulch with a Guar, straw mulch, Gypsum or similar binder. Flat areas of less than 5% (like building pads, parking areas, leach fields) shall have 100% protection using geotextiles, mats (SS-7 or ESC20), or other material approved by the County for stabilizing slopes, or using tracking and soil stabilizers/binders (SS-5), temporary seeding (SS-4), mulch/wood chips (SS-3, SS-6, SS-8), or jute matting (SS-7). The County may reduce this requirement for flat areas and the below requirement, provided full sediment control is provided through constructed and maintained desiltation basins (SC-2) at all project discharge points. Stabilized Fiber Matrix may be used on slopes that are not steeper than 2 to 1 (horizontal to vertical). During the non-rainy season flat areas of less than 5% may be protected by rolled plastic as part of a weather-triggered action plan until the structure's roof has been completed.

F.3.1.3: Areas of graded pads that must remain unobstructed to allow ongoing construction may be protected by rolled plastic as part of a weather-triggered action plan until the structure's roof has been completed. The remainder of the pad area must continue to be protected using erosion control measures identified above or use of a desilting basin.

F.3.1.4: Unpaved roads and traveled ways within contractor's onsite yards are exempt from the 100% protection requirement but shall be protected with gravel bag chevrons or an alternative equally effective BMP.

## F.3.2 Sediment Control

F.3.2.1: Dischargers must provide protection of the grading site perimeter, all environmentally sensitive areas and all watercourses and at all operational internal inlets to the storm drain system at all times; through the use of filtration devices, silt fencing (SC-1), straw, coconut fiber or wood fiber-rolls, gravel bag barriers (SC-8 or ESC52),

and gravel inlet filters; and capture of sediment and dust through the use of storm-drain inlet protection (SC-10 or ESC54) and construction road stabilization (TC-2 or ESC23).

### F.3.3 Offsite Sediment Control

F.3.3.1: Dischargers must eliminate off-site sediment tracking through use of stabilized construction entrances/exits (TC-1 or ESC24) and sweeping (SC-7).

### F.3.4 Velocity Reduction

F.3.4.1: Dischargers must provide velocity reduction for all runoff leaving the site, and onsite runoff that could cause erosion, through appropriate outlet protection (SS-10 or ESC40). Velocity reduction BMPs shall be designed and constructed for the precipitation intensity from the 10-year, 6-hour rain event. Runoff shall be calculated using Q=C x I x A where Q is the discharge rate measured in cubic feet per second; C is the runoff coefficient; I is the precipitation intensity for the 10-year, 6-hour rain event; and A is the area draining into the sediment basin in acres.

### F.3.5 Materials Management

F.3.5.1: Waste handling and materials storage areas shall be designated and waste-handling methods identified. Methods for handling; Solid waste (WM-5 or CA20), Sanitary waste (WM-9 or CA24), Concrete waste (WM-8 or CA23), Hazardous waste (WM-6 or CA21) shall be shown. Material storage methods proposed (WM-1 or CA10), including storage of emergency BMP materials, shall be implemented.

### F.3.6 Structural BMP Sizing

If a project chooses to rely on desiltation basins for treatment purposes, the following shall apply:

F.3.6.1: At a minimum all desiltation basins shall be designed by a registered civil engineer and be sized to either:

- Have at least a capacity equivalent to 3,600 cubic feet of storage per acre drained,

  or

- Be designed using the standard equation: As=1.2Q/Vs. As is the minimum surface area for trapping soil particles of a certain size; Vs is the settling velocity of the design particle size chosen; Q=C x I x A where Q is the discharge rate measured in cubic feet per second; C is the runoff coefficient; I is the precipitation intensity for the 10-year, 6-hour rain event and A is the area draining into the sediment basin in acres. The design particle size shall be the smallest soil grain size determined by

wet sieve analysis, or the fine silt sized (0.01mm) particle, and the Vs used shall be 100 percent of the calculated settling velocity.

An Authorized Enforcement Official may provide additional guidance for desiltation basins, including standardized design and inspection details for minor projects by preparing, circulating for public comment, and publishing a guidance document.

F.3.6.2: The length of any basin, as measured from inlet to outlet, shall be more than twice the width whenever practical; the depth must not be less than three feet nor greater than five feet for safety reasons and maximum efficiency. The basin(s) shall be located on the site where it can be maintained on a year-round basis, and have a means for dewatering by no later than 5 calendar days following a storm event. Basins should be fenced if safety (worker or public) is a concern, and shall be maintained at least once before the start of the rainy season (October 1) and as needed to retain a minimum of two feet of capacity at all times.

## F.3.7 Plan Notes

F.3.7.1: Discretionary grading plans shall contain advisory notes concerning erosion and sediment protection to the satisfaction of the Director of the County Department issuing the permit. The Director shall prepare, circulate for public comment, disseminate and maintain guidance documents to provide additional information, specific wording, and guidance concerning these required plan notes. The notes shall be shown on erosion control plans or the erosion control portion of grading plans, and the Plans shall include details and drawings of the erosion control methods.

## PART F.4—STANDARDS APPLICABLE TO MINISTERIAL PERMIT ACTIVITIES AND TO GRADING THAT DOES NOT REQUIRE A PERMIT

Land development and redevelopment projects that do not require a permit or that can be issued ministerial permits, and which satisfy the requirements of this Part F.4, are not subject to the requirements in Parts F.1 through F.3 of this Manual.

Ministerial projects must meet the other applicable requirements in the Ordinance including the design requirements set out in Part G.9 of this Manual

The application for any of the following ministerial permits or approvals shall be accompanied by plans demonstrating how the specifically applicable requirements, if any, set out below will be met, and the permit or approval shall not be approved unless the decision maker determines that the application complies with those requirements.

a. Building Permit (not minor grading)
b. Construction Right of Way Permit
c. Encroachment Permit
d. Excavation Permit
e. On-Site Waste Water System Permit
f. Underground Tank Permit
g. Well Permit

Applications for any of the above ministerial permits shall include such stormwater-related forms as the issuing Authorized Enforcement Official shall designate, in addition to the details and drawings required as part of the permit application process. See, e.g., Attachments F-1 and F-2.

### F.4.1 Building Permit – Residential New Construction, Additions, and Accessory Structures

To receive a permit as of right (a ministerial permit) a residential new construction, addition or accessory structure project requiring a building permit must meet the requirements set out in this subsection. The application and plans for the permit must include details showing how these requirements will be met. If the project cannot meet these requirements, the project proponent may choose to treat their project as a discretionary project using the performance criteria/BMP Menu method through the voluntary use of a Site Plan, however this alternative may require additional CEQA review.

F.4.1.1: Dischargers must select and implement at least one BMP in each of the following areas, from the associated BMPs shown on Table A (Attachment F-2 to this Part): graded slope erosion control, flat area erosion control, runoff velocity control; sediment control; and offsite tracking of sediment. For example, for sediment control

from disturbed areas, silt fence, straw waddles or wattles, gravel bags berms, storm drain inlet protection, or a desilting basin may be selected. The selected BMP or BMP must be deployed to protect all areas that have been disturbed incidental to construction, including parking and material delivery areas and trash and material stockpiling areas.

F.4.1.2: Areas for material storage shall be either under roof or be able to be covered with plastic or tarp prior to a rain event. In either case, sediment control silt fencing or straw waddles shall be placed around the full perimeter of the storage area.

F.4.1.3: All containers shall be elevated to protect against contact with stormwater runoff.

F.4.1.4: Project schedules shall be provided showing quantity and dates for delivery so as to minimize waste and long-term storage on site.

F.4.1.5: A designated disposal area for construction wastes or stockpiles must be present on site. Wastes and stockpiles must either be containerized or completely surrounded by silt fence, straw wattles or gravel bags and able to be covered with plastic or tarp prior to a rain event,

F.4.1.6: The applicant shall provide information concerning the cleanup responsibilities for the site and the frequency that cleanup will occur. The frequency shall be not less than weekly and immediately before any predicted rain event.

F.4.1.7: Areas where vehicle traffic is planned shall be restricted to existing vehicle use areas on the site, or shall be treated as "new construction" and be covered with gravel to protect against off-site tracking of sediment and mud.

F.4.1.8: The applicant shall designate one individual who will serve as the stormwater protection contact for the permit, along with their address, phone number, cellular phone number and fax number.

F.4.1.9: At the time a permit application is submited the applicant shall provide written acknowledgement from the owner that any and all stormwater protection measures previously installed on the site shall be protected and maintained during the construction.

F4.1.10: Any minor slopes created incidental to construction and not subject to a major or minor grading permit shall be protected by covering with plastic or tarp prior to a rain event, and shall have vegetative cover reestablished within 180 days of completion of the slope and prior to final building approval.

## F.4.2 Building Permit – Residential Mutli-Family Construction

To receive a permit as of right (a ministerial permit) a residential multi-family construction project requiring a building permit must meet the requirements set out in this

subsection. The application and plans for the permit must include details showing how these requirements will be met. If the project cannot meet these requirements, the project proponent may choose to treat their project as a discretionary project using the performance criteria/BMP Menu method through the voluntary use of a Site Plan, however this alternative may require additional CEQA review.

F.4.2.1: All of the above Residential Building permit conditions (4.1.1 through 4.1.10) must be met.

4.2.2: Any area planned for use as a de-silting basin shall be completely fenced to prevent unauthorized entry.

**F.4.3 Building Permit – Commercial or Industrial New Construction or Addition**

To receive a permit as of right (a ministerial permit) a commercial or industrial new construction or addition project requiring a building permit must meet the requirements set out in this subsection. The application and plans for the permit must include details showing how these requirements will be met. If the project cannot meet these requirements, the project proponent may choose to treat their project as a discretionary project using the performance criteria/BMP Menu method through the voluntary use of a Site Plan, however this alternative may require additional CEQA review.

F.4.3.1: All of the above Residential Building permit conditions (F.4.1.1 through F.4.1.10) must be met.

F.4.3.2: Any area planned for use as a de-silting basin shall be completely fenced to prevent unauthorized entry.

F.4.3.3: Designation of one individual who will serve as the stormwater protection contact for the permit, along with their address, phone number, cellular phone number and fax number; along with the name, phone, and address of any site manager.

**F.4.4 Right-of-way Permit**

To receive a permit as of right (a ministerial permit) a right of way project requiring a building permit must meet the requirements set out in this subsection. If a project cannot meet these requirements, the project proponent may choose to treat their project as a discretionary project using the performance criteria/BMP Menu method through the voluntary use of a Site Plan, however this alternative may require additional CEQA review.

F.4.4.1: Silt fence, straw waddles, or gravel bags berms shall be used to protect areas that have been disturbed incidental to construction. These areas shall include parking and material delivery areas, and material stockpiling areas, and have provisions for dealing with unexpected areas of soil disturbance.

F.4.4.2: Areas for material storage shall be either under roof or be able to be covered with plastic or tarp prior to a rain event.

F.4.4.3: All containers shall be elevated to protect against contact with stormwater runoff.

F.4.4.4: Project schedules shall be provided showing quantity and dates for delivery so as to minimize waste and long-term storage on site.

F.4.4.5: A designated disposal area for construction wastes or stockpiles, that is either containerized or completely surrounded by silt fence, straw wattles or gravel bags and able to be covered with plastic or tarp prior to a rain event,

F.4.4.6: Information concerning the cleanup responsibilities for the site and the frequency that cleanup will occur. The frequency shall be not less than weekly and immediately before any predicted rain event.

F.4.4.7: Areas where vehicle traffic is planned shall be restricted to existing vehicle use areas on the site, or be covered with gravel to protect against off-site tracking of sediment and mud.

F.4.4.8: Designation of one individual who will serve as the stormwater protection contact for the permit, along with their address, phone number, cellular phone number and fax number; along with the name, phone, and address of any construction site manager (if different person).

F.4.4.9: Current drainage flows shall be shown on a site plan and shall not be negatively impacted by any permitted activities.

F4.4.10: Any minor slopes created incidental to construction and not covered by a major or minor grading permit shall be protected by covering with plastic or tarp prior to a rain event, and shall have vegetative cover reestablished within 180 days and prior to final building approval.

