CITY OF ENCINITAS

Jurisdictional Runoff Management Program

June 2015

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Table of Contents

Executive Summary ES-1

1 Introduction 1-1

1.1 Background 1-1

1.1.1 Urban Runoff as Non-Point Source of Pollutants 1-1

1.1.2 Regulatory Background 1-2

1.2 Purpose and Objectives 1-2

1.3 City Setting 1-3

1.3.1 Watersheds 1-3

1.3.2 Storm Drain System 1-3

1.3.3 Environmentally Sensitive Areas 1-3

1.3.4 Report Organization 1-4

2 Program Organization and Legal Authority 2-1

2.1 Introduction 2-1

2.2 Certification of Legal Authority 2-1

2.3 Departmental Roles and Responsibilities 2-2

3 Illicit Discharge Detection and Elimination 3-1

3.1 Introduction 3-1

3.2 Non-Stormwater Discharges 3-1

3.2.1 Prohibited Discharges 3-2

3.2.2 Conditionally Allowed Discharges 3-3

3.2.3 Firefighting Discharges 3-4

3.3 IC/ID Prevention and Detection 3-5

3.3.1 Public Reporting of Illegal Discharges and Connections 3-5

3.4 Spill Reporting, Response, and Prevention 3-6

3.4.1 Sewage Spill Prevention 3-6

3.4.2 Sewage Spill Response 3-7

3.4.3 Hazardous Materials Spill Response 3-8

3.4.4 Other Spill Prevention and Mitigation Procedures 3-8

3.4.5 Spill/Discharge Reporting 3-8

3.5 IC/ID Investigation and Elimination 3-8

3.5.1 Dry Weather Major MS4 Outfall Discharge Monitoring 3-8

3.5.2 Storm Drain System Map 3-9

3.5.3 Other Source Investigation Procedures 3-10

3.5.4 Elimination of IC/IDs 3-11

3.5.5 Record Keeping 3-12
3.6 Enforcement 3-12
4 Development Planning 4-1
4.1 Introduction 4-1
4.2 Land Use Planning 4-1
4.2.1 General Plan 4-2
4.2.2 Environmental Review Process 4-2
4.2.3 Encinitas Stormwater Manual 4-3
4.2.3.1 Prior Lawful Approval 4-3
4.3 Development Project Requirements 4-4
4.3.1 BMP Requirements for All Projects 4-4
4.3.2 BMP Requirements for Priority Development Projects 4-4
4.3.2.1 Alternative Compliance 4-5
4.4 Development Project Review and Approval 4-5
4.4.1 Discretionary Projects Review and Approval 4-6
4.4.1.1 Predevelopment review 4-6
4.4.1.2 Stormwater Quality Checklist and Certification 4-7
4.4.1.3 Development Review and Approval 4-7
4.4.2 Ministerial Projects Review and Approval 4-7
4.4.2.1 Engineering Review and Approval 4-8
4.4.2.2 Permanent BMP Maintenance Agreements 4-8
4.4.3 Capital Improvement Projects 4-9
4.4.4 Outreach and Staff Training 4-9
4.5 PDP BMP Implementation and Oversight 4-9
4.5.1 Permanent BMP Approval and Verification 4-9
4.5.2 PDP Inventory and Prioritization 4-10
4.5.3 Structural BMP Maintenance Verification and Inspection 4-15
4.6 Enforcement Measures for Development Sites 4-17
5 Construction Management 5-1
5.1 Introduction 5-1
5.2 Program Implementation 5-1
5.3 Project Approval Process 5-1
5.4 Construction Site Inventory 5-5
5.4.1 Construction Site Prioritization 5-5
5.5 Best Management Practice Requirements 5-6
5.5.1 BMP Requirements 5-6

5.6 Inspection of Construction Sites 5-7
5.6.1 Inspection Frequency 5-8
5.6.2 Routine and Follow-Up Inspections 5-8
5.6.3 Inspection Tracking 5-10
5.7 Enforcement 5-11
6 Industrial and Commercial Facilities 6-1
6.1 Introduction 6-1
6.2 Industrial and Commercial Source Inventory 6-1
6.2.1 Background 6-1
6.2.2 Data Sources 6-1
6.2.3 Inventoried Facilities 6-2
6.2.4 Inventory Data Management 6-3
6.2.5 Inventory Prioritization 6-4
6.3 Best Management Practice Requirements 6-4
6.4 Best Management Practice Implementation 6-5
6.4.1 Inspection Frequency 6-5
6.4.2 Inspection Data Management 6-6
6.4.3 Inspection Methods Overview 6-6
6.4.3.1 Onsite Inspections 6-7
6.4.3.2 Drive-by Inspections 6-7
6.4.3.3 Mobile Business Oversight 6-8
6.5 Enforcement 6-8
6.5.1 Identification of Industrial Non-filers 6-8
7 Municipal Properties 7-1
7.1 Introduction 7-1
7.2 Municipal Properties Inventory 7-1
7.2.1 Fixed Facilities 7-2
7.2.2 Special Event Sites/Sources 7-3
7.2.3 Inventory Prioritization 7-3
7.4.1 Inspection Frequency 7-6
7.4.2 Inspection Content 7-6
7.4.3 Inspection Data Management 7-7
7.4.4 Inspection Procedures 7-7
7.4.4.1 Onsite Inspections 7-8
7.4.4.2 Drive-by Inspections 7-9
7.5 Enforcement 7-9

8 Municipal Infrastructure 8-1
8.1 Introduction 8-1
8.2 Roads, Streets, Highways, and Parking Facilities 8-1
8.2.1 Background 8-1
8.2.2 Street Sweeping 8-1
8.2.3 Best Management Practices 8-2
8.3 Municipal Separate Storm Sewer System 8-3
8.3.1 Background 8-3
8.3.2 Best Management Practices 8-3
8.4 Sanitary Sewer System 8-5
8.4.1 Background 8-5
8.4.2 Maintenance 8-5
8.4.3 Best Management Practices 8-6
8.5 Landscaping and Trails 8-6
8.5.1 Background 8-6
8.5.2 Best Management Practices 8-7
8.5.2.1 Irrigation Runoff Control 8-7
8.5.2.2 Erosion Prevention 8-7
8.5.2.3 Pesticide and Fertilizer Management 8-7
8.6 Structural BMPs 8-9
8.7 Other Infrastructure Operation and Maintenance Activities 8-9
8.7.1 Background 8-9
8.7.2 Best Management Practices 8-10
9 Residential Areas 9-1
9.1 Introduction 9-1
9.2 Residential Inventory 9-1
9.3 Best Management Practice Requirements 9-2
9.4 Program Implementation 9-2
9.4.1 Residential Education 9-3
9.4.2 Oversight Programs and Procedures 9-3
9.4.2.1 Dry Weather MS4 Outfall Monitoring 9-4
9.4.2.2 Drive-by Assessments 9-4
9.4.2.3 Supplemental Oversight Mechanisms 9-5
9.5 Enforcement 9-5
10 Public Education and Participation 10-1
10.1 Introduction 10-1

10.2 Education 10-2
10.3 Municipal Staff Training 10-3
10.3.1 Municipal Development Planning & Construction Activities 10-3
10.3.2 Municipal, Industrial, and Commercial Activities 10-3
10.3.3 Other Municipal Activities 10-3
10.4 Public Education 10-3
10.4.1 Development Community 10-3
10.4.2 Construction Site Operators 10-4
10.4.3 Industrial Facility Operators 10-4
10.4.4 Commercial Facility Operators 10-4
10.4.5 Residential Community, General Public, and School Children 10-5
10.4.6 Targeted Education 10-6
10.5 Public Participation Programs 10-9
11 Fiscal Analysis 11-1
11.1 Introduction 11-1
11.2 Municipal Permit Compliance Funding Needs and Sources 11-1
11.2.1 Funding Needs 11-1
11.2.2 Funding Sources 11-2
11.3 Fiscal Analysis Reporting 11-2
12 Conclusions and Recommendations 12-1
13 References 13-1

Appendices

A Stormwater Management and Discharge Control Ordinance (Ordinance 2015-07)

B Enforcement Response Plan

C Stormwater Standards Manual

D Municipal Facilities Inventory and Maps

E Retrofit and Rehabilitation Program

F Inspection Forms

G Dry Weather Major MS4 Outfall Monitoring Procedures

H Environmentally Sensitive Areas

I Water Quality Improvement Plan Strategies

Tables

Table 4-1. Structural BMP Prioritization Factors 4-13
Table 4-2. Structural BMP Weighting Factors 4-14
Table 4-3. Permanent BMP Maintenance Verification and Inspection Requirements 4-15
Table 5-1. Criteria to Identify High Threat to Water Quality Construction Projects....5-6
Table 5-2. Construction Site Inspection Frequency 5-8
Table 8-1. Sweeping Frequencies for Roads, Streets, Highways, and Parking Facilities....8-2
Table 9-1. City of Encinitas Residential Management Areas 9-7
Table 10-1. Training Topics by Target Audience....10-13

Figures

Figure 2-1. City of Encinitas Public Works Department Organizational Chart 2-7
Figure 4-1. Prioritization Process for Projects with Structural BMPs 4-12
Figure 4-2. Permanent BMP Tracking GIS Data Management System. 4-16
Figure 5-1. Private Development Project Approval Process....5-3
Figure 5-2. Capital Improvement Project Approval Process 5-4
Figure 5-3. Typical Construction Project Inspection Process....5-10
Figure 5-4. Typical Construction Project Enforcement Process....5-12
Figure 6-1. Commercial Areas within the 2nd Street Sub-Basin 6-10
Figure 9-1. City of Encinitas Residential Management Areas Map 9-9

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
303(d) list	Clean Water Act Section 303(d) List of Water Quality Limited Segments
ASBS	Area of Special Biological Significance
Basin Plan	Water Quality Control Plan for The San Diego Basin
BMP	Best Management Practice
CASQA	California Stormwater Quality Association
CFR	Code of Federal Regulations
CGP	SWRCB Order No. 2009-0009-DWQ, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ
CIP	Capital Improvement Project
CIA	Common Interest Area
City	City of Encinitas
Copermittees	18 incorporated cities in San Diego County, the County of San Diego, the San Diego County Regional Airport Authority, and the San Diego Unified Port District
County	County of San Diego
CWA	Federal Water Pollution Control Act (also known as the Clean Water Act)
CWP	City of Encinitas Clean Water Program
DEH	County of San Diego Department of Environmental Health
ERP	Enforcement Response Plan
ESA	Environmentally Sensitive Area
GIS	Geographic Information System
HA	Hydrologic Area
HFMA	High Frequency Maintenance Areas
HHW	Household Hazardous Waste
HMP	Hydromodification Plan
HOA	Home Owners Association

Acronym/Abbreviation	Definition
HPWQC	Highest Priority Water Quality Condition
HSA	Hydrologic Subarea
HU	Hydrologic Unit
IC/ID	Illicit connection and illicit discharge
IDDE	Illicit Discharge Detection and Elimination
IGP	SWRCB Industrial General Permit, Order No. 2014-0057-DWQ
JRMP	Jurisdictional Runoff Management Program
JURMP	Jurisdictional Urban Runoff Management Program
LID	Low Impact Development
LUP	Linear Underground/Overhead Project
MAWA	Maximum Applied Water Allowance
MEP	Maximum Extent Practicable
MS4	Municipal separate storm sewer system
Municipal Permit	San Diego Regional Water Quality Control Board Order No. R9-2013-0001, as amended by Order no. R9-2015-0001
NAICS	North American Industrial Classification System
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
PDP	Priority Development Project
QR	Quick Response
RARE	Rare, Threatened, or Endangered Species, as defined in the Basin Plan
RMA	Residential Management Area
RWQCB	San Diego Regional Water Quality Control Board
SIC	Standard Industrial Classification
SMARTS	Stormwater Multiple Application and Report Tracking System
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow

Acronym/Abbreviation	Definition
SSOERP	Sanitary Sewer Overflow Emergency Response Plan
Stormwater Ordinance	Stormwater Management and Discharge Control Ordinance (Encinitas Municipal Code Chapter 20.08)
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TTWQ	Threat To Water Quality
USEPA	United States Environmental Protection Agency
WDID	Waste Discharge Identification
WMA	Watershed Management Area
WQIP	Water Quality Improvement Plan

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Executive Summary

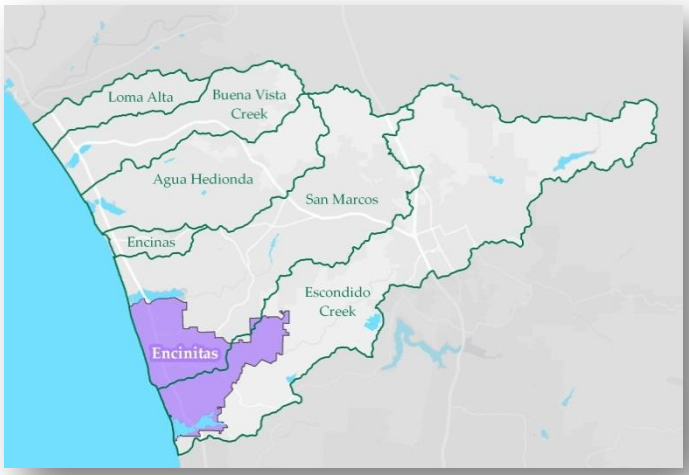
The Jurisdictional Runoff Management Plan (JRMP) is the City of Encinitas's approach to improving water quality in its creeks, lagoons, and the ocean through reducing discharges of pollutants to the municipal separate storm sewer system (MS4; hereafter, "storm drain system"). As the operator of a storm drain system, the City of Encinitas (City) is subject to a National Pollutant Discharge Elimination System (NPDES) Municipal Permit issued by the Regional Water Quality Control Board, San Diego Region (RWQCB). The permit requires the City to reduce pollutants in discharges from its storm drain system to water bodies.

The City's storm drain system, like that of most other jurisdictions across the United States, conveys most runoff from rain, irrigation runoff, natural groundwater seepage, and other sources of water to water bodies without first being directed to a treatment plant. To reduce pollutants in these storm drain system discharges to water bodies, the City implements or requires its residents and land owners to implement a variety of measures commonly referred to as Minimum Best Management Practices (BMPs) for Residential, Industrial, Commercial, Construction and Municipal Sites and Sources. Some examples of BMPs include covering potential pollutant sources to prevent contact with rain, employing erosion reduction techniques at construction sites, adjusting sprinklers to eliminate irrigation runoff, sweeping streets and parking lots, and building green infrastructure techniques like planters that capture and treat runoff along streets.

The most recent permit, RWQCB Order No. R9-2013-0001, as amended by R9-2015-0001 (Municipal Stormwater Permit), requires the City of Encinitas and the other 20 municipal agencies in San Diego County to prepare both jurisdictional and watershed scale plans that detail how they will comply with the new requirements. Each agency, including the City, prepares its own JRMP. The JRMP presented herein is an update to the City's 2008 Jurisdictional Urban Runoff Management Plan (JURMP), which was prepared in response to the 2007 Municipal Stormwater Permit. The watershed plans, known as Water Quality Improvement Plans (WQIP), are collaboratively prepared by the municipal agencies and each focus on a particular watershed. The Stormwater Section of the Public Works Department has led the City's efforts to update this JRMP and prepare one WQIP.

Permit-Required Plans:

- Jurisdictional Runoff Management Plan (1)
- Water Quality Improvement Plan (1)



Carlsbad Watershed Management Area

Water Quality Improvement Plan (WQIP)

The City of Encinitas is located entirely within the Carlsbad Watershed Management Area (WMA) along with the Cities of Oceanside, Vista, Carlsbad, San Marcos, Escondido, and Solana Beach, and the County of San Diego. It is within this defined land area, and with these responsible agencies, that the WQIP has been prepared. The WQIP has been collaboratively developed to identify specific water quality priorities, establish numeric water quality goals and objectives, the schedules by which they will be achieved, and the implementation strategies to achieve them. The Carlsbad WMA is comprised of multiple distinct sub-watersheds, and the goals, schedules, and strategies have been formulated in light of the specific characteristics of individual sub-watersheds. The City's JRMP has been developed in light of the water quality priorities and goals identified in the Carlsbad WMA WQIP. The water quality improvement strategies selected for implementation in the WQIP have been incorporated into the City's JRMP.

Jurisdictional Runoff Management Program (JRMP)

The City of Encinitas JRMP document presented in the following report will serve as the City's foundational program management tool, capturing the developed process, procedure, and implementation strategies for described elements. The purpose of this document is to present an integrated programmatic approach to reducing the discharge of pollutants from the MS4 to the maximum extent practicable (MEP) standard, and to protect and improve the quality of water bodies in Encinitas. The JRMP describes operational programs and activities developed to meet the requirements of Municipal Stormwater Permit, and serves as the implementation mechanism for WQIP strategies.

WQIP and JRMP Connection

The Municipal Stormwater Permit sets up a new paradigm in water quality planning and program implementation. It preserves some of the programmatic specificity of past permits, but it generally allows the City and other permitted jurisdictions more discretion in determining the details of how their day-to-day programs will be implemented. This approach is intended to allow the City and other regulated agencies more flexibility in directing efforts

toward the issues identified as the highest priorities in each WMA, as identified in the WQIPs. Addressing these highest priorities, however, involves meeting numeric water quality targets. The targets are more stringent metrics than those established by previous stormwater permits, which mostly used programmatic achievements to determine compliance.

Functionally, the WQIP serves as an overarching strategic planning document, setting watershed-scale water quality priorities, goals, schedules, and strategies. Concurrently, the local JRMP document describes minimum program implementation standards in compliance with the Municipal Stormwater Permit, and integrates the priorities and actuates the strategies defined by the WQIP.

More detail about JRMP strategies, including where they have been modified to address WQIP priorities and integrate WQIP strategies, is provided in the following section. The full list of strategies the City has committed to implement in the JRMP and Carlsbad WMA WQIP is also included in Appendix I.

JRMP Components

The new Municipal Stormwater Permit requires jurisdictional program components as well as watershed program components to address the highest priority water quality conditions within the Carlsbad WMA. Changes have been made to each of the City's JRMP program components to meet these requirements. The components of the updated JRMP are discussed below, including changes with respect to the 2008 JURMP. The components of the City's updated JRMP are discussed below, including changes with respect to the 2008 JURMP.

Introduction

The introduction includes a discussion of the general regulatory background leading up to the creation of this JRMP and the general objectives of updating the JRMP. Information on local water bodies and a report outline are also included in this section.

Program Organization and Legal Authority

This section describes the City's legal authority to implement its stormwater program. It also identifies and describes the departments within the City that conduct and oversee runoff management activities.

Key changes made with respect to the 2008 JURMP are summarized below:

- Added detail about legal authority, as outlined by the Municipal Stormwater Permit.
- Revised departmental roles and responsibilities to account for changes in departmental organization.
- Provided additional detail on roles and responsibilities of different departments and divisions.

Illicit Discharge Detection and Elimination (IDDE)

This section includes newly updated prohibitions of various non-stormwater discharges—discharges of water that do not originate from rain—and the City's approach to controlling such discharges. These discharges can increase pollutant loads in the water that flows to the City's storm drain system and eventually to receiving waters. The categories of non-stormwater discharges the RWQCB or City has determined to be significant sources of pollutants are identified, and the appropriate control measures the City has identified to reduce the discharge of pollutants from such non-stormwater discharges are discussed.

This section describes the processes by which illicit connections and illicit discharges (IC/IDs) are detected by the City. This includes the receipt and recording of violation reports made by both the general public and City personnel regarding stormwater pollution and the City's Dry Weather Major MS4 Outfall Discharge Monitoring Program. The City's sanitary sewer overflow and other spill response and prevention methods are also described.

Key changes made with respect to the 2008 JURMP are summarized below:

- Combined the non-stormwater discharge section with IDDE section.
- Revised the discharge prohibitions and exceptions. Some non-stormwater discharges that were previously conditionally allowed are now prohibited or more strongly regulated by the Municipal Stormwater Permit. Eliminating irrigation runoff is expected to be a major focus across the San Diego region over the remainder of the Municipal Stormwater Permit term (2015 through 2018), and it will also help the City meet WQIP goals to reduce flow rates in the storm drain system when it is not raining.
- Updated discussion on dry weather monitoring procedures, including IC/ID prioritization and follow-up.
- Provided more detail on public complaint response procedures and spill response actions.
- Provided more detail on IC/ID investigation methods not associated with MS4 outfall monitoring.

Development Planning

The development of urban areas has the potential to negatively impact the surrounding environment. The addition of impervious surfaces can alter the natural drainage patterns of the area, and development can facilitate the introduction of pollutants to the environment resulting from human activities. The City will update its Encinitas Stormwater Manual, which establishes the specific post-construction BMP requirements for development projects. The Encinitas Stormwater Manual is currently under development and is expected to be completed in December 2015 as required by the Municipal Stormwater Permit; in the meantime, the existing Encinitas Stormwater Manual will continue to apply.

This section also discusses updated procedures for permanent BMP maintenance verification activities. Methods for maintaining a prioritized, watershed-based inventory of completed projects with permanent BMPs and conducting associated maintenance inspections are also included in this section.

Key changes made with respect to the 2008 JURMP are summarized below:

- Added more specific procedural information specifically outlining the roles and responsibilities of different departments, divisions, and sections.
- Planned updates to the Encinitas Stormwater Manual will incorporate new, Priority Project Category definitions and stormwater treatment and flow control requirements.
- Added a Retrofit and Rehabilitation Program, as required by the Municipal Stormwater Permit (Appendix E). This program identifies potential locations for BMP retrofits or stream restoration projects within areas that have already been developed. This includes opportunities for Low Impact Development in the Cottonwood Creek watershed, which has been identified as a high priority area in the WQIP and to which numeric goals apply. Projects from the overall list included in Appendix E may be undertaken as funding is identified. The Retrofit and Rehabilitation Program applies to all areas of existing development: industrial, commercial, municipal, and residential.

Construction

This section includes information and regulations applicable to construction activities within the City and discusses updates made to the City's watershed-based inventory of the construction sites within the City. Construction site inspection frequencies and methods are presented. This section also discusses procedures for ensuring that both private development projects and Capital Improvement Program projects provide proper construction BMP plans and obtain coverage under the State Water Resources Control Board Construction General Permit, Order No. 2009-009-DWQ, as amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ, when necessary.

Key changes made with respect to the 2008 JURMP are summarized below:

- Modified program procedures with the goal of effectively reducing sediment discharges from construction sites. Reduced discharges of sediment are especially important in the San Elijo watershed since the lagoon is listed as impaired for sedimentation.
- Developed revised minimum BMP requirements in the Stormwater Standards Manual based on the most recent version of the California Stormwater Quality Association Standards.
- Instituted a requirement for projects to prepare erosion control plans that address all applicable phases of development, and clarified that City inspectors have the authority

to require additional BMPs in the field where necessary to maintain compliance with the Municipal Stormwater Permit.

- Prepared more detailed workflows to clarify the roles of different departments, divisions, and sections in the plan review, inspection and enforcement processes for both private projects and Capital Improvement Projects.
- Prepared a revised inspection form to emphasize the role of erosion control BMPs and clearly communicate required corrections to responsible parties.
- Developed revised follow-up and enforcement procedures to facilitate tracking and prompt resolution of violations.

Industrial and Commercial

This section discusses how the City updates and maintains its watershed-based inventory of industrial and commercial facilities, including mobile businesses. The City continues to utilize a similar prioritization procedure for industrial and commercial facilities as a result of experience and knowledge gained through the inspections conducted during the previous permit cycle. The minimum industrial and commercial BMPs for industrial and commercial facilities have been updated in the Stormwater Standards Manual and are included as JRMP Appendix C. The industrial and commercial section also includes a discussion of facility inspection frequencies and procedures.

Key changes made with respect to the 2008 JURMP are summarized below:

- Revised the threat to water quality prioritization procedures to direct more inspections toward the 2nd Street geographic focus area identified in the WQIP and generally to target businesses identified through previous inspections as significant sources of pollutants.
- Updated minimum industrial and commercial BMPs to address updates to the Municipal Stormwater Permit and Stormwater Management and Discharge Control Ordinance (Encinitas Municipal Code Sections 20.08) (Storm Water Ordinance), to address deficiencies commonly observed during inspections over the past Permit cycle, and to increase clarity. The updated Stormwater Ordinance and BMPs are included in Appendices A and C, respectively.
- Added drive-by inspections as an optional approach for assessing compliance at businesses. Drive-by inspections are a patrolling style approach most useful for efficiently evaluating groups or areas of businesses, such as shopping centers, for the presence of non-stormwater discharges.

