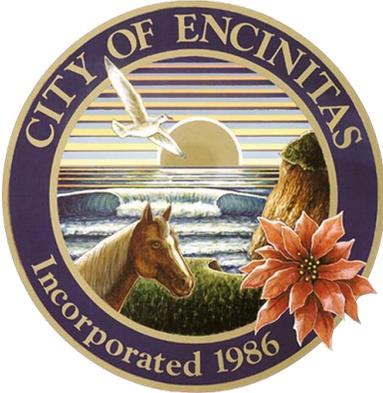


City of Encinitas

Stormwater Standards Manual

January 2019



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Table of Contents

1	Introduction	1
1.1	Stormwater Standards Manual	1
1.2	Purposes and Use	1
2	Minimum BMP Requirements	3
2.1	Existing Development: Industrial, Commercial, Municipal, and Residential	3
2.2	Construction.....	16
2.2.1	Construction BMP Planning and Management Requirements	16
2.2.2	Summary of Minimum BMP Requirements.....	16
2.3	Post-Construction BMPs for Development Projects.....	24

Tables

Table 1.	Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources	5
Table 2.	BMPs for Construction Sites	20

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1 Introduction

1.1 Stormwater Standards Manual

This Stormwater Standards Manual (hereafter, “Manual”) is to be used in conjunction with the City of Encinitas (City) Stormwater Management and Discharge Control Ordinance (Stormwater Ordinance), codified as Encinitas Municipal Code (EMC) Chapter 20.08, and the water quality protection provisions of the City of Encinitas Grading, Erosion and Sediment Control Ordinance, codified as EMC Chapter 23.24. This Manual is not a stand-alone document, but must be read in conjunction with other parts of the Stormwater Ordinance and the Grading, Erosion, and Sediment Control Ordinance (collectively, “Ordinances”). In general, this Manual sets out in more detail, by project category, what dischargers must do to comply with the Ordinances. The Manual and the Ordinances have been prepared to provide the City with the legal authority necessary to comply with the requirements of San Diego Regional Water Quality Control Board (RWQCB) Order No. R9-2013-0001, as amended by Order No. R9-2015-0001 (Municipal Permit).

1.2 Purposes and Use

The purposes of this Manual are to establish clear minimum stormwater management requirements and controls, and to support the following objectives stated in Section 20.08.020 of the Stormwater Ordinance:

- Prohibiting non-Stormwater discharges to the Stormwater Conveyance System;
- Eliminating pollutants in Stormwater to the Maximum Extent Practicable, including pollutants from both point and non-point sources;
- Prohibiting activities which cause, or contribute to, exceedance of state and federal Receiving Water Quality objectives.
- Protecting Watercourses from disturbance and pollution.

The requirements described in the Manual are primarily in the form of best management practices (BMP) to be used to reduce the amount of pollutants discharged to the City’s Stormwater Conveyance System (hereafter, “storm drain system”¹). The Manual is intended to provide direction to residents, businesses, contractors, developers, and City staff about what is necessary to meet the City’s stormwater requirements. All terms used in the Manual have the same meaning as defined in EMC Chapter 20.08, unless otherwise noted.

The Manual provides direction on stormwater BMPs required by the City of Encinitas. In some cases, actions that have applicable stormwater BMPs may also be subject to requirements of

¹ Throughout the Manual, the term “storm drain system” is typically used instead of “Stormwater Conveyance System” since the former term is expected to be better understood by the general public.

other City programs or to requirements established by other agencies, such as the RWQCB, the US Army Corps of Engineers, and the County of San Diego Department of Environmental Health. Complying with the BMPs described in the Manual does not ensure compliance with all other regulatory requirements, including requirements of other agencies. The legally responsible person taking any action is responsible for identifying all other applicable requirements and obtaining any necessary permits or approvals.

Discharges to the sanitary sewer system require approval from the City's Public Works Department. Structural improvements to properties, such as building an overhead canopy, may also require City permits. Call the City's Engineering Division at (760) 633-2770 for more information.

2 Minimum BMP Requirements

This section presents minimum BMP requirements for the following types of properties and activities:

- Industrial, commercial, municipal, and residential
- Construction sites

Note that post-construction BMP requirements applicable to development projects are provided in the Encinitas Engineering Design Manual.

Wherever BMP requirements reference “where applicable,” “where feasible,” or similar terms that involve discretion, the final determination shall be made by City Enforcement Staff, as defined in EMC Chapter 20.08. Enforcement Staff also have the authority to require additional BMPs beyond the minimum BMPs listed in this Manual if necessary to comply with EMC Chapter 20.08. References to “CASQA Factsheets” refer to factsheets in manuals prepared by the California Stormwater Quality Association (CASQA). CASQA materials can be accessed at www.casqa.org. Some materials may not be viewable without a paid subscription.