## F.4.5 On-site Waste Water Disposal System Permit

To receive a permit as of right (a ministerial permit) an on-site wastewater disposal system project must meet the requirements set out in this subsection. If a project cannot meet these requirements, the project proponent may choose to treat their project as a discretionary project using the performance criteria/BMP Menu method through the voluntary use of a Site Plan, however this alternative may require additional CEQA review.

F.4.5.1: Adequate perimeter protection BMPs must be installed and maintained. The perimeter of the cleared/graded area must be protected to prevent the discharge of stormwater pollutants. At lease one of the following BMPs must be installed: Silt Fence; Straw Wattles; and/or Gravel Bags.

F.4.5.2: Adequate BMPs to control off site sediment tracking must be installed and maintained. These BMPs include stabilized construction entrances/exits and construction road stabilization

F.4.5.3: Deployment of physical or vegetation erosion control BMPs must commence as soon as construction in cleared or graded areas is completed. For graded slopes at least one of the following BMPs must be installed and maintained: Vegetation Stabilization (Planting); Hydraulic Stabilization (Hydro-seeding); Bonded Fiber Matrix; Physical Stabilization (Fiber rolls, geo-textile blankets or fabrics). For flat areas (slopes <5%) at least one of the following BMPs must be installed and maintained: Mulch; Straw; Wood Chips; Soil Applications; Vegetation Stabilization (Planting); Hydraulic Stabilization (Hydro-seeding); Bonded Fiber Matrix; Physical Stabilization (Fiber rolls, geo-textile blankets or fabrics).

When Planting or Hydroseeding are selected for erosion control, the vegetative cover must be planted by August 15th and watered as necessary to ensure that cover is established by October 1st. If in the opinion of the County Official the vegetative cover is not established by October 1st, additional hydraulic or physical erosion control BMPs will be required

F.4.5.4: Areas that had been previously protected from erosion using physical stabilization or established vegetation stabilization BMPs prior to the installation of the on-site waste water sewage disposal system, must be repaired as soon as the installation is complete.

F.4.5.5: The area that can be cleared or graded and left exposed at one time is limited to the area that can be adequately protected within 48 hours of a predicted storm event.

F.4.5.6: Areas for material storage shall be either under roof or be able to be covered with plastic or tarp prior to a rain event.

F.4.5.7: All containers containing material or waste shall be elevated to protect against contact with stormwater runoff.

F.4.5.8: Waste materials must be properly managed to prevent discharge into stormwater. Each of the following BMPs shall be implemented and maintained if the waste is present on site: Concrete Waste Management; Solid Waste Management; Sanitary Waste Management; Hazardous Waste Management.

### F.4.6 Underground Storage Tank Permit

To receive a permit as of right (a ministerial permit) an underground storage tank permit project (i.e., any project that requires a permit permits for the installation, removal, repair or modification of an underground storage tank system containing hazardous materials or wastes) must meet the requirements set out in this subsection. If a project cannot meet these requirements, the project proponent may choose to treat their project as a discretionary project using the performance criteria/BMP Menu method through the voluntary use of a Site Plan, however this alternative may require additional CEQA review.

F.4.6.1: Adequate perimeter protection BMPs must be installed and maintained. The perimeter of the cleared/graded area must be protected to prevent the discharge of stormwater pollutants. At lease one of the following BMPs must be installed: Silt Fence; Straw Wattles; and/or Gravel Bags.

F.4.6.2: Adequate BMPs to control off site sediment tracking must be installed and maintained. These BMPs include stabilized construction entrances/exits and construction road stabilization

F.4.6.3: Areas for material storage shall be either under roof or be able to be covered with plastic or tarp prior to a rain event.

F.4.6.4: All containers containing material or waste shall be elevated to protect against contact with stormwater runoff.

F.4.6.5: Waste materials must be properly managed to prevent discharge into stormwater. Each of the following BMPs shall be implemented and maintained if the waste is present on site: Concrete Waste Management; Solid Waste Management; Sanitary Waste Management; Hazardous Waste Management.

F.4.6.6: All contaminated or potentially contaminated soil must be managed to prevent it from being discharged into a stormwater conveyance or receiving water. All contaminated soil must be placed on an impervious surface, bermed and completely covered with plastic sheeting.

F.4.6.7: All storm drain inlets on site must be either sealed with an impervious material during construction activities or protected using inlet protection BMPs.

F.4.6.8: Any minor slopes created incidental to construction and not covered by a major r minor grading permit shall be protected by covering with plastic or tarp prior to a rain event, and shall have vegetative cover reestablished within 180 days and prior to final building approval.

### F.4.7 Permit-Exempt Grading

F.4.7.1. Dischargers conducting grading activities that do not require a County permit or other approval (and which are not part of larger project that requires such approval) must select and implement at least one BMP in each of the following areas, from the associated BMPs shown on Table A (Attachment F-2 to this Part): graded slope erosion control, flat area erosion control, runoff velocity control; sediment control; and offsite tracking of sediment.

### F.4.8 Well Permit

[Reserved]

## PART F.5—REFERENCES

1. Caltrans Storm Water Quality Handbooks - Project Planning and Design Guide-Construction Site Best Management Practices (BMPs) Manual, available on the Caltrans web site.

Details for Temporary Soil Stabilization BMPs

- SS-1 Scheduling, SS-2 Preservation of Existing Vegetation, SS-3 Hydraulic Mulch, SS-4 Hydroseeding, SS-5 Soil Binders, SS-6 Straw Mulch, SS-7 Geotextiles, Plastic Covers & Erosion Control Blankets/Mats, SS-8 Wood Mulching
- SS-9 Earth Dikes/Drainage Swales & Lined Ditches, SS-10 Outlet Protection/Velocity Dissipation Devices, SS-11 Slope Drains,

Details for Temporary Sediment Control BMPs

- SC-1 Silt Fence, SC-2 Desilting Basin, 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, SC-10 Storm Drain Inlet Protection

Details for Wind Erosion Control BMPs

- WE-1 Wind Erosion Control

Details for Tracking Control BMPs

- TC-1 Stabilized Construction Entrance/Exit, TC-2 Stabilized Construction Roadway, TC-3 Entrance/Outlet Tire Wash

Details for Non-Storm Water 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/Illegal Discharge Detection and Reporting, NS-7 Potable Water/Irrigation, NS-8 Vehicle and Equipment Cleaning, NS-9 Vehicle and Equipment Fueling, NS-10 Vehicle and Equipment Maintenance

Details for Waste Management and Materials Pollution Control 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

2. County Excavation and Grading Ordinance - Sections 87.101 through 87.717 of San Diego County Code of Regulatory Ordinances, available through the County web site.

3. Stormwater Permit # CAS000002 and State Water Resources Control Board Order 99-08

4. Caltrans Storm Water Quality Handbook (BMP) dated April, 1997, available on the Caltrans web site.

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## SECTION G: LAND DEVELOPMENT AND REDEVELOPMENT

### Section G Outline

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- 1.2 Applicable Requirements

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(Construction, Encroachment, Excavation)

Part 9 Resources and References

Attachment G-1 Pollutants from the Project Area

Attachment G-2 Standard Stormwater BMP Selection Matrix

Attachment G-3 Enhanced Treatment Control BMP Selection Matrix

Attachment G-4 County of Los Angeles appendix to A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP)

Attachment G-5 Environmental Protection Agency, Office of Water Post-Construction Storm Water Management in New Development and Redevelopment, BMP individual Fact Sheets.

## PART G.1—INTRODUCTION

This Section sets out additional performance, project design and post-construction BMP requirements for certain development and redevelopment activities that require a County permit.

### G.1.1 Covered Project Locations

This section applies to land development projects in a defined "urban" portion of the County, and to land development projects in rural parts of the County if an on-site storm sewer any part of which is under ground will serve those rural projects.

For purposes of this section the "urban" area of the County includes all lands that are west of the designated service boundary for the County Water Authority (CWA) or that are within the service territory of another public water supply authority, including any future annexations. This area is shown on the map incorporated as Appendix B of this Ordinance. In general, the following County communities are included within the CWA boundary; Sweetwater, Spring Valley, Valle de Oro, Jamul, Crest/Dehesa, Bostonia, Alpine, Lakeside, Ramona, San Dieguito, North County Metro, Valley Center, Bonsall, Fallbrook, and Rainbow. The present "urban" area of the County also includes some additional developed areas east of the CWA boundary. Other parts of the unincorporated County are presently considered "rural."

### G.1.2 Applicable Requirements

Parts G.2 through G.6 of this Section apply to urban land development projects that require or seek a discretionary County permit. Part G.2 sets out general requirements. Part G.3 establishes Performance Standards. For discretionary permit projects, project proponents must determine whether their project design and associated BMPs will meet these performance standards for their facility or activity, and must redesign their project and/or install, implement and maintain additional BMPs where needed to meet these performance standards. Part G.4 sets out design and BMP requirements and options that can be used to meet applicable performance standards.

Part G.5 mandates a step-by-step process for identifying appropriate BMPs, and also designates a small set of BMPs as mandatory. Part G.6 is reserved for future use. Part G.7 addresses BMP maintenance.

Parts G.2, G.7 and G.8 apply to urban land development projects that are entitled to receive and that seek a ministerial County permit.

## PART G.2— GENERAL REQUIREMENTS

### G.2.1 Application Submission Requirements

G.2.1.1: All project subject to this Section must provide sufficient information and analysis in permit applications to allow the County to determine whether the requirements of this Manual and the Ordinance will be met (1) during the design of covered public land development projects; (2) during CEQA review of covered public and private land development projects before providing any discretionary County approval; (3) prior to approval of subsequent modifications to a covered public or private land development project; and (4) prior to approval of any ministerial projects as identified in the section G.8 "Ministerial Permit Activity".

G.2.1.2: Permit applications shall include details and drawings of the BMPs proposed to be implemented, and any other storm water-related forms designated by the issuing Department.

G.2.1.3: Permit applicant shall certify that the BMPs proposed to support the permit application will be installed, monitored, maintained or revised as appropriate to ensure continued effectiveness.

### G.2.2 Construction-Phase Requirements

During construction, all development projects must comply with the state General Stormwater Permit for Construction Activities, if applicable; with the conditions imposed in permits required for construction; and with County ordinances and sections for construction activities.

### G.2.3 Additional Requirements in Permits; Role of Guidance

G.2.3.1: Urban land development activities that require a discretionary County permit are subject to the applicable requirements in the Ordinance and this manual, and to any additional requirements imposed in County permits or Orders. Those additional requirements may implement the Ordinance or other County ordinances, or may be imposed to reduce or mitigate the environmental impacts of the permitted activity.

G.2.3.2: Permits may modify the minimum BMPs specified in Parts G.4 and G.5 below by approving specific BMPs as alternatives. Any such alternative BMP must be at least as effective as the BMP the alternative replaces.

G.2.3.3: County permits or orders approving or requiring the use of alternative BMPs may take into account any guidance issued pursuant to section 67.804(h) of the Ordinance, in the manner authorized by that section.

### G.2.4 Non-Storm Water Discharges

Dischargers shall identify and implement BMPs to address all potential non-stormwater discharges from the permitted activity.

### G.2.5 Industrial Facility General Permit Coverage

Prior to commencing industrial operations, any new industrial facility subject to the State General Industrial Storm Water Permit must provide evidence to the County that the Notice of Intent required to be filed under that general permit has been filed.

## PART G.3—ENVIRONMENTAL PERFORMANCE STANDARDS

### G.3.1 Flow Control and Erosion Prevention

G.3.1.1: Post-construction peak runoff flow rates and velocities from the project site shall be maintained at levels that will not cause a significant increase in downstream erosion.

G.3.1.2: Measures to control flow rates and velocities shall not disrupt flows and flow patterns that are necessary to support downstream wetlands or riparian habitats. Diversion of runoff to regional facilities shall not be allowed to deprive immediate downstream habitats of the minimum flows and /or over-bank flow events they need.