Municipal Properties and Infrastructure

The municipal component of the JRMP is divided into two sections which collectively provide a discussion of the City's municipal properties and the process for maintaining its watershed-based inventory. The City requires its own facilities to comply with the same minimum BMPs required for industrial and commercial businesses, as listed in the Stormwater Standards Manual (Appendix C). The municipal properties component (Section 7) identifies inspection frequencies and procedures for municipal site inspections, which are used to verify compliance with the minimum BMPs. Additional detail on BMPs specific to municipal maintenance activities, such as storm drain cleaning and landscape maintenance, are described in the municipal infrastructure component of the JRMP (Section 8).

Key changes made with respect to the 2008 JURMP are summarized below:

- Updated the minimum municipal BMPs to be consistent with the BMPs required for industrial and commercial businesses.
- Added more detail about the City's efforts to conserve water and prevent runoff during landscape irrigation. Reducing dry weather flows, especially from irrigation, will help meet WQIP goals.

Residential Areas

The new requirements that have been incorporated into the residential inventory are included in this section. This section also provides a description of the newly updated residential oversight program and the oversight methods the City staff will use to implement the program. Minimum residential BMPs required to be implemented for residential areas and activities are included in the Stormwater Standards Manual (Appendix C).

Key changes made with respect to the 2008 JURMP are summarized below:

- Developed minimum residential BMP requirements, which are included in the Stormwater Standards Manual (Appendix C).
- Created an inventory of Residential Management Areas (RMAs) and developed an associated inspection/oversight program. The RMAs are based primarily on drainage area delineations. Completing residential inspections by drainage area will allow the City to place an emphasis on reducing non-stormwater discharges, which aligns well with WQIP and Municipal Stormwater Permit priorities.
- Provided more details on methods of residential area evaluations and oversight, including drive-through assessments and upstream investigations based on MS4 outfall field screening.

Public Education and Participation

The updated education programs and activities that the City uses to foster awareness and encourage behavioral changes relating to stormwater activities are presented in this section. This section describes the educational programs and other mechanisms that are used to encourage public participation in the City's stormwater program. The content, form, and frequency, of educations programs and activities are discussed in detail.

Key changes made with respect to the 2008 JURMP are summarized below:

- In accordance with the WQIP emphasis on reducing dry weather flows, a revised outreach approach was developed to reduce landscape irrigation runoff and conserve water. Specifically a program targeting homeowners associations (HOA) was developed.
- Updated the list of targeted audiences and applicable training topics.

Fiscal Analysis

The City's stormwater program funding structure, including funding for JRMP activities and WQIP activities necessary to meet WQIP requirements, is discussed in this section.

The key change made with respect to the 2008 JURMP is summarized below:

- Revised the fiscal analysis approach presented to meet the revised fiscal reporting requirements specified in the 2013 Municipal Stormwater Permit.

Enforcement Response Plan

The City has developed enforcement tools and procedures that will be used, as necessary, to bring about compliance with requirements to implement BMPs and eliminate IC/IDs. The City has developed an Enforcement Response Plan (Appendix B) that summarizes the City's approach to enforcing its stormwater requirements. The enforcement approach for each program component is discussed in that component's section, with additional details provided in the Enforcement Response Plan.

JRMP Implementation

Each City department is committed to implementing the relevant procedures and BMPs described in this JRMP. The goal of these actions is not only to meet regulatory requirements, but also to improve water quality for the City's residents and the environment. Results from the City's implementation of the JRMP will be documented and reported each year as part of the annual reporting process, similar to the approach in past years. Jurisdictional program data will be a significant part of the Carlsbad WQIP annual report and annual assessments will be completed through the WQIP annual reporting process. As part of the adaptive management and iterative approach, the City will refine its programs accordingly as new lessons are learned.

Modifications to the JRMP will be documented to ensure clear communication and transferability from one staff person to another.

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1 Introduction

On May 8, 2013, the San Diego Regional Water Quality Control Board (RWQCB) adopted Water Quality Order No. R9-2013-0001, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region (2013 Municipal Stormwater Permit or Municipal Permit). The 2013 Municipal Stormwater Permit was subsequently amended in 2015 by RWQCB Order No. R9-2015-0001, which expanded the list of regulated parties to include municipal agencies in southern Orange County. The City of Encinitas, as an owner and operator of an MS4 through which it discharges stormwater and non-stormwater into waters of the United States within the San Diego Region, is subject to the requirements of the 2013 Municipal Stormwater Permit.

The Municipal Permit requires the City to prepare both jurisdictional (JRMP) and watershed scale plans, known as Water Quality Improvement Plans (WQIP), that detail how they will comply with the new requirements. The WQIP is required to be collaboratively developed at a Watershed Management Area (WMA) scale to identify specific water quality priorities, establish numeric water quality goals and objectives, the schedules by which they will be achieved, and the implementation strategies to achieve them. In turn, each local agency must develop their JRMP in consideration of the identified priorities, goals, and schedules established in the WQIP.

1.1 Background

1.1.1 Urban Runoff as Non-Point Source of Pollutants

Urban development typically involves conversion of natural space to impervious developed area such as streets, buildings, and parking lots and an increase in human population associated with use of the impervious developed areas. An increase in impervious area is related to higher runoff volume and velocity because impervious area has reduced capacity to absorb and hold rainwater. Land use of developed areas is associated with a number of pollutants that can be conveyed to the municipal separate storm sewer system (MS4) by a rain event or non-stormwater discharges. Non-point source pollution, such as urban runoff discharges to the MS4, has been identified as a large source of pollutants to receiving water bodies in the San Diego region and throughout the United States. Pollutants commonly associated with urban runoff include pesticides, fertilizers, herbicides, trash, sediments, oil and grease, and heavy metals. Such pollutants are generated by everyday activities such as landscaping and vehicle use.

1.1.2 Regulatory Background

The Clean Water Act of 1972 established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate the discharge of pollutants from point sources to the waters of the United States. In 1987, the Clean Water Act was amended to include non-point source pollution such as urban runoff, and established a framework for regulating urban stormwater runoff and other non-point source pollutants through establishment of various general and individual permits issued to local governments and other agencies.

The California Regional Water Quality Control Board, San Diego Region (Regional Board), adopted the first NPDES General Municipal Permit for the San Diego Region in 1990. The City of Encinitas Jurisdictional Urban Runoff Management Program (JURMP) was initially developed and subsequently updated under previous Municipal Stormwater Permit terms; first in 2001 in response to Water Quality Order No. 2001-01, and again in 2008 in response to Water Quality Order No. 2007-0001. The JURMP (updated to JRMP under Order No. 2013-0001) document describes all of the programs, processes, and procedures utilized by the City to comply with said permit requirements, to describe the City's approach to minimizing the discharge of pollutants to and from its storm drainage systems, and to reduce the impact of urban runoff on adjacent water bodies and sensitive areas.

1.2 Purpose and Objectives

The updated JRMP document presented in the following report will serve as the City's foundational program management tool, capturing the developed process, procedure, and implementation strategies for described elements. The purpose of this document is to present an integrated approach to reducing the discharge of pollutants from the MS4 to the maximum extent practicable (MEP) standard, and to protect and improve the quality of water bodies in Encinitas. The following list of objectives has been established to set baseline guidance for overall program success:

- Develop programmatic elements to ensure compliance with regulatory standards and provisions mandated in Order No. R9-2013-001.
- Integrate WQIP strategies into local program and activities.
- Establish management processes and procedures to ensure accountability for program actions and activities.
- Establish and support a set of effective and efficient strategies to address Encinitas water quality concerns.
- Build program elements around WQIP integrated assessment approaches in order to evaluate overall performance and effectiveness of program components.

1.3 City Setting

The City of Encinitas encompasses an overall area of nearly 20 square miles and is located along six miles of Pacific coastline in northern San Diego County. The City is characterized by coastal beaches, cliffs, flat-topped coastal areas, steep mesa bluffs and rolling hills. Incorporated in 1986, drawing together the communities of New Encinitas, Old Encinitas, Cardiff-by-the-Sea, Olivenhain, and Leucadia, the City has an approximate population of 60,000. Encinitas is bordered by the Pacific Ocean to the west, Batiquitos Lagoon to the north, and the San Elijo Lagoon to the south.

1.3.1 Watersheds

The City of Encinitas is situated entirely within the Carlsbad Hydrologic Unit (Carlsbad Watershed Management Area) and is split between the San Marcos Watershed to the north and Escondido Creek Watershed to the south. The City is naturally divided by eight (8) distinct drainage areas (sub-basins); Cardiff, Lower Escondido, La Orilla, La Costa South, Leucadia, Encinitas, Rancho Santa Fe, and Lux Canyon sub-basins. Encinitas receives an average annual rainfall of approximately 10 inches.

1.3.2 Storm Drain System

The City owns and maintains miles of improved open stormwater channel and underground pipes of varying material, as well as stormwater detention basins and a variety of other MS4 facilities. A map of the City's storm drain system is included in Appendix D.

1.3.3 Environmentally Sensitive Areas

Environmentally sensitive areas (ESA), as defined in the Permit, include but are not limited to the following:

- Clean Water Act Section 303(d) impaired water bodies
- Areas designated as Areas of Special Biological Significance (ASBS) by the State Water Resources Control Board (SWRCB)
- Water bodies designated with the RARE beneficial use by the SWRCB
- Areas designated as preserves or their equivalent under the Multi Species Conservation Program
- Any other equivalent environmentally sensitive areas which have been identified by the Copermittees.

ESAs within Encinitas include Multiple Habitat Conservation Program (MHCP) areas and 303(d) listed water bodies. The 303(d) listings are based on the 2010 303(d) list, which is the most recent list issued by the State Water Resources Control Board as of this writing. The 303(d) listed water bodies in Encinitas are discussed below.

Cottonwood Creek drains the heart of Encinitas and discharges to the Pacific Ocean at Moonlight Beach. Cottonwood Creek is 303(d) listed for DDT, selenium, and sediment toxicity stressors. Further, the Pacific Ocean at Moonlight Beach, where Cottonwood Creek meets the ocean, is listed as a 303(d) impaired water body for total coliform bacteria. Encinitas Creek drains the north-central portion of the city and drains into Batiquitos Lagoon, which is designated a Critical Coastal Area in the State of California 2002 Critical Coastal Areas Strategic Plan. Encinitas Creek is 303(d) listed for selenium and toxicity. Escondido Creek, 303(d) listed for DDT, enterococcus, fecal coliform, manganese, selenium, sulfates, total dissolved solids, total nitrogen, phosphate, and toxicity, drains the southern and northwest (Olivenhain) portion of the city and drains into the San Elijo Lagoon. San Elijo Lagoon is a 303(d) impaired water body listed for sediment/siltation, indicator bacteria, and eutrophic conditions.

The City of Encinitas has identified and geographically captured the Environmentally Sensitive Areas located with the City as depicted in Appendix H.

1.3.4 Report Organization

The sections and appendices included in the JRMP are summarized below.

Section 1 Introduction

The introduction includes a general regulatory background leading up to the creation of this JRMP document. Land use statistics, City information, and information about ESAs within the City are included in this section.

Section 2 Program Organization and Legal Authority

This section identifies and describes the departments within the City that conduct and oversee JRMP-related activities and presents the City's stormwater program organization.

Section 3 Illegal Discharge Detection and Elimination

This section describes the processes by which illegal connections and illegal discharges are detected, investigated, and eliminated by the City. This section describes non-stormwater discharge prohibitions and the City's approach to controlling such discharges.

Section 4 Development Planning

This section addresses how the City will reduce discharge of pollutants from development projects. Information regarding the City's General Plan, the City's post-construction BMP requirements and related implementation methods are also included.

Section 5 Construction Management

This section provides a description on the prioritization of the City's watershed-based inventory of construction sites within the City. Updates to the construction BMPs are also described. Other program implementation information, including construction and grading permit approval process and inspection procedures, is also included in this section.

Section 6 Existing Development: Industrial and Commercial Facilities

This section provides a description of the prioritization of the City's watershed-based inventory of industrial and commercial facilities within the City, including mobile businesses known to operate in the City. This section describes the minimum BMPs that are required to be implemented at industrial and commercial facilities. This section also includes a discussion of facility inspection frequencies and procedures.

Section 7 Existing Development: Municipal Facilities

This section provides a description of the updated prioritization of the City's watershed-based inventory of municipal facilities. A description of pollution prevention methods and minimum BMPs to be implemented at specific municipal facilities and during specific municipal activities is also covered in this section. This section also includes a discussion of municipal inspection frequencies and procedures.

Section 8 Municipal Infrastructure

A description of MS4 and sanitary sewer maintenance, street sweeping, and landscape activities conducted by City staff and associated BMPs for each activity is included in this section.

Section 9 Existing Development: Residential Areas

The new requirements that have been incorporated into the residential inventory are included in this section. This section also provides a description of the newly updated residential oversight program and the methods the City staff will use to implement the program.

Section 10 Education and Public Participation

This section describes the education programs and activities that will be used by the City including content, form, and frequency for each target community as described by the Municipal Permit. This section describes the mechanisms that will be used to encourage public participation.

Section 11 Fiscal Analysis

This section provides the methods of reporting the yearly fiscal analysis in annual reports to the RWQCB. A description of the City's method of securing all necessary financial resources for the inclusion of all programs detailed in the JRMP is also included.

Section 12 Reporting

This section describes components of the City's JRMP that are required to be included in the Annual Report submission.

Section 13 Conclusions and Recommendations

This section describes conclusions and recommendations that were drawn from updates made to the JRMP document.

Section 14 References

Appendices

Appendix A Stormwater Ordinance

A copy of the updated Stormwater Ordinance, Encinitas Municipal Code Chapter 20.08 is provided here.

Appendix B Enforcement Response Plan

Describes enforcement tools the City may use to enforce its stormwater requirements and how they may be applied to the different components of the stormwater program, such as industrial and commercial inspections.

Appendix C Stormwater Standards Manual

This manual details minimum BMP requirements for industrial, commercial, municipal, residential, and construction activities.

Appendix D Municipal Inventory

A detailed list of inventoried municipal facilities is provided here. This appendix also includes maps of the MS4, City-maintained roads, City-maintained permanent structural BMPs, and sanitary sewer agency district boundaries.

Appendix E Existing Development Retrofit and Stream Rehabilitation Program

This section established a Retrofit and Rehabilitation Program that will be implemented by the City. It discusses mechanisms to identify and implement potential projects for retrofitting areas of existing development and for rehabilitation of streams, channels, or habitats.

Appendix F Inspection Forms

Inspection forms for structural post-construction BMP inspections, construction inspections, municipal inspections, and industrial/commercial inspections and complaint response forms are provided here.

Appendix G Dry Weather Major MS4 Outfall Discharge Monitoring Program

This section details the City's Dry Weather Major MS4 Outfall Discharge Monitoring procedures, monitoring field datasheets, and provides a map of monitoring locations.

Appendix H Environmentally Sensitive Areas

This appendix presents a map of the Environmentally Sensitive Areas identified within the City which generally consist of the 303(d) listed water bodies and Multiple Habitat Conservation Program (MHCP) areas.

Appendix I Water Quality Improvement Plan Jurisdictional Strategies

This appendix includes a summarized list of the City's jurisdictional strategies presented in the Carlsbad Watershed Management Area WQIP.

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2 Program Organization and Legal Authority

2.1 Introduction

The City of Encinitas (City) establishes, maintains, and enforces adequate legal authority within its jurisdiction to control pollutant discharges into and from its storm drain system and to meet the requirements of Municipal Permit[1] Provision E.1. The City has established local ordinances in the Encinitas Municipal Code to provide legal authority in support of stormwater program goals, including reducing discharges of pollutants in stormwater to the maximum extent practicable (MEP) and effectively prohibiting non-stormwater discharges. The ordinances also provide legal authority necessary to implement strategies designed to achieve the City's numeric goals included in the Carlsbad Watershed Management Area (WMA) Water Quality Improvement Plan (WQIP). The major ordinances relating to stormwater include the following:

- City of Encinitas Stormwater Management and Discharge Control Ordinance (Stormwater Ordinance), Encinitas Municipal Code Chapter 20.08
- Grading and Erosion Control Ordinance, Encinitas Municipal Code Chapter 23.24

The Stormwater Ordinance has been updated to reflect changes in the requirements of the Municipal Permit, including new regulations for non-stormwater discharges. The City's Stormwater Ordinance also makes enforceable the City's revised minimum BMP requirements included in the Stormwater Standards Manual (Appendix C of this document). The updated Stormwater Ordinance is included in Appendix A. Chapters 20.08 and 23.24 of the Encinitas Municipal Code are also both viewable via the City's website.

Where violations of the Encinitas Municipal Code are observed, administrative and judicial procedures may be employed to enforce stormwater requirements. More details about enforcement tools and processes are provided in the Enforcement Response Plan (Appendix B).

2.2 Certification of Legal Authority

As required by the Municipal Permit, the City of Encinitas will prepare a letter certifying that the City has adequate legal authority to implement and enforce the requirements of Title 40 Code of Federal Regulations (CFR) Section 122.26(d)(2)(i)(A-F) and the Municipal Permit. This certification letter will be submitted with the first WQIP annual report, which is expected to be due in January 2017.

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[1] San Diego Regional Water Quality Control Board Order No. R9-2013-0001, as amended by Order No. R9-2015-0001

2.3 Departmental Roles and Responsibilities

Management and implementation of the City's stormwater program is centralized in the Public Works Department; however personnel from various City departments are involved in the implementation of the City's stormwater program. A diagram of the Public Works Department within the City is in the City of Encinitas Organizational Chart is presented in Figure 2-1 at the end of this section. The following is a comprehensive list of departments, divisions, and sections within the City that conduct or support stormwater related activities. Only those departmental responsibilities and activities directly related to compliance with the Municipal Permit are mentioned below.

Mayor and City Council

- Adopt ordinance revisions to carry out new Municipal Permit requirements.
- Secure fiscal resources and approve budgets.
- Provide public participation at City Council meetings.
- Review and approve related policies and plans as needed.
- Enter into formal agreements with Copermittees to define management structure, responsibilities, cost sharing, and decision making procedures for implementation of the Municipal Permit.

City Attorney's Office

- Draft and approve ordinances and assist with enforcement as needed.
- Ensure and certify adequate legal authority.

City Manager

- Sign and certify reports submitted to the San Diego Regional Water Quality Control Board (RWQCB), when determined appropriate.
- Facilitation and administration of City Council actions necessary to support the stormwater program.
- The Geographic Information Systems section within the City Manager's office assists with the development, maintenance, and access of information about the City's infrastructure, facilities, and publicly-owned areas.

City Clerk

- Maintain records applicable to previous and current Jurisdictional Runoff Management Program (JRMP) implementation activities.
- Facilitate processing of public record requests related to the Municipal Permit.

Public Works Department

- ***Environmental Management Division***
    - Stormwater Management Section
        - Develop and administer the JRMP.
        - Represent the City of Encinitas in Carlsbad WMA WQIP development.
        - Implement strategies to meet numeric goals established within the Carlsbad WMA WQIP.
        - Maintain an inventory and conduct inspections and enforcement of industrial and commercial facilities.
        - Maintain a construction site inventory.
        - Responsible for enforcement of municipal areas and activities.
        - Provide enforcement support for construction activities.
        - Oversee IDDE efforts, including dry weather monitoring, investigation, enforcement, and hotline response.
        - Assist with training of municipal personnel, and industrial and commercial facility operators.
        - Provide education for various audiences such as residents, general public, and school children.
        - Maintain the permanent BMP inventory and oversee maintenance tracking activities.
        - Update the Encinitas Stormwater Manual based on the regional Model BMP Design Manual.
        - Act as representative in Carlsbad watershed and regional Copermittee management activities.
        - Serve as liaison to City departments regarding implementation of the Municipal Permit, JRMP and WQIP.
        - Coordinate JRMP Annual Report preparation.
        - Provide information for JRMP document updates and JRMP Annual Reports.
        - Participate in development of Carlsbad WMA WQIP Annual Report.

- *Engineering Division*
    - Capital Improvements Section
        - Ensure that public projects meet new development standards.
        - Assist with permanent BMP maintenance tracking.
        - Contribute to education and outreach for construction audience.
        - Provide information for JRMP document updates and JRMP Annual Reports.
        - Responsible for design, review, and approval of all publicly owned and maintained sewer infrastructure.
    - Land Development Section
        - Modify development requirements as needed.
        - Provide support for updating the Encinitas Stormwater Manual.
        - Implement the updated Encinitas Stormwater Manual, including review and approval of proposed low impact development (LID), structural, and hydromodification mitigation BMP design.
        - Maintain inventory of permits.
        - Assist with development site enforcement.
        - Contribute to education for new development and construction activities.
        - Provide information for JRMP document updates and JRMP Annual Reports.
        - Conducts plan checks and sewer permit issuance for private development wishing to connect to the public sewer system.
        - Issue grading permits and conduct construction site inspections.
        - Receive and review development and redevelopment applications.
        - Develop permanent BMP maintenance agreements and file with the County Recorder's office.
    - Engineering Inspection Section
        - Conduct inspections and regulate construction sites regarding erosion control and other site management activities.

        - Report non-compliant sites, including the State Water Resources Control Board Construction General Permit, Order No. 2012-0006-DWQ (CGP), non-filers.
        - Inspect Priority Development Projects (PDP) to verify proper installation of structural BMPs.
        - Contribute to education and outreach for construction audience.
        - Provide information for JRMP document updates and JRMP Annual Reports.
        - Conduct permanent BMP inspections.
- ***Field Operations Division***
    - Streets Section
        - Responsible for operation and maintenance of storm drain system and structural controls.
        - Administer street sweeping program.
        - Conduct preventative maintenance.
        - Manage pesticides, herbicides, and fertilizers as applicable.
        - Provide education and outreach for municipal personnel and contractors.
        - Provide information for JRMP document updates and JRMP Annual Reports.
    - Wastewater Section
        - Responsible for the maintenance of the City's sanitary sewer system.
        - Respond to sewage spills and contain and clean up such spills to prevent or minimize discharge to the storm drain system.
        - Provide information for JRMP document updates and JRMP Annual Reports.

Planning and Building Department

- Responsible for update to the City's General Plan and Environmental Review process.
- Responsible for ensuring that land uses in the City comply with the City's Municipal Code, General Plan, Council and Planning Commission policies, and State requirements.
- Contribute to education and outreach for new development and construction activities.
- Provide information for JRMP document updates and JRMP Annual Reports.

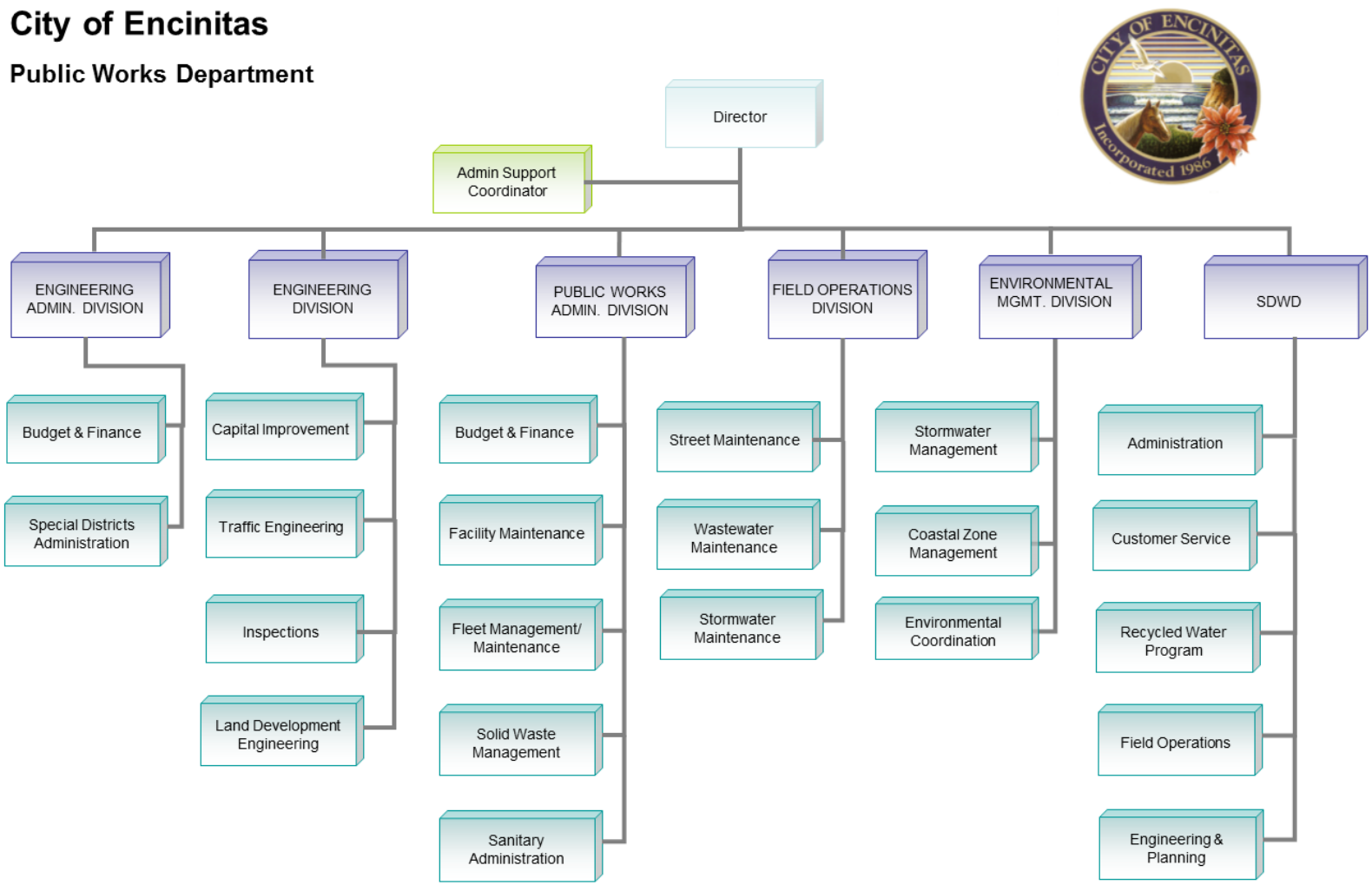
Parks and Recreation Department

- Manage pesticides, herbicides, and fertilizers.
- Implement and maintain BMPs at City parks.
- Contribute to education and outreach for municipal personnel.
- Provide information for JRMP document updates and JRMP Annual Reports.