2.1 Existing Development: Industrial, Commercial, Municipal, and Residential

The City’s BMP requirements for existing development (industrial, commercial, municipal, and residential) follow the organization of the Municipal Permit, which groups all types of existing development together. Table 1 presents the minimum required BMPs for industrial, commercial, municipal, and residential sites and sources. The section(s) of the Encinitas Municipal Code that provide legal authority to require the BMPs are also presented in the table.

BMPs are required to the extent that they apply to a given property or activity. Enforcement staff determine when and to what extent BMPs are applicable. Factors such as frequency and intensity of the activity are typically considered in this determination. While most BMPs are typically applicable to businesses and municipal operations, some BMPs are less likely to be applicable to residents, or when they are applicable, may be addressed through simpler measures. For example, hazardous waste management at a business usually requires compliance with County of San Diego Department of Environmental Health permit requirements, including employee training, secondary containment structures, and keeping records of proper disposal. At a residence, no permitting requirements apply in almost all cases. Small quantities of household hazardous wastes like cleaning supplies may be kept in cabinets in a house or garage, with excess materials disposed of through household hazardous waste collection sites.

The BMPs listed in Table 1 are the minimum required BMPs. In accordance with EMC Chapter 20.08, Enforcement Staff may require a discharger to prepare a site-specific Stormwater

Pollution Prevent Plan, including a description of employee training efforts. Enforcement Staff may also require a discharger to monitor or sample discharges and report results to the City, or Enforcement Staff may directly sample or monitor discharges themselves. If monitoring or sampling identifies discharges as sources of pollutants, Enforcement Staff may require additional BMPs as necessary to eliminate the source of pollution and prevent discharges from causing or contributing to exceedances of water quality standards.

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
Discharge Control			
1	Eliminate illegal connections to the storm drain system.	<p>A. "Illegal Connection" means a physical connection to the Stormwater Conveyance System or Receiving Waters, which has not been reviewed and authorized by the City; or a permitted connection, which conveys Illegal Discharges.</p> <p>B. No person shall establish, use, or maintain an Illegal Connection to the Stormwater Conveyance System or the Receiving Waters.</p>	EMC 20.08.070
2	Eliminate illegal discharges.	<p>A. "Illegal Discharge" is any discharge to the Stormwater Conveyance System that is not composed entirely of Stormwater or is not discharged in compliance with EMC Chapter 20.08. This includes, but is not limited to, discharges of non-Stormwater that are not exempt as defined by EMC Chapter 20.08, discharges of irrigation runoff to the MS4, any discharge from an illegal connection, and any discharge that contains additional pollutants due to the absence of a required BMP or the failure of a BMP. Discharges that require a City permit or a RWQCB permit that has not been issued or has not been acknowledged by the discharger to be applicable are illegal discharges. Discharges regulated under an applicable NPDES Permit are illegal discharges for purposes of EMC Chapter 20.08 unless compliance with all applicable permit conditions is maintained.</p> <p>B. No person shall discharge stormwater directly or indirectly into the Stormwater Conveyance System or Receiving Waters, unless discharged in compliance with EMC Chapter 20.08.</p>	EMC 20.08.040

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources (Continued)

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
3	Properly dispose of process and wash water.	A. All process water and wash water shall be contained, captured and reused, properly disposed of to the sanitary sewer, removed by an appropriate waste hauler, or, where water contains a negligible amount of pollutants, directed to landscaping or other pervious surfaces.	EMC 20.08.040
4	Eliminate the discharge of vehicle and equipment wash water.	<p><u>Industrial, Commercial, and Municipal Implementation</u></p> <p>A. Water associated with washing activities shall not be allowed to enter City storm drains, curbs and gutters, or any other part of the City’s storm drain system. When washing is conducted outside permanent designated wash areas, all wash water shall be contained, captured, and disposed of appropriately.</p> <p>B. Drains in designated vehicle or equipment washing areas may be connected to the sanitary sewer system if approved by the City. Designated wash areas connected to the sanitary sewer system shall be covered and designed to prevent stormwater run-on.</p> <p>C. When washing is conducted outside permanent designated wash areas that drain to the sanitary sewer, all wash water shall be contained, captured, and disposed of appropriately. Small amounts of water may be allowed to evaporate if any remaining residue is removed to prevent future pollutant discharges. Wash water containing oil, paint, or other hazardous waste shall be disposed of properly in accordance with applicable regulations.</p> <p><u>Residential Implementation</u></p> <p>A. Wash water from individual residential vehicle washing should be directed to landscaped areas or other unpaved surfaces, where feasible. Minimizing water use (e.g., through use of a shut-off nozzle) and minimizing use of detergents and other vehicle wash products are encouraged. Non-commercial car washes, such as fundraisers and other similar activities, are not considered individual residential vehicle washing, and are therefore subject to the industrial, commercial, and municipal requirements as described above.</p>	EMC 20.08.050