G.3.1.3: If peak stormwater runoff discharge rates or velocities would be increased by the project, the project proponent small submit an evaluation by a qualified engineer to determine impacts to the downstream channel extending to a major receiving water. Such evaluations shall address the erosive effects of post-construction discharges, in combination with other development-related discharges in the area, on the types of soil and vegetation downstream; any other applicable considerations; and mitigation measures.

G.3.1.4: Where effective, acceptable measures to prevent erosion include but are not limited to minimizing the amount of new impervious surface created, retaining or constructing vegetated swales and buffers, and the use of velocity reducers, drop structures, and energy dissipation can help to achieve these standards. Where these measures are not sufficient to achieve these standards, runoff must be captured and released in a more controlled manner. "Hardening" natural downstream areas to prevent erosion is not an acceptable technique for meeting these performance standards, unless pre-development conditions are determined to be so erosive that hardening would be required even in the absence of the proposed development.

G.3.1.5: Mitigation structures put in place to control peak runoff flow rates and velocities shall be designed for a 10-year 6-hour storm event.

### G.3.2. Water Quality Protection

G.3.2.1: Pollutants in non-storm water and storm water discharged from each project (or discharged to waters of the state within the project area) shall not cause or contribute to an exceedance of receiving water quality objectives.

Whether a project meets this standard will depend on the waters affected by the project, on the water quality objectives established for those waters at the time the project is proposed, and on the amount and type of pollutants discharged by the project. The question is whether increased pollution from the project (together with pollution from other sources) would be likely to result in water quality violations that would not otherwise occur.

G.3.2.2: Pollutants in non-storm water and storm water discharged from each project (or discharged to waters of the state within the project area) shall not significantly degrade receiving water quality.

G.3.2.3: Pollutants in non-storm water and storm water discharged from each project (or discharged to waters of the state within the project area) must be reduced to the MEP.

Whether this standard is met is both a technical and an economic determination. If the project fulfills the requirements in Parts G.4 and G.5 of this section, it shall be deemed to have fulfilled requirement G.3.2.3.

G.3.2.4: Pollutants in non-storm water and storm water discharged from each project (or discharged to waters of the state within the project area) shall not cause or contribute to a condition of "pollution", "contamination" or "nuisance" as those terms are defined in the State Water Code, section 13050 subsections (k), (l) and (n). ("Pollution" is an unreasonable interference with a beneficial use assigned to a specific water body in the RWQCB Basin Plan. "Contamination" involves a threat to public health. A "nuisance" is a condition that affects a considerable number of persons, and "is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.")

To support County determinations and findings related to these standards, applicants must when requested by the County submit a report that identifies affected receiving waters, identifies applicable water quality objectives and pollutants of concern, and estimates post-construction discharges rates (with all BMPs in place), and explains why those projected pollutant loads would not cause a violation of these standards.

## G.3.3 Groundwater Quality Protection

G.3.3.1: Infiltration BMPs (as defined in the Ordinance) shall not cause or contribute to an exceedance of applicable groundwater quality objectives as set out in the RWQCB "Basin Plan" for the San Diego area. (This requirement does not apply to BMPs such as grassy swales, detention basins, vegetated buffer strips and constructed wetlands which allow incidental infiltration, but which are not designed primarily to function as infiltration devices.)

G.3.3.2: Land development projects shall not significantly degrade ground water quality.

## PART G.4—DESIGN AND BMP REQUIREMENTS FOR ALL LAND DEVELOPMENT AND REDEVELOPMENT PROJECTS

Project proponents must select install and maintain BMPs to address each of the project elements listed in Sections G.4.3 through G.4.8 below. Project proponents must submit sufficient information to the County to allow the County to determine whether proposed BMPs will reduce pollutants in storm water to the MEP. Staff may request information on alternative BMPs from the project applicant to assist in making this determination.

BMPs must be installed in accordance with industry recommended standards (Caltrans or California Stormwater BMP handbooks, etc.). The following documents contain standard drawings and design specifications for available BMPs that can be used to supplement specifications provided by the County:

1. County of Los Angeles- Manual for the Standard Urban Stormwater Mitigation Plan
2. EPA - Post-Construction Storm Water Management in New Development and Redevelopment

### G.4.1 General Project Design and Selection of BMPs

G.4.1.1: Choosing Effective BMPs. The following criteria shall be used to determine if a BMP is effective:

- BMPs must prevent or reduce the discharge of the pollutants identified at a site for reduction;

- BMPs must comply with other regulations as well as Stormwater regulations.

G.4.1.2: Choosing BMPs that Reduce Pollution to the "Maximum Extent Practicable (MEP)". The BMPs selected and installed pursuant to this section must reduce pollution in runoff to the MEP. This standard is defined in section 67.803 of the Ordinance.

### G.4.2 Other BMP Selection Criteria

The criteria that follow shall be used in assessing the appropriateness of BMPs for a particular project. Selection of BMPs for a project is a function of assessing project type, size, post-construction activities and other factors. Project proponents shall identify all impacts relating to pollutants of concern and provide satisfactory evidence using these criteria that the specific BMPs proposed will mitigate such impacts to the maximum extent practicable.

G.4.2.1: Site Factors. The following site factors must be considered in selecting BMPs:

a) Steep slopes restrict the use of some BMPs. For example, porous pavement is typically not useable on slopes of more than 5 %, and bio-Swales should only be used if their slope allows this BMP to be effective and non-erosive

b) A high water table acts as an effective barrier to infiltration and can sharply reduce the ability of an infiltration BMP to drain properly. If the height of the seasonally high water table extends to within 4 feet of the bottom of an infiltration BMP, the site is not considered suitable (even with runoff filtration or pretreatment).

c) Soil type and permeability limit use of infiltration BMPs. These BMPs shall not be used when infiltration rates are less than 0.27 inch per hour, as defined by the least permeable layer in the shallow soil profile. This excludes most "C" and "D" soils (Standard Soil Classification System), which cannot exfiltrate enough runoff through the subsoil. Extremely permeable sandy soils may not maintain adequate water levels in wet ponds.

d) Infiltration BMPs divert runoff back into the soil and may cause local seepage or contamination. These BMPs shall not be located within 100 feet of a building foundation or a drinking water well.

e) BMPs must be designed to address rainfall volume and intensity during both wet weather and dry weather seasons. Wet ponds require some continuous flow (dry weather water source) to keep them from stagnating or developing odor and vector problems.

f) BMPs must be compatible with the site. For example, some sites are too intensively developed or limited in area to allow use of BMPs such as ponds or vegetated run-off areas, which require a large surface area and buffer area.

g) Infiltration BMPs must be designed to completely drain within 72 hours after a storm. If the infiltration rates of the underlying soils are slow, depth and footprint of the infiltration BMP must be adjusted to achieve this standard.

h) Land uses may dictate that only certain BMPs can be applied, and most BMPs are not broadly applicable for all development sites. For example, porous pavement may not provide adequate support in parking lots expected to receive heavy car or truck traffic, or much sediment.

i) Infiltration BMPs may be clogged by large loads of sediment generated during construction, and shall not be installed until all of the land to be disturbed by construction is effectively and permanently stabilized. To prevent clogging after construction, a pre-treatment device must be used to filter sediment and other coarse particles before they reach the infiltration BMP.

j) Landscaping that stabilizes disturbed soils or that filters pollutants from stormwater flows can be an effective BMP option provided continued maintenance and protection are assured.

k) Some BMPs could become an attractive hazard unless properly safeguarded and maintained. BMPs used to control pollutants of concern using swales or wet ponds, could pose a health hazard from accumulated pollutants during the dry season or from direct human contact. Regular removal of accumulated pollutants and fencing to restrict access may be required.

**G.4.2.2: Pollutants of Concern. See subsection G.5.1.2 below.**

G.4.2.3: Effective Removal of Pollutants of Concern. BMPs must effectively address the "pollutants of concern" at the site. The nature and concentration of the pollutant being removed, removal mechanisms, and the amount of runoff being treated all affect the potential removal rate that can be achieved with a given BMP. Pollutants such as sediment and lead can be removed effectively by common BMP removal mechanisms, including settling and filtering. Where soluble pollutants such as nitrate, phosphate, and some trace metals are a concern, a BMPs may not be effective unless it relies on biological and/or chemical mechanisms, such as uptake by bacteria, algae, rooted aquatic plants, organic material, terrestrial vegetation, or soils, to remove pollutants.

G.4.2.4: Costs. The appropriateness of a BMP for a particular site can be affected by economic feasibility considerations, which encompass short- and long-term cost factors. Short-term costs include installation costs for both materials and labor. Long-term costs include maintenance and replacement. To sustain proper function, some BMPs require low-level maintenance on a regular and frequent basis, whereas other BMPs require infrequent maintenance of a more extensive nature. Maintenance costs include the proper disposal of accumulated material. In selecting a control method, all cost elements—construction, installation, and maintenance—associated with the BMP should be considered.

G.4.2.5: Watershed Area. The feasibility of a particular BMP depends on the contributing watershed area and the reasonably expected flow at the portion of the project being protected.

a) Wet pond BMPs generally requires a significant contributing watershed area of greater than 10 acres, and in locales such as Southern California, a dry weather source of water. Wet pond BMPs with contributing watersheds less than 10 acres are acceptable, given that a qualified engineer provides evidence acceptable to the County that an adequate water source is provided.

b) Infiltration and vegetative BMPs are generally applicable for catchments less than 10 acres, due to space, economic, or flow volume constraints. Vegetative BMPs with contributing watersheds less than 10 acres are acceptable, given that a

qualified engineer provides evidence acceptable to the County that space, economic and flow volume constraints are accounted for in the design of the BMPs.

c) Additional runoff generated away from the development project may be routed to a BMP, thereby increasing total catchment area and making pond options more practicable.

d) Portions of the total runoff from a development project site may be diverted to smaller, individual BMPs, thereby decreasing the contributing watershed area and making infiltration and vegetative BMPs more practical. Offsite diversion is prohibited.

e) Where appropriate, post-construction BMPs (including but not limited to regional facilities) should be considered with project requirements to preserve or enhance open space. Project proponents may wish to put their BMPs in open space. This shall only be allowed when the County can determine that such usage will be an enhancement to the open space and will be consistent with the reasons for which the open space is being preserved.

**G.4.2.6: Environmental Impacts.**

a) Impacts to downstream aquatic life must be avoided by maintaining the natural low flow levels experienced during the dry weather season. Infiltration BMPs can contribute significantly to groundwater recharge and may be able to help the watershed better mimic its past hydrologic behavior. Vegetative BMPs such as swales and filter strips can also help.

b) Stream bank erosion must be controlled to avoid large sediment loads to receiving waters and impacts on the habitat downstream. Extended detention ponds and full exfiltration BMPs can reduce erosive storm flows enough to keep downstream channels and banks relatively stable.

c) A BMP that is slightly less effective than a practicable alternative in reducing pollution in storm water may nevertheless be acceptable to comply with the Ordinance, if the slightly less effective BMP confers other significant environmental benefits, e.g., valuable habitat for wildlife.

**G.4.3 Performance Requirement for BMPs in Combination**

The project proponent must propose, and after any adjustments required by the County must implement and maintain, BMPs in each of the areas set out in sections G.4.3 through G.4.8 below. The cumulative effects of the measures implemented must be (1) to limit increases in post-development runoff from the site to the maximum extent

practicable; and (2) to reduce post-construction discharges of pollutants from the project to the maximum extent practicable.

The BMP design for a project must address all potential sources of pollution. In addition, BMPs must address specific requirements in the RWQCB Order as set out below. Variation among projects prevents specification of a set of "minimum" BMPs.

## G.4.4 Preference for Natural BMPs

G.4.4.1: BMPs which incorporate natural systems or approaches shall be considered and shall be utilized whenever practical. Acceptable natural BMPs may include constructed or natural wetlands, grassed swales, biofilters, wet ponds, and vegetated filter strips. The use of natural BMPs can conserve natural areas, can remove pollutants from impervious areas before they reach water, and can maximize infiltration, provide retention, and reduce runoff velocities.