Fire Department

- Implement and maintain BMPs at fire-related facilities and during fire-related activities.
- Contribute to education and outreach for municipal personnel.
- Provide information for JRMP document updates and JRMP Annual Reports.

Figure 2-1. City of Encinitas Public Works Department Organizational Chart



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3 Illicit Discharge Detection and Elimination

3.1 Introduction

The City of Encinitas detects and eliminates illegal connections and illegal discharges (IC/IDs) into the municipal separate storm sewer system (MS4, also referred to as "storm drain system"). Unauthorized discharges or connections can result in illegal discharges of pollutants to the City's storm drain system and ultimately receiving waters. IC/IDs are defined as follows:

- An ***illegal connection*** is 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.
- An ***illegal discharge*** is any discharge to the stormwater conveyance system that is not composed entirely of stormwater or is not discharged in compliance with the City's Stormwater Management Ordinance (Municipal Code Chapter 20.08).

The City's program to detect and eliminate IC/IDs involves Clean Water Program (CWP) staff, two sanitary sewer districts (Leucadia Wastewater District and the City of Encinitas Wastewater Division), the Fire Department, the Public Works Department, the County of San Diego Department of Environmental Health (DEH), and members of the public.

The City investigates, inspects and appropriately follows-up on every IC/ID that is reported to the City or detected directly by City staff to identify the source(s) of the discharge. Escalating enforcement mechanisms are implemented to eliminate the IC/ID once the source has been identified. Education is also provided to the discharger to prevent future IC/IDs, where feasible.

This section discusses prohibited discharges, non-stormwater discharge exemptions (conditionally allowable discharges), and the City's procedures for IC/ID prevention, detection, response, and enforcement.

3.2 Non-Stormwater Discharges

Non-stormwater discharges to the MS4 are prohibited unless the discharge has been authorized by a separate NPDES permit or are conditionally allowed by Regional Water Quality Control Board (RWQCB) Order No. R9-2013-0001, as amended by Order No. R9-2015-0001 (Municipal Permit). The City also has the authority to prohibit conditionally allowed categories of discharges if it finds that those discharges are significant sources of pollutants to the MS4.

3.2.1 Prohibited Discharges

Irrigation runoff that reaches the City's MS4 is now prohibited, as required by the Municipal Permit. Under the previous permit, irrigation runoff was allowed unless it was shown to be a source of pollutants. Irrigation runoff includes intended or unintended overspray and excessive application of irrigation water from sprinklers or hosing activities that reaches the City's MS4. Other examples of prohibited discharges include wash water from commercial car washing or power washing, debris from industrial or commercial business operations, or hazardous materials such as automotive fluids.

The following two groups of non-stormwater discharges are not allowed unless they have coverage under an NPDES permit, as required by Section E.2.a.(1)-(2) of the Municipal Permit.

- The following discharges of non-stormwater to the MS4 will be considered illegal discharges unless the discharge has coverage under NPDES Permit No. CAG919002 (Order No. R9-2008-0002, or subsequent order) for discharges to surface waters other than San Diego Bay:
    - Uncontaminated pumped ground water.
    - Discharges from foundation drains and footing drains (if not covered under an NPDES permit, the discharge is only prohibited if the system is located at or below the groundwater table to actively or passively extract groundwater during any part of the year. See Section 3.2.2.).
    - Water from crawl space pumps.

  An application for the NPDES Permit No. CAG919002 can be found online at the State Water Resources Control Board (SWRCB) website. Any parties discharging the aforementioned non-stormwater discharges to the MS4 must submit a Notice of Intent (NOI) to the SWRCB along with an initial sampling and monitoring report, a project map, and an application fee.

- Discharges of non-stormwater from water line flushing and water main breaks to the MS4 will be considered illegal discharges unless the discharge has coverage under an appropriate NPDES Permit (Order No. R9-2010-0003 or subsequent order).
    - This includes water line flushing and water main break discharges from water purveyors issued a water supply permit by the California Dept. of Public Health or federal military installations.
    - Discharges from recycled or reclaimed water lines to the MS4 will also be addressed as illegal discharges unless the discharge has coverage under a separate NPDES permit.

3.2.2 Conditionally Allowed Discharges

Conditionally allowed non-stormwater discharges are described in Section E.2.a.(3)-(4) of the Municipal Permit and include the following:

- Discharges of non-stormwater to the MS4 from the following categories will be considered illegal discharges only if the City or the RWQCB identifies the discharge as a source of pollutants to receiving waters:
    - Diverted stream flows
    - Rising ground waters
    - Uncontaminated ground water infiltration to MS4
    - Springs
    - Flows from riparian habitats and wetlands
    - Discharges from potable water sources
    - Discharges from foundation drains and footing drains (only applies if the system is located above the groundwater table at all times of year and is only expected to discharge non-stormwater under unusual circumstances).
- Discharges of non-stormwater to the MS4 from the following categories will be controlled by the requirements listed below; otherwise, they will be addressed as illegal discharges.
    - Air conditioning condensation.
        - The discharge of air conditioning condensate should be directed to landscaped areas or other pervious surfaces, where feasible.
    - Individual residential vehicle washing.
        - The discharge of wash water should be directed to landscaped areas or other pervious surfaces, where feasible.
        - Residents are encouraged to minimize the use of water, washing detergent and other vehicle wash products used for vehicle washing, and the implementation of other practices or behaviors that will prevent the discharge of pollutants from entering the City's storm drain system, including public streets.
    - Dechlorinated swimming pool discharges.
        - Non-saline pool water must be directed to landscaped areas or other pervious surfaces that can accommodate the volume of water, where

feasible; otherwise, discharges of pool water to the MS4 are allowable as long as the discharge does not erode or contain, and will not transport, pollutants to the storm drain system, including public streets. Residual chlorine, algaecide, filter backwash, or other pollutants from swimming pools must be eliminated prior to discharging to the MS4.

- Saline swimming pool water may not be discharged to the MS4. It can be discharged via pipes or concrete channels that drain directly to a naturally saline water body (e.g. Pacific Ocean). Where direct discharge to a saline water body is not possible, saline swimming pool water may be discharged to the sanitary sewer system upon approval by the City.

If the City is unable to identify and document the source of a recurring non-stormwater discharge to or from the MS4, then the City will address the discharge as an illegal discharge and update its JRMP as needed to address the common and suspected sources of the non-stormwater discharge within its jurisdiction.

3.2.3 Firefighting Discharges

In accordance with Section E.2.a.(5) of the Municipal Permit, non-stormwater discharged to the MS4 as a result of firefighting activities, both emergency and non-emergency activities, is considered an illegal discharge if the City of Encinitas or the RWQCB identifies the discharge as a significant source of pollutants to receiving waters. Firefighting discharges to the MS4 not identified as a significant source of pollutants to receiving waters, must be addressed, at a minimum, as follows:

- Non-emergency firefighting discharges.
  - Building fire suppression system maintenance discharges (e.g. sprinkler line flushing) to the MS4 must be addressed as illegal discharges unless BMPs are implemented to prevent pollutants associated with such discharges to the MS4. See Appendix C for minimum BMPs.
  - Non-emergency firefighting discharges, such as discharges from controlled or practice blazes, firefighting training, and maintenance activities not associated with building fire suppression systems, are subject to the municipal BMPs described in Appendix C of this JRMP document to reduce or eliminate pollutants in such discharges from entering the MS4.
- Emergency firefighting discharges.
  - During emergency situations, priority of efforts is directed toward life, property, and the environment (in descending order). BMPs are only required to the

extent that they do not interfere with immediate emergency response operations or impact public health and safety.

3.3 IC/ID Prevention and Detection

The City actively seeks and eliminates IC/IDs to the storm drain system. Eliminating IC/IDs helps minimize potentially negative impacts of human activities on receiving water bodies. The City utilizes its municipal personnel to assist in actively seeking, identifying, and reporting IC/IDs during their daily activities.

Detection and prevention of IC/IDs is achieved through the following activities:

1. Operating a public complaint phone hotline and email address.
2. Inspecting local businesses, municipal facilities, construction sites, and residential areas.
3. Conducting field screening of major MS4 outfalls.
4. Maintaining municipal MS4 and sewer systems.
5. Educating the local community.

3.3.1 Public Reporting of Illegal Discharges and Connections

To further aid the process of identifying illegal discharges, the City encourages the public and City and contract staff to report IC/IDs. The City continues to maintain a public complaint hotline and email address, which is currently operated by the Clean Water Program:

City of Encinitas Clean Water Hotline
(760) 633-2787
cleanwater@encinitasca.gov

The Public Works Department, Wastewater Collection Division accepts calls at (760) 753-5018 for sewage related discharges. The public can also notify any City employee who will promptly notify the appropriate CWP staff. In cases of incidents occurring after working hours, the City provides a hotline number (760) 633-2922 where members of the public can call and report illegal discharges. Alternatively, a regional public reporting hotline is provided by the County of San Diego at (888) 846-0800. The County hotline is answered Monday through Friday, 8:00 a.m. – 5:00 p.m. and provides a voice mail message for 24-hour public access in both English and Spanish.

Once a complaint is received, it is logged into a geocoded database for documentation and tracking purposes. The City of Encinitas has configured its enterprise GIS system to document and track all complaints as well as complaint driven stormwater inspections in a GIS based program called Cityworks. Investigations are initiated by staff for all complaints with details suggesting an actual or potential discharge to the MS4 or receiving waters. If investigators find

evidence of a violation with the potential to release pollutants or an actual IC/ID, every effort is made to find the responsible party and inform them of the complaint or issue a notice of violation. Parties found to be responsible for a violation or IC/ID are required to clean up or remove pollutants to the maximum extent practicable (MEP). Any refusal by the responsible party to perform clean-up of a violation or discharge will be handled by Enforcement staff and appropriate enforcement actions outlined in the Enforcement Response Plan (ERP) will be taken. If determined to pose a serious threat to human health or the environment, the complaint is reported to the RWQCB in accordance with Section 1.l.(6) of Attachment B of the Permit. Investigations are recorded using the Clean Water Program Complaint Response form, which is included in Appendix F, and electronically tracked in Cityworks.

The City validates, investigates, inspects, and appropriately follows-up on IC/IDs that are reported or detected, to identify the source(s) of the discharge. Complaints are typically validated in the field. IC/IDs potentially harming human health are placed at the highest priority, with IC/IDs potentially threatening aquatic health or reaching a receiving water body as the next most important priority for investigation. If the reported IC/ID is identified, voluntary compliance and enforcement mechanisms are implemented to immediately eliminate the IC/ID once the source has been identified and education is provided to help prevent future IC/ID occurrences. In addition, the City routinely performs MS4 outfall discharge monitoring and source identification as part of a regional and jurisdictional effort to aid in identifying IC/IDs. Appendix G describes the City's dry weather MS4 outfall monitoring procedures.

3.4 Spill Reporting, Response, and Prevention

The City implements spill prevention, response, and reporting mechanisms to prevent, respond to, contain, and clean up all sewage and other spills that discharge to, or may have the potential to discharge to, its storm drain system. The City coordinates with spill response teams to prevent entry of spills into the MS4 to prevent the contamination of surface water, ground water, and soil to the MEP. If necessary, the City will coordinate with upstream and downstream Copermittees and/or agencies to prevent spills and illegal discharges into or from the City's MS4. This section is intended to provide an overview of the City's general spill prevention, response, and reporting actions.

3.4.1 Sewage Spill Prevention

Part of the sanitary sewer system within the City is operated and maintained by the Leucadia Wastewater District (LWWD), as described in Section 8. LWWD is responsible for sanitary sewer system maintenance and responding to and reporting Sanitary Sewer Overflows (SSO) within the portion of the City that is within its jurisdictional area. The City of Encinitas is responsible for SSO prevention, response, and reporting in the remainder of the City. A map of the sanitary sewer jurisdictional areas is provided in Appendix D. The measures outlined

below are implemented to prevent overflows, spills, and infiltration of sewage to the MS4 as required by sections E.2.b.(4)-(5) of the Municipal Permit.

Preventive Maintenance Activities

The City conducts routine sanitary sewer system maintenance activities, as discussed in Section 8.

Sewer System Management Plan (SSMP)

The City will continue to maintain and implement a SSMP in response to the SWRCB Order No. 2006-003-DWQ, 2013-0058-EXEC and RWQCB Order R9-2007-0005. The City will also continue to maintain a Sanitary Sewer Overflow Prevention Plan (SSOPP), which is included within the SSMP. The SSOPP describes the City's sewer system and addresses the organization and major activities of the City's wastewater operations. The SSOPP has been designed to prevent or minimize the potential for sanitary sewer overflows (SSOs).

3.4.2 Sewage Spill Response

Spills from the City's sanitary sewer system entering the MS4 may be discovered during routine maintenance activities or observed and reported to the City by citizens and sewer and maintenance workers. Any reports by the public or City staff are called in to the Public Works Department at (760) 753-5018 or reported online via the City's website, www.encinitasca.gov. Sewer spills are reported using the procedures outlined in the Sanitary Sewer Overflow Emergency Response Plan (SSOERP), which is included within the SSMP. The SSOERP describes the City's sewer system overflow response and notification procedures. Response actions are taken in accordance with the City's SSMP to address all spills. The City also regularly coordinates with LWWD, which is responsible for responding to SSOs within the portion of the City within its jurisdiction.

The Municipal Permit also requires that sewage discharges that are caused by blockages or other problems within a privately owned lateral or failing septic systems are dealt with appropriately. If a spill from a private sewer lateral is not contained and no action is being taken by the responsible party to repair the lateral, the City will take necessary action to contain the spill, repair the lateral and bill the responsible party. CWP staff will issue citations where appropriate.

The County DEH is responsible for responding to sewage spills due to failing septic systems at private residences. The City will work with the County DEH, as needed, to ensure spills are fully remediated.

3.4.3 Hazardous Materials Spill Response

The City's Fire Department responds directly to spills or illegal dumping of hazardous materials, and provides support services to other agencies that encounter hazardous materials in their routine duties. The Fire Department operates 24 hours a day, seven days a week. The team's duties include, but are not limited to, directing the containment and clean-up of spills that may enter surface waters or flow directly to the MS4 in accordance with the City's Hazardous Materials Response Plan.

3.4.4 Other Spill Prevention and Mitigation Procedures

The City coordinates spill prevention, containment, and response activities throughout all appropriate departments, programs, and agencies to protect water quality. Spills are prevented and mitigated through the implementation and enforcement of minimum BMPs in the Stormwater Standards Manual (Appendix C).

3.4.5 Spill/Discharge Reporting

Illegal discharges to the City's MS4 are reported annually in the City's JRMP Annual Report, which includes the number of discharges reported, detected, investigated, identified, and eliminated, and the number of associated enforcement actions. Discharges that are considered to pose a threat to health or the environment are reported to the RWQCB verbally within 24 hours and in writing within 5 days, as required by Attachment B of the Municipal Permit. SSOs are reported to the State Water Resources Control Board via the California Integrated Water Quality Management System (CIWQS), an online database. Protocols for SSO reporting are described in more details in the City's SSMP.

3.5 IC/ID Investigation and Elimination

3.5.1 Dry Weather Major MS4 Outfall Discharge Monitoring

In 2013, the City of Encinitas began routine visual monitoring of discharges from major MS4 outfalls during dry weather to detect non-stormwater and IC/IDs from its storm drain system. A "major outfall" is defined as an outfall that is 36 inches in diameter or a drain in an industrial area that is at least 12 inches in diameter.

Under the 2007 Municipal Permit, the City conducted field screening at a smaller number of monitoring sites and tested any water present at the sites for various common stormwater pollutants. The 2013 Municipal Permit emphasizes the identification and elimination of dry weather discharges from the City's outfalls instead of on pollutants in discharges. By working towards eliminating or reducing dry weather flows, the City of Encinitas is able to concentrate on reducing and eliminating a wide range of pollutants that may be transported to receiving waters.

The City has implemented procedures to investigate and inspect segments of its MS4 that have a reasonable potential of receiving, containing, or discharging pollutants due to IC/IDs or other non-stormwater sources. All IC/IDs found during dry weather MS4 outfall monitoring field work are investigated immediately by CWP staff and appropriate follow-up and/or enforcement actions are taken as necessary. Detailed procedures for dry weather major MS4 outfall monitoring, IC/ID investigations and prioritization of investigations are included in Appendix G: Dry Weather MS4 Outfall Monitoring Procedures.

Note that other monitoring requirements specified in the Municipal Permit include wet weather MS4 outfall and receiving water monitoring. Those activities are completed by contractors through watershed level programs for which cost is shared among the responsible parties in the watershed. For that reason, the details of those programs are discussed in the Carlsbad Watershed Management Area Water Quality Improvement Plan.

3.5.2 Storm Drain System Map

As part of the City's JRMP and MS4 outfall monitoring program, the City has updated and continues to maintain an MS4 map and a monitoring locations map that display the Municipal Permit-required information listed below. The MS4 map is included in Appendix D, and the monitoring locations map is included in Appendix G. The maps include the following:

- All MS4 segments owned, operated, and maintained by the City, and that includes MS4 outfall monitoring locations and drainage basins.
- All known locations of inlets that discharge and/or collect runoff into the City's MS4.
- All known locations of connections with other MS4s not owned or operated by the City (e.g. Caltrans MS4s).
- All known locations of MS4 outfalls and private outfalls that discharge runoff collected from areas within the City's jurisdiction.
- All segments of receiving waters within the City's jurisdiction that receive and convey runoff discharged from the City's MS4 outfalls.
- Locations of the inventoried major MS4 outfalls within the City's jurisdiction, pursuant to Section D.2.a.(1) of the Municipal Permit.
- Locations of the non-stormwater persistent flow MS4 outfall monitoring stations, identified pursuant to Section D.2.a.(1) of the Municipal Permit.

If field staff note inaccuracies in the map during field screening, the inaccuracies will be reported to the appropriate City staff so that updates can be made. The need for updates to the map will be assessed at least annually, and at that time updates will be made where necessary.

The GIS files used in developing the City's MS4 map will be made available to RWQCB staff upon request.

3.5.3 Other Source Investigation Procedures

In addition to the investigation procedures described in the MS4 outfall monitoring procedures (Appendix G), the City may also employ the following methods to identify the source of an IC/ID:

Review of Plans

As-built drawings for the area of concern may be obtained to verify connections. However, an illegal connection is likely to have occurred after the as-built drawings were created, so additional techniques should also be employed.

Dye Testing

Dye testing is useful to confirm hydraulic connections between the potential source and the location downstream. Fluorescent dye is discharged at the source of the potential IC/ID and is monitored downstream. This method is used only when necessary because the public and appropriate regulatory agencies in the surrounding area need to be informed of the cause of the water discoloration.

Smoke Testing

Smoke testing can be used only on underground stormwater conveyance facilities, to determine potential hydraulic connections between the source and downstream location. Again, the public and appropriate agencies need to be informed of the cause for smoke coming from the storm drain system.

Video Monitoring

Mobile video cameras may be used to record observations in an underground stormwater conveyance facility. The public and regulatory agencies generally do not need to be informed prior to initiating this kind of investigation.

Confined Space Entry

In some cases, underground conveyances are large enough that a crew trained in confined space entry may investigate the section of pipe or culvert in question instead of using video monitoring. All applicable health and safety regulations must be followed. The public and regulatory agencies, however, generally do not need to be informed prior to initiating a confined space entry.

Potential Sewage IC/IDs

Further testing of suspected sewage-related flows is conducted when visual and odor observations do not adequately confirm the presence of sewage.

- Ammonia - Sewage frequently contains ammonia levels of 30 mg/L or greater. Typically, this can be measured with an inexpensive field screening kit.
- Bacteria - Sewage generally has high levels of total and fecal coliforms and *Enterococci*. Sewage treatment plants and many laboratories routinely conduct these indicator analyses.

3.5.4 Elimination of IC/IDs

Action is taken to eliminate all detected IC/IDs and their sources as soon as possible after detection. IC/IDs that pose a serious threat to public health or the environment are eliminated immediately. IC/IDs that are not deemed to pose serious threats to public health or the environment are eliminated through an escalating series of enforcement actions, which are described in the Enforcement Response Plan (Appendix B).

Remove Illegal Connections

The City ensures that the violator takes appropriate action to disconnect, block, stop, or divert drainage facilities and pipe connections that are determined to discharge pollutants to the MS4. Appropriate actions may include the following:

- Plug sinks and drains that are discharging illegal materials to the storm drain system.
- Disconnect all drainage pipes found to discharge illegal pollutants to the storm drain system.
- Dispose of illegal materials via the sanitary sewer if approved by the City, or other appropriate disposal or storage methods.
- Divert illegal discharges to the sanitary sewer if approved by the City, or treat on-site.

Note that in some cases special permits from the local wastewater authority are needed before material can be discharged to the sanitary sewer system in addition to the City's approval.

Discontinue Illegal Discharges

As applicable to each individual circumstance, the City ensures that responsible parties implement the procedures outlined below to eliminate discharges that transport pollutant materials to the MS4. If the responsible party or parties cannot be identified, City staff will perform the cleanup for IC/IDs.

- Eliminate the source of the discharge.
- Remove pollutant materials from the site (including from the City's right-of-way or MS4 to the MEP).
- Prevent pollutant materials from coming in contact with the discharge.

- Contain potential illegal discharges on site for treatment or proper disposal.

3.5.5 Record Keeping

The City will maintain records and a database of the following information for IC/ID investigations:

- Location of incident, including hydrologic subarea, portion of MS4 receiving the non-stormwater or illegal discharge, and point of discharge or potential discharge from MS4 to receiving water.
- Source of information initiating the investigation (e.g., public reports, staff or contractor reports and notifications, field screening, etc.).
- Date the information used to initiate the investigation was received.
- Date the investigation was initiated.
- Dates of follow-up investigations.
- Identified or suspected source of the illegal discharge or connection, if determined.
- Known or suspected related incidents, if any.
- Result of the investigation.
- If a source cannot be identified and the investigation is not continued, document the response pursuant to the requirements of the Municipal Permit Section E.2.d.(3).

Records of notifications provided to regulatory agencies are also tracked. For example, reports of SSOs are entered into CIWQS and can be exported by City staff when necessary.

3.6 Enforcement

Procedures described in the City's Enforcement Response Plan (Appendix B) are followed to prohibit and eliminate identified IC/IDs. Discharges are eliminated as soon as possible upon being discovered. The level of enforcement action taken to bring about compliance may depend on factors such as the type and amount of substance discharged and prior compliance history. If compliance has not been achieved within 30 days of the time the City became aware of a violation, CWP staff will document information on why additional time beyond 30 days was necessary for resolution, as required by the Municipal Permit.

4 Development Planning

4.1 Introduction

This component describes the City's land use policies and procedures which aim to reduce the water quality impacts of development and redevelopment. Being a coastal community, environmental protection and water quality is of utmost importance. The City has strong water quality protection policies reflected in its General Plan, environmental review process, Municipal Code, development project approval process, and Best Management Practice BMP inspection and enforcement program.