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources (Continued)

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
5	Properly dispose of water from fire sprinkler maintenance activities.	<p>A. Non-emergency firefighting discharges, including building fire suppression system maintenance discharges (e.g. sprinkler line flushing), controlled or practice blazes, training, and maintenance activities shall be addressed by BMPs to prevent the discharge of pollutants to the MS4.</p> <p>B. Fire sprinkler system discharges containing corrosion inhibitors, fire suppressants, or antifreeze shall be disposed through the sanitary sewer system, not the storm drain system. Fire sprinkler system discharges without corrosion inhibitors, fire suppressants, or antifreeze shall be disposed through the sanitary sewer, if practicable. When not practicable to discharge to the sanitary sewer system due to the presence of prohibited contaminants, the water shall be collected and disposed of by an appropriately certified party. When not practicable to discharge to the sanitary sewer system for reasons other than the presence of prohibited contaminants, the water shall not be discharged unless adequate precautions have been taken to prevent the transport of pollutants to the storm drain system.</p>	EMC 20.08.050
6	Eliminate irrigation runoff.	<p>A. Irrigation runoff to the storm drain system shall be eliminated through proper landscape maintenance and watering practices.</p>	EMC 20.08.040
7	Properly dispose of discharges from swimming pools and spas.	<p>A. Chlorine, algaecide, filter backwash, and other pollutants shall be eliminated prior to discharging swimming pool water to the MS4.</p> <p>B. Saline swimming pool water shall be directed to the sanitary sewer, landscaped areas, or other pervious surfaces that can accommodate the volume of water, unless the saline swimming pool water can be discharged through a pipe or concrete channel directly to a naturally saline water body.</p>	EMC20.08.050
8	Control air conditioning condensation discharges.	<p>A. Air conditioning condensation shall be directed to landscaped areas or other pervious surfaces, or to the sanitary sewer, where feasible, as determined by Enforcement Staff.</p>	EMC 20.08.050

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources (Continued)

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
9	Eliminate floor mat cleaning discharges.	<p>A. Floor mats shall be cleaned in a manner such that there is no discharge to City storm drains, curb gutters along City streets, or any other part of the City’s storm drain system.</p> <p>B. Indoor wash areas, mop sinks, or indoor floor drains may be designated as wash areas for floor mats if these areas drain to the sanitary sewer system.</p>	EMC 20.08.040
10	Eliminate pumped groundwater, foundation, and footing drain discharges.	<p>The following types of discharges should be eliminated where feasible. Where not feasible, a National Pollutant Discharge Elimination System (NPDES) permit² shall be obtained from the Regional Water Quality Control Board unless the Regional Water Quality Control Board has determined in writing that no permit is needed.</p> <p>A. Pumped groundwater, including water from crawl space pumps.</p> <p>B. Discharges from foundation and footing drains that are at or below the groundwater table to actively or passively extract groundwater during any part of the year.</p>	EMC 20.08.050
11	Regularly clean and maintain structural BMPs, including LID installations, to ensure proper performance.	<p>A. Permanent BMPs. The owners and occupants of lands on which Permanent BMPs have been installed shall ensure the maintenance of those BMPs, and shall themselves maintain those BMPs if other persons or entities who are also obliged to maintain those BMPs (by contract or covenant, or pursuant to EMC Chapter 20.08) fail to do so.</p> <p>B. Maintenance of permanent BMPs shall be conducted as frequently as necessary to maintain the designated functionality of the BMP(s).</p>	EMC 20.08.140

² As of June 2015, the applicable permit for discharges of groundwater is NPDES NO. CAG919002 (RWQCB Order No. R9-2008-0002). The San Diego Regional Water Quality Control Board (<http://www.waterboards.ca.gov/sandiego>) can provide additional details about permit requirements.

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources (Continued)

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
Good Housekeeping			
12	Regularly clean facility parking areas.	<p>A. Paved parking lots, roads, and driveways located on the property shall be cleaned as needed to prevent pollutants from entering the City’s storm drain system, including the curb and gutter.</p> <p>B. Sweeping is the preferred method of cleaning. Wet cleaning methods, such as mopping or power washing, may be substituted for sweeping if all wash water is contained, captured, and disposed of appropriately.</p>	EMC 20.08.080
13	Implement good housekeeping to keep site free of trash and debris.	<p>A. Outdoor areas shall be cleaned as needed to keep them free of accumulations of trash, sediment, litter, and other debris.</p>	EMC 20.08.080
14	Keep storm drain inlets free of sediment, trash, and debris.	<p>A. Accumulated materials shall be removed from, and around on-site storm drains.</p>	EMC 20.08.080 & 20.08.110
15	Implement controls to minimize pollution from exposed outdoor work areas.	<p>Activities that may generate pollutants, including but not limited to vehicle repair, shall be conducted in covered, contained areas where feasible. Where not feasible, the following measures are required:</p> <p>A. Protect areas where outdoor activities are performed from runoff from upstream areas.</p> <p>B. Do not conduct outdoor activities that may generate pollutants when it is raining.</p> <p>C. Thoroughly clean outdoor work areas at least daily to remove accumulated sediment, debris, oil and grease, particulate matter, and other pollutants.</p>	EMC 20.08.090, 20.08.110 & 20.08.140