G.4.4.2: An enhanced or constructed wetland located in areas where the natural hydrology will support wetlands vegetation may be subject to federal or state regulation as jurisdictional wetlands, and may be required by other laws to be protected or managed to promote environmental values other than stormwater flow reduction, infiltration, or treatment. Reliance on such wetlands to comply with this Ordinance is allowable only where the requirements of this Ordinance and other applicable requirements can all be met. Constructed wetlands located in upland areas where natural hydrology would not support a wetland are not jurisdictional wetlands, and may be managed as stormwater treatment or infiltration facilities.

6.4. 4.3: Hardened alternative BMPs can be used instead of natural BMP if natural BMPs are not practical, but most projects in the County should be able, with appropriate design and perhaps some project downsizing, to make good use of natural BMPs. Project applicants will be required to explain why any significant opportunities to use natural BMPs have not been exploited.

Natural BMPs are "structural" BMPs. They require provisions for maintenance as set out in section G.7 below.

## G.4.5. Source Control BMPs

G.4.5.1: All sources of potentially significant post-construction pollutant loading shall be identified and the introduction of pollutants from these sources into storm water and non-storm water discharges shall be prevented or reduced to the maximum extent practicable.

G.4.5.2: The project must be designed and built to protect slopes and channels from eroding.

Project proponents must provide satisfactory evidence that each of the following measures has been provided in the proposed project design:

a) Convey runoff safely from the tops of slopes and discharge in a manner so as not to cause downstream erosion.

b) Stabilize all disturbed slopes

c) Utilize natural drainage systems to the maximum extent practicable

d) Control or reduce flow to natural drainage systems to the maximum extent practicable

e) Stabilize permanent channel crossings.

f) Vegetate slopes with native or drought tolerant vegetation.

g) Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels to minimize erosion, with the approval of all agencies with jurisdiction, e.g., the U.S. Army Corps of Engineers, RWQCB, and the California Department of Fish and Game

G.4.5.3: Outdoor materials storage areas must be properly designed. Personal storage areas at detached single-family residences are exempt from this requirement.

Improper storage of materials outdoors may provide an opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the storm water conveyance system. Where proposed project plans include outdoor areas intended for storage of materials that may contribute pollutants to the storm water conveyance system, a proper design of such areas should include the following BMPs:

a) Materials with the potential to contaminate storm water must be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage into the storm water conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.

b) The storage area must be paved and sufficiently impervious to contain leaks and spills.

c) The storage area must have a roof or awning to minimize collection of storm water within the secondary containment area.

G.4.5.4: Outdoor trash storage areas must be properly designed. Personal trash storage areas at detached single-family residences are exempt from this requirement. A “trash

storage area" refers to an area where a trash receptacle or receptacles are located for use as a repository for solid wastes. Loose trash and debris can be easily transported by the forces of water or wind into nearby storm drain inlets, channels, and/or creeks. Trash container areas are required to meet the following BMP requirements.

a) Trash container areas must be designed to either prevent contact with runoff or spillage to the storm water conveyance system; or to include protection by secondary containment structures such as berms, dikes, or curbs.

b) The trash storage area must be paved and sufficiently impervious to contain leaks and spills, with drainage from adjoining roofs and pavement diverted around the area(s).

c) Trash storage areas must be screened or walled to prevent off-site transport of trash.

## G.4.6 Minimize Impervious Surface Area

G.4.6.1: The project must include site design and landscape characteristics that maximize infiltration, provide stormwater retention, slow runoff, and minimize impervious land coverage, to the MEP.

Reducing impervious surfaces is an effective and preferred means to prevent increased runoff and increased pollution from development, and is a cornerstone of the County's programs to reduce water pollution from new development. Therefore, proposed projects should be closely scrutinized to ensure that measures such as the following have been included to reduce impervious surfaces to the MEP. Design and landscape characteristics that can be used to meet this section (provided all General Plan, Specific Plan, Zoning, Subdivision Design, Traffic Safety and other development regulations are met) include the following:

a) Direct rooftop runoff to pervious areas such as yards, or vegetated areas, and avoid routing rooftop runoff to the roadway or the storm water conveyance system.

b) When feasible, use permeable materials for private sidewalks, driveways, parking lots, golf cart paths, trails, or interior roadway surfaces.

c) Reduce overall lot imperviousness by promoting alternative driveway surfaces and shared driveways that connect two or more homes together.

d) Reduce the overall imperviousness associated with parking lots by providing compact car spaces, minimizing stall dimensions, incorporating efficient parking lanes, and using pervious materials in spillover parking areas.

e) Provide reduced width sidewalks and incorporate landscaped buffer areas between sidewalks and streets. These must comply with regulations for the Americans with Disabilities Act and other life safety requirements and will require provisions for maintenance as set out is section 5.4 below.

f) Design residential streets for the minimum required pavement widths. The radius of cul-de-sacs should be the minimum required to accommodate emergency and maintenance vehicles.

g) Minimize the number of residential streets and cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.

## G.4.7 Buffer Zones

G.4.7.1: Project designs must include buffer zones for natural water bodies where feasible.

G.4.7.2: Where buffer zone implementation is infeasible, projects must include other buffers such as trees, lighting restrictions, access restrictions, etc.

This subsection is mandated by RWQCB Order 2001-01, and is also intended to be consistent with current County practices implementing CEQA; state and federal species, habitat and wetlands protection programs; and the County Resource Protection Ordinance. The ability of buffer zones to help to protect water quality should be considered when determining whether a project meets the requirements of this section.

## G.4.8 Conserve Natural Areas

G.4.8.1: Project proponents must conserve natural areas where practicable, to protect water quality. Reasons for not pursuing a project alternative that would better conserve natural areas must be clearly identified and explained as part of the preliminary approval process. The following design and development characteristics must be considered under this section:

a) Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.

b) Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.

c) Promote natural vegetation by using parking lot islands and other landscaped areas.

d) Preserve riparian areas and wetlands.

## G.4.9 Storm Drain Tiles and Signage

G.4.9.1: Storm drain inlets and access points to creeks and channels must be marked to discourage illegal dumping, with markings indicating the receiving water by name. Specifically:

a) All storm drain inlets and catch basins within the project area shall have a tile placed with prohibitive language (such as: "NO DUMPING – DRAINS TO _____") and/or graphical icons to discourage illegal dumping.

b) Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area.

c) Legibility of tiles and signs must be maintained and tiles must be placed flush with the top of concrete to reduce tripping by pedestrians

## G.4.10 Additional BMPs Where Necessary

G.4.10.1: If the measures proposed for implementation under subsections G.4.2 through G.4.8 above are not adequate to ensure compliance with the performance standards in Part G.2 above, additional BMPs sufficient to meet those performance standards must be included in the project.

Two approaches can be taken to meet this section: proposed BMPs can be intensified, or additional treatment BMPs can be added. Additional treatment BMPs can be engineered structures, or enhanced or constructed "natural" features. Potentially useful treatment BMPs include the following:

a) Utilize "natural" structural treatment BMPs such as vegetated swales, vegetated buffer strips, wet ponds, bio-retention facilities, constructed wetlands, and foundation planting

b) Utilize structural infiltration BMPs such as infiltration basins, infiltration trenches, dry-wells, and cisterns, so long as ground water is not jeopardized.

c) Utilize structural filtering BMPs such as oil/water separators, catch basin inserts, storm drain inserts, media filtration, continuous flow deflection/ separation systems, catch basin screens, clarifiers, desilting basins, and filtration systems

d) Utilize structural flow BMPs such as extended/dry detention basins and normal flow storage/ separation systems.

## G.4.11 Infiltration BMPs

G.4.11.1: Infiltration BMPs (as defined in the Ordinance) shall not adversely affect designated beneficial uses for ground water.

G.4.11.2: Infiltration BMPs shall not be used for areas of industrial or light industrial activity, areas subject to high vehicular traffic (25,000 average daily traffic (ADT) on main roadway or 15,000 or more ADT on any intersecting roadway), automotive repair shops, car washes, fleet storage areas (bus, truck, etc.), or nurseries.

G.4.11.3: All projects using structural treatment infiltration BMPs must implement one or more of the following protective measures where applicable:

Option 1: Runoff shall undergo pretreatment such as sedimentation or filtration before infiltration or satisfactory evidence must be provided that project source control measures will adequately clean runoff for infiltration.

Option 2: The vertical distance from the base of any infiltration structural treatment BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater basins do not support beneficial uses, this distance requirement may be reduced.

Option 3: Infiltration BMPs shall not be located within 100 feet horizontally of any water supply wells.

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## PART G.5—STEP-BY-STEP PROCESS FOR PROJECT STORMWATER DESIGN

Applicants for discretionary County permits for land development shall use the process set out in this Part to identify pollutants and conditions of concern for their proposed project and affected receiving water; and to identify design and implement appropriate BMPs for their proposed project to address those pollutants and condition. Sufficient information shall be provided with the relevant permit application to allow the County to determine that this process has been completed.

### G.5.1 Identify Pollutants & Conditions of Concern

G.5.1.1: Identify Pollutants from the Project Area. Using Table 1 (Attachment G-1), identify pollutants that are anticipated to be generated from the proposed project. Pollutants associated with any hazardous material sites that have been remediated or are not threatened by the proposed project are not considered a pollutant of concern. The following categories of pollutants shall be evaluated as potential pollutants of concern:

- Sediments – Sediments are soils or other surficial materials eroded and then transported or deposited by the action of wind, water, ice, or gravity. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth.
- Nutrients – Nutrients are inorganic substances, such as nitrogen and phosphorus. They commonly exist in the form of mineral salts that are either dissolved or suspended in water. Primary sources of nutrients in urban runoff are fertilizers and eroded soils. Excessive discharge of nutrients to water bodies and streams can cause excessive aquatic algae and plant growth. Such excessive production, referred to as cultural eutrophication, may lead to excessive decay of organic matter in the water body, loss of oxygen in the water, release of toxins in sediment, and the eventual death of aquatic organisms.
- Metals – Metals are raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. Primary source of metal pollution in storm water are typically commercially available metals and metal products. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. Lead and chromium have been used as corrosion inhibitors in primer coatings and cooling tower systems. At low concentrations naturally occurring in soil, metals are not toxic. However, at higher concentrations, certain metals can be toxic to aquatic life. Humans can be impacted from contaminated groundwater resources, and bioaccumulation of metals in fish and shellfish. Environmental concerns, regarding the potential for release of metals to the environment, have already led to restricted metal usage in certain applications.
- Organic Compounds – Organic compounds are carbon-based. Commercially available or naturally occurring organic compounds are found in pesticides,

solvents, and hydrocarbons. Organic compounds can, at certain concentrations, indirectly or directly constitute a hazard to life or health. When rinsing off objects, toxic levels of solvents and cleaning compounds can be discharged to storm drains. Dirt, grease, and grime retained in the cleaning fluid or rinse water may also adsorb levels of organic compounds that are harmful or hazardous to aquatic life.

- Trash & Debris – Trash (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic matter (such as leaves, grass cuttings, and food waste) are general waste products on the landscape. The presence of trash & debris may have a significant impact on the recreational value of a water body and aquatic habitat. Excess organic matter can create a high biochemical oxygen demand in a stream and thereby lower its water quality. Also, in areas where stagnant water exists, the presence of excess organic matter can promote septic conditions resulting in the growth of undesirable organisms and the release of odorous and hazardous compounds such as hydrogen sulfide.
- Oxygen-Demanding Substances – This category includes biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds. Proteins, carbohydrates, and fats are examples of biodegradable organic compounds. Compounds such as ammonia and hydrogen sulfide are examples of oxygen-demanding compounds. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions.
- Oil and Grease – Oil and grease are characterized as high-molecular weight organic compounds. Primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids. Introduction of these pollutants to the water bodies are very possible due to the wide uses and applications of some of these products in municipal, residential, commercial, industrial, and construction areas. Elevated oil and grease content can decrease the aesthetic value of the water body, as well as the water quality.
- Bacteria and Viruses – Bacteria and viruses are ubiquitous microorganisms that thrive under certain environmental conditions. Their proliferation is typically caused by the transport of animal or human fecal wastes from the watershed. Water, containing excessive bacteria and viruses can alter the aquatic habitat and create a harmful environment for humans and aquatic life. Also, the decomposition of excess organic waste causes increased growth of undesirable organisms in the water.
- Pesticides – Pesticides (including herbicides) are chemical compounds commonly used to control nuisance growth or prevalence of organisms. Excessive application of a pesticide may result in runoff containing toxic levels of its active component.