To accommodate the City of Encinitas' growth and provide opportunities for new businesses, development projects are continually being proposed and built within the City. The development of urban areas has the potential to negatively impact the surrounding environment. The addition of impervious surfaces can alter the natural drainage patterns of the area and urban development can facilitate the introduction of pollutants into the environment.

Accordingly, the City has established measures which limit the potential for urban development to negatively impact downstream water quality. Through the implementation of this chapter, the City will reduce the discharge of pollutants from development projects to the Maximum Extent Practicable (MEP) to protect receiving water bodies, and manage increases in runoff from development projects that have the potential to increase erosion in streams or rivers.

This chapter contains a review of the City's land use and planning authorities as it relates to water quality and environmental protection. It also describes how all development and redevelopment projects are reviewed by the City to ensure that the established Encinitas Stormwater Manual, the Municipal Permit, and other stormwater policies and regulations are followed.

4.2 Land Use Planning

The City's land use planning process (1) effectively prohibits non-stormwater discharges to the MS4, (2) facilitates the reduction of development project discharges of pollutants from the MS4 to the MEP, (3) protects the beneficial uses of receiving waters from MS4 discharges, and /or will aim to achieve the interim and final numeric goals identified in the Carlsbad Watershed WQIP.

The City's land use planning process consists of development and implementation if the following documents:

- General Plan
- Jurisdictional Runoff Management Plan
- Watercourse Protection, Stormwater Management and Discharge Control Ordinance (Chapter 20.08)
- Encinitas Stormwater Manual

The General Plan is the City's primary land use planning document and contains the adopted policies designed to guide City processes and decision making. The Jurisdictional Runoff Management Plan serves as the City's stormwater management guidance document. Any City department or staff member involved in any aspect of stormwater regulation refers to the JRMP for direction. The City's Municipal Ordinance supports the policies founded in the General Plan and the JRMP and establishes the legal framework by which these policies are enforceable. The Encinitas Stormwater Manual serves as the City's local structural BMP manual which outlines BMPs that are required to be implemented at new development and redevelopment projects. The following sections describe the City's land use planning process in more detail.

4.2.1 General Plan

The City's General Plan document serves as the blueprint for the long-range, development of the City and contains stated community goals and policies designed to protect core environmental, social, cultural and economic resources. The General Plan includes a number of water quality and watershed protection principles and policies which direct land use decisions and require implementation of consistent water quality protection measures for development projects.

The City implements the policies in the General Plan using a variety of resources; including the JRMP, Municipal Code, the Encinitas Stormwater Manual, development agreements, and other various land use plans and permits. The General Plan is periodically reviewed by City staff to ensure that water quality and watershed principles are maintained and updated as needed to comply with local stormwater regulations.

4.2.2 Environmental Review Process

The City's environmental review process includes an evaluation of water quality and cumulative impacts and identifies appropriate measures to avoid, minimize and mitigate those impacts for all development projects. The California Environmental Quality Act requires environmental review of discretionary applications for development projects. Environmental initial studies are conducted to determine whether the project may have a significant impact on the environment. This review process evaluates a project's potential for significant impacts on water quality. The environmental review process ensures that a

project's impact on water quality is addressed early in the planning process. If a project is determined to have a significant environmental effect, mitigation measures are required under CEQA to avoid or reduce the effect to below a level of significance. The mitigation measures normally take the form of permanent structural BMPs designed to be incorporated into project plans prior to discretionary approval.

4.2.3 Encinitas Stormwater Manual

The City of Encinitas participated in the update of the Model BMP Design Manual for the San Diego Region. The Model BMP Design Manual addresses post-construction urban runoff pollution from development projects and defines the minimum required LID, source control, treatment control and hydromodification control BMPs. The updated Model BMP Manual meets the requirements outline in Section E.3.d of the Permit.

This Model BMP Design Manual addresses updated onsite post-construction stormwater requirements for Standard Projects and Priority Development Projects (PDPs), and provides updated procedures for planning, selecting, and designing permanent stormwater BMPs based on the performance standards presented in the 2013 Municipal Permit. The manual is intended to be used as the basis for jurisdiction-specific BMP Design Manuals as described in the "Local Implementation" section below. At the local level, the intended users of the BMP Design Manual include project applicants, for both private and public developments, and their representatives responsible for preparation of Stormwater Quality Management Plans (SWQMPs) and Copermittee personnel responsible for review of these plans.

As required by the Municipal Permit, the City of Encinitas will incorporate the updated Model BMP Design Manual into the Encinitas Stormwater Manual and implement the requirements within 180 days of completing the regional update. A copy of the current Encinitas Stormwater Manual is available on the City's website (http://www.encinitasca.gov). A copy of the Model BMP Design Manual for the San Diego Region is available on the Project Clean Water website (http://www.projectcleanwater.org).

4.2.3.1 Prior Lawful Approval

With the incorporation of the Model BMP Design Manual into the local Encinitas Stormwater Manual, the City will be adopting updated post-construction BMP requirements for development projects to meet the requirements of the Municipal Permit. These new requirements are anticipated to go into effect in late December 2015. All projects that have not started construction (i.e. obtained a grading permit or building permit) before that date will be subject to the new requirements. Project applicants will be directed to consult with City Engineering staff to determine if their project may be subject to the new requirements.

4.3 Development Project Requirements

Development projects have the potential to discharge pollutants based on the project's size and intended land use. The Encinitas Stormwater Manual describes specific categories for Priority Projects and establishes BMP requirements for each category of project: Priority, Standard, and Exempt. Both Priority and Standard projects must meet the BMP requirements for all projects described in Section 4.3.1. Priority Projects are also subject to additional requirements as described in Section 4.3.2.

The City of Encinitas has an established multi-departmental review process for all new development and redevelopment projects. Through the use of the City's Stormwater Ordinance, Encinitas Stormwater Manual and development project review process, the City aims to mitigate the negative impacts of urban runoff from development projects to the MEP. In the City of Encinitas, all development projects are required to meet the applicable BMP requirements. The following sections describe the minimum BMP requirements and development project review and approval process.

4.3.1 BMP Requirements for All Projects

Site design, source control and low-impact development BMPs are required for both Standard and Priority projects, as detailed in the Encinitas Stormwater Manual. This generally includes BMPs such as materials and trash storage, minimization of impervious area, limiting compaction of native soil, conservation of natural areas, etc. As part of the Encinitas Stormwater Manual update described in Section 4.2.5, the requirements for all projects will be updated based on the Model BMP Design Manual.

4.3.2 BMP Requirements for Priority Development Projects

In addition to meeting the site design and source control BMP requirements described in Section 4.3.1 above, designs for Priority Development Projects also must include numerically-sized structural BMPs to meet treatment and hydromodification management requirements. These BMPs must be designed to meet the requirements of the existing Encinitas Stormwater Manual.

As described above, the City will be updating the permanent BMP requirements in the Encinitas Stormwater Manual based on the regionally-developed Model BMP Design Manual. Some of the key requirements in the BMP Design Manual are listed below:

- Structural BMPs must be designed to retain onsite pollutants contained in the volume of stormwater runoff produced from the 24-hour 85th percentile storm.
- If retention of the design capture volume is not technically feasible, higher volume biofiltration or flow-through BMPs may be used. The BMP Design Manual provides more details on this process.

- Onsite BMPs to manage hydromodification that may be caused by stormwater runoff discharged from the project are required. Post-project flow rates and durations must not exceed pre-development conditions by more than 10 percent.
- Impacts to known critical sediment yield areas, as identified through the regional Watershed Management Area Analysis, must be avoided.

4.3.2.1 Alternative Compliance

As noted earlier, the requirements in the existing Encinitas Stormwater Manual will continue to apply until the new BMP Design Manual goes into effect. Under the Municipal Permit requirements, each Copermittee, including the City of Encinitas, has the option to develop an alternative compliance program. An alternative compliance program would allow project proponents that cannot meet the requirements solely through onsite BMPs to satisfy the requirements by implementing additional BMPs offsite. All Copermittees, including the City of Encinitas, are currently funding a study to collect technical information on approaches to evaluate water quality equivalency among multiple BMPs. Additional work to develop a crediting system based on the water quality equivalency study results is also expected to be necessary to support the creation of an alternative compliance program. Once the studies of water quality equivalency and crediting approaches have been finalized, the City will evaluate the feasibility of establishing an alternative compliance program.

4.4 Development Project Review and Approval

As required by the Municipal Permit, the City of Encinitas has implemented a project review and approval process to ensure that development and redevelopment projects comply with Development Planning requirements detailed in section E.3 of the Municipal Permit, including Source Control, Low Impact Development, Treatment Control, and Hydromodification Management BMPs. Pursuant to section E.3.e.(1)(b) of the permit, the City has identified the following departments, divisions, and sections of which staff have the responsibility for ensuring that projects are appropriately identified, reviewed, approved, inspected for construction completion and proper BMP maintenance.

- The Planning and Building Department receives project applications, reviews, and distributes them to other departments for review and further processing.
- The Public Works Development Review Division conducts plan checks and issues grading, improvement, and other permits.
- The Public Works Capital Improvement Projects (CIP) Engineering Division designs and prepares plans for CIPs and is responsible for the supervision of design and construction of public facilities.

- The Public Works Grading Inspection staff conducts project inspections during grading and improvement phases, conducts permanent BMP inspections, and initiates enforcement when necessary.
- Public Works Stormwater Division staff provides guidance for City staff that implements the Development Project Approval Process and verifies that the City's program meets the Municipal Permit requirements. Upon completion of the project, Clean Water Program (CWP) staff also manages the permanent BMP inspection and maintenance program.

During the planning process, prior to project approval and issuance of any permits, the City prescribes the necessary requirements so that development project discharges of pollutants to the MS4 will be reduced to the MEP, will not cause or contribute to a violation of water quality standards and will comply with the City's ordinances, plans, and the Municipal Permit. Both discretionary and ministerial projects must undergo a project approval process during which the City's local stormwater requirements are applied to the project.

4.4.1 Discretionary Projects Review and Approval

Projects requiring a discretionary permit are subject to a three-tier review process that includes an initial predevelopment review prior to submittal to the City, a written self-certification of the stormwater requirements for the project, and the application of project conditions of approval to meet stormwater pollution control requirements. Those projects requiring a further ministerial permit are also subject to a plan check review as described in the Ministerial Project section.

4.4.1.1 Predevelopment review

During the predevelopment phase, the applicant is informed of the City's stormwater requirements and provided information about stormwater pollution control and structural BMP options. During this preliminary design phase, engineers and applicants are guided by City staff to provide adequate stormwater facilities in conceptual form and to document those facilities on the site plans upon the initial discretionary permit application submittal. This process ensures structural BMPs, are integrated into the design of the project early in the project planning process.

Priority Development Projects (PDPs) are first identified during the predevelopment process. During the predevelopment meeting, applicants proposing PDPs learn they must meet the City's established permanent BMP requirements outlined in the Encinitas Stormwater Manual. At the predevelopment phase, City staff and the applicant and/or engineer discuss options for meeting the numerical requirements.

4.4.1.2 Stormwater Quality Checklist and Certification

All development project applicants are required to complete the Stormwater Quality Checklist and Certification. The completed certification must accompany the initial submittal of each discretionary permit application. In the certification, applicants identify whether their project is a Priority Development Project, Standard Project, or Exempt from stormwater requirements and certify that they will implement structural BMPs on their site as appropriate for the project's priority. A copy of the checklist is provided in the Encinitas Stormwater Manual.

4.4.1.3 Development Review and Approval

The Development Review Section of the Public Works Department has established specific Conditions of Development Approval to assure compliance with the City's stormwater pollution control standards. These conditions include construction requirements as well as permanent BMP standards for effective stormwater pollution control facilities. Once the predevelopment meetings are conducted and the certification checklist has been completed, the application is reviewed for adequacy of the project's proposed facilities shown on the site plan. Conditions of Approval are issued to ensure implementation of satisfactory LID, source control, treatment control and hydromodification BMPs based on the Encinitas Stormwater Manual. The Conditions of Approval take into account the nature of each project site, the work proposed and the mandatory requirement for development project in the Municipal Permit. The Conditions of Approval are then recorded in a covenant against the property.

Applicants not showing adequate construction or permanent structural BMP measures on their initial development review submittals are asked to revise their plans and resubmit prior to approval. At a minimum, stormwater pollution control facilities for Standard projects must meet the minimum requirements established in the Encinitas Stormwater Manual. PDPs must show LID, source control, treatment control and hydromodification BMPs on the project plans. In addition, PDP plans must show a feasible solution for structural BMPs, designed to meet numeric sizing standards for water quality treatment and hydromodification management. Projects with permanent structural BMPs that appear to be inadequate are asked to resubmit with substantiating calculations for the proposed BMPs. These numeric requirements are listed in the Encinitas Stormwater Manual and available to all applicants through the City's website.

4.4.2 Ministerial Projects Review and Approval

Projects requiring a ministerial permit such as a grading, improvement, or building permit are also required to include permanent BMPs in the project design. These facilities must be considered adequate before the project's plans are approved by the City. Often the

project has been scrutinized at the discretionary permit level and the project is already conditioned to provide specific permanent structural BMPs. For those projects not requiring a discretionary permit, the review of the permanent structural BMPs begins at the plan check stage.

4.4.2.1 Engineering Review and Approval

City plan check engineers in the Development Review Section are trained in the design of permanent BMPs and serve as resources for the general public and design engineers. During the plan check process, every project is reviewed for stormwater construction and permanent structural BMPs. City plan check engineers emphasize to applicants the variety of solutions that may be used in providing stormwater pollution control. Once the proposed plans meet the City's stormwater requirements, the permitted drawing becomes public record; therefore documentation of the designated permanent structural BMPs is maintained. Engineers are also required to provide stormwater pollution control notes on the plans addressing employee stormwater education, materials storage, erosion/sediment controls, and waste management in order to meet the City's stormwater requirements.

Every plan is also reviewed to determine if it meets the City's definition of a Priority Development Project. In addition to meeting Standard Project requirements, PDPs must provide LID, source control and structural BMPs as required by the Municipal Permit and the Encinitas Stormwater Manual. All PDPs must comply with the numeric sizing criteria for treatment control and hydromodification BMPs in order to be approved by the City Engineer. Plan check engineers review the project's hydrology calculations to determine the adequacy of the system proposed.

During the plan check process, erosion control plans are also carefully reviewed to ensure compliance with construction-phase BMP requirements. For more information regarding temporary construction BMPs, refer to Chapter 5 of this document.

4.4.2.2 Permanent BMP Maintenance Agreements

All PDPs under review for ministerial permits must execute a stormwater maintenance agreement guaranteeing the operation and maintenance of permanent BMPs as necessary into perpetuity. At the plan check phase the project applicant is required to establish maintenance responsibility and identify the maintenance mechanism for the permanent BMPs prior to project approval. A covenant ensuring adequate maintenance into perpetuity is recorded against the property. The covenant includes an attachment depicting the structural BMPs, so that the required facilities and their location on the project site are easily identified. The maintenance agreement is then recorded against and runs with the property.

4.4.3 Capital Improvement Projects

The City's Capital Improvement Projects (CIPs) are subject to the same permanent structural BMP requirements as private development and must undergo the same level of project review. PDP CIPs must be designed to incorporate the City's stormwater requirements including LID, source control, treatment control and hydromodification BMPs per the Encinitas Stormwater Manual. The City takes responsibility for long-term maintenance and regular inspection of the permanent BMPs installed on PDP CIPs. Section 6 of this document provides a description of the City's MS4 maintenance and inspection program.

4.4.4 Outreach and Staff Training

The Encinitas Stormwater Manual serves as the City's guidance document for designing and reviewing development projects. City staff work closely with applicants during the entire approval process via in-person meetings, email correspondence and phone conversations in order to convey development project stormwater requirements. City staff involved in planning and review are trained on an as needed basis. Training includes a review of LID design, source control, treatment control, and hydromodification concepts, so that planners and engineers can effectively review development projects for appropriate BMP implementation and incorporate appropriate BMPs into private developments and Capital Improvement Projects. For more detail on outreach and training with respect to development planning, refer to Chapter 10 of this document.

4.5 PDP BMP Implementation and Oversight

The following section describes the City's program that requires and confirms permanent BMPs on all PDPs are designed, constructed, and maintained to remove pollutants to the MEP.

4.5.1 Permanent BMP Approval and Verification

Pursuant to section E.3.e.(1)(d) of the Municipal Permit, Engineering inspection staff inspect all PDPs subject to stormwater requirements prior to occupancy and/or intended use of any portion of the site, to verify that all permanent structural BMPs proposed for the project have been constructed in accordance with all approved plans, City permits, ordinances, and requirements of the Permit.

City inspectors check to ensure that BMPs have been built according to plans before signing off on each stage of BMP construction. The inspectors use the project's grading plans to identify any missing or incorrectly installed BMPs. If any permanent BMP is missing or is found to be incorrectly installed during or upon completion of construction,

appropriate enforcement measures will be taken to require proper installation of all approved BMPs, as described in Section 4.6.

If the need arises to modify a BMP during construction, the proposed change will be submitted to City plan check engineers for review and approval. Modifications must meet the permanent BMP sizing requirements in order to be approved.

Beginning in FY 2015-16, the PDP project developer will be required to obtain an engineer (or equivalent qualified individual) to inspect and certify that the BMPs have been installed per plan. The engineer will be required to provide the City inspector with documentation demonstrating that the structural BMPs have been installed per plan. This requirement will be stated on each grading plan.

Upon completion of the project and prior to occupancy, the engineer of record for the project must provide the City with a final grading certification letter and documentation confirming that the permanent BMPs were installed per the approved plan and are in operation. Included with the final grading certification letter must be photos of the completed, installed permanent structural BMPs and other documentation, as necessary. The certification letter must be stamped and signed by the engineer of record and verified by City inspection staff via signature.

Upon completion of the project, electronic copies of the as-built grading plans for each PDP are preserved in the City's electronic document storage system and accessible to all City staff.

4.5.2 PDP Inventory and Prioritization

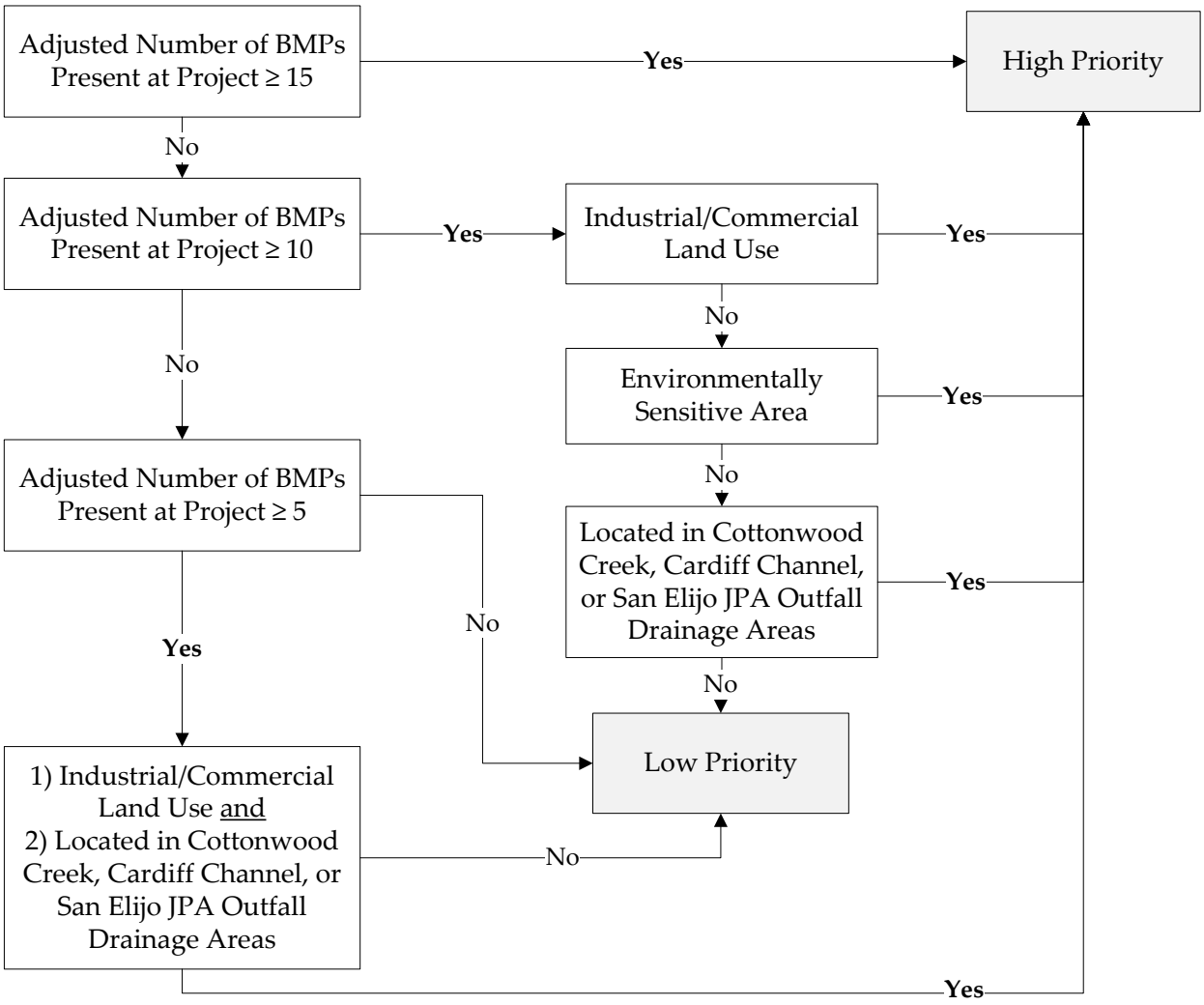
Pursuant to section E.3.e.(2) of the Municipal Permit, the City has established a watershed-based GIS data management system to track the long-term maintenance of all approved permanent structural BMPs installed at PDPs. The database inventory includes the following information:

- PDP location (address and hydrologic subarea);
- Descriptions of structural BMP type(s);
- Date(s) of construction (as-built plans date);
- Contact information for party responsible for structural BMP maintenance;
- Dates and findings of structural BMP maintenance verifications; and
- Corrective actions and/or resolutions, when applicable.

The inventory includes all PDPs and their respective permanent structural BMPs for projects that have been completed since December 2002 and which require maintenance inspections per the Municipal Permit.

The City prioritizes its inventory of PDPs by designating the projects that are high priority for annual inspection. A project is classified as "High" priority or "Low" priority for inspection when it is first added to the inventory. The prioritization approach is presented in Figure 4-1. Table 4-1 summarizes how the criteria were incorporated into the prioritization procedure and how they satisfy the Municipal Permit requirements. The City may also consider additional site-specific information beyond those included in Figure 4-1 and Table 4-1 when assigning priorities where applicable.

Figure 4-1. Prioritization Process for Projects with Structural BMPs



Notes:

- Adjusted Number of BMPs Present at Project – the number of BMPs present at a project, adjusted for the typical drainage area of each BMP type. BMPs that typically have larger drainage areas are assigned a higher weight since if they fail to operate properly a larger tributary area will be affected.
- Industrial/Commercial Land Use – any project for which any of the following Priority Development Project categories applies: Industrial Development, Heavy Industry, Commercial Development, Automotive Repair, Restaurant, or Retail Gasoline Station.
- Environmentally Sensitive Area (ESA) – project classified in the ESA Priority Development Project category. These projects are within 200 feet from an ESA or directly discharge to an ESA.
- Projects in the Cottonwood Creek, Cardiff Channel and San Elijo JPA Outfall Drainage Areas are assigned higher priorities because numeric goals have been established for these watersheds in the WQIP.
- The City may adjust assigned priorities based additional site-specific conditions or factors, such as maintenance history or inspection compliance history.

Table 4-1. Structural BMP Prioritization Factors

Flow Chart Prioritization Factor	Corresponding Municipal Permit Prioritization Criteria	Rationale/Notes
Adjusted number of BMPs present at project	• Number and size of structural BMPs • Likelihood of operational and maintenance issues associated with BMP(s)	Larger sites with more BMPs and on BMPs with larger drainage areas have a larger potential positive impact on water quality if properly maintained.
Industrial/commercial land use	• Land use and expected pollutants generated	Businesses are expected to be more concentrated sources of bacteria and nutrients
Environmentally Sensitive Area (ESA)	• Receiving water quality	Sites next to ESA may have a disproportionate impact on ESAs if BMPs are not properly maintained. A map of ESAs within the City is provided in Appendix H.
Located within the Cottonwood Creek, Cardiff Channel and San Elijo JPA Outfall Drainage Areas	• Highest priority water quality conditions identified in Water Quality Improvement Plans • Receiving water quality	Highest priority water quality conditions and corresponding numeric goals have been established for the Cottonwood Creek, Cardiff Channel and San Elijo JPA Outfall Drainage Areas.
Site-specific factors (see footnote in Figure 4-2)	• Compliance record • Likelihood of operational and maintenance issues associated with BMP(s) • Recommended maintenance frequency of the BMP(s)	City staff may adjust priorities based on results from inspections and review of submitted maintenance verification information.