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources (Continued)

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
Material Storage and Handling			
16	Provide and maintain secondary containment to catch spills if storing potential liquid pollutants in outdoor areas.	<ul style="list-style-type: none"> A. Drums and other containers shall be kept in good condition and securely closed when not in use. B. Effective secondary containment shall be provided and maintained for all containers of liquid with the potential to leak or to spill onto outdoor areas to prevent leaks or spills from discharging pollutants to the storm drain system. C. Secondary containment shall also be provided for all liquids during transport to prevent spills. D. Provide liquid storage containers with covers to prevent precipitation from accumulating in or causing overflows from the secondary containment. E. Note that other regulations may also apply to the use of secondary containment, especially for hazardous materials, which are regulated by the County of San Diego Department of Environmental Health. 	EMC 20.08.090, 20.08.110 & 20.08.140
17	Cover, contain, and/or elevate materials stored outside that may become a source of pollutants in stormwater or non-stormwater.	<ul style="list-style-type: none"> A. Materials stored outdoors shall be covered, contained, and/or elevated to prevent stormwater and non-stormwater from contacting and/or transporting materials and pollutants to the storm drain system. Some examples of cover are roofs, awnings, and tarps. 	EMC 20.08.090, 20.08.110 & 20.08.140

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources (Continued)

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
18	Properly store and dispose of hazardous materials.	<ul style="list-style-type: none"> A. Hazardous materials and wastes shall be stored, managed, and disposed in accordance with federal, state, and local laws and regulations. B. Hazardous materials and wastes and their primary storage containers shall also be stored such that they will not come into contact with stormwater, even if leaks or spills occur. C. Hazardous materials and wastes generated by business activities are additionally regulated by the County of San Diego Department of Environmental Health. D. Store hazardous materials and wastes, and their primary storage containers, with sufficient cover and/or containment to prevent contact with stormwater. 	EMC 20.08.090, 20.08.110 & 20.08.140
Pesticide and Fertilizer Management			
19	Properly manage pesticides and fertilizers.	<ul style="list-style-type: none"> A. Pesticides and fertilizers shall be applied in strict accordance with manufacturer's label, as authorized by U.S. Environmental Protection Agency. B. Chemicals shall be stored safely in covered and contained areas. See BMPs 16 and 17 for additional details regarding storage. C. Waste products shall be disposed of in accordance with the manufacturer's label and applicable hazardous waste regulations. D. Use of integrated pest management techniques to reduce the amount of pesticides used is encouraged. For more information about integrated pest management, see the University of California Statewide IPM Program at http://www.ipm.ucdavis.edu. 	EMC 20.08.090, 20.08.110 & 20.08.140

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources (Continued)

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
Spill Prevention and Response			
20	Prevent or capture liquid leaks from vehicles or equipment.	<ul style="list-style-type: none"> A. Leaking vehicles or equipment shall be repaired promptly. B. Drip pans or other equivalent means shall be used to capture spills or leaks of oil and other fluids from vehicles awaiting maintenance and during maintenance activities. C. Captured fluids shall be disposed of in accordance with applicable hazardous materials regulations. 	EMC 20.08.090
21	Immediately clean up spills.	<ul style="list-style-type: none"> A. Spills shall be cleaned up immediately and prevented from entering the storm drain system. B. Dry cleaning methods such as the use of rags and absorbents are preferred cleaning methods. Clean up/or remove and properly dispose in a timely manner to the satisfaction of the enforcement officer. C. Spills that enter a storm drain shall be reported promptly to the City's Clean Water Hotline at (760) 633 -2787. 	EMC 20.08.090
22	Maintain a readily accessible spill cleanup kit that is appropriate for the type of materials stored onsite.	<ul style="list-style-type: none"> A. Cleanup materials and equipment appropriate for the type and quantity of potential spills shall be kept onsite and with any mobile activities as a spill cleanup kit. B. Keep cleanup materials in close proximity to locations where spills may occur, with instructions for use clearly displayed. 	EMC 20.08.090

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources (Continued)