G.5.1.2: Identify Pollutants of Concern in Receiving Waters.

(a) Pollutants that exhibit one or more of the following characteristics shall be identified as pollutants of concern in the receiving water:

- Current loadings or historical deposits of the pollutant are impairing the beneficial uses of a receiving water;
- Elevated levels of the pollutant are found in water or sediments of a receiving water and/or have the potential to be toxic to or bio-accumulate in organisms therein; and
- Inputs of the pollutant are at a level high enough to be considered potentially toxic.

(b) To identify pollutants of concern in receiving waters, each project shall, at a minimum, do the following:

(i) For each of the proposed projects discharge points, identify the receiving water(s) that each discharge point proposes to discharge to, including hydrologic unit basin number(s), as identified in the most recent version of the *Water Quality Control Plan for the San Diego Basin*, prepared by the San Diego Regional Water Quality Control Board.

(ii) Identify any receiving waters, into which the developed area would discharge, listed on the most recent list of Clean Water Act Section 303(d) impaired water bodies. List any and all pollutants for which the receiving waters are impaired.

G.5.1.3: Identify Conditions of Concern. The following steps shall be followed by each project to address potential impacts to downstream channels and habitat integrity, due to change in the hydrologic regime resulting from development including increased runoff volume; reduced infiltration; increased flow frequency, duration, and peaks; faster time to reach peak flow; and water quality degradation:

(a) Evaluate the project's conditions of concern in a drainage study report prepared by a registered civil engineer in the State of California, with experience in fluvial geomorphology and water resources management. The report shall consider the project area's location (from the larger watershed perspective), topography, soil and vegetation conditions, percent impervious area, natural and infrastructure drainage features, and any other relevant hydrologic and environmental factors to be protected specific to the project area's watershed.

(b) As part of the drainage study, the civil engineer shall conduct a field reconnaissance to observe and report on downstream conditions, including undercutting erosion, slope stability, and vegetative stress (due to flooding, erosion, water quality degradation, or loss of water supplies).

(c) The drainage study shall compute rainfall runoff characteristics from the project area including, at a minimum, runoff volume, time of concentration, and retention volume. These characteristics shall be developed for the two-year and 10-year frequency, Type I storm, of six-hour or 24-hour duration (whichever is the closer approximation of the site's time of concentration), during critical hydrologic conditions for soil and vegetative cover[1]. The drainage study shall report the project's conditions of concern based on the hydrologic and downstream conditions discussed above. Where downstream conditions of concern have been identified, the drainage study shall establish that pre-project hydrologic conditions affecting downstream conditions of concern would be maintained by the proposed project, satisfactory to the County, by incorporating the site design, source control, and treatment control requirements identified in Section VI.2.

## G.5.2 Establish Stormwater BMPs

G.5.2.1: Discharges shall incorporate site design BMPs to reduce the need for source and/or treatment control BMPs, and source control BMPs to reduce the amount of treatment control BMPs needed. BMPs small be evaluated for inclusion in the project in the following order:

- Site Design BMPs
- Source Control BMPs
- Treatment Control BMPs

[1]. Design storms can be found at http://www.wrcc.dri.edu/pcpnfreq.html. The County's may calculate the storm events using local rain data. In addition, isopluvial maps contained in the County of San Diego Hydrology Manual may be used to extrapolate rainfall data to areas where insufficient data exists. If isopluvial maps are selected, County's shall describe their method for using isopluvial maps in their Jurisdictional SUSMP.

In addition, runoff treated by site design or source control BMPs, such as rooftop runoff treated in landscaping, may be credited towards the treatment control requirements in "Treatment Control BMPs." The site design, source control, and standard treatment control BMP minimum requirements for project categories are summarized in Table 2, "Standard Storm Water BMP Selection Matrix," (Attachment G-2).

G.5.2.2: Projects that are anticipated to generate a pollutant (as identified in Table 1, "Anticipated Pollutants Generated by Land Use Type) for which the receiving water is an Impaired Water Body shall meet all applicable requirements and shall select a single or combination of storm water BMPs from Table 3 which maximizes pollutant removal for the particular pollutant(s) of concern.

6.5.2.3: Alternative storm water BMPs for enhanced treatment, and specific BMP types within the tabulated categories, may be approved at the discretion of the County. The general effectiveness of these BMPs is identified in table 3, "Enhanced Treatment Control BMP Selection Matrix" (Attachment G-3).

**G.5.2.1 Site Design BMPs**

Projects shall be designed so as to minimize, to the maximum extent practicable, the introduction of pollutants and conditions of concern that may result in significant impacts, generated from site runoff to the storm water conveyance system. Projects can achieve storm water control through the creation of a hydrologically functional project design that attempts to mimic the natural hydrologic regime. This objective is accomplished by:

- Reducing imperviousness, conserving natural resources and areas, maintaining and using natural drainage courses in the storm water conveyance system, and minimizing clearing and grading.
- Providing runoff storage measures dispersed uniformly throughout a site's landscape with the use of a variety of detention, retention, and runoff practices.
- Implementing on-lot hydrologically functional landscape design and management practices.

G.5.2.1.1: Step 1: Maintain Pre-Development Rainfall Runoff Characteristics

(a) Projects shall maintain or reduce peak velocities from the project area to the maximum extent practicable. In addition, projects shall control the total volume of runoff to the maximum extent practicable using the site design, source control, and treatment control.

(b) Design Concept 1: Minimize Project's Impervious Surface & Conserve Natural Areas.

(i) Construct walkways, trails, patios, and alleys and other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers,

and granular materials.

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(ii) Construct streets, sidewalks and parking lot aisles to the minimum widths necessary.

7.

(iii) Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs.

8.

(iv) Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design.

9.

(vi) Use natural drainage systems to the maximum extent practicable.

(c) Design Concept 2: Minimize Directly Connected Impervious Areas (DCIAs). Projects shall incorporate the following design characteristics, where applicable.

(i) Where landscaping is proposed, drain rooftops into adjacent landscaping prior to discharging to the storm drain.

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(ii) Where landscaping is proposed, drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping.

<u>G.5.2.1.2: Step 2: Protect Slopes and Channels. Project plans shall include storm water BMPs to decrease the potential for erosion of slopes and/or channels, consistent with local codes and ordinances and with the approval of all agencies with jurisdiction, e.g., the U.S. Army Corps of Engineers, the San Diego Regional Water Quality Control Board, and the California Department of Fish and Game. The following design principles shall be followed:</u>

o Convey runoff safely from the tops of slopes.

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o Vegetate slopes with native or drought tolerant vegetation.

o Control and treat flows in landscaping and/or other controls prior to reaching existing natural drainage systems.

o Stabilize permanent channel crossings.

o Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.

### G.5.2.2 Source Control BMPs

The use of source control BMP is mandatory whenever such BMPs are practicable.

G.5.2.2.1: Step 3: Provide Storm Drain System Stenciling and Signage. See subsection G.4.9 above.

G.5.2.2.2: Step 4: Design Outdoor Material Storage Areas to Reduce Pollutant Releases. See subsection G.4.5.3 above.

G.5.2.2.3: Step 5: Design Trash Storage Areas to Reduce Pollution Introduction. See subsection G.4.5.4 above.

12.

G.5.2.2.4: Step 6: Use Efficient Irrigation Systems & Landscape Design. Projects shall design the timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water conveyance system. (Limited exclusion: detached residential homes.)

(a) Rain shutoff devices shall be employed to prevent irrigation after precipitation.

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(b) Irrigation systems shall be designed to each landscape area's specific water requirements.

(c) Flow reducers or shutoff valves triggered by a pressure drop shall be used to control water loss in the event of broken sprinkler heads or lines.

G.5.2.2.5: Step 7: Incorporate Requirements Applicable to Individual Project Categories. Where identified in Table 2 (Attachment G-2), the following requirements shall be incorporated into applicable projects during the storm water BMP selection and design process. Projects shall adhere to each of the individual project category requirements that apply to the project (e.g., a restaurant with more than 15 parking spaces would be required to incorporate the requirements for " g. Equipment Wash Areas <u>and</u> "h. Parking Areas" into the project design).

(a) Private Roads. Private roadway drainage shall be designed using one of the following methods (for further guidance, see Start at the Source [1999]). Applicants shall assess project applicability in this order:

i. Rural swale system: street sheet flows to vegetated swale or gravel shoulder, curbs at street corners, culverts under driveways and street crossings;

ii. Urban curb/swale system: street slopes to curb, periodic swale inlets drain to vegetated swale/biofilter;

iii. Dual drainage system: First flush captured in street catch basins and discharged to adjacent vegetated swale or gravel shoulder, high flows connect directly to storm water conveyance system.

iv. Urban curb/filter system: street slopes to curb, periodic inlet drain are filtered and then enter conveyance system;

The County shall consider alternatives to established road standards that will more readily allow this type of BMP.

(b) Residential Driveways and Guest Parking. New driveways and new private residential parking areas shall be designed with the following features.

i. Design driveways with shared access, flared (single lane at street) or wheelstrips (paving only under tires); or, drain into landscaping prior to discharging to the storm water conveyance system.

ii. Uncovered temporary or guest parking on private residential lots shall either be: paved with a permeable surface; or, designed to drain into landscaping prior to discharging to the storm water conveyance system.

(c) Dock Areas. Loading/unloading dock areas shall include the following:

i. Cover loading dock areas or design drainage to preclude urban run-on and runoff.

ii. Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.

(d) Maintenance Bays. Maintenance bays shall include the following:

i. Repair/maintenance bays shall be indoors; or, designed to preclude urban run-on and runoff.

ii. Design a repair/maintenance bay drainage system to capture all wash water, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.

(e) Vehicle Wash Areas. Projects that include areas for washing/steam cleaning of vehicles shall be:

i. Self-contained; or covered with a roof or overhang;

ii. Equipped with a clarifier or other pretreatment facility;

iii. Properly connected to a sanitary sewer.

(f) Outdoor Processing Areas. Outdoor process equipment operations, such as rock grinding or crushing, painting or coating, grinding or sanding, degreasing or parts cleaning, landfills, waste piles, and wastewater and solid waste treatment and disposal, and other operations determined to be a potential threat to water quality by the County shall adhere to the following requirements:

i. Cover or enclose areas that would be the most significant source of pollutants; or, slope the area toward a dead-end sump; or, discharge to the sanitary sewer system following appropriate treatment in accordance with conditions established by the applicable sewer agency.

ii. Grade or berm area to prevent run-on from surrounding areas.

iii. Installation of storm drains in areas of equipment repair is prohibited.

(g) Equipment Wash Areas. Outdoor equipment/accessory washing and steam cleaning activities at projects shall be:

i. Self-contained; or covered with a roof or overhang;

ii. Equipped with a clarifier, grease trap or other pretreatment facility, as appropriate;

iii. Properly connected to a sanitary sewer.

(h) Parking Areas. To minimize the offsite transport of pollutants from parking areas, the following design concepts shall be included:

i. Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design.

ii. Overflow parking (parking stalls provided in excess of the County's minimum parking requirements) shall be constructed with permeable paving.

(i) Roadways. Roadway projects shall select treatment control BMPs following the enhanced treatment control selection procedure identified in "Establish Storm Water BMPs."

(j) Fueling Areas. Fuel dispensing areas shall contain the following:

i. Overhanging roof structure or canopy. The cover's minimum dimensions must be equal to or greater than the area within the grade break. The cover must not drain onto the fuel dispensing area and the downspouts must be routed to prevent drainage across the fueling area. The fueling area shall drain to the project's treatment control BMP(s) prior to discharging to the storm water conveyance system.

ii. Paved with Portland cement concrete (or equivalent smooth impervious surface). The use of asphalt concrete shall be prohibited.

iii. Paving must have a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of urban runoff.

iv. At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.