The prioritization factor "adjusted number of BMPs present at project" is the number of BMPs at a project, adjusted for the typical drainage area of each BMP type. BMPs that typically have larger drainage areas are assigned a higher weight since if they fail to operate properly a larger tributary area will be affected. The adjusted number of BMPs at a project is obtained by multiplying the number of each type of BMP at a project by a weighting factor for that BMP type, and then summing the weighted scores. Table 4-2 summarizes the weighting factors assigned to each BMP type. An example calculation is provided following Table 4-2.

Table 4-2. Structural BMP Weighting Factors

BMP Type	Weighting Factor
Vegetated Swale	0.5
Landscaped Area	0.5
Bioretention Basin	1
Mechanical Filter (Inlet)	0.5
Infiltration Basin	1
Rock Swale	0.5
Pervious Pavement	1
Other	1
Bioretention Swale	0.5
Turf Block Swale	0.5
Extended Detention Basin	5
Flow-Through Planter	0.5
Media Filter	2
Advanced Mechanical Filter	5
Retention/Infiltration Vault	5
Dry Well	1
Interceptor (Sewer)	1
Vortex Separator	3
Sand/Oil Separator (stormwater)	3
Cistern/Bioretention	0.5

<u>Example calculation of adjusted number of BMPs:</u>

Project has 6 vegetated swales and 1 sand filter.

Adjusted number of BMPs = (veg. swales)(weighting factor) + (sand filter)(weighting factor)

= (6)(0.5) + (1)(1.5) = 4.5

Each year the City of Encinitas updates its inventory of all approved and completed PDPs and structural BMPs within the City's jurisdiction. Each year, pursuant to section

E.3.e.(1)(c) of the Municipal Permit, the City requires and confirms that appropriate easements and ownerships are properly recorded in public records for all PDPs newly added to the inventory. The City has access to current County Assessor's parcel data which is used to determine project ownership. In addition, the City requests updated ownership information from responsible parties during annual BMP inspections. This data is used to update the PDP inventory. As discussed in section 4.4.2.2, a maintenance agreement (also known as a maintenance covenant) is recorded against any PDP property. This agreement runs with the land and obligates any new property owner to maintain the BMPs as specified in the property-specific agreement.

4.5.3 Structural BMP Maintenance Verification and Inspection

All permanent structural BMPs installed at PDPs are required to be inspected by the property owner and maintained as necessary. Maintenance verification documenting the property owner's inspection and maintenance activities is required to be provided to the City on an annual basis. All PDPs designated as High priority for inspection, as determined in Section 4.5.2, are inspected by City staff on an annual basis prior to October 1. Table 4-3 below presents structural BMP priorities and their corresponding inspection frequencies.

Table 4-3. Permanent BMP Maintenance Verification and Inspection Requirements

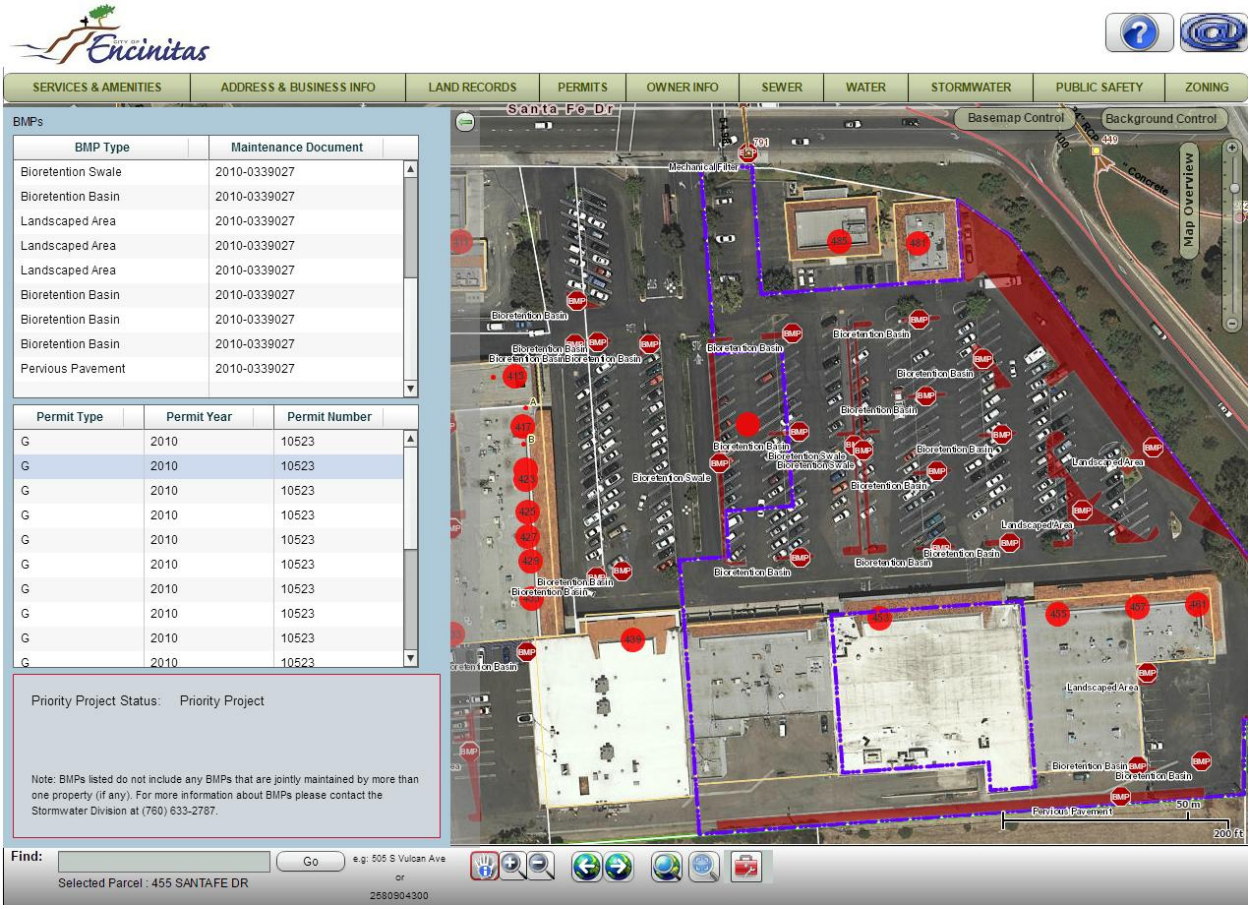
Project Priority	Maintenance Verification	Inspection Frequency
High	Required from all projects annually	100% inspected annually by City staff prior to the start of the rainy season (October 1)
Low	Required from all projects annually	Inspected by City staff if verification documentation is not provided or is not adequate.

The City requires annual verification of proper maintenance of all permanent structural BMPs by the party responsible for maintenance. The City sends annual reminder letters to the responsible party for each site in the City's PDP inventory. Utilizing information from the City's PDP data management system, the reminder letters inform the responsible parties of the permanent BMPs for which they are responsible and require the responsible parties to submit documentation verifying that the permanent BMPs are being properly maintained in accordance with the project's maintenance requirements. Annual verification documentation can conveniently be submitted via a specially designed City website, http://cleanwaterbmp.cityofencinitas.org/ Maintenance verification submitted via email, mail and in person are also accepted.

City inspections include an examination of all permanent structural BMPs at the PDP site to verify that each BMP is working, being maintained properly, and is in compliance with all applicable City ordinances and permits. Inspection findings are documented by the inspector using the Permanent BMP Inspection Form included in Appendix F. If any deficiencies in BMP operation or maintenance are noted during the inspection, the responsible party is notified and appropriate follow up and if necessary enforcement actions are taken to achieve compliance, as described in Section 4.6.

Inspection findings and follow-up actions for each development site with installed permanent BMPs are recorded in the City's Permanent BMP Tracking GIS Data Management System. Figure 4-2 provides a screenshot of this system.

Figure 4-2. Permanent BMP Tracking GIS Data Management System.



Permanent BMPs operated and maintained by the City are inspected by City staff on an annual basis and maintained as needed based on the results of the inspections. For more

information regarding the maintenance and inspection of the City's MS4 refer to Section 7 of this document.

4.6 Enforcement Measures for Development Sites

The City uses a variety of escalating enforcement methods to implement stormwater requirements for all development projects within the City's jurisdiction. Enforcement methods include verbal and written warnings, notices of violation, monetary penalties, and denial of permits. A more detailed description of the different enforcement measures used by the City to enforce its stormwater regulations and their legal basis can be found in the Enforcement Response Plan (Appendix B).

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5 Construction Management

5.1 Introduction

Construction and grading activities have the potential to impact neighboring water bodies due to the presence of disturbed soils and building materials. It is important that construction sites take appropriate measures to prevent potential pollutants from entering the storm drain system.

The purpose of the construction section is to limit the negative impact that construction and grading activities can have on receiving water bodies. The following section provides details on how the City of Encinitas (City) will meet the minimum requirements outlined in Provision E.4 of the Municipal Permit[2] to reduce the release of pollutants into the storm drain system to the maximum extent practicable (MEP).

5.2 Program Implementation

Construction projects include, but are not limited to, clearing, grading, grubbing, excavation, re-construction of existing facilities involving removal and replacement, or any other land disturbing activities. Construction activity does not include routine maintenance such as, maintenance of original line and grade, hydraulic capacity, or original purpose of the facility. Construction projects are required to select, install, and maintain best management practices (BMP) that meet or exceed the City's BMP requirements listed in the Stormwater Standards Manual (Appendix C). Construction projects may also be subject to the requirements of the statewide Construction General Permit (Order 2012-0006-DWQ) (CGP), which applies to projects that disturb one acre or more.

5.3 Project Approval Process

Construction project proponents are informed of applicable stormwater requirements during the permit application process. An Erosion Control Plan is required for all projects for which a grading or improvement plan is required. The Public Works Engineering Division uses a standard checklist to review the Erosion Control Plan submittals for consistency with the BMP requirements in the Stormwater Standards Manual (Appendix C). Proposed BMPs are required to be appropriate to construction phases, and the City may require phased Erosion Control Plans, usually for larger projects. When phased plans are required, separate sets of erosion control sheets are required for mass grading and precise grading. The Erosion Control Plan is

[2] San Diego Regional Water Quality Control Board Order No. R9-2013-0001, as amended by Order No. R9-2015-0001

included as part of the overall grading or improvement plan submittal to Engineering, and a grading or improvement permit is not issued until the Erosion Control Plan is approved.

Note that there are two different types of permits for grading projects: Grading and Simplified Grading. The latter typically applies to smaller, less complex projects. In either case Erosion Control Plans are reviewed and must be approved prior to permit issuance. As an added level of assurance, posting of financial securities is required for Grading Permits and occasionally required for Simplified Grading Permits.

The City also requires projects subject to the CGP to provide proof of coverage before construction work may begin. To confirm coverage, the Waste Discharge Identification (WDID) number issued by the State Water Resources Control Board (SWRCB) must be noted on the grading plan. Note that the CGP requires projects to complete Storm Water Pollution Prevention Plans (SWPPP). SWPPPs are prepared for all Capital Improvement Projects (CIPs) that are one acre or more, and the City ensures that the SWPPPs for CIPs meet CGP requirements. For private projects, the City reviews Erosion Control Plans for compliance with the Stormwater Standards Manual, EMC Chapter 20.08, and the Municipal Permit as part of the City's project approval process. The City does not formally approve CGP SWPPPs for private development projects.

Projects that disturb less than 50 cubic yards of soil do not require a grading permit. These projects are small, generally disturbing minimal soil and are typically short duration. Standard construction BMP notes are required to be included on the approved building plans for small projects. These projects are also notified of their obligation to implement BMPs via the City's small project construction BMP sheet, which is provided to them during the permitting process.

The City's construction project review processes for private projects and for CIPs are summarized in figures 5-1 and 5-2, respectively. The processes are essentially the same. The main difference is that the City directly prepares a SWPPP and files a Notice of Intent (NOI) to comply with the CGP for CIPs, while for private projects the City requires the project proponent to provide proof of coverage under the CGP. Green boxes indicate endpoints in the review and approval process.

Figure 5-1. Private Development Project Approval Process

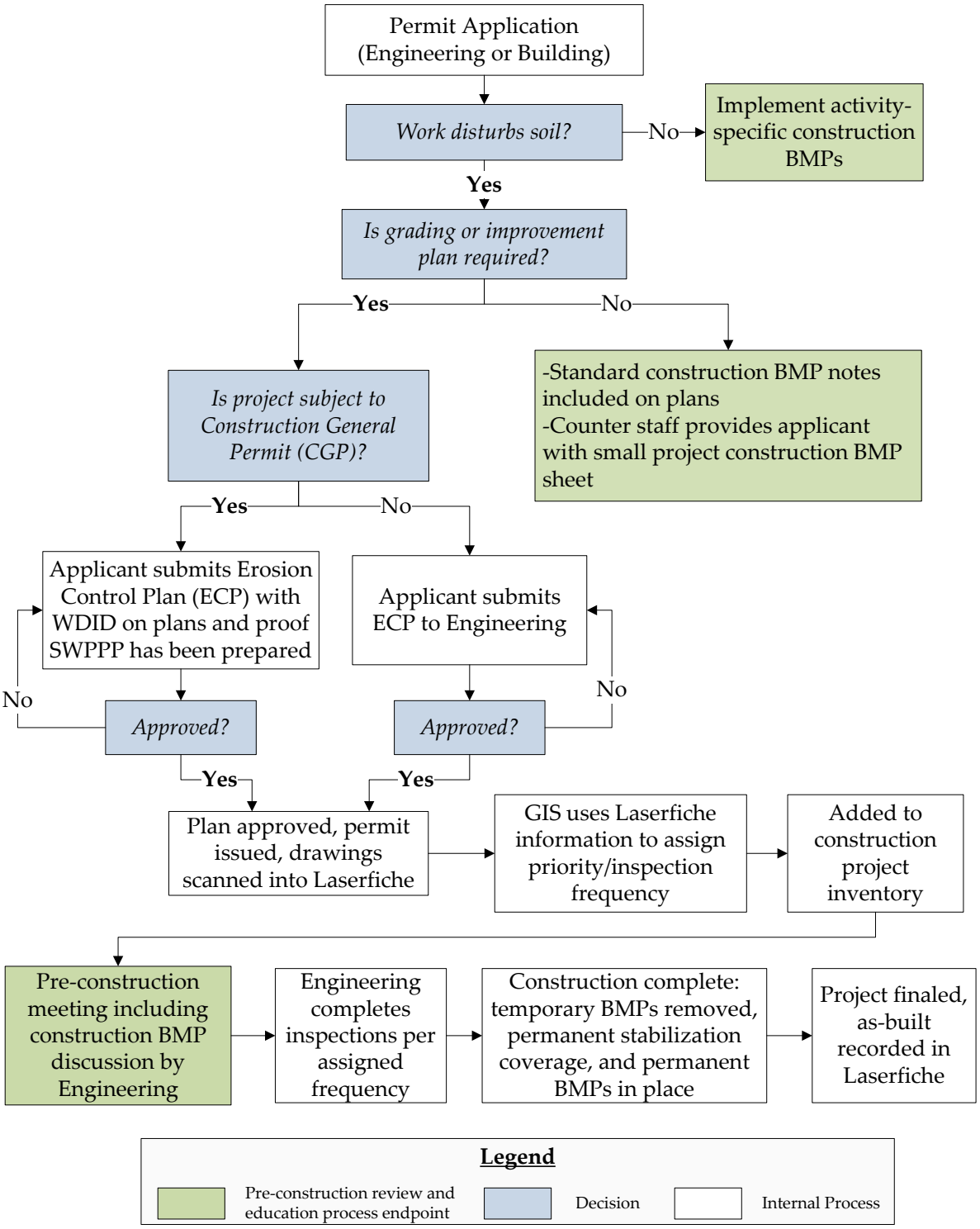
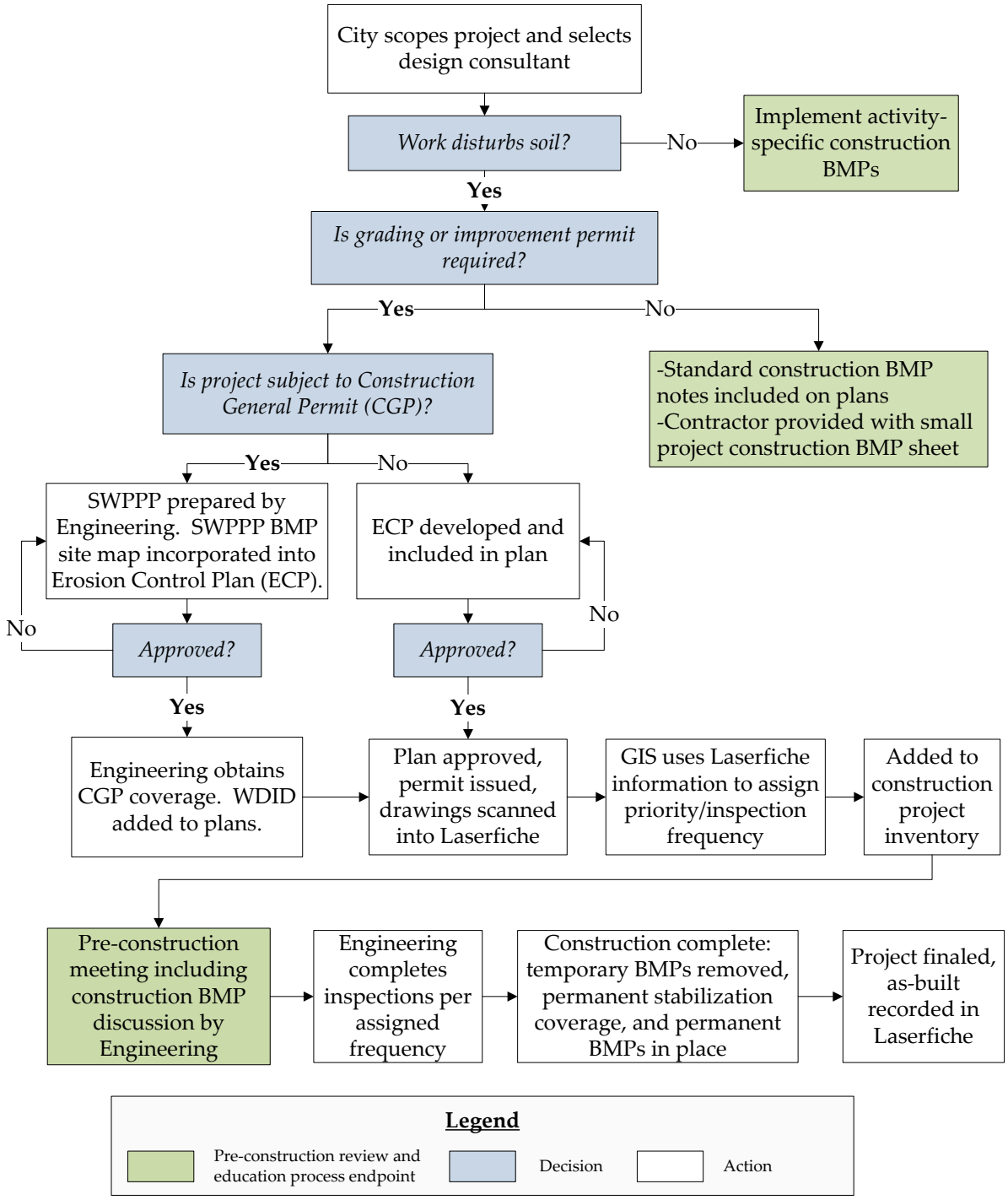


Figure 5-2. Capital Improvement Project Approval Process



5.4 Construction Site Inventory

The City of Encinitas maintains a watershed-based inventory of active construction sites within its jurisdiction. The inventory includes details on each construction site, including project name, location, and construction site priority as determined by the process described in Section 5.4.1. Construction sites are added to the City's construction inventory when grading permits, simplified grading permits, improvement permits are approved. CIPs are also added to the construction inventory when a project begins construction. Completed projects are removed from the inventory upon finalization, as reported by City inspectors. While the City's construction inventory is updated on an ongoing basis, at a minimum, the City will review the inventory on a quarterly basis to ensure that the inventory is current and accurate.

The City uses an electronic database to maintain its inventory, which includes the following components required by the Municipal Permit:

- Contact information for each site (e.g., name, address, phone, and email for the owner and contractor).
- Basic site information including location (address and hydrologic subarea), WDID number (if applicable), size of the site, and approximate area of disturbance.
- Threat to water quality (TTWQ) priority (see Section 5.4.1), which dictates the required inspection frequency.
- Project start and completion dates.
- Date of acceptance or approval of the Erosion Control Plan or other construction BMP plan. The date of approval of an Erosion Control Plan is the signed date of approval of the overall grading plan.
- Whether there are ongoing enforcement actions administered to the site.

Inspection data management is discussed in Section 5.6.3.

5.4.1 Construction Site Prioritization

All construction sites within the City's jurisdiction are assigned priorities based on the criteria in Table 5-1, which incorporates the prioritization factors from Municipal Permit sections E.4.b.(2) and E.4.d. Priorities are initially assigned when a project is added to the inventory. During the formal quarterly review of the City's construction inventory, re-prioritization of TTWQ designations for active construction sites will be performed as needed.

Table 5-1. Criteria to Identify High Threat to Water Quality Construction Projects

CGP Category	Within an ESA?[1]?	Site Priority
Risk Level 2 or 3 LUP Type 2 or 3	Yes or No	High
Risk Level 1 or LUP Type 1	Yes	High
	No	Medium
All other projects	Yes	Medium
	No	Low

Notes
CGP – State Construction General Permit
LUP – Linear Underground/Overhead Project
ESA – Environmentally Sensitive Area
[1] Within, directly discharging to, or directly adjacent to (within 200 feet of) a receiving water body within an ESA. JRMP Section 1 and Appendix H provide more information about ESA locations.

Other factors besides those discussed above can influence a construction site's TTWQ. The City maintains the right to re-prioritize a construction site's assigned TTWQ during the course of construction based on compliance history or if any of the prioritization factors change.

5.5 Best Management Practice Requirements

5.5.1 BMP Requirements

The City has established BMP requirements for construction sites, as detailed in the Stormwater Standards Manual (Appendix C). Construction sites within the City's jurisdiction are required to implement and maintain general site management BMPs and erosion and sediment control BMPs to reduce, retain, and manage pollutant discharges to the MEP. The City emphasizes erosion control BMPs as the primary approach to reducing pollution in discharges from construction sites. All implemented BMPs must be properly maintained until they are removed.

All personnel working at a construction site, including subcontractors, are expected to be aware of BMP requirements for each individual site. While the City is involved in educating construction site project proponents about the City's requirements, it is also the responsibility of project managers and site supervisors to communicate City requirements to all construction site personnel and subcontractors. Project foreman and other personnel who manage construction activities are also expected to stay updated on current BMP requirements for construction. Often project foremen and other personnel have been trained in stormwater BMP requirements

and have been certified as Qualified SWPPP Practitioners (QSPs) or Qualified SWPPP Developers (QSDs).

Prior to start of construction activities, project proponents are required to present the planned BMPs that meet the requirements specified in the Stormwater Standards Manual to the City for compliance review. Section 5.3 provides a more detailed description of the construction and grading approval process.

5.6 Inspection of Construction Sites

The City has an established inspection program to evaluate proper BMP implementation at construction sites within the City's jurisdiction. The inspection program is designed to confirm sites reduce the discharge of pollutants in stormwater to the MEP and effectively prohibit non-stormwater discharges. Designated minimum BMPs are required for all construction sites, especially during the rainy season. These minimum BMPs include, but are not limited to, the following:

- Erosion prevention is the most important measure for keeping sediment on site during construction, but should never be the single method utilized.
- Sediment controls are to be used as a supplement to erosion prevention for keeping sediment on site during construction, including perimeter protection and exit/entrance controls.
- Minimization of areas of exposed soil (e.g. cleared and graded, and/or disturbed) and minimization of time of exposure.
- Temporary or permanent stabilization of areas of exposed soil with deployment of permanent, effective soil cover as soon as feasible.
- Prevention of non-stormwater discharges to the MEP.
- Good housekeeping at all times.