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
Waste Management			
23	Keep trash/waste storage areas free of exposed trash, sediment, and debris.	<ul style="list-style-type: none"> A. Stored waste shall be protected and covered from contact with stormwater and non-stormwater. B. Disposal areas for trash and other wastes shall be cleaned as frequently as necessary to keep these areas free of loose trash, litter, debris, liquids, powders, and sediment. C. Liquid waste, hazardous waste, medical waste, universal waste, and other items prohibited by current regulations shall not be placed in solid waste dumpsters. D. Dry cleaning methods such as sweeping are preferred. E. If wet cleaning methods are used, all wash water shall be contained, captured, and disposed of appropriately. 	EMC 20.08.090
24	Protect waste storage areas from contact with stormwater and non-stormwater flows onto the property.	<ul style="list-style-type: none"> A. Stored trash and other wastes shall be protected from contact with stormwater and non-stormwater flows. B. Trash and other wastes shall be contained to prevent transport of trash off site, and to keep surrounding areas and on site storm drains free of trash and other wastes. 	EMC 20.08.090
25	Cooking oil waste shall be managed to prevent illegal discharges.	<ul style="list-style-type: none"> A. Waste containers for oils, grease, fats, or tallow shall be kept indoors where feasible. B. For outdoor storage, the waste containers shall be kept in a covered, contained area to prevent waste transport in runoff. 	EMC 20.08.090

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources (Continued)

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
26	Manage animal waste and animal washing in a manner that prevents transport of wastes and wash water off-site.	<ul style="list-style-type: none"> A. Animals and animal waste shall be managed and stored in a manner that prevents animal waste and wash water from entering the storm drain system. B. Collect and dispose of animal waste to the trash or the sanitary sewer, as appropriate. 	EMC 20.08.090
BMPs for Equestrian Use Areas and Activities			
27	Design equestrian use areas to prevent transport of pollutants off-site.	<ul style="list-style-type: none"> A. Locate equestrian use areas out of the flow path of storm water runoff from surrounding areas, and away from waterways B. Direct runoff from equestrian use areas away from the storm drain system and waterways C. Do not allow water to stand onsite for more than 72 hours 	EMC 20.08.040, 20.08.090, 30.34.040, & 30.55.030
28	Stabilize equestrian use areas to control sediment and prevent erosion	<ul style="list-style-type: none"> A. Ensure unpaved equestrian use areas and access roads are stabilized to prevent soil erosion and wind dispersion B. Install check dams or energy dissipation devices, such as rip rap, as needed, to prevent erosion within onsite drainages (e.g. swale, ditch, or similar conveyance). Note that BMP installation within a creek or other waterbody is prohibited. C. Subdivide pastures and rotate animal access to prevent over-grazing and associated erosion D. Regularly maintain irrigation systems and repair leaks 	EMC 20.08.040, 20.08.090

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources (Continued)

No.	BMP Title	BMP Description	Encinitas Municipal Code (EMC) Section Reference
29	Conduct appropriate housekeeping to prevent transport of wastes and wash water off-site.	<ul style="list-style-type: none"> A. Regularly maintain drainage structures to prevent debris or sediment accumulation B. Regularly remove animal wastes and deceased animals from the property C. Do not allow horse wash water to discharge to the storm drain system or waterways 	EMC 20.08.040, 20.08.080, 20.08.090, 20.08.110, & 30.55.030
30	Manage pests and chemicals in a manner that prevents transport of pollutants off-site.	<ul style="list-style-type: none"> A. Use Integrated Pest Management (IPM) preferentially over chemical methods B. Use, store, and dispose of chemical pesticides, herbicides, and fertilizers in accordance with manufacturer's directions and hazardous material regulations 	EMC 20.08.090, 20.08.110 & 20.08.140
31	Manage manure and soiled bedding in a manner that prevents transport of wastes and wash water off-site.	<ul style="list-style-type: none"> A. Regularly remove animal wastes and soiled bedding from animal housing B. Store manure, soiled bedding, and other waste materials in a way that prevents contact with waterways or storm water, and where seepage is prevented from leaching into the ground or flowing into waterways 	EMC 20.08.040, 20.08.090, 20.08.110, 30.55.030
32	Manage feeding and watering operations in a manner that prevents transport of pollutants off-site.	<ul style="list-style-type: none"> A. Do not allow water troughs to overflow or stagnate B. Prevent horse access to waterways, and provide other sources of water and shade 	EMC 20.08.040, 20.08.090

2.2 Construction

Construction sites are required to implement BMPs to reduce discharges of sediment and other pollutants associated with construction activities. The City's BMP standards are based on the California Stormwater Quality Association (CASQA) BMP factsheets and the 2010 *City of Encinitas Storm Water Best Management Practices, Part II*. Where any conflict may exist between CASQA factsheets and requirements in the Stormwater Standards Manual or the Municipal Code, the requirements of the Stormwater Standards Manual and the Municipal Code shall prevail. Property owners and contractors are responsible for compliance with requirements of other agencies, including the State Construction General Permit (CGP).³ Complying with the BMPs described in the Stormwater Standards Manual does not ensure compliance with regulatory requirements of other agencies.