(k) Hillside Landscaping. Hillside areas that are disturbed by project development shall be landscaped with deep-rooted, drought tolerant plant species selected for erosion control, satisfactory to the County.

### G.5.2.3 Treatment Control BMPs

Minimizing a development's detrimental effects on water quality can be most effectively achieved through the use of a combination of site design, source and treatment control storm water BMPs. Where projects have been designed to minimize, to the maximum extent practicable, the introduction of anticipated pollutants of concern that may result in significant impacts to the receiving waters through the implementation of site design and source control storm water BMPs, and the development still has the potential for pollutants of concern to enter the storm water conveyance system, the project may need to implement treatment control BMPs. In meeting the requirements in this section, projects shall implement a single or combination of storm water BMPs best suited to maximize the removal of anticipated pollutants of concern in site runoff to the maximum extent practicable.

5.2.3.1: Step 8: Design to Treatment Control BMP Standards. All projects that propose to use structural treatment BMPs in meeting performance standards or in achieving Maximum Extent Practicable shall design, construct and implement their structural treatment control BMPs in conformance with the design standards of this section, unless specifically exempted by the County. Structural treatment control BMPs are not required by this section, but if structural treatment BMPs are proposed they must comply with this section and be operational prior to the use of any dependent development, and be located and designed in accordance with the requirements here in Step 8 and below in Step 9. The County may choose to eliminate one or more of the numeric sizing methods listed below when it prepares it's Jurisdictional SUSMPs. Either volume-based or flow-based BMPs may be used.

(a) Volume-based BMPs if proposed shall be designed to mitigate (infiltrate, filter, or treat) either:

i. The volume of runoff produced from a 24-hour 85$^{th}$ percentile storm event, as determined from the local historical rainfall record and shown on the official County Isopluvial Map for the 85$^{th}$ percentile; or

ii. The volume of runoff produced by the 85$^{th}$ percentile 24-hour runoff event, determined as the maximized capture urban runoff volume for the area, from the formula recommended in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87, (1998*); or

iii. The volume of annual runoff based on unit basin storage volume, to achieve 90 percent or more volume treatment by the method recommended in *California Stormwater Best Management Practices Handbook – Industrial/ Commercial, (1993)*, or

iv. The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85$^{th}$ percentile 24-hour runoff event,

(b) Flow-based BMPs if proposed shall be designed to mitigate (infiltrate, filter, or treat) either:

i. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour for each hour of a storm event; or

ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or

iii. The maximum flow rate of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

G5.2.3.1: Step 9: Locate BMPs Near Pollutant Sources. Structural treatment control storm water BMPs, if proposed, should be implemented close to pollutant sources to minimize costs and maximize pollutant removal prior to runoff entering receiving waters. Such BMPs may be located on- or off-site, used singly or in combination, or shared by multiple new developments, pursuant to the following requirements:

(a) Any structural treatment control BMPs shall be located so as to infiltrate, filter, and/or treat the required runoff volume or flow prior to its discharge to any receiving water body supporting beneficial uses.

(b) Multiple post-construction structural treatment control BMPs for a single development project shall collectively be designed to comply with the design standards.

(c) Any structural treatment BMPs are to be located to infiltrate, filter, or treat the required runoff volume or flow prior to its discharge to any receiving water body supporting beneficial uses. In most cases, on-site BMPs will be the best alternative for protecting all downstream water bodies. However, in some situations, better results may be achieved when structural treatment BMPs are shared by multiple new development projects. The County may elect to allow the use of a shared structural treatment BMP provided construction of the shared structural treatment BMP is completed (or an equivalent temporary alternative is put in place) prior to the post-construction use of any new development project from which the structural treatment BMP will receive runoff. Ongoing long-term maintenance of any shared structural post-construction BMP must be identified before a shared BMP will be considered "effective". Shared storm water BMPs shall be operational prior to the use of any dependent development or phase of development. The shared BMPs shall only be required to treat the dependent developments or phases of development that are in use.

(d) Interim storm water BMPs that provide equivalent or greater treatment than is required may be implemented by a dependent development until each shared BMP is operational. If interim BMPs are selected, the BMPs shall remain in use until permanent BMPs are operational.

G.5.2.3.3: Step 10: Restrictions on Use of Infiltration BMPs. Three factors significantly influence the potential for urban runoff to contaminate ground water. They are (i) pollutant mobility, (ii) pollutant abundance in urban runoff, (iii) and soluble fraction of pollutant. The risk of contamination of groundwater may be reduced by pretreatment of urban runoff. A discussion of limitations and guidance for infiltration practices is contained in, *Potential Groundwater Contamination from Intentional and Non-Intentional Stormwater Infiltration, Report No. EPA/600/R-94/051, USEPA (1994).*

To protect groundwater quality, the County the use of Infiltration BMPs (such as infiltration trenches and infiltration basins) to accept Urban Runoff from land development projects subject to the Ordinance is restricted as set out below. These restrictions do not apply to areas developed prior to February 20, 2002.

(a) Runoff shall undergo pretreatment such as sedimentation or filtration prior to discharge to an Infiltration BMP.

(b) Prohibited non-stormwater discharges shall be diverted from Infiltration BMPs, unless treated prior to discharge.

(c) Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where Infiltration BMPs are to be used.

(d) The vertical distance from the base of any Infiltration BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater does not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained.

(e) Infiltration BMPs may not be used unless the soil through which infiltration is to occur is shown to have physical and chemical characteristics (such as appropriate caution exchange capacity, organic content, clay content, and infiltration rate) that are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses.

(f) Infiltration BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated by the County in their Local SUSMP.

(g) Infiltration structural BMPs shall be located a minimum of 100 feet horizontally from any water supply wells.

## G.5.3 Examples

Application of the process and requirements described above could, for example, lead to design requirements and permit conditions such as the following:

- A commercial development might have loading/unloading dock areas where material spills could be quickly transported to the storm water conveyance system. The project should be required to cover loading dock areas or design drainage to minimize run-on and runoff of storm water. Direct connections to storm drains from depressed loading docks (truck wells) should be prohibited.

- A vehicle repair facility could handle oil and grease, solvents, car battery acid, coolant and gasoline from the repair/maintenance bays that can negatively impact storm water. Design plans should show repair bays indoors or designed to prohibit storm water contact; the drainage system should be designed to capture all wash water, leaks and spills with a sump for collection and disposal; and direct connection to the storm drain system should be prohibited.

- A project that includes vehicle/equipment washing/steam cleaning has the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to the storm water conveyance system. The project plans should include an area for washing/steam cleaning of vehicles and equipment. The area should be self-contained and/ or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to a sanitary sewer (with the required permit).

- A restaurant project could include various outdoor activities, equipment, accessory washing/steam cleaning, which have the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to storm water. This type of project should include an area for the washing/steam cleaning of equipment and accessories that are self-contained, equipped with a grease trap, and properly connected to a sanitary sewer. If outdoors, this areas should also be covered, paved, and have secondary containment.

- A gas station or auto repair shop project would have fueling areas with the potential to contribute oil and grease, solvents, car battery acid, coolant and gasoline to storm water. The project should include overhanging roof canopy for the fuel dispensing area, with the canopy and any downspouts designed to prevent drainage across the fueling area. The fuel dispensing area must be paved with Portland cement concrete (asphalt concrete is prohibited) with a 2% to 4% slope to prevent ponding, separated from the rest of the site by a grade break that prevents run-on of storm water. This protected area should extend the length at which any proposed hose and nozzle assembly may be operated plus 1 foot.

- A parking lot project (or portion of a project) would typically be a source of pollutants such as heavy metals, oil and grease, and polycyclic aromatic hydrocarbons that are deposited on parking lot surfaces by motor-vehicles, and that can be transported to storm water. Parking lots should be required to reduce impervious land coverage of parking areas, and to infiltrate clean runoff before it reaches storm drain system. (Parking lots subject to Part Four, below, should also be required to treat runoff before it reaches the storm drain system to remove oil and petroleum hydrocarbons, and to ensure adequate operation and maintenance of these treatment systems to prevent system fouling and plugging.)

## PART G.6— ADDITIONAL DESIGN AND BMP REQUIREMENTS FOR PRIORITY DEVELOMENT PROJECTS

[Reserved]

## PART G.7—BMP MAINTENANCE AND MAINTEANCE ASSURANCE

### G.7.1 BMP Maintenance

Requirements for BMP maintenance; and related disclosure, plan, and permit application requirements; are set out in Section 67.819 of the Ordinance.

### G.7.2 Proof of a Mechanism to Ensure Maintenance of Post-Construction BMPs

G.7.2.1: Pursuant to section 67.819(h) of the Ordinance, the proponents of any land development or significant redevelopment project that requires a discretionary County permit, shall provide to the County prior to the issuance of such permit, proof of a mechanism acceptable to the County which will ensure ongoing long-term maintenance of all structural treatment BMPs associated with the proposed project. The proponents shall be responsible for maintenance of BMPs unless and until an alternative mechanism for ensuring maintenance is accepted by the County and becomes effective.

G.7.2.2: Project proponents shall enter into and provide the County copies of any covenants, legal agreements, maintenance agreements, and/or conditional use permits the County deems necessary to ensure the effectiveness of any BMP maintenance assurance mechanism proposed by the Proponent.

G.7.2.3: Potentially acceptable mechanism for ensuring BMP maintenance include the following:

(a) County maintenance. The County may agree to accept ownership of and to maintain the BMP, under such conditions as it deems appropriate.

(b) Maintenance by another public entity. The County may agree that another public or acceptable quasi-public entity (e.g., the County Flood Control District, a state or federal resource agency, or a conservation conservancy) may assume responsibility for maintenance, repair and replacement of the BMP in lieu of the developer. The County may require that some or all estimated maintenance costs be front-funded or reliably guaranteed, (e.g., through a trust fund, assessment district fees, bond, letter of credit or similar means). In addition, the County may seek protection from liability by appropriate releases and indemnities.

The developer must provide any public entity accepting maintenance obligations sufficient ownership or easement interests to allow maintenance, repair and replacement

of BMPs. If structural BMPs are located within a public area proposed for transfer, they will be the responsibility of the developer until the County or other public entity accepts them. Structural BMPs proposed for transfer to any other public entity must be approved by the County prior to installation. The County shall be involved in the negotiation of maintenance requirements with any other public entities accepting maintenance responsibilities. The County must be identified as a third party beneficiary empowered to enforce any such maintenance agreement.

(c) Maintenance by a subsequent owner. The County may agree that sufficient assurance of maintenance is provided by the responsibility this Ordinance imposes on subsequent owners of the BMP to maintain that BMP. The County may decline to accept this mechanism as an adequate developer assurance if the County concludes in its sole discretion that any subsequent owner(s) may be unable or unwilling to maintain, repair or replace the BMP despite the legal obligation to do so. The County may condition acceptance of this mechanism on a backup agreement with the developer, a related natural person to ultimately be accountable to the County to pay all costs for BMP maintenance, repair or replacement if a subsequent owner fails to perform. Acknowledgements or responsibility or other contractual agreement with the subsequent owners may also be required.

(d) County Service Area or Assessment District. The developer can create a County Service Area (CSA) or other funding mechanism to provide funds for BMP maintenance, repair and replacement on an ongoing basis. If that mechanism could be compromised or eliminated by any subsequent vote, the County may condition acceptance of this mechanism on an agreement that would preclude such compromise or elimination, and/or on a backup agreement with the developer or a related natural person to ultimately be accountable to the County to pay all costs for BMP maintenance, repair or replacement if funding and maintenance by a CSA or Assessment District proved to be inadequate for any reason.

(e) Lease provisions. In those cases where the County holds title to the land in question, and the land is being leased to another party for private or public use, the County may assure storm water BMP maintenance, repair and replacement through conditions in the lease.