Engineering Division inspection staff perform regularly scheduled site inspections to ensure BMPs are implemented consistent with the Erosion Control Plan and the City's BMP requirements during all stages of development.

Site inspections performed by City inspection staff evaluate compliance with BMP requirements, as required through applicable ordinances and permits. Inspection findings are documented on the City's construction inspection form (included in Appendix F) and tracked in the City's construction inspection spreadsheet. If required BMPs are missing or found to be improperly implemented, follow up and if necessary appropriate enforcement actions, as described in

City's Enforcement Response Plan, are taken. Details of the City's inspection procedures are described below.

5.6.1 Inspection Frequency

Routine inspections are performed per the frequency in Table 5-2. The frequency depends on the site's assigned TTWQ, as determined through the prioritization process described in Section 5.4.1.

The following table presents the different TTWQ categories and their corresponding inspection frequencies for the wet (October 1 through April 30) and dry (May 1 through September 30) seasons.

Table 5-2. Construction Site Inspection Frequency

Construction Site TTWQ	Wet Season Inspection Frequency	Dry Season Inspection Frequency
High	Twice per Month	As Needed
Medium	Monthly	As Needed
Low	As Needed[1]	As Needed

Note

[1] Low priority projects are generally inspected at least once over the life of the project. Since many low priority projects are very small projects, the construction duration may be too short for a stormwater inspection to occur during the construction process.

The City may reevaluate a construction site's TTWQ and subsequent inspection frequency, particularly when grading activities are being conducted during the wet season. The City maintains the right to inspect a site more often than the frequencies listed in Table 5-2, if necessary. The need for additional inspections can vary depending on site conditions, previous violations, history of developer or contractor past performance, and/or weather patterns.

5.6.2 Routine and Follow-Up Inspections

Routine inspections include the following components:

- Assessment of the implementation of all required BMPs, whether required through ordinances or permits.
    - A check for proper maintenance of the applicable BMPs.
    - Assessment of the adequacy and effectiveness of required BMPs.
- Assessment of whether project proponents are making appropriate adjustments when BMP inefficiencies are found as a result of self- or City-conducted inspections.
- Visual observations to evaluate presence of non-stormwater discharges.

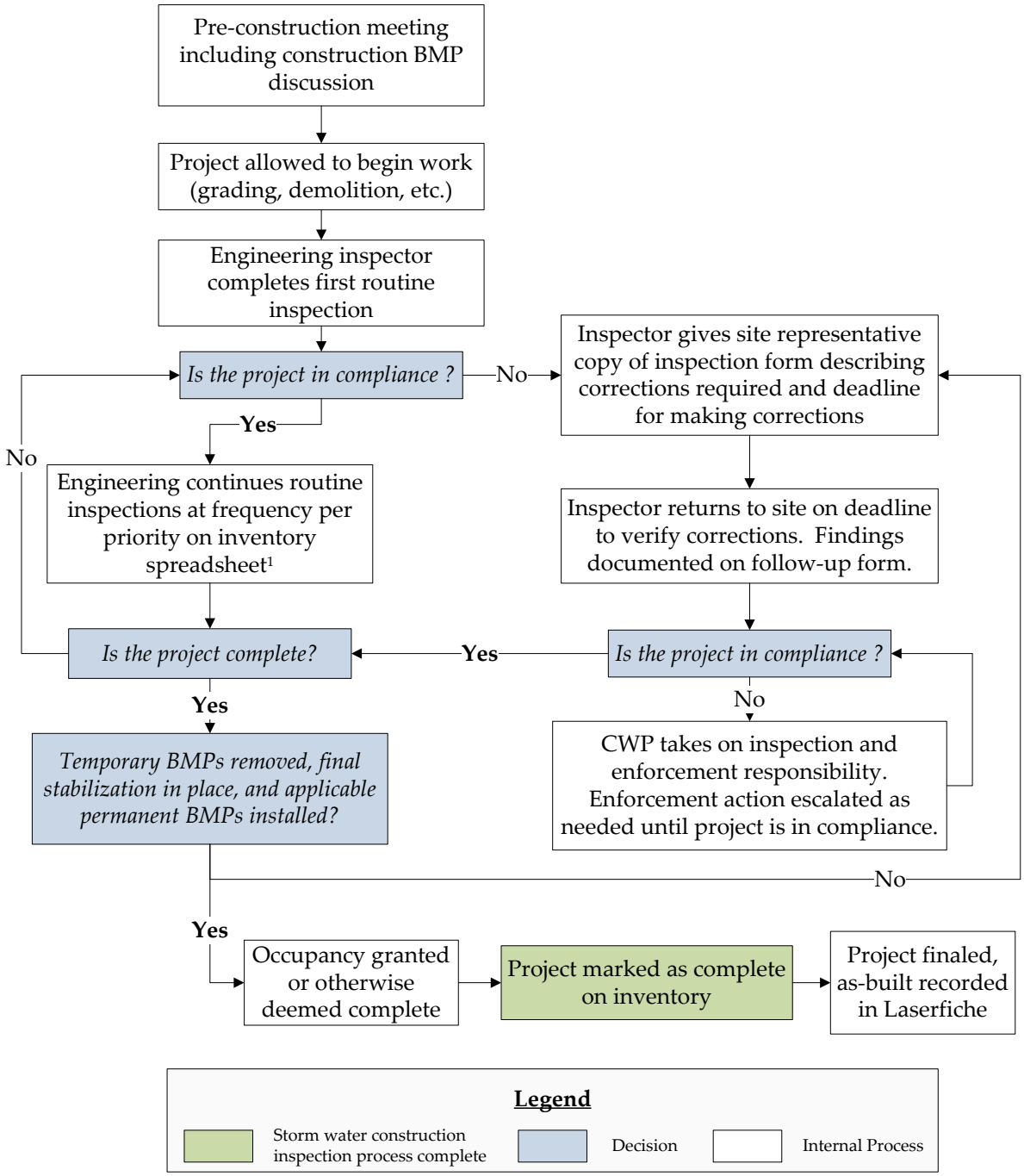
- Visual observations of actual or potential illicit connections and discharges of pollutants, such as sediment and/or construction related materials, from the site.
- Education of project proponents on stormwater pollution prevention as needed.

During the initial site inspection, the inspector will verify coverage under the General Construction Permit (WDID number), where applicable. The initial routine inspection may be completed in conjunction with onsite pre-construction meetings.

Inspection findings are documented on the City's inspection form (included in Appendix F). The construction form has been designed to track compliance with the BMPs required per the Stormwater Standards Manual (Appendix C). The table of construction BMPs in the Stormwater Standards Manual identifies the corresponding question on the inspection form for each BMP in the table.

The completed construction form is provided directly to the responsible party at the end of each routine inspection. Promptly providing written notification of required corrections starts the follow-up and enforcement process and allows deficiencies to be resolved more quickly. When an inspection finds a site is noncompliant, the initial follow-up inspection is documented on the follow-up inspection form (included in Appendix F). Enforcement actions will be taken as necessary to bring about compliance, as discussed in Section 5.7 and the City's Enforcement Response Plan (Appendix B). After compliance has been achieved, routine inspections resume again per the frequency identified in Section 5.6.1. Figure 5-3 below summarizes the typical inspection process.

Figure 5-3. Typical Construction Project Inspection Process



Note
[1] If an inspector notes a site is inactive, the inventory and inspection frequency will be updated accordingly. Once activity resumes, the inventory and inspection frequency will be updated again accordingly.

5.6.3 Inspection Tracking

The inspections performed at each construction site will be tracked in the City's construction spreadsheet to ensure all construction sites in the City's inventory are being inspected at the

appropriate frequency. Inspection records and related documentation for each inspection at inventoried construction sites will also be kept on file. These documents will be made available to San Diego Regional Water Quality Control Board (RWQCB) staff upon request. Inspection records will include the following information, at a minimum:

- Site name, location (address and hydrologic subarea), and WDID number (if applicable).
- Inspection date.
- Approximate amount of rainfall since last inspection.
- Description of problems observed with BMPs and indication of need for BMP addition/repair/replacement and any scheduled re-inspection, and date of re-inspection.
- Descriptions of any other specific inspection comments which must, at a minimum, include rationales for longer compliance time.
- Description of enforcement actions issued in accordance with the Enforcement Response Plan (Appendix B).
- Resolution of problems noted and date problems were resolved.

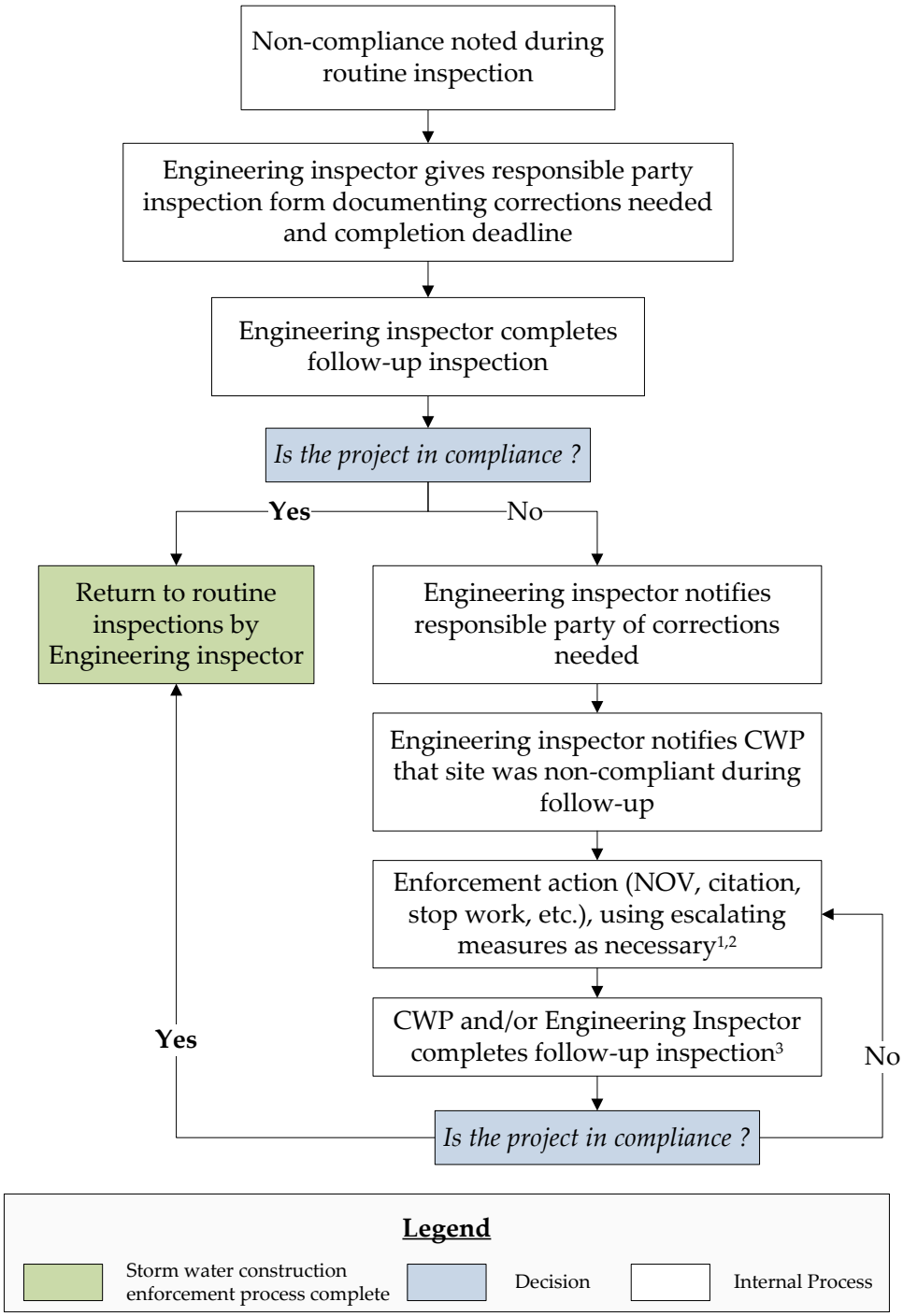
5.7 Enforcement

The City is responsible for enforcement of applicable local ordinances and permits at all construction sites in its jurisdiction. When violations are observed and documented during a site inspection, City staff implement appropriate enforcement measures as discussed in the City's Enforcement Response Plan (Appendix B).

When deficiencies are noted, Engineering inspectors provide a copy of the inspection form at the end of the routine inspection and subsequently perform the initial follow-up inspection using the follow-up inspection form (both forms are included in Appendix F). If corrections have not been made at the time of follow-up inspection, Clean Water Program staff will assist with gaining compliance and issue enforcement actions as needed to resolve violations. Enforcement actions are based on the severity of the violation and can range from written warnings to more severe enforcement such as stop work notices. When a site is subject to the CGP, City staff may also collaborate with RWQCB staff on enforcement actions.

Typically violations are resolved in much less than 30 days, but in cases where the violation cannot be resolved within 30 days, the reason additional time was needed for case resolution will be documented. Figure 5-4 summarizes the City's typical enforcement process for construction projects.

Figure 5-4. Typical Construction Project Enforcement Process



Notes
[1] If escalated enforcement is taken for a site determined to pose a significant threat to water quality as a result of non-compliance with the City's storm water requirements, the Regional Board will also be notified within five days.
[2] If NOVs, citations, and stop works are not effective, the City may use the site's bond money to hire a contractor to implement improved BMPs, or the City Attorney's Office may initiate legal proceedings against the site.
[3] CWP inspectors typically take the lead on follow-up and enforcement. Engineering inspectors assist as needed.

6 Industrial and Commercial Facilities

6.1 Introduction

The City of Encinitas requires industrial and commercial facilities or areas to implement pollution prevention methods, also known as Best Management Practices (BMPs), to reduce discharges of pollutants to the storm drain system (MS4). The required BMPs are listed in the City's minimum BMPs (Appendix C) and have been developed based on the requirements of the Municipal Permit. The City inventories businesses subject to these requirements and facilitates BMP implementation through education, inspections, and enforcement. The City has also incorporated strategies to reduce discharges of bacteria, the highest priority water quality condition identified in the WQIP for the Carlsbad Watershed Management Area (WMA).

6.2 Industrial and Commercial Source Inventory

6.2.1 Background

A watershed-based inventory of known industrial and commercial businesses and properties (collectively, "facilities") within the City's jurisdiction has been developed and will be updated annually. Commercial facilities make up the majority of the City's business inventory, which mostly consists of restaurants, nurseries, and auto repair shops. There are only three industrial facilities located in the City: the San Dieguito Union School District Transportation Authority, the San Elijo Joint Powers Authority Water Reclamation Facility, and the closed Encinitas Landfill. The types of businesses included on the inventory are listed in Section 6.2.3. These types of businesses are believed to have the potential to discharge pollutants into the MS4 and impact local water quality.

6.2.2 Data Sources

The City regularly maintains and updates a watershed-based inventory of industrial and commercial facilities within its jurisdiction. The inventory is managed using an electronic database, and spatial information for each inventoried facility is stored so that the inventory can be mapped using GIS. Data is gathered from the following sources to form the inventory:

- City of Encinitas business registration listings
- SWRCB list of facilities covered under the NPDES Industrial General Permit, Order No. 2014-0057-DWQ (IGP)
- Complaints filed for unregistered businesses
- Findings from routine commercial and industrial inspections

6.2.3 Inventoried Facilities

Businesses identified from the data sources described above are included in the commercial and industrial inventory if the type of business or activities performed by the business may have the potential to discharge pollutants to the MS4. The following types of businesses are included in the City's inventory.

Industrial Facilities

- Facilities subject to the statewide IGP or other individual NPDES permit
- Facilities subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986
- Landfills
- Hazardous waste treatment, disposal, storage and recovery facilities

Commercial Facilities

- Automobile repair, maintenance, fueling, or cleaning
- Airplane repair, maintenance, fueling, or cleaning
- Boat repair, maintenance, fueling, or cleaning
- Equipment repair, maintenance, fueling, or cleaning
- Automobile and other vehicle body repair, or painting
- Automobile (or other vehicle) parking lots and storage facilities
- Retail or wholesale fueling
- Contractors with significant storage yards
    - Painting and coating
    - Cement mixing or cutting
    - Masonry
    - Landscaping
    - Pest control services
    - Other contractors
- Eating or drinking establishments, including food markets
- Botanical or zoological gardens and exhibits
- Nurseries and greenhouses

- Golf courses, parks and other recreational areas/facilities
- Cemeteries
- Marinas
- Building material retailers and storage
- Animal facilities
- Portable sanitary services

Mobile businesses known to operate within the City's jurisdiction are also included on the City's industrial and commercial inventory. Unlicensed mobile businesses are identified and added to the inventory based on incidents reported to the Clean Water Hotline and violations directly observed by City or contract staff. Examples of mobile businesses include the following:

- Mobile vehicle washing
- Mobile carpet, drape or furniture cleaning
- Power washing services

Other industrial or commercial sites/sources that the City determines may contribute a significant pollutant load to the MS4 are also inventoried.

6.2.4 Inventory Data Management

The City maintains its industrial and commercial inventory through the use of a GIS-based data management system in accordance with Permit Section E.5.a. Because spatial information is stored and maintained for inventoried businesses on an ongoing basis, a map of industrial and commercial facilities can be generated whenever it is necessary. At a minimum, the inventory includes, where applicable, the following information for industrial and commercial facilities within its jurisdiction:

1. Name and location (HSA and address)
2. Classification as commercial or industrial
3. Status of facility or area as active or inactive
4. Identification if a business is a mobile business
5. SIC and/or NAICS code(s)
6. Industrial General Permit Notice of Intent and/or Waste Discharger Identification number
7. Identification of pollutants generated and potentially generated by the facility or area.

8. Whether the facility or area is adjacent to an ESA. "Adjacent to" is defined as being within 200 feet of an ESA. This is in accordance with past procedure and with the most recent definition provided by the RWQCB, which is found in Order No. R9-2007-0001. A map of ESAs is shown in Appendix J.
9. Whether the facility or area is tributary to and within the same HSA as a water body segment listed as impaired on the Section 303(d) list and generates pollutants for which the water body segment is impaired. The following groups of businesses are considered to meet this criterion.
    - Businesses in the Cottonwood Creek drainage area marked as likely sources of bacteria
    - Businesses in the Escondido Creek and San Elijo Lagoon drainage area marked as likely sources of bacteria, sediment, or nutrients

The City maintains its inventory in a GIS-based database and therefore has the ability to map the locations of inventoried industrial and commercial facilities, watershed boundaries, and water bodies, as required by the Municipal Permit. A tabular summary of fields included in the industrial and commercial inventory is included in Appendix F.

6.2.5 Inventory Prioritization

In the Carlsbad WQIP, the 2nd Street sub-basin has been identified as a focus area due to its relatively higher concentration of restaurants and other commercial businesses. The 2nd Street sub-basin drains to the lower portion of Cottonwood Creek, which drains to the Pacific Ocean at Moonlight Beach. Cottonwood Creek and the Pacific Ocean at Moonlight Beach are sensitive water bodies that the City would like to protect at an enhanced level. To minimize pollutants from impacting these water bodies, the commercial businesses within this sub-basin that are on the industrial and commercial inventory are considered high priority sites. Figure 6-1 shows the location of the 2nd Street sub-basin and the commercial areas within the sub-basin.

Facilities outside the 2nd Street sub-basin are generally assigned a standard inspection priority. City Stormwater staff also have the discretion to classify sites outside the 2nd Street sub-basin as high priority or to inspect them more frequently based on compliance history or other relevant factors.

6.3 Best Management Practice Requirements

The City requires businesses to implement BMPs to reduce discharges of pollutants and to eliminate prohibited non-stormwater discharges. The updated minimum BMP requirements are listed in the Stormwater Standards Manual (Appendix C). The Stormwater Ordinance (Appendix A) also gives City inspectors the authority to require additional BMPs beyond the

minimum BMPs where necessary to reduce discharges of pollutants to the maximum extent practicable. Businesses can also be required to develop and implement site-specific BMP plans.

Consistent with WQIP strategies to reduce discharges of bacteria (see Appendix I), the minimum required BMPs include prohibiting irrigation runoff, which can transport bacteria. The City has also passed an ordinance banning distribution of single use plastic bags. The ban applies to large retailers, grocery stores, drug stores, convenience stores, and mini-markets in spring 2015 and to farmers markets and all other retailers in fall 2015.

6.4 Best Management Practice Implementation

The City inspects inventoried industrial and commercial facilities to require compliance with the established minimum BMPs and the Stormwater Ordinance. The City provides education and outreach to businesses to make them aware of and encourage compliance with the requirements, as described in Section 10.

6.4.1 Inspection Frequency

The City's inspection program is designed to meet the following Permit objectives:

- Inspect all inventoried industrial and commercial businesses at least once every five years. These inspections may be either onsite inspections or drive-by inspections.
- Annually complete a number of onsite inspections equal to 20 percent of the total number of inventoried facilities. If multiple onsite inspections are completed at a facility in a given year, including follow-up inspections or inspections in response to a hotline call, those inspections may be counted toward the 20 percent requirement. Drive-by inspections, as defined in Section 6.4.3.2, are not counted toward the 20 percent requirement.

All inventoried facilities will be inspected a least once within the Municipal Permit term. As described in section 6.2.2, the 2nd Street sub-basin has been identified in the Carlsbad WQIP as a focus area for which goals and strategies have been established. All facilities in the 2nd Street sub-basin are considered high priority and will be inspected twice per year, which is ten times more than the minimum commercial inspection requirements mandated by the Municipal Permit. In an effort to meet established WQIP goals, the City will inspect the facilities in the 2nd Street sub-basin at least twice annually. Typically one inspection will be onsite and one will be drive-by, although City inspectors have discretion to vary the types of inspections completed based on their best professional judgment and business compliance history. The procedures for onsite and drive-by inspections are discussed in more detail in Section 6.4.3.

Inspections outside the 2nd Street sub-basin will also be completed to ensure at least 20 percent of businesses receive an onsite inspection each year and all businesses are inspected at least once every five years.

Based upon inspection findings, the City will implement all follow-up actions (i.e. education and outreach, re-inspection, enforcement) necessary to require and confirm compliance with the applicable BMPs, local ordinances, and permits, and in accordance with the Enforcement Response Plan.

6.4.2 Inspection Data Management

City inspectors track all inspections and re-inspections at all inventoried industrial and commercial facilities and retain all inspection records in an electronic database. Information from the database will be made available to RWQCB staff upon request.

Inspection records include, at a minimum:

- Name and location of facility or area (address and HSA) consistent with the inventory name and location.
- Inspection and re-inspection date(s).
- Inspection method(s) (i.e. drive-by, onsite).
- Observations and findings from the inspection(s).

Records for onsite inspections also include:

- Description of any problems or violations found during the inspection(s).
- Description of enforcement actions issued in accordance with the Enforcement Response Plan.
- The date BMP deficiencies or violations were resolved.

6.4.3 Inspection Methods Overview

Inspections of industrial and commercial facilities will typically be conducted by designated stormwater compliance inspectors or contractors. Inspections of industrial and commercial facilities include either a drive-by or onsite inspection, and are tracked using the City's electronic database. Inspectors will use the Commercial and Industrial Storm Water Inspection Form, included in Appendix F. All questions on the form will be answered during onsite inspections, and all discharge-related questions on the form will be answered for drive-by inspections.

An inspection is typically initiated as a result of one of the following:

- To meet the City's commitment to inspect commercial businesses within the 2nd Street sub-basin at least twice per year, as stated in the WQIP.
- To meet the inspection frequency requirements of the Permit, as described in Section 6.4.1.
- To investigate a potential illegal discharge as reported through the Stormwater Hotline or based on MS4 outfall monitoring.
- As a follow-up to a previous inspection during which a violation was noted.

6.4.3.1 Onsite Inspections

Onsite inspections include the following components:

- Visual inspection for the presence of non-stormwater discharges, actual or potential discharges of pollutants, and actual or potential illegal connections.
- Determining whether description of the facility or area in the inventory has changed, and making corresponding updates if necessary.
- Assessment of the implementation of the minimum BMPs, including preventing non-stormwater discharges as required by the Stormwater Ordinance.
- Verification of coverage under the Industrial General Permit, when applicable.

Often, the inspector will obtain information from the facility representative or other responsible individual while on site. If the information requested is not available for verification at the time of the inspection, the inspector will verify the information via telephone or email after the inspection.

During the site visit inspectors will assess areas in which pollutant sources and pollutant-generating activities are exposed to direct precipitation, stormwater run-on, or non-stormwater discharges. Inspectors will evaluate the effectiveness of the business' actions to determine if they comply with the City's BMP requirements. Inspectors also look for evidence of illegal discharges, such as ongoing leaks or recent spills, or discharges/connections not authorized under an NPDES permit. After the inspection, the facility representative and/or the responsible party is provided a written inspection summary for their records.