2.2.1 Construction BMP Planning and Management Requirements

Construction sites are required to show the BMPs they plan to implement on their Erosion Control Plans, which shall be prepared in accordance with the BMP standards in this Manual, EMC Chapter 20.08, and EMC Chapter 23.24. Construction BMP plans should consider ways in which BMP implementation may change over the course of construction, as a project goes through different phases. Sites subject to the CGP also prepare Stormwater Pollution Prevention Plans (SWPPP) to demonstrate their approach to meeting CGP requirements. When a site is subject to the CGP and City requirements are stricter than the CGP, the Erosion Control Plan is required to meet the City's standards. Significant differences between the CGP standards and the City's standards are identified in Section 2.2.2 below.

Because site conditions change over time and from phase to phase, site owners and operators should regularly evaluate BMP implementation to verify continued effectiveness. City Enforcement Staff, including Engineering inspectors, also assess BMP implementation during construction, most commonly during site inspections. Enforcement Staff have the authority to require BMPs that are appropriate to the observed condition and phase of a construction site to ensure discharges of pollutants are reduced to the MEP, even if those BMPs are not explicitly shown on the approved plans.

2.2.2 Summary of Minimum BMP Requirements

BMPs are required year round, including during the dry season (May 1 through September 30). BMP implementation shall also plan for and address rain events that may occur at any time, regardless of the season. The following summarizes the minimum BMP requirements that

³ NPDES Permit No. CAS000002, currently State Water Resources Control Board Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ.

apply to construction sites. BMPs shall be implemented per the CASQA factsheet unless otherwise identified below or unless approved by the Enforcement Staff. Table 2 provides additional details on required BMPs, including the applicable CASQA standards.

- A. **Perimeter protection** BMPs shall be installed and maintained to comply with the applicable CASQA factsheet standards. See Table 2 for CASQA factsheet references.
- B. **Sediment control** BMPs shall be installed and maintained to comply with the applicable CASQA factsheet standards. See Table 2 for CASQA factsheet references.
- C. BMPs to control **sediment tracking** shall be installed and maintained at entrances/exits to comply with the applicable CASQA factsheet standards. See Table 2 for CASQA factsheet references.
- D. Material needed to install standby **erosion control** BMPs necessary to completely protect the exposed portions of the site from erosion and to prevent sediment discharges, shall be stored on site. Areas that have already been protected from erosion using physical stabilization or established vegetation stabilization BMPs as described below are not considered to be “exposed” for purposes of this requirement.
- E. The owner/contractor shall have the ability to deploy standby erosion control BMPs as needed to completely protect the exposed portions of the site within 24 hours of a predicted storm event (a predicted storm event is defined as a forecasted, 40% chance of rain). On request, the owner/contractor shall provide proof of this capability that is acceptable to the Director of Public Works.
 - a. **Note:** This requirement is different than the CGP requirement, which requires initial evaluation of the site within 48 hours of a forecasted rain event and, for certain sites, preparing a Rain Event Action Plan within 24 hours of the forecasted rain event. The CGP defines a forecasted rain event as a 50% chance of rain.
- F. Deployment of physical or vegetation erosion control BMPs shall commence as soon as grading and/or excavation is completed for any portion of the site, in accordance with the timeline provided in part “M” below. In these areas, the project proponent may not continue to rely on the ability to deploy standby BMP materials to prevent erosion.
- G. The area that can be cleared or graded and left exposed at one time is limited to the amount of acreage that the owner/contractor can adequately protect prior to a predicted rainstorm. This standard may require grading to be phased at larger sites.

- H. To provide sufficient protection for storms likely to occur during the rainy season, additional and/or more advanced erosion control BMPs shall be installed on the project site if necessary.
- I. To provide sufficient protection for storms likely to occur during the rainy season, additional and/or more advanced perimeter protection and sediment control BMPs shall be installed on the project site if necessary.
- J. Adequate physical or vegetation erosion control BMPs shall be installed and established for all graded areas prior to the start of the rainy season. These BMPs shall be maintained throughout the rainy season. If a selected BMP fails, it shall be repaired and improved, or replaced with an acceptable alternate as soon as it is safe to do so. The failure of a BMP shows that the BMP, as installed, was not adequate for the circumstances in which it was used and shall be corrected or modified as necessary. Repairs or replacements shall therefore put a more effective BMP in place.
- K. All vegetation erosion control shall be established prior to the rainy season to be considered as a BMP.
- L. The amount of exposed soil allowed at one time shall not exceed that which can be adequately protected by deploying standby erosion control and sediment control BMPs prior to a predicted rainstorm.
- M. A disturbed area that is not completed but in which construction activities have ceased for 7 or more consecutive calendar days shall be fully protected from erosion. The ability to deploy standby BMP materials is not sufficient for these areas. BMPs shall actually be deployed.
 - a. **Note:** This requirement is different than the CGP requirement, which requires protection after 14 days of inactivity rather than 7 days.
- N. Properly protected, designated storage areas are required for materials and wastes.
- O. Non-stormwater discharges should be eliminated or controlled to the maximum extent practicable. Discharges prohibited by EMC Chapter 20.08 shall be eliminated.
- P. Manage runoff velocity to prevent downstream erosion.
- Q. Implement any other BMPs, in addition to items “A” through “P” above, that are required on the site’s Erosion Control Plan. Additional BMPs may also be required by City inspectors based on inspections or other field evaluations.