(f) Conditional use permits. For discretionary projects that require a use permit, the County may agree that the inclusion of appropriate terms in the use permit will provide sufficient assurance maintenance of storm water BMPs. The County may condition acceptance of this mechanism on a backup agreement with the developer or a related natural person to ultimately be accountable to the County to pay all costs for BMP maintenance, repair or replacement if a subsequent owner fails to perform.

G.7.2.4: Other mechanisms. The County in its discretion may accept other mechanisms for ensuring BMP maintenance, repair and replacement.

G.7.2.5: Right to condition acceptance of any proposed mechanism. The County in its discretion may decline to accept any proposed mechanism for assuring BMP maintenance, repair or replacement that is not supported by an adequate and reliable source of funds. The County in its discretion may also require that any such proposed mechanism be supported by back up agreements including but not limited to a back-up maintenance agreement with the developer or a related natural person.

G.7.2.6: Developer's acknowledgement of obligations. All applications for a County land development permit shall include the project proponent's signed statement acknowledging responsibility for structural BMP maintenance, repair and replacement until the County accepts an alternative mechanism to ensure such maintenance, repair and replacement.

## PART G.8—DESIGN REQUIREMENTS FOR MINISTERIAL LAND DEVELOPMENT PERMITS

Land development and redevelopment projects that can be issued ministerial permits, and which satisfy the requirements of this Part, are not subject to the requirements in Parts G.3 through G.6 of this Manual.

Ministerial projects must meet the other applicable requirements in the Ordinance including the construction phase requirements set out in Part F.4 of this Manual.

G.8.1: Building Permit – Residential New Construction, Addition, or Accessory Structure

To receive a permit as of right (a ministerial permit) a residential new construction, addition or accessory structure project requiring a building permit must meet the requirements set out in this subsection. The application and plans for the permit must include details showing how these requirements will be met. If the project cannot meet these requirements, the project proponent may choose to treat their project as a discretionary project using the performance criteria/BMP Menu method through the voluntary use of a Site Plan, however this alternative may require additional CEQA review.

G.8.1.1: A calculation must be provided showing that the proposed new construction or addition will not result in overall impervious surfaces for the lot exceeding 80% of the overall lot area for lots ¼ acre or less, 70% for lots ¼ acre to ½ acre, or 50% for lots over ½ acre.

G.8.1.2: If proposed new construction exceeds the above allowances, the excess impervious surface shall be diverted to an underground infiltration trench of at least 2 foot width, filled with gravel and a minimum 4-inch perforated pipe manifold, and with an area of not less than 10 percent of the size of excess surface area. This option may only be used in areas with type A and B soils.

G.8.1.3: A detailed drawing must be provided showing drainage from all new roof areas being directed to flat vegetated areas not less that 15 feet wide in the direction of runoff flow, or diverted to an underground infiltration trench of at least 2 foot width, filled with gravel and a minimum 4-inch perforated pipe manifold, and with an area of not less than 10 percent of the size of roof area.

G.8.1.4: Proposals to create off-street parking in excess of that required to accommodate 2 vehicles (including all driveway areas) shall utilize porous pavement alternatives.

G.8.1.5: All new impermeable surfaces shall drain to either a vegetated area not less than 15 feet wide in the direction of runoff flow, or diverted to an underground infiltration trench of at least 2 foot width, filled with gravel and a minimum 4-inch perforated pipe

manifold, and with an area of not less than 10 percent of the size of impermeable surface. This option may only be used in areas with type A and B soils.

G.8.1.6: Landscape grading

[Reserved]

G.8.1.7: New walkways, trails, and alleys and other low-traffic areas shall be constructed with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, or granular materials that allow infiltration.

G.8.1.8: Infiltration alternatives shall not be allowed unless found in compliance with section G.4.10 "Infiltration BMPs" of this manual.

G.8.2 Building Permit – Residential Multi-family Construction

To receive a permit as of right (a ministerial permit) a residential multi-family construction project requiring a building permit must meet the requirements set out in this section G.8.2. The application and plans for the permit must include details showing how these requirements will be met. If the project cannot meet these requirements, the project proponent may choose to treat their project as a discretionary project using the performance criteria/BMP Menu method through the voluntary use of a Site Plan, however this alternative may require additional CEQA review.

G.8.2.1: Residential Building permit conditions G.8.1.2, G.8.1.3, and G.8.1.5 through G.8.1.8 must be met.

G.8.2.2: A calculation must be provided showing that the proposed new construction or addition will not result in overall impervious surfaces for the lot exceeding 80% of the overall lot area.

G.8.2.3: Proposals to create off-street parking in excess the minimums set forth in the County Zoning ordinance shall utilize porous pavement alternatives, all parking areas shall drain to a dry well filter which filters runoff through sand and crushed rock or cyclone-type before infiltration.

G.8.3: Building Permit – Commercial or Industrial, New Construction or Addition

To receive a permit as of right (a ministerial permit) a commercial or industrial new construction or addition project requiring a building permit must meet the requirements set out in this section G.8.3. The application and plans for the permit must include details showing how these requirements will be met. If the project cannot meet these requirements, the project proponent may choose to treat their project as a discretionary project using the performance criteria/BMP Menu method through the voluntary use of a Site Plan, however this alternative may require additional CEQA review.

G.8.3.1: Residential Building permit conditions G.8.1.2, G.8.1.3, and G.8.1.5 through G.8.1.8 must be met.

G.8.3.2: A calculation must be provided showing that the proposed new construction or addition will not result in overall impervious surfaces for the lot exceeding 80% of the overall lot area.

G.8.3.3: Proposals to create off-street parking in excess the minimums set forth in the County Zoning ordinance shall utilize porous pavement alternatives, all parking areas shall drain to a dry well filter which filters runoff through sand and crushed rock or cyclone-type before infiltration.

G.8.4: Right-of-way Permit (Construction, Encroachment, Excavation)

To receive any otherwise available permit as of right (a ministerial permit) a right of way project requiring a building permit must meet the requirements set out in this section G.8.4. The application and plans for the permit must include details showing how these requirements will be met. If the project cannot meet these requirements, the project proponent may choose to treat their project as a discretionary project using the performance criteria/BMP Menu method through the voluntary use of a Site Plan, however this alternative may require additional CEQA review.

G.8.4.1: A calculation showing the proposed increase in overall impervious surface.

G.8.4.2: For proposals that increase impervious surface, a detailed drawing showing drainage from these surfaces being directed to flat vegetated areas not less that 15 feet wide in the direction of runoff flow, or diverted to an underground infiltration trench of at least 2 foot width, filled with gravel and a minimum 4-inch perforated pipe manifold, and with an area of not less than 10 percent of the size of increase in surface area. This option may only be used in areas with type A and B soils.

G.8.4.3: A detailed drawing of the proposed activity showing that it will not occupy any of the areas currently used for surface drainage flow, filtering, or infiltration.

G.8.4.4: New walkways, trails, and alleys and other low-traffic areas shall be constructed with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, or granular materials that allow infiltration.

## PART G.9—RESOURCES AND REFERENCES

Reference BMP Drawings

1. County of Los Angeles appendix to "A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP)," available on the Los Angeles Department of Water and Power web site:

> Bioretention Facility, Catch Basin Insert, Cistern, Constructed Wetlands, Dry Wells, Extended/Dry Detention Basins or Underground Detention Tanks, Infiltration Basins, Infiltration Trenches, Media Filtration, Porous Pavement, Storm Drain Insert, Vegetated Filter Strips, Vegetated Swale, and Wet Ponds.

2. Environmental Protection Agency - Office of Water - Post-Construction Storm Water Management in New Development and Redevelopment -BMP individual Fact Sheets, available on the U.S. EPA web site:

> *Structural BMPs Ponds,* Dry extended detention ponds, Wet ponds; *Infiltration practices;* Infiltration basin, Infiltration trench, Porous pavement; Filtration *practices;* Bioretention, Sand and organic filters; *Vegetative practices;* Storm water wetland, Grassed swales, Grassed filter strip; *Runoff pretreatment practices;* Catch basins/Catch basin insert, In-line storage, Manufactured products for storm water inlets
>
> *Nonstructural BMPs Experimental practices;* Alum injection; *On-lot Treatment*; *Better site design;* Buffer zones; Open space design, Urban forestry, Conservation easements, Infrastructure planning, Narrower residential streets, Eliminating curbs and gutters, Green parking, Alternative turnarounds, Alternative pavers, BMP inspection and maintenance
>
> *Additional BMP Fact Sheets:* Bioretention, Hydrodynamic Separators, Infiltration Drainfields, Infiltration Trench, Modular Treatment System, Porous Pavement, Sand Filters, Storm Water Wetlands, Vegetative Swales, Water Quality Inlets, Wet Detention Ponds.

PASSED, APPROVED AND ADOPTED this 16th day of January, 2002.

**ATTACHMENT F-1**

# Stormwater Management Plan Instructions: To Accompany All Grading Permit Applications

In order to comply with the federal Clean Water Act, the state Water Code and County Ordinances, the County of San Diego requires that property owners complete a Stormwater Management Plan prior to issuance of any Grading Permit. The purpose of a Stormwater Management Plan is to document Best Management Practices (BMPs) that will be implemented to prevent pollutants (including sediment) from entering stormwater conveyances and receiving waters. The Stormwater Management Plan becomes a part of the Grading Permit and is subject to enforcement by County inspectors and others.

Stormwater Management Plans include the elements described in the following sections:

**Section 1: Required Information** - This section is used to provide the County with basic information necessary to evaluate and prioritize project activities. Each of the items in this section must be completed, except projects with less than 5 acres of disturbed area are not required to have a Waste Discharge Identification Number (WDID). Grading projects with a disturbed area of 5 acres or greater must also meet additional requirements from the State Water Resources Control Board (SWRCB). Those additional requirements include filing a Notice of Intent (NOI) and preparation of a Stormwater Pollution Prevention Plan (SWPPP).

**Note: It is the responsibility of the property owner and the contractor to determine the types of BMPs that will be used, as well as the levels of application necessary to comply with the County's Stormwater and Grading Ordinances. Failure to prevent soil erosion and discharges of sediment and other pollutants from construction sites is subject to enforcement by the County or others. At a minimum, the County requires that the BMPs listed in Table A (attached) be installed and maintained for all grading projects. Additional BMPs listed in Table B (attached) may also be required in correlation to a**

**Section 3: Certification** – The property owner must sign this section certifying that they understand the County's minimum requirements for stormwater management of construction activities and will implement, monitor and maintain the selected BMPs to ensure their

A County BMP manual can be found at the DPW and DPLU Permit Counters. The Manual includes all of the referenced BMPs listed in Tables A and B and from the *Caltrans Storm Water Quality Handbooks* and *California Stormwater BMP Handbook for Construction*. The entire manuals may also be ordered directly from the following sources:

Caltrans Manuals
Caltrans Publications unit
(916)445-3520
(916)324-8997 Fax

County of San Diego

STORMWATER MANAGEMENT PLAN

**ATTACHMENT F-1**
(Continued)

This form must be submitted with all Grading Permit Applications.

| SECTION 1. Required Information | | | |
|---|---|---|---|
| Grading Permit Application Number: | | Project Name: | |
| Name of Project Contact Person: | | Project address or location: | |
| Title: | Phone #: | | APN #: |
| Grading start date: | Grading finish date: | Project start date: | Project finish date: |

Estimated amount of disturbed acreage:_____ acres (If equal to or greater than 5 acres, you must
also provide a WDID number from the SWRCB.) WDID _____

Are there any watercourses or waterbodies within 50 feet of the limits of soil disturbance? YES___NO__

Does the soil type have high erosion potential (fine grain soil like sand, silt, fine disintegrated granite) ? YES _____ NO _____

Does the project site have or propose slopes higher than 25 feet or steeper than 1:1? YES _____ NO _____

Best Management Practices

The goal of stormwater management planning is to reduce pollution to the maximum extent practicable by implementing Best Management Practices (BMPs). There are five categories of BMPs: 1) Erosion control practices, and; 2) Velocity reduction, and; 3) Sediment control practices, and; 4) Offsite sediment tracking control, and; 5) General site and materials management. BMPs from each of the five categories must be used together as a system in order to prevent erosion, sediment, wastes, spills, and residues from leaving the site. When properly implemented, monitored and maintained, BMPs will function to prevent pollutants (including sediment) from leaving the site. It is the responsibility of the property owner and the contractor to determine the types of BMPs that will be used, as well as the levels of application necessary to comply with the County's Stormwater and Grading Ordinances.