6.4.3.2 Drive-by Inspections

Drive-by inspections include the following components:

- Visual inspection for the presence of non-stormwater discharges, actual or potential discharges of pollutants, and actual or potential illegal connections.

- Determining whether description of the facility or area in the inventory has changed, and making corresponding updates if necessary.

Drive-by inspections are generally faster than onsite inspections. Their use can allow the City to oversee a large area in a comparatively short amount of time. They can also be used at lower priority businesses to satisfy the Municipal Permit requirement that all businesses are inspected at least once every five years.

The main focus for drive-by inspections is inspecting the discharge points of a facility for evidence of non-stormwater discharges by driving through the area. Identified non-stormwater discharges are further investigated to determine if they are illegal discharges. If an inspector determines more extensive investigation is needed, an onsite inspection may be completed. Whenever an illegal discharge is identified, the responsible party is contacted, and the illegal discharge is required to be eliminated.

6.4.3.3 Mobile Business Oversight

Mobile businesses are subject to the same prohibitions and enforcement mechanisms as stationary industrial and commercial facilities. Field investigations of mobile business BMP implementation are completed on as needed basis, typically in response to reported incidents and direct visual observations by City staff or members of the public.

6.5 Enforcement

The City enforces its legal authority for all its inventoried existing development, as necessary, to achieve compliance in accordance with the Municipal Permit and the Enforcement Response Plan included in Appendix B of this JRMP document. If any stormwater violations are observed during an inspection, the procedure described in the Enforcement Response Plan shall be followed to ensure compliance with BMP requirements and other permit requirements. More specifically, corrections of the observed violations will be corrected within 30 calendar days of the time the violations were discovered or prior to the next rain event. Electronic calendar reminders will be utilized to ensure that the 30 day compliance schedules are met. If more than 30 calendar days are required to achieve compliance, then a rationale will be recorded. Note that the City maintains the authority to require facilities to prepare SWPPPs or to conduct sampling and analysis where deemed necessary by the City.

6.5.1 Identification of Industrial Non-filers

City inspectors evaluate whether inspected businesses are subject to the IGP. The City notifies the RWQCB of any industrial facilities that may be required to obtain coverage under the IGP but that to the City's knowledge have not filed for coverage (non-filers) within five calendar days from the time the City is made aware of the circumstances. Written notification will be

provided electronically by email to Nonfilers_R9@waterboards.ca.gov. As previously noted, the City of Encinitas has very little industrial land use. For that reason, it is unlikely that the City's inspections will discover a significant number of IGP non-filers.

Figure 6-1. Commercial Areas within the 2nd Street Sub-Basin

Data Sources: SanGIS and City of Encinitas

0 200 400 800 Feet

7 Municipal Properties

7.1 Introduction

The City maintains a number of public parks, administration buildings, fire stations, a fire training facility, industrial facilities, potable reservoirs, sewage pump stations, wastewater treatment facilities, and other miscellaneous facilities. An inventory of these facilities is included in Appendix D of this document. Additionally, the City conducts high threat to water quality (TTWQ) activities such as power washing, street and sidewalk repair, painting, graffiti cleaning which are described in Section 8 of this document. Section 8 also describes other prominent municipal operations such as street sweeping, MS4 maintenance, and regular upkeep of the sanitary sewer system to prevent overflows.

7.2 Municipal Properties Inventory

The City maintains and updates, at least annually, a watershed-based GIS inventory of the municipal facilities within its jurisdiction that have the potential to contribute pollutants and non-stormwater discharges to the City's storm drain system. Because the inventory is tracked using GIS, the City is able to map inventoried facilities as needed. The inventory includes the following information, where applicable:

1. Name and location, including hydrologic subarea (HSA) and address.
2. Status of facility or area as active or inactive.
3. General Industrial Permit NOI and/or WDID number.
4. Identification of pollutants generated and potentially generated by the facility or area.
5. Whether the facility or area is adjacent to an ESA (within 200 feet).
6. Whether the facility or area is tributary to and within the same HSA as a water body segment listed as impaired on the CWA Section 303(d) list and generates pollutants for which the water body segment is impaired. This attribute is assigned through the same process used for businesses, which is described in JRMP Section 6.2.4.

Note that the Municipal Permit[3] requires Standard Industrial Classification (SIC) codes and North American Industrial Classification System (NAICS) codes to be included on industrial, commercial, and municipal inventories where applicable. These code systems are designed to

[3] San Diego Regional Water Quality Control Board Order No. R9-2013-0001, as amended by Order No. R9-2015-0001

categorize businesses and are not considered applicable to municipal facilities. Further information regarding stationary municipal facilities is included in the following sections.

7.2.1 Fixed Facilities

Parks and Recreational Facilities

The City maintains a number of parks, landscaped areas, and other recreational areas for use by the general public. Recreational facilities are defined as facilities that support outdoor activities such as sports fields and outdoor pools. Municipal personnel are typically responsible for park maintenance activities such as landscaping, waste removal and control, and the maintenance of any facilities on the grounds of the park such as restrooms or facilities that support concession capabilities.

Public Works Operational Facilities

Public works yards are important in maintaining the functionality of many publicly offered services. The City maintains a number of different facilities that support the activities of the City's Public Works Department including general operations centers and storage yards. Storm Water Pollution Prevention Plans (SWPPPs) have been developed for the City's main operation facilities. The SWPPPs are maintained at each facility, and all of the facilities are inspected by City staff on an annual basis. Additionally, Public Works employees are trained in stormwater management on an annual basis.

Potable Water Facilities

Providing residents with potable water is an essential activity conducted by the City of Encinitas San Dieguito Water District and the Olivenhain Municipal Water District. Potable water facilities in the City include reservoirs, pump stations, and water treatment facilities to remove pollutants from raw water sources such as reservoirs. Many of these facilities are considered low TTWQ because the activities associated with these facilities are located underground and do not involve any other activities on site.

Wastewater Facilities

There is one wastewater treatment facility and a number of pump stations within the City. The City of Encinitas Wastewater Collection Division Facility is located at the same site as the San Elijo Joint Powers Authority Water Reclamation Facility. This facility is an industrial facility and is covered under the General Industrial Permit (WDID 9 37I001545).

Fire Station Facilities

Firefighting capability is an essential element of municipal activities conducted in the City. Firefighting activities are conducted during non-emergency and emergency firefighting activities in the field. Firefighting training is conducted at a fire station outside of the City. Other firefighting activities include equipment maintenance which occurs at the fleet

maintenance facility at Fire Station No. 3. Two fire stations, Station No. 3 and Station No. 4, have fueling stations on site. Firefighting personnel will continue to be trained on how to implement BMPs during firefighting activities.

Other Stationary Facilities

The City maintains a number of public buildings such as administrative buildings, community centers, lifeguard facilities, and leased facilities and/or areas that do not fall into any of the aforementioned categories. The City implements pollution prevention methods and BMPs to reduce or eliminate the pollutants generated at these facilities.

7.2.2 Special Event Sites/Sources

The City of Encinitas hosts a number of different special events in the City. These events include, but are not limited to, festivals, fairs, parades, and other events for various causes and occasions. Additionally, the City issues permits to private organizations that wish to use the City's parks, beaches, streets, and civic center for various events. Special events typically have a high density use of people per square foot, raising the potential for pollutant types at special events, such as:

- Setup and teardown of equipment booths
- Booth operation generating trash
- Food and drink preparation and consumption – illicit discharges and organic material
- Hydraulic rides – oil and grease
- Temporary portable restroom – chemicals and bacteria
- Hydration stations – water cups and other trash material

7.2.3 Inventory Prioritization

Although the current Municipal Permit does not require the prioritization of existing development, the City will continue to prioritize municipal facilities based on their potential TTWQ for internal function and use. The potential TTWQ of each facility is evaluated by incorporating the following factors, where applicable:

Coverage under the Industrial General Permit (IGP) or NPDES Permit subjectivity

Although not specifically required by the Permit, the City continues to classify facilities that have obtained, or should obtain coverage, under the IGP as high TTWQ since industrial sites tend to have a greater potential to discharge pollutants due to the nature of the activities and outdoor exposure.

Compliance history

Results from dry weather field screening at the City's major MS4 outfalls can be useful in identifying facilities that contribute significant pollutant loads to the MS4. Reported incidents,

violations, and field investigation reports are also reviewed, when available, to identify such sites.

Facilities that, based on past inspections and institutional knowledge, are known to have poor compliance history or otherwise have a high potential for pollutant discharge are classified as posing a high TTWQ. If in future years these sites develop a satisfactory pattern of compliance, a lower priority may be assigned so that the City will continue to direct its inspection resources where they are most needed.

Size of facility and total area of the site

Size of the facility affects the amount of runoff and pollutant loads generated from the area.

Proximity to and sensitivity of receiving water body

The key pollutants of concern associated with receiving water bodies in the City of Encinitas are bacterial indicators, nutrients, sediment, DDT, and TDS. The City's inventory prioritization process places facilities that are likely to generate pollutants that are of concern for the watershed in which the facility is located as a high TTWQ.

If the receiving water body is 303(d) listed, and if the facility is determined to be a "likely" source of a pollutant for which the water body is impaired, the facility will be prioritized as a high TTWQ. Facilities or activities within, or adjacent to (within 200 feet), or directly discharging to coastal lagoons or other receiving waters within ESAs are also classified as high TTWQ.

Facility/activity type

Different municipal properties and activities may produce a variety of wastes (trash, green waste, hazardous waste, etc.). Wastes generated by these facilities or activities have the potential to pollute receiving waters if transported by stormwater. All material handling equipment and machinery, raw materials, intermediate products, final products, and by-products exposed to stormwater are evaluated to determine the potential to discharge pollutants in stormwater.

Though some non-stormwater discharge categories associated with municipal operations are allowed by the Permit, they can negatively affect water quality by transporting pollutants into receiving waters. Non-stormwater discharges are evaluated to determine whether they are a significant source of pollutants and whether the discharges may continue to be exempt from the prohibitions of the Permit.

Other relevant factors

Other relevant factors specific to the facility or activity were considered during the prioritization process, when applicable, to assign a higher TTWQ than determined by using the aforementioned criteria only.

The City will continue to prioritize the following municipal facilities as high TTWQ:

- Parking facilities
- Areas and activities within or adjacent to or discharging directly to coastal lagoons or other receiving waters within ESAs
- Parks and recreation facilities
- City properties that host special events (e.g. festivals, sporting events, etc.)
- Power washing
- Other municipal areas and activities that the City determines may contribute a significant pollutant load to the MS4

Analysis utilizing GIS assists in determining land use, watershed, HSA, and distance to receiving water bodies and ESAs. Based on the above criteria, each site is prioritized as a high, medium, or low TTWQ.

7.3 Best Management Practice Requirements

The implementation, operation, and maintenance of BMPs by municipal facilities are required by the City in order to prevent pollutants from entering its MS4. The City has established and updated its minimum set of BMPs specific to each type of existing development, including special event venues. The minimum BMPs that have been designed for each type of facility are described within this section and are included in the JRMP document as Appendix C.

7.3.1 Special Events BMP Implementation

All special events are required to implement designated BMPs and comply with all applicable regulations outlined in the Encinitas Municipal Code. Before any special event permits are approved, applicants must fill out the City's "Special Events Permit P2 Questionnaire" to assess the most appropriate BMPs for their event. Applicants will continue to be required to provide solid waste disposal and recycling services to keep the event area free of trash and debris.

In addition to the BMPs that are implemented by the applicant, the City implements the following practices during and/or after special events, where applicable:

- Proper management of trash and litter, including temporary trash receptacles for trash
- Street sweeping following the special event
- Other BMPs as included in the Municipal Permit, when deemed necessary by City personnel
- Other post clean-up activities, such as catch basin cleaning, when necessary

City personnel are available for the duration of the special event for immediate trash removal and to notify the appropriate personnel if a problem is observed. During the event, special event permit holders are required to ensure that the event remains free of illegal discharges and/or illicit connections to the MS4.

7.4 Best Management Practice Implementation

The City conducts inspections of its inventoried municipal facilities to ensure compliance with the established minimum BMPs and applicable local ordinances and permits and to reduce the discharge of pollutants in stormwater.

7.4.1 Inspection Frequency

The City's inspection program is designed to meet the following Permit objectives:

- Inspect all inventoried municipal facilities at least once within the Permit term, which is expected to be a five-year period. These inspections may be either onsite inspections or drive-by inspections.
- Annually complete a number of onsite inspections equal to 20 percent of the total number of inventoried facilities. If multiple onsite inspections are completed at a facility in a given year, including follow-up inspections or inspections in response to a hotline call/email, those inspections may be counted toward the 20 percent requirement. Drive-by inspections are not counted toward the 20 percent requirement.

The city plans to conduct inspections of all 29 high priority municipal facilities annually.

Based upon inspection findings, the City will implement all follow-up actions (i.e. education and outreach, re-inspection, enforcement) necessary to require and confirm compliance with the applicable BMPs, local ordinances, and permits, and in accordance with the Enforcement Response Plan.

7.4.2 Inspection Content

Inspections of facilities will include, at a minimum, visual inspection for the presence of non-stormwater discharges, actual or potential discharges of pollutants, actual or potential illicit connections, and verification that the description of the facility or area in the inventory has not changed. Onsite inspections will include, at a minimum:

- Assessment of compliance with applicable local ordinances and permits related to non-stormwater and stormwater discharges and runoff.
- Assessment of the implementation of the City's minimum BMPs and any other required BMPs.
- Verification of coverage under the IGP, when applicable.

If any problems or violations are found during the inspection, inspectors will take and document appropriate actions in accordance with the Enforcement Response Plan (Appendix B).

7.4.3 Inspection Data Management

City inspectors track all inspections and re-inspections at all inventoried municipal facilities and retain all inspection records in an electronic database. Information from the database will be made available to RWQCB staff upon request.

Inspection records will include, at a minimum:

- Name and location of facility or area (address and hydrologic subarea) consistent with the inventory name and location.
- Inspection and re-inspection date(s).
- Inspection method(s) (i.e. drive-by, onsite).
- Observations and findings from the inspection(s).

For onsite inspections of municipal facilities the records will also include, as applicable:

- Description of any problems or violations found during the inspection(s).
- Description of enforcement actions issued in accordance with the Enforcement Response Plan.
- The date BMP deficiencies or violations were resolved.

7.4.4 Inspection Procedures

Inspections of municipal facilities will typically be conducted by a City inspector. Inspections include either a drive-by or onsite inspection, and are tracked using the City's electronic database. Inspectors will utilize a General Stormwater Inspection Form, included in Appendix F. The following describes the general procedures that inspectors will follow to conduct inspections.

Inspection Initiation

An inspection is initiated as a result of one of the following:

- The facility is due for a routine inspection.
- A report by the public or a municipal staff member.
- An illicit discharge investigation.
- As a follow up to a previous inspection, violation, or citation.

Pre-Inspection Preparation

Prior to visiting a facility, the inspector will access the electronic database and note the general information portion of the General Stormwater Inspection Form (included in Appendix F). The inspector will review the database to determine the facility's primary activity, general location, proximity to water bodies, applicable BMPs, and other relevant information. The inspector will also note incomplete portions of the facility's general description so as to attempt to complete the information during the inspection.

The inspector may also review all saved documentation from previous years inspection including but not limited to inspection reports, photos, individual state issued permits, annual reports (for sites already known to maintain coverage under separate state permits), and the site specific SWPPP.

7.4.4.1 Onsite Inspections

Site Visit

Prior to entering the facility, the inspector will document the following:

- Adjacent conveyances or water bodies.
- Visible discharge points along perimeter of the site.
- Outdoor areas of intensive industrial activity.
- Signs of recent additions or remodels.

The inspector will obtain information from the facility representative. If the information requested is not available for verification at the time of the inspection, the inspector will verify the information via telephone or email after the inspection where necessary.

Inspectors will perform the following tasks at the time of the inspection:

- Obtain updated information for the City's electronic inspection database, including changes in operations.
- Verify the SIC code and other descriptions of the facility.
- Clarify observations made before entering the facility (i.e., any changes in activities, materials, or physical structures).
- Check for coverage under the IGP when applicable.
- If applicable, review the facility's SWPPP or list of any changes made to the SWPPP in the past year.
- Identify which general BMP requirements apply to the facilities.

- Interview the facility representative about which non-structural BMPs are implemented and how the various BMP requirements are met. The majority of these BMPs may be incorporated into operations and may not be evident in a walkthrough.
- Review other relevant items such as existing pollution prevention plans or an environmental management system.

Inspection Form

The inspector will fill out the inspection form (included in Appendix F) during the interview of the facility representative and the walkthrough of the facility. Once the inspection is completed, while still onsite, the inspector will complete the inspection summary form and revise information as necessary. A signature on the form may be obtained by the facility representative at the site.

7.4.4.2 Drive-by Inspections

Drive-by inspections of municipal facilities include, at a minimum, making observations at all discharge points of the facility. Results of drive-by inspections will be documented on the City's inspection form (included in Appendix F). Note that during a drive-by inspection some of the BMP assessment questions on the inspection form will likely not be completed. This is because the main focus of the drive-by inspection is making observations for discharges and noting any other clearly observable BMP deficiencies; the inspection is not intended to be an in-depth evaluation of all activities that may occur at the site.

7.4.4.3 Special Event Inspections

A Stormwater Compliance Inspection form, included in Appendix F, will be completed by large event coordinators before the start of the event to ensure that appropriate BMPs are in place and after the event to ensure that the site is properly cleaned.

7.5 Enforcement

The City enforces its legal authority for all its municipal facilities, as necessary, to achieve compliance in accordance with the Municipal Permit and the Enforcement Response Plan included in Appendix B of this JRMP document. If any stormwater violations are observed during an inspection, the procedure described in the Enforcement Response Plan will be followed to ensure compliance with BMP requirements and other permit requirements. More specifically, corrections of the observed violations will be completed within 30 calendar days of the time the violations were discovered or, where possible, prior to the next rain event. Electronic calendar reminders will be used to ensure that the 30 day compliance schedules are met. When a violation cannot be resolved within 30 days, the City will document the reason why the violation took additional time to resolve.

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8 Municipal Infrastructure

8.1 Introduction

The City carefully manages pollution prevention measures and best management practices (BMP) to reduce or potentially eliminate the discharge of pollutants to or from its municipal separate storm sewer system (MS4) from municipal areas and activities. The City regularly conducts activities such as street sweeping, street and sidewalk repair, MS4 maintenance, and regular upkeep of the sanitary sewer system to prevent overflows. The City of Encinitas has developed a comprehensive stormwater program designed to reduce the amount of pollutants that are transported in urban runoff from municipal activities.

In accordance with Section E.5.b.(1)(c) of the Municipal Permit,[4] this section describes BMPs associated with the operation and maintenance of municipal infrastructure.

8.2 Roads, Streets, Highways, and Parking Facilities

8.2.1 Background

The City of Encinitas maintains approximately 180 miles of roads, streets, and highways and four City-owned and operated parking facilities. Roads, streets, highways, and parking facilities are an integral part of any functional City. These facilities can collect a variety of pollutants due to routine vehicle use and have a tendency to collect litter and debris from neighboring areas and activities. Regular maintenance is necessary to control the level of pollutants, such as sediment, metals, litter, and debris on roads, streets, highways, and parking facilities. A parking facility is defined as a stand-alone parking facility, which is a parking facility that is not associated and/or adjacent to other inventoried municipal facilities. Parking facilities that are associated and/or adjacent to municipal facilities will continue to be included in regular maintenance activities of the associated municipal facility. Other related City activities include building new roads, resurfacing existing roads, and similar construction-related activities. All construction-related activities conducted by the City will continue to be conducted as described in Section 4 and 5 of this document.

8.2.2 Street Sweeping

Roads, streets, highways, and parking facilities are all included in the City's municipal inventory (Appendix D). The City regularly sweeps these facilities to reduce pollutants in

[4] San Diego Regional Water Quality Control Board Order No. R9-2013-0001, as amended by Order No. R9-2015-0001

runoff from to the maximum extent practicable (MEP), with a particular focus on sweeping areas that drain to environmentally sensitive areas (ESAs).

The City sweeps all paved streets within the approved road system inventory. Sweeping occurs five days per week during a typical business day.

Table 8-1 below shows the sweeping frequencies for the roads, streets, highways, and parking facilities in the City.

Table 8-1. Sweeping Frequencies for Roads, Streets, Highways, and Parking Facilities

Priority	Description	Sweeping Frequency
High	Arterial roads, streets, highways, and those parking facilities identified as consistently generating the highest volumes of trash and/or debris.	Weekly
Medium	Collector streets and parking facilities identified as consistently generating moderate volumes of trash and/or debris.	Twice per Month
Low	Residential (publicly owned) streets and parking facilities identified as generating low volumes of trash and/or debris.	Annually

Additionally, the City maintains four parking facilities adjacent to four local beaches. These parking lots are generally swept monthly from October through April and weekly from May through September as a measure to address increased traffic during the summer months. All other municipal parking facilities in the City are associated with municipal buildings or parks and are swept monthly.

8.2.3 Best Management Practices

Sweeping and cleaning is the main BMP implemented for streets and parking lots. The City uses a private contractor to provide this service. All contracted street sweepers are equipped with a GPS device that enables City staff to monitor real time progress. The contractor also provides monthly reports for each vehicle. The reports indicate date and time of service, vehicle information, broom or pick-up head down time, mileage, and route.

The City also removes trash and debris from the public Right-of-Way on a regular basis. Trash is typically removed more frequently from heavy use areas that collect higher amounts of trash and debris, such as downtown and beach areas.

The City also maintains unpaved roads to prevent erosion as needed. In the event that any pervious areas are disturbed or otherwise become destabilized, temporary cover and containment measures will be installed, such as erosion control blankets, gravel bags, fiber rolls,

and silt fencing. These BMPs will be maintained until the area can be more permanently stabilized.

8.3 Municipal Separate Storm Sewer System

8.3.1 Background

The primary function of the MS4 is to collect and transport surface runoff to receiving waters during storms in order to prevent flooding. To reduce the transportation of pollutants into receiving water bodies, the City of Encinitas will continue to regularly maintain its MS4 to ensure that it remains both fully functional and free of pollutants to the MEP. The City's MS4 includes curb gutters, catch basins, inlets, pipes of varying material, concrete channels, culverts, and detention basins. The City's MS4, as one complete entity, is included on the municipal inventory (Appendix D). The City's MS4 management program includes inspecting and cleaning MS4 structures, repairing and/or replacing damaged or failing MS4 structures, and responding to service requests from residents and businesses.

8.3.2 Best Management Practices

City field staff are trained on implementing BMPs, equipment inspection, and the action plan that is followed for regular maintenance and emergency maintenance and/or discharge control. The City uses a combination a storm drain cleaner truck to collect both dry and liquid debris from catch basins and inlets, along with a vacuum capture system to prevent the transport of material downstream within the MS4.

Maintenance of the MS4 in the City is broken into two main categories: above ground facilities and below ground facilities. The maintenance procedures for these two categories are different due to access issues, as described below.

Above Ground Maintenance

Maintenance of the above ground MS4 primarily affects open channels and detention basins. When the facilities are inspected, an NPDES Work Order program in GIS is used to schedule, track, and record day-to-day efforts of the crews.

The City is divided into eleven maintenance work zones for inspection and maintenance purposes. Each year, City maintenance crews routinely begin in the northernmost area and work their way south. Storm drain facilities are inspected and cleaned if accumulated trash or debris is found. The NPDES Work Order form is filled out to record any maintenance that is necessary. When referrals or complaints are received, the NPDES Work Order form is used by a dispatcher to direct crews to the appropriate location. After maintenance is performed, the form is completed in the field and the GIS database is updated. Debris removed from the above

ground MS4 is transported to the City's municipal yard and properly disposed of by the City's waste hauler, EDCO.

Below Ground Maintenance

The below ground maintenance program consists primarily of cleaning inlets and catch basins. As with maintenance for above ground facilities, each year City crews typically begin work at the north side of the City and work their way south. Storm drain facilities are inspected and cleaned if accumulated debris is found. Cleaning is performed using a combination storm drain cleaner truck that utilizes a water recovery and vacuum unit so that disturbed sediment and debris is fully captured and can be disposed of properly. An NPDES Work Order program in GIS is used to track and record day-to-day efforts of the crews.

Routine inspection and cleaning of underground facilities is performed annually. Debris removed from the underground portion of the MS4 is transported and properly disposed of at the San Elijo JPA Water Reclamation Facility, a wastewater treatment plant. Any contaminated material that cannot be disposed of at the wastewater treatment plant is disposed of by an outside contractor.