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Table 2. BMPs for Construction Sites

BMP Categories	Required, Where Applicable ¹	CASQA BMP Factsheet No.	CASQA BMP Factsheet Name	Municipal Permit BMP Categories							Corresponding Inspection Form Question
				Project Planning	Erosion Control	Run-on & Runoff Control	Sediment Control	Housekeeping	Non-Stormwater Management	Active/Passive Sediment Treatment	
Project Planning	Yes	EC-1	Scheduling	x							(Considered during plan review)
Erosion Control	Yes, Select Effective Combination as Applicable ^{2,3}	EC-3	Hydraulic Mulch ³		x						Mulch
		EC-6	Straw Mulch ³		x						Mulch
		EC-8	Wood Mulching ³		x						Mulch
		EC-4	Hydroseeding		x						Hydroseeding
		EC-2	Preservation of Existing Vegetation ³	x	x						Permanent Landscaping
		EC-7	Geotextiles and Mats ³		x						Geotextiles/Mats
		EC-14	Compost Blankets ³		x						Geotextiles/Mats
	EC-5	Soil Binders ³		x						Soil Binder	
	Yes, Select Effective Combination as Applicable ²	EC-9	Earth Dikes and Drainage Swales			x					Run-on/Runoff Controls
		EC-10	Velocity Dissipation Devices			x					Run-on/Runoff Controls
		EC-11	Slope Drains			x					Run-on/Runoff Controls
	Yes	EC-12	Stream Bank Stabilization		x						Other
	Alternative that May Be Considered ⁴	EC-15	Soil Preparation Roughening ³		x						Other
		EC-16	Non-Vegetative Stabilization ³		x						Other

Table 2. BMPs for Construction Sites (Continued)

BMP Categories	Required, Where Applicable ¹	CASQA BMP Factsheet No.	CASQA BMP Factsheet Name	Municipal Permit BMP Categories							Corresponding Inspection Form Question
				Project Planning	Erosion Control	Run-on & Runoff Control	Sediment Control	Housekeeping	Non-Stormwater Management	Active/ Passive Sediment Treatment	
Sediment Control	Yes, Select Effective Combination as Applicable ^{2, 5}	SE-1	Silt Fence ⁶				x				Silt Fencing
		SE-2	Sediment Basin ⁷				x				Sediment Basin/Sediment Trap
		SE-3	Sediment Traps ⁷				x				Sediment Basin/Sediment Trap
		SE-6	Gravel Bag Berm				x				Gravel Bag Check Dams
		SE-4	Check Dam				x				Gravel Bag Check Dams
		SE-5	Fiber Rolls ⁶				x				Fiber Rolls
	Yes	TC-1	Stabilized Construction Entrance/Exit				x				Stabilized Entrance/Exit
	At Discretion of City ⁸	TC-2	Stabilized Construction Roadway				x				Other
	At Discretion of City ⁸	TC-3	Tire Wash				x				Other
	Yes	SE-10	Storm Drain Inlet Protection				x				Storm Drain Inlet Protection
	Alternative that May Be Considered ⁹	SE-12	Manufactured Linear Sediment Controls				x				Other
		SE-13	Compost Socks and Berms				x				Other
		SE-14	Biofilter Bags				x				Other
	At Discretion of City ⁸	WE-1	Wind Erosion Control				x				Other
At Discretion of City ^{7, 10}	SE-11	Active Treatment Systems ¹⁰							x	Other*	

Table 2. BMPs for Construction Sites (Continued)