Best Management Practice Tables Tables A and B (attached) must be used to indicate those BMPs that will be used to prevent stormwater pollution. At a minimum, the County requires that the BMPs listed in Table A be installed on all grading projects. However, some BMPs may not be applicable to every project. For example, if storm drain inlets are not present, then Storm Drain Inlet Protection (BMP SC10) would not be applicable.

Grading Plan Best Management Practice Checklist

The following information shall be shown on the grading plans:

❑
he project boundaries.
❑
he footprint of any existing structures and facilities.
❑ The footprint of all structures and facilities to be constructed.
❑ The limits of grading.
❑ The existing and proposed grades of the site, along with any intermediate grades that will significantly affect site drainage patterns.
❑ The location(s) where runoff from the site may enter storm drain(s), channel(s), and/or receiving waters.

*The following certification must be signed before a Grading Permit will be issued.*

I have read and understand that the County of San Diego has adopted minimum requirements for stormwater management of construction activities. I certify that the BMPs I have selected in Tables A and B will be implemented to effectively minimize the potentially negative impacts of this project's construction activities on stormwater quality. I further agree to install, monitor, maintain or revise the selected BMPs to ensure their effectiveness.

I also understand that non-compliance with the County's Stormwater and Grading Ordinances may result in enforcement by the County, including fines, citations, stop-work orders, cease and desist orders or other actions.

*Property owner*
*Date*

TABLE A
MINISTERIAL and MINOR PERMIT REQUIRED CONSTRUCTION BMPs

| **Minimum Required Best Management Practices (BMPs)** | CALTRANS Stormwater Handbook Detail | ✔ BMP **Selected** | Each selected BMPs must be shown on Grading Plan. If No BMP is selected, explain why |
|---|---|---|---|
| **Step 1 Select Erosion Control method for graded Slopes (choose at least one)** | | | |
| Vegetation Stabilization Planting *(see* note 1) | **SS-2 SS-4** | | |
| Hydraulic Stabilization Hydroseeding *(see note 1)* | **SS-3 SS-4** | | |
| Bonded Fiber Matrix *(see note 2)* | **SS-4** | | |
| Physical Stabilization Erosion Control Blanket*(see note 2)* | **SS-7** | | |
| **Step 2 Select Erosion Control method for graded Flat Areas (slope < 5%) (choose at least one)** | | | |
| Will use above Slope Control measures on flat areas also | **SS-2,3,4,7** | | |
| Mulch, straw, wood chips, soil application | **SS-6 SS-8** | | |
| De-silting Basin (must treat all site runoff) | **SC-2** | | |
| **Step 3 If runoff is concentrated, velocity must be controlled using energy dissipater** | | | |
| Energy Dissipater Outlet Protection *(see note 3)* | **SS-10** | | |
| **Step 4 Select Sediment Control method for all disturbed areas (choose at least one)** | | | |
| Silt Fence | **SC-1** | | |
| Straw Wattles | **SC-5** | | |
| Gravel Bags | **SC-6 & 8** | | |
| Storm Drain Inlet Protection | **SC-10** | | |
| **De-silting Basin (sized for 10-year flow)** | **SC-2** | | |
| **Step 5 Select method for preventing offsite tracking of sediment (choose at least one)** | | | |
| Stabilized Construction Entrance | **TC-1** | | |
| Construction Road Stabilization | **TC-2** | | |

| | | | |
|---|---|---|---|
| Entrance/Exit Tire Wash | **TC-3** | | |
| Entrance/Exit Inspection & Cleaning Facility | - | | |
| **Step 6 select the General Site Management BMPs for each waste that will be on site** | | | |
| **Materials Management**<br>Material Delivery & Storage | **WM-1** | | |
| **Waste Management**<br>Concrete Waste Management | **WM-8** | | |
| Solid Waste Management | **WM-5** | | |
| Sanitary Waste Management | **WM-9** | | |
| Hazardous Waste Management | **WM-6** | | |

***Notes***

1. **When Planting or Hydroseeding are selected for erosion control, the vegetative cover must be planted by August 15th and established by October 1st. If in the opinion of the County Official the vegetative cover is not established by October 1st, additional hydraulic or physical erosion control BMPs will be required.**
2. **These BMPs are temporary measures only when used without planting or hydroseeding. All slopes must have established vegetative cover prior to final grading approval.**
3. **Regional Standard Drawing D-40 - Rip Rap Energy Dissipater is also acceptable for velocity reduction.**
4. **Not all grading projects will have every waste identified. The applicant is responsible for identifying wastes that will be on-site and applying the appropriate BMP. For example, if concrete will be used, BMP WM-8 should be selected.**

**Table B** ***ADDITIONAL BMPs available for use in conjunction with minimum BMPs***

| **Erosion Control** | CALTRANS Stormwater Handbook Detail |
|---|---|
| **Site Development Considerations** Scheduling | **SS-1** |
| Preservation of Existing Vegetation | **SS-2** |
| Other (submit description for approval) | |
| **Vegetation Stabilization**<br>Vegetation Buffer Strips | **SS-2** |
| **Physical Stabilization**<br>Dust Control | **WE-1** |
| Soil Stabilizers | **SS-5** |
| **Diversion of Runoff** | |
| Earthen Dikes | **SS-9** |
| Ditches and Berms | **SS-9** |
| Slope Drains | **SS-11** |
| Temporary Drains & Swales | **SS-9** |
| **Velocity Reduction** | |
| Check Dams | **SS-4** |
| Slope Terracing | **-** |
| **Sediment Control** | |
| Brush or Rock Filter | **-** |
| Sediment Trap | **SC-3** |
| Sediment Basin | **SC-2** |
| **General Site Management** | |
| Employee & Subcontractor Training | **-** |

| | |
|---|---|
| **Materials Management**<br>Spill Prevention & Control | **WM-4** |
| **Waste Management**<br>Contaminated Soil Management | **WM-7** |
| **Vehicle and Equipment Management**<br>Vehicle & Equipment Cleaning | **NS-8** |
| Vehicle & Equipment Fueling | **NS-9** |
| Vehicle & Equipment Maintenance | **NS-10** |
| **Construction Practices**<br>Water Conservation | **NS-1** |
| Structure Construction & Painting | **-** |
| Paving Operations | **NS-3** |
| Dewatering Operations | **NS-2** |

Alternatives stormwater protection measures may also be presented for County consideration in any category.

ATTACHMENT G-1

**Table 1- Pollutants from the Project Area**

| | | *General Pollutant Categories* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Priority Project Categories* | Sediments | Nutrients | Heavy Metals | Organic Compounds | Trash & Debris | Oxygen Demanding Substances | Oil & Grease | Bacteria & Viruses | Pesticides |
| Detached Residential Developm | X | X | | | X | X | X | X | X |
| Attached Residential Developm | X | X | | | X | P(1) | P(2) | P | X |
| Commercial Developm | P(1) | P(1) | | P(2) | X | P(5) | X | P(3) | P(5) |
| Automotive Repair Shops | | | X | X(4)(5) | X | | X | | |
| Restaurant | | | | | X | X | X | X | |
| Hillside Development | X | X | | | X | X | X | | X |
| Parking Lots | P(1) | P(1) | X | | X | P(1) | X | | P(1) |
| Streets, Highways & | X | P(1) | X | X(4) | X | P(5) | X | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Retail Gas Outlets | | | X | X(4) | X | | X | | |

X = anticipated
P = potential
(1) A potential pollutant if landscaping exists on-site.
(2) A potential pollutant if the project includes uncovered parking areas.
(3) A potential pollutant if land use involves food or animal waste products.
(4) Including petroleum hydrocarbons.
(5) Including solvents.

ATTACHMENT G-2

**Table 2-Standard Storm Water BMP Selection Matrix**

| *Project Category* | *Site Design BMPs(1)* | *Source Control BMPs(2)* | *Treatment Control BMPs(3)* | *Requirements Applicable to Individual Project Categories(4)* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | a. Dock Areas | | b. Vehicle Wash Areas | c. Outdoor Processing Areas | d. Equipment Wash Areas | e. Parking Areas | f. Roadways | g. Fueling Areas | h. Hillside Landscaping |
| Detached Residential Development | R | R | S | | | | | | | | | | | R |
| Attached Residential Development | R | R | S | | | | | | | | | | | |
| Commercial Development >100,000 $ft^2$ | R | R | S | | | R | | R | R | | | | | |
| Automotive Repair Shop | R | R | S | | | R | | R | | R | | | R | |
| Restaurants | R | R | S | | | R | | | | R | | | | |
| Hillside Development >5,000 $ft^2$ | R | R | S | | | | | | | | | | | R |
| Parking Lots | R | R | S | | | | | | | | R | | | |
| Streets, Highways & Freeways | R | R | S | | | | | | | | | R | | |
| Retail Gas Outlets | R | R | S | | | | | R | | R | | | R | |

R = Required
S = Select one or more applicable and appropriate treatment control BMPs if needed to meet MEP and performance standards.

ATTACHMENT G-2

**Table 2-Standard Storm Water BMP Selection Matrix (continued)**

| *Project Category* | *Site Design BMPs(1)* | *Source Control BMPs(2)* | *Treatment Control BMPs(3)* | *Requirements Applicable to Individual Project Categories(4)* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | i. Private Roads | j. Residential Driveways & Guest | k. Dock Areas | l. Maintenance Bays | m. Vehicle Wash Areas | n. Outdoor Processing Areas | o. Equipment Wash Areas | p. Parking Areas | q. Roadways | r. Fueling Areas | s. Hillside Landscaping |
| Detached Residential Development | R | R | S | R | R | | | | | | | | | R |
| Attached Residential Development | R | R | S | R | | | | | | | | | | |
| Commercial Development >100,000 $ft^2$ | R | R | S | | | R | R | R | R | | | | | |
| Automotive Repair Shop | R | R | S | | | R | R | R | | R | | | R | |
| Restaurants | R | R | S | | | R | | | | R | | | | |
| Hillside Development >5,000 $ft^2$ | R | R | S | R | | | | | | | | | | R |
| Parking Lots | R | R | S | | | | | | | | R | | | |
| Streets, Highways & Freeways | R | R | S | | | | | | | | | R | | |
| Retail Gas Outlets | R | R | S | | | | | R | | R | | | R | |

R = Required.
S = Select one or more applicable and appropriate treatment control BMPs if needed to meet MEP and performance standards.

ATTACHMENT G-3

**Enhanced Treatment Control BMP Selection Matrix**

| *Pollutant of Concern* | *Treatment Control BMP Categories* | | | | | | |
|---|---|---|---|---|---|---|---|
| | Biofilters | Detention Basins | Infiltration Basins(2) | Wet Ponds or Wetlands | Drainage Inserts | Filtration | Continuous Flow Deflection Systems(3) |
| Sediment | M | H | H | H | M | H | M |
| Nutrients | L | M | M | M | M | M | L |
| Heavy Metals | M | M | M | H | M | H | L |
| Organic Compounds | U | U | U | U | L | M | L |
| Trash & Debris | L | H | U | U | M | H | M |
| Oxygen Demanding Substances | L | M | M | M | L | M | L |
| Bacteria | U | U | H | U | L | M | L |
| Oil & Grease | M | M | U | U | L | H | L |
| Pesticides | U | U | U | U | L | U | L |

(1) The County will periodically assess the performance characteristics of many of these BMPs to update this table.
(2) Including trenches and porous pavement.
(3) Also known as hydrodynamic devices and baffle boxes.

L (Low): Low removal efficiency
M (Medium): Medium removal efficiency
H (High): High removal efficiency
U: Unknown removal efficiency, applicant must provide evidence supporting use

Sources: *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* (1993), *National Stormwater Best Management Practices Database* (2001), and *Guide for BMP Selection in Urban Developed Areas* (2001).