The City documents all MS4 maintenance activities and inspections. Record keeping for preventative maintenance, cleaning, and inspections contains the following information, where applicable:

- Dates of inspections
- Locations of facilities inspected or cleaned
- Overall amount of material removed (estimated in either volume or dry weight)
- Disposal site
- Problems noted
- Illegal connections and illegal discharges (IC/ID) detected
- Corrective action required
- Date corrective action was completed

Additional means to document and record inspection results may include field notes, drawings, and maps. All records will be retained for at least three years from the date it was first collected. Field staff are trained on implementing BMPs, equipment inspection, and the action plan that is followed for regular maintenance and emergency maintenance and/or discharge control.

Structural treatment BMPs may also be installed in strategic locations to reduce pollutant discharges. For example, the City constructed an Ultraviolet (UV) Bacteria Treatment Facility upstream of the outfall of Cottonwood Creek to kill or inactivate bacteria in water flowing to the Pacific Ocean at Moonlight Beach. The treatment facility has successfully reduced dry weather bacteria concentrations and associated beach closures. Structural BMPs are also

installed for public projects when required by development planning standards, as discussed in Section 4. Structural BMP maintenance is described in Section 8.6.

8.4 Sanitary Sewer System

8.4.1 Background

Spills and/or leaks caused by a malfunction or failure of a component of the City' sanitary sewer system have the potential to introduce a significant volume of untreated sewage into receiving water bodies. Untreated sewage can contain high concentrations of bacteria, viruses, parasites, and hazardous chemicals all of which have the potential to negatively impact the environment and pose a significant threat to human health.

The City of Encinitas directly operates and maintains the sanitary sewer system within a portion of the City. The Leucadia Wastewater District (LWWD) operates and maintains the sanitary sewer system within the remainder of the City. Appendix D includes a map of sanitary sewer district boundaries; the City of Encinitas is responsible for the areas marked as Encinitas Sanitary Division and Cardiff Sanitary Division. The City's sanitary sewer operations and maintenance programs described throughout Section 8.4 are only implemented in the part of the City for which the City of Encinitas is responsible for the sanitary sewer system. LWWD provides these services in the remainder of the City. The City maintains regular communication with LWWD regarding sanitary sewer maintenance.

8.4.2 Maintenance

The City conducts routine inspections and maintenance of 122 miles of sanitary sewer system to ensure that the system is functioning properly. Routine inspections and maintenance of the sanitary sewer system reduces the potential for an overflow and helps prevent and eliminate infiltration of sewage into the MS4. The City also responds to sanitary sewer overflows to reduce or eliminate the amount of untreated sewage that reaches the MS4 and aids in cleaning up and disposing of overflow residue when necessary as described in Section 3 – Illicit Discharge Detection and Elimination.

The City conducts regular maintenance of the sanitary sewer system to prevent Sewer System Overflows (SSOs) and other leaks that may occur due to system malfunction. The City has identified High Frequency Maintenance Areas (HFMA), which are cleaned on a quarterly basis to prevent future problems. These areas and their associated maintenance frequencies are identified as part of the overall SSO prevention approach outlined in the City's Sewer System Management Plan (SSMP).

The City seeks to eliminate seepage from the sanitary sewer system to the MS4 through routine preventative maintenance of both systems. Preventative maintenance of both systems allows

City officials to detect and eliminate active seepage points before they become a larger problem, and also to repair areas of the system that have a higher potential to become an infiltration point. The City takes the following measures to prevent seepage from the sanitary sewer system to the MS4:

- Conduct flow metering throughout the City's sanitary sewer system to monitor potential capacity concerns.
- Use video cameras in the sanitary sewer system to check pipe conditions if there is a potential problem.
- Implement a rehabilitation program for aged sewer pipes and use of polyvinyl chloride (PVC) pipes for new construction.
- Reline corrugated metal pipe storm drains with plastic pipe or replace them with concrete pipes.

The SSMP includes a spill response plan that establishes standard procedures for immediate response to any SSO. City personnel are trained in detecting, reporting, and responding to SSOs. The City's Sanitary Sewer Overflow Emergency Response Plan, which is a component of the SSMP, describes the City's activities and personnel organization when responding to an SSO.

8.4.3 Best Management Practices

The City responds to overflows and spills, identifies spills and leaks, contains and controls spilled materials, repairs damaged and leaking sewer lines, remediates existing sewer lines as necessary, and properly disposes of hazardous waste. The City will continue to implement the SSMP and the City's minimum BMPs (Appendix C) for municipal areas and activities, including sanitary sewer maintenance. Similar to the MS4 maintenance program, the City trains field staff on implementing BMPs, equipment inspection, regular maintenance, and spill response.

8.5 Landscaping and Trails

8.5.1 Background

Municipal landscaping in parks, by City buildings, and along streets can be a source of pesticides, fertilizers, bacteria, and sediment. Trails in City parks also have the potential to erode and release sediment. The City implements a variety of BMPs to reduce or eliminate the amount of pollutants entering the MS4 from municipal parks and recreation facilities. City personnel implement general waste management BMPs, and patrons of City facilities are encouraged to properly dispose of trash and pet waste. The City also maintains structural treatment BMPs that require landscape maintenance, as described in Section 8.6.

8.5.2 Best Management Practices

8.5.2.1 Irrigation Runoff Control

The City regularly checks landscape irrigation systems and maintains them as needed. Runoff is reduced by proper irrigation programming, including using shorter irrigation cycle times at a higher frequency instead of single long cycles. Sprinklers are also adjusted to eliminate overspray. The City has also implemented evapotranspiration-based controllers and broken sprinkler detection capability for sprinkler systems. Subsurface irrigation systems are typically used adjacent to roadways to reduce irrigation runoff discharges. The City is also developing a parks water management program. The program will assess water use at parks by comparing the amount of water used to the Maximum Applied Water Allowance (MAWA).[5] Areas using the most water relative to the MAWA will be targeted for water conservation activities, which are also expected to reduce irrigation runoff.

8.5.2.2 Erosion Prevention

Trails and landscaped areas are maintained as necessary to prevent erosion. Common erosion prevention measures include diverting concentrated flows away from pervious areas and establishing vegetation. Erosion and sediment control measures typically used at construction sites, such as fiber rolls or erosion control blankets, may also be used temporarily until more permanent solutions can be implemented.

8.5.2.3 Pesticide and Fertilizer Management

Due to their widespread outdoor use, pesticides, herbicides, and fertilizers have the potential to be discharged to MS4s. Transport of these pollutants is often a result of one or more of the following: (1) runoff from excessive irrigation after application; (2) application of chemicals during or prior to storm events; (3) overspray from chemical applications that may eventually enter the MS4. In addition to introducing pollutants to the MS4, improper pesticide and herbicide use can cause harm to non-target flora and fauna.

The City has developed a program to reduce discharges of pesticides, herbicides, and fertilizers to the MS4. This program includes reducing the amounts of pesticides and herbicides used through Integrated Pest Management (IPM). More detail about the program is provided below.

The federal Pesticide, Fungicide and Rodenticide Act and California Title 3, Division 6, Pesticides and Pest Control Operations place strict controls over pesticide application and handling. This Act also specifies training, annual refresher, and testing requirements. The

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[5] MAWA is defined in the Department of Water Resources' Model Water Efficient Landscape Ordinance. For more information, see http://www.water.ca.gov/wateruseefficiency/landscapeordinance/.

regulations generally include: a list of approved pesticides and selected uses, updated regularly; general application information; equipment use and maintenance procedures and record keeping. The California Department of Pesticide Regulations and the County Agricultural Commission coordinate and maintain the licensing and certification programs. The following BMPs will continue to be implemented to reduce pollutants from pesticides, herbicides and fertilizers:

- City personnel who participate in the application of pesticides are trained and licensed (Qualified Applicator License) and follow guidelines set by the California Department of Pesticide Regulations and the County Agricultural Commission.
- Agricultural pest control businesses working for the City are supervised by a Qualified Applicator Licensee who has a current Qualified Applicator Certificate.
- Every two years, Qualified Applicator Certificate holders must show proof that they have secured a minimum of 20 hours of continuing education. Agricultural Pest Control Advisors must have secured a minimum of 40 hours continuing education.
- City staff record the applications of all chemical agents by noting the locations, type and quantity of chemicals used. Monthly reports of pesticide usage are prepared and submitted to the Department of Agriculture.
- The Qualified Applicator Certificate holder conducts monthly inspections to monitor storage, handling, and disposal of the pesticides.
- Written recommendations prepared by a State Pesticide Advisor should be followed during the pesticide application.
- Personnel who participate in the application of herbicides for the City are trained and follow guidelines set by the County Agricultural Commission.
- Runoff is reduced by proper irrigation programming, including shorter irrigation cycle times after the application of fertilizers and pesticides.
- Employees are trained to follow pesticide, herbicide and fertilizer labels, and the material safety data sheet(s).
- All federal, state and local regulations are followed in the use of pesticides, herbicides and fertilizers.
- Pesticides, herbicides and fertilizers are not applied during or directly prior to storm events or irrigation, unless the fertilizer is pre-emergence and needs irrigation to enter the top layer of soil. If pre-emergence fertilizer is used, a controlled amount of irrigation is used to ensure no fertilizer runs off.

- Only pesticides that are quickly absorbed into the soil or plants are used.
- Whenever practicable, integrated pest management techniques are implemented.
- Whenever practicable, native vegetation is used.
- Alternative products to control insects, fungi, and weeds are considered for use to minimize the use of pesticides/herbicides.
- Pesticides are not to be sprayed when there is a high possibility of the spray drifting into non-target areas or onto non-target vegetation, insects, or animals.
- The City maintains compliance with county and state reporting requirements for pesticide use.
- Unused portions of chemicals are disposed of in accordance with the pesticide and fertilizer labels and applicable regulations.

8.6 Structural BMPs

The City maintains an inventory of structural BMPs and implements a program to verify the BMPs are being maintained, as described in Section 4 (Development Planning). The City directly maintains structural BMPs associated with City projects, and any other BMPs for which the City has formally accepted maintenance responsibility. The Clean Water Program manages the structural BMP inventory, which is tracked in GIS, and communicates the locations and types of structural BMPs to other City departments and divisions that are responsible for maintaining the BMPs.

As agreed upon by the City and the San Elijo JPA, the San Elijo JPA maintains the Ultraviolet (UV) Bacteria Treatment Facility located adjacent to Cottonwood Creek upstream of Moonlight Beach. As this is a specialized BMP constructed by the City for a unique situation, the City has established a specific set of maintenance procedures and associated schedule for the UV Bacteria Treatment Facility.

8.7 Other Infrastructure Operation and Maintenance Activities

8.7.1 Background

The City conducts a number of activities that are not confined to a fixed facility. These "mobile" activities include the following:

- Power Washing
- Infrastructure Maintenance
    - Street and sidewalk repair

    - Street striping
    - Waste removal
    - Traffic signal light maintenance
- Landscape/Right-of-Way Maintenance
- Graffiti Removal
- Painting

8.7.2 Best Management Practices

City field crews are routinely trained to implement BMPs during all mobile activities. Appendix C lists BMPs applicable to municipal operations, such as containing any discharge generated by power washing or any other discharge-generating activities. Section 8.5 above provides additional detail about BMPs used to manage pesticides and fertilizers during landscape/Right-of-Way maintenance. City personnel involved in mobile activities are also trained to identify IC/IDs while in the field during their daily activities. Observed IC/IDs are reported to Clean Water Program staff for follow-up.

9 Residential Areas

9.1 Introduction

Approximately 80 percent of the City of Encinitas (City) has a residential land use designation, which includes single-family residences, multi-family residences, and a small portion of other residential areas, such as mobile home parks. Since residential land use comprises such a large area of the City, residential activities can have a considerable effect on the quality of receiving waters. For that reason, the City has further developed and continues to implement multiple activities that aim to reduce non-stormwater discharges and pollutant runoff from residential areas.

9.2 Residential Inventory

The San Diego Regional Water Quality Control Board (RWQCB) Order No. R9-2013-0001, as amended by Order No. R9-2015-0001 (Municipal Permit) requires Copermittees to create an inventory with distinct residential areas, also known as residential management areas (RMAs), as part of the existing development inventory. Inventoried RMAs are managed and tracked through the use of an electronic database and Geographic Information System (GIS). The residential inventory (Table 9-1) includes the following information, as required by the Municipal Permit:

Inventoried residential areas are managed and tracked through the use of an electronic database and GIS. At a minimum, the residential inventory includes the following information:

1. RMA name and hydrologic subarea (HSA).
2. Status of area as active or inactive. Inactive areas include areas on the inventory that may not be accessible for inspection (i.e., under construction or under temporary closure), but should remain on the inventory.
3. Identification if the area is or includes a Common Interest Area (CIA)/Homeowners Association (HOA), or mobile home park.
4. Identification of pollutants generated and potentially generated by the area.
5. Whether the area is adjacent to an environmentally sensitive area (ESA). "Adjacent to" is defined as being within 200 feet of an ESA. This is in accordance with past procedure and with the most recent definition provided by the Regional Water Quality Control Board, which is found in Order No. R9-2007-0001.

6. Whether the area is tributary to and within the same HSA as a water body segment listed as impaired on the Clean Water Act Section 303(d) List of Water Quality Limited Segments and generates pollutants for which the water body segment is impaired.
7. An annually updated map showing the location of inventoried residential areas, watershed boundaries, and water bodies.

The City's RMAs have been organized first by drainage basin and then by HSA, as shown in Table 9-1 and Figure 9-1 at the end of this section. The potential pollutants listed in the table in are based on the pollutant source assessment in the Copermittees' Long Term Effectiveness Assessment (County of San Diego 2011). Potential pollutants associated with each RMA may be adjusted over time as data is collected during field investigations. Some of the information in Table 9-1 has been intentionally left blank, pending further analysis and data collected during future field inspections.

9.3 Best Management Practice Requirements

The City has updated the minimum BMPs required for residents. Residents are required to eliminate or reduce a number of different types of non-stormwater discharges and to take other actions, such as proper use of pesticides and fertilizers, to reduce discharges of pollution. Notably, consistent with the 2013 Municipal Permit, irrigation runoff, which was previously an allowable discharge under the 2007 Municipal Permit, is now considered an illegal discharge. The full list of required residential BMPs is included in the Stormwater Standards Manual in Appendix C.

9.4 Program Implementation

The main focus of the City's residential program will be reducing non-stormwater discharges. Reducing non-stormwater discharges is expected to reduce discharges of bacteria, the highest priority water quality condition identified in the Carlsbad Water Quality Improvement Plan, from the City's MS4 to downstream water bodies. It also is consistent with the Municipal Permit's increased emphasis on eliminating non-stormwater discharges, including irrigation runoff, and with water conservation efforts being taken in response to the State's ongoing drought.

The City's residential program is a new effort initiated to meet 2013 Municipal Permit requirements, and as the program matures and as regulatory drivers change, the program itself also may change through an adaptive management process. Inspection, monitoring, hotline calls, and enforcement data collected will be used to evaluate the effectiveness of the City's residential oversight program in reducing non-stormwater discharges to the City's MS4. To ensure the required inspection frequencies are being met, stormwater staff routinely evaluate collected data. Regular evaluation will also assist in identifying potential gaps in the City's

residential oversight program, which will allow the City to focus or adjust efforts and resources as needed.

9.4.1 Residential Education

Education and outreach is a key mechanism used to increase residents' rates of BMP implementation. In addition to its own programs, the City contributes to regional education programs run collectively by all municipal agencies in San Diego County. This coordination helps provide more uniform messaging across the region. Consistent with the regional residential program, the City's residential outreach efforts focus on reducing non-stormwater discharges, such as irrigation runoff. Other topics, such as using fertilizers and pesticides appropriately, managing pet waste, and eliminating yard waste from entering the MS4, may also be covered. Section 10 of the JRMP document, "Education and Public Participation," provides more detail on outreach efforts.

The City typically uses the following media for educational outreach to residents, when appropriate:

- City's Website: Clean Water Pages, Environmental Pages, Homepage news, etc.
- Informational or Advisory Letters to targeted neighborhoods
- Water district bill inserts and water district public events
- HOA newsletters
- Brochures at City Hall
- Specific Complaint Response related educational literature
- Community events, workshops, and trainings
- Cleanups and trash collection events

9.4.2 Oversight Programs and Procedures

The primary methods through which BMP implementation in RMAs is assessed are routine MS4 outfall monitoring and drive-by evaluations, as further described in subsections 9.4.2.1 and 9.4.2.2. These two primary methods will be used to meet the Municipal Permit requirement to inspect each RMA to evaluate compliance with the City's requirements at least once every five years. Table 9-1 and Figure 9-1 at the end of this section identify which evaluation method(s) will be used for each of the City's RMAs. Results from oversight programs will be used to help refine educational efforts, as described in Section 9.4.1, where appropriate. Illegal discharges and connections discovered will be addressed through the City's enforcement process, as described in Section 9.5.

9.4.2.1 Dry Weather MS4 Outfall Monitoring

Routine MS4 outfall monitoring and identification of the presence of non-stormwater discharges by Clean Water Program staff is one of the two primary mechanisms for overseeing RMAs and detecting non-stormwater discharges to the City's MS4. When non-stormwater flow is observed at an outfall during routine monitoring for the Dry Weather MS4 Outfall Monitoring Program, stormwater staff will investigate upstream areas to see if a flow source can be identified. During these investigations, staff often evaluate upstream residential areas, and these investigations are considered RMA inspections as defined by the Municipal Permit. If an IC/ID is discovered, it will be addressed through the enforcement process described in Section 9.5.

Major MS4 outfalls are monitored once or twice per year; those with persistent non-stormwater flow will be monitored more frequently. Water quality samples will also be collected for laboratory analyses at selected outfalls with persistent flow. In turn, a larger share of upstream investigation resources will be directed toward identifying and reducing sources of non-stormwater flow in areas upstream of these outfalls, including residential areas. When outfalls are found to be dry, indicating no non-stormwater discharge, the corresponding RMA is considered inspected. More information about outfall monitoring procedures is included in Section 3 and in Appendix G.

9.4.2.2 Drive-by Assessments

Drive-by assessments are the other primary method of RMA oversight. These assessments, which consist of making observations for non-stormwater discharges and actual or potential IC/IDs while driving through neighborhoods or residential complexes, will be completed for the RMAs that do not have associated major MS4 outfall monitoring locations. Observed IC/IDs and other violations of the City's Stormwater Ordinance will be recorded in the same electronic database used to track reports to the City's Clean Water Hotline/email. The records will be marked as having originated from residential assessments to facilitate annual reporting.

Where possible, City staff will directly engage residents while in the field, explaining applicable requirements and alternative methods that are acceptable under the City's requirements and working with residents to eliminate non-stormwater discharges. If a responsible party is a property manager or an HOA they may not be onsite, and Clean Water Program staff will typically reach out to the responsible party following the completion of the day's field work. Obvious illicit discharges that may pose a threat to human or environmental health will be addressed immediately.

Clean Water Program staff will complete drive-by assessments for all RMAs not assessed through outfall monitoring at least once every five years, as required by the Municipal Permit. City staff also may elect to complete additional inspections for particular areas if higher

frequencies of illegal discharges are observed in those areas or they otherwise establish a history of repeated non-compliance. Occasionally, onsite inspections or assessments may also be completed at multi-family residential complexes. In addition to assessing for the presence of non-stormwater discharges, onsite assessments also include an assessment of the implementation of the City's designated residential minimum BMPs in the Stormwater Standards Manual (Appendix C).

9.4.2.3 Supplemental Oversight Mechanisms

The City's Clean Water Hotline/email, described in Section 3, is another mechanism for overseeing RMAs and for reporting residential-based violations of the City's Stormwater Ordinance. The hotline number and email address are advertised through various media as part of the City's stormwater education program. The Clean Water Hotline/email is used to receive reports from City staff and from members of the general public. Clean Water Program staff respond to complaints received through the hotline/email, and investigations are documented as described in Section 3.

9.5 Enforcement

The residential program has been designed to ensure that adequate City enforcement, investigation, and reporting is conducted, so that pollutants associated with residential activities and areas are minimized to the MEP. The residential program also has an education component, described in Section 10, so that residents are made aware of any updated BMP requirements, such as eliminating discharges from irrigation runoff. The City will continue to use enforcement mechanisms when necessary to address particularly problematic individuals, activities, and areas.

The City enforces its legal authority for all its inventoried residential management areas, as necessary, to achieve compliance in accordance with the Municipal Permit and EMC Chapter 20.08. The Enforcement Response Plan included in Appendix B of this JRMP document describes the process by which compliance is achieved. If any stormwater violations are observed during an inspection or through routine MS4 outfall monitoring, the procedure described in the Enforcement Response Plan will be followed to ensure compliance with BMP requirements and other permit requirements.

During investigations of incidents reported to the hotline/email, or discovered during routine MS4 outfall monitoring, that are associated with a residential source, City staff will address issues of stormwater concern and provide education where appropriate. Voluntary compliance and escalating enforcement mechanisms are implemented to immediately eliminate an IC/ID once the source has been identified. Violations to the City's Municipal Code will be investigated by City personnel with enforcement authority. Violations are documented and

depending on the nature and severity of the violation, enforcement may consist of any of the enforcement measures described in the Enforcement Response Plan (Appendix B), which typically includes education, verbal warnings, written warnings, notices of violation, and administrative citations in escalating order.

If compliance is not achieved within 30 days, Clean Water Program staff will document the reason why resolving the problem required additional time, as required by the Municipal Permit.

Table 9-1. City of Encinitas Residential Management Areas

Residential Management Area	Hydrologic Subarea	CIA, HOA, or Mobile Home[1]	Adjacent to ESA	Pollutants Potentially Generated[2]							Evaluation Method	
				Metals	Oil & Grease	Sediment	Nutrients	Bacteria	Dissolved Minerals	Organics	Major Outfall Monitoring (Outfall Used for Assessment)	Drive Through Assessment
LUC1	904.51	X	X	L	L	L	L	L	L	L		X
LUC2	904.51	X	X	L	L	L	L	L	L	L		X
LUC3	904.51	X	X	L	L	L	L	L	L	L	24, 32, 33, 35	
LUC4	904.51	X		L	L	L	L	L	L	L		X
ENC1	904.51	X	X	L	L	L	L	L	L	L	17, 18, 19, 23, 24, 25	
ENC2	904.51	X	X	L	L	L	L	L	L	L		X
ENC3	904.51	X	X	L	L	L	L	L	L	L	20, 21, 22	
ENC4	904.51	X		L	L	L	L	L	L	L		X
ENC5	904.51	X	X	L	L	L	L	L	L	L		X
ENC6	904.51	X	X	L	L	L	L	L	L	L		X
ENC7	904.51	X		L	L	L	L	L	L	L		X
ENC8	904.51	X	X	L	L	L	L	L	L	L		X
LCS1	904.61	X	X	L	L	L	L	L	L	L	26, 27, 28, 29, 30, 31	
LCS2	904.61	X	X	L	L	L	L	L	L	L	38, 39, 40, 42, 43	
LCS3	904.61	X	X	L	L	L	L	L	L	L	37, 41, 44	
LCS4	904.61	X	X	L	L	L	L	L	L	L		X
CBS1	904.61	X	X	L	L	L	L	L	L	L	1, 3, 9	
CBS2	904.61		X	L	L	L	L	L	L	L		X
CBS3	904.61	X	X	L	L	L	L	L	L	L	5, 6, 8, 10, 11, 12, 13, 14, 15, 16	
LUX1	904.61	X	X	L	L	L	L	L	L	L	45, 46, 47	

Table 9-1. City of Encinitas Residential Management Areas (Continued)

Residential Management Area	Hydrologic Subarea	CIA, HOA, or Mobile Home[1]	Adjacent to ESA	Pollutants Potentially Generated[2]							Evaluation Method	
				Metals	Oil & Grease	Sediment	Nutrients	Bacteria	Dissolved Minerals	Organics	Major Outfall Monitoring (Outfall Used for Assessment)	Drive Through Assessment
RSF1	904.61	X	X	L	L	L	L	L	L	L		X
RSF2	904.61	X	X	L	L	L	L	L	L	L	49, 50	
RSF3	904.61		X	L	L	L	L	L	L	L		X
RSF4	904.61	X	X	L	L	L	L	L	L	L		X
RSF5	904.61		X	L	L	L	L	L	L	L		X

Notes: CIA = Common Interest Area; HOA = Home Owners Association; ESA = Environmentally Sensitive Area; LUC = Leucadia; ENC = Encinitas; LCS = La Costa South; CBS = Cardiff-by-the-Sea; LUX = Lux Canyon; RSF = Rancho Santa Fe