BMP Categories	Required, Where Applicable ¹	CASQA BMP Factsheet No.	CASQA BMP Factsheet Name	Municipal Permit BMP Categories							Corresponding Inspection Form Question
				Project Planning	Erosion Control	Run-on & Runoff Control	Sediment Control	Housekeeping	Non-Stormwater Management	Active/ Passive Sediment Treatment	
Waste Management and Good Housekeeping	Yes	WM-3	Stockpile Management					x			Stockpile Management
	Yes	WM-8	Concrete Waste Management					x	x		Designated Washout Area(s)
	Yes	NS-8	Vehicle and Equipment Cleaning					x	x		Equipment and Vehicle Storage
	Yes	NS-10	Vehicle and Equipment Maintenance					x	x		Equipment and Vehicle Storage
	Yes	WM-5	Solid Waste Management					x			Trash, Litter, and Debris Management
	Yes	SE-7	Street Sweeping and Vacuuming				x	x			Street Sweeping
	Yes	WM-1	Material Delivery & Storage					x			Fuel/Chemical Storage
	Yes	WM-4	Spill Prevention & Control					x			Fuel/Chemical Storage
	Yes	WM-6	Hazardous Waste Management					x			Fuel/Chemical Storage
	Yes	WM-10	Liquid Waste Management					x	x		Fuel/Chemical Storage
	Yes	NS-9	Vehicle and Equipment Fueling					x	x		Fuel/Chemical Storage
	Yes	WM-9	Sanitary/Septic Waste Management					x	x		Sanitary Waste Area Mgmt
	Yes	NS-1	Water Conservation Practices						x		Non-Stormwater Mgmt
	Yes	NS-2	Dewatering Operations						x		Non-Stormwater Mgmt
	Yes	NS-3	Paving and Grinding Operations						x		Non-Stormwater Mgmt
	Yes	NS-4	Temporary Stream Crossing						x		Non-Stormwater Mgmt
	Yes	NS-5	Clear Water Diversion						x		Non-Stormwater Mgmt
	Yes	NS-6	Illicit Connection/Discharge						x		Non-Stormwater Mgmt
	Yes	NS-7	Potable Water/Irrigation ¹¹						x		Non-Stormwater Mgmt
	Yes	NS-11	Pile Driving Operations						x		Non-Stormwater Mgmt
Yes	NS-12	Concrete Curing						x		Non-Stormwater Mgmt	

Table 2. BMPs for Construction Sites (Continued)

BMP Categories	Required, Where Applicable ¹	CASQA BMP Factsheet No.	CASQA BMP Factsheet Name	Municipal Permit BMP Categories							Corresponding Inspection Form Question
				Project Planning	Erosion Control	Run-on & Runoff Control	Sediment Control	Housekeeping	Non-Stormwater Management	Active/ Passive Sediment Treatment	
Waste Management and Good Housekeeping (Continued)	Yes	NS-13	Concrete Finishing						x		Non-Stormwater Mgmt
	Yes	NS-14	Material Over Water						x		Non-Stormwater Mgmt
	Yes	NS-15	Demolition Adjacent to Water						x		Non-Stormwater Mgmt
	Yes	NS-16	Temporary Batch Plants						x		Non-Stormwater Mgmt
	Yes	WM-2	Material Use					x			Other
	Yes	WM-7	Contaminated Soil Management					x			Other

Notes

1. BMPs marked as required do not need to be included in plans or implemented if demonstrated not to be applicable satisfactory to City staff.
2. A combination of the BMPs within these categories that will be effective, as determined by City staff, shall be proposed. Typically not all BMPs within the category will be necessary to provide an effective combination. In some cases only one BMP from the category may be necessary to be effective.
3. The City requires erosion control BMPs to be applied to areas that have been inactive for at least 7 days. The City requires sites to follow this 7 day standard rather than the 14 day standard stated in the CASQA factsheet.
4. These BMPs may be included as part of the overall effective combination of erosion control BMPs if approved by City staff.
5. An effective combination of sediment control BMPs includes both full perimeter protection and sediment control within the boundaries of the site.
6. Silt fence and fiber rolls shall be staked into the ground as shown in the CASQA factsheet to be effective. Therefore, they may not be used in paved areas or other areas where staking is not possible; gravel bags (SE-6) or compost socks (SE-13) shall be used on paved areas instead.
7. Sediment basins and traps shall be sized per CASQA and City standards. Sediment basins and traps shall be maintained after storms in accordance with the CASQA factsheets unless otherwise directed by City staff. Due to site drainage patterns, sediment basins and traps are often located where permanent post-construction BMPs will eventually be installed. All accumulated sediment from the construction phase shall be removed prior to final installation of permanent post-construction BMPs to maintain the as-designed percolation rate.
8. These BMPs are not required to be included in plans or implemented unless specifically directed to be included by City staff to meet the MEP standard.
9. These BMPs may be included as part of the overall effective combination of sediment control BMPs if approved by City staff.
10. Active treatment systems may be required for CGP Risk Level 3 sites, as necessary to meet CGP standards. They may also be required for other sites at the discretion of City staff.
11. The CASQA factsheet implies some irrigation runoff may be acceptable. However, irrigation runoff discharges are considered illegal discharges and are prohibited per Encinitas Municipal Code Chapter 20.08.

2.3 Post-Construction BMPs for Development Projects

The City's post-construction BMPs for development projects are presented in the Engineering Design Manual.

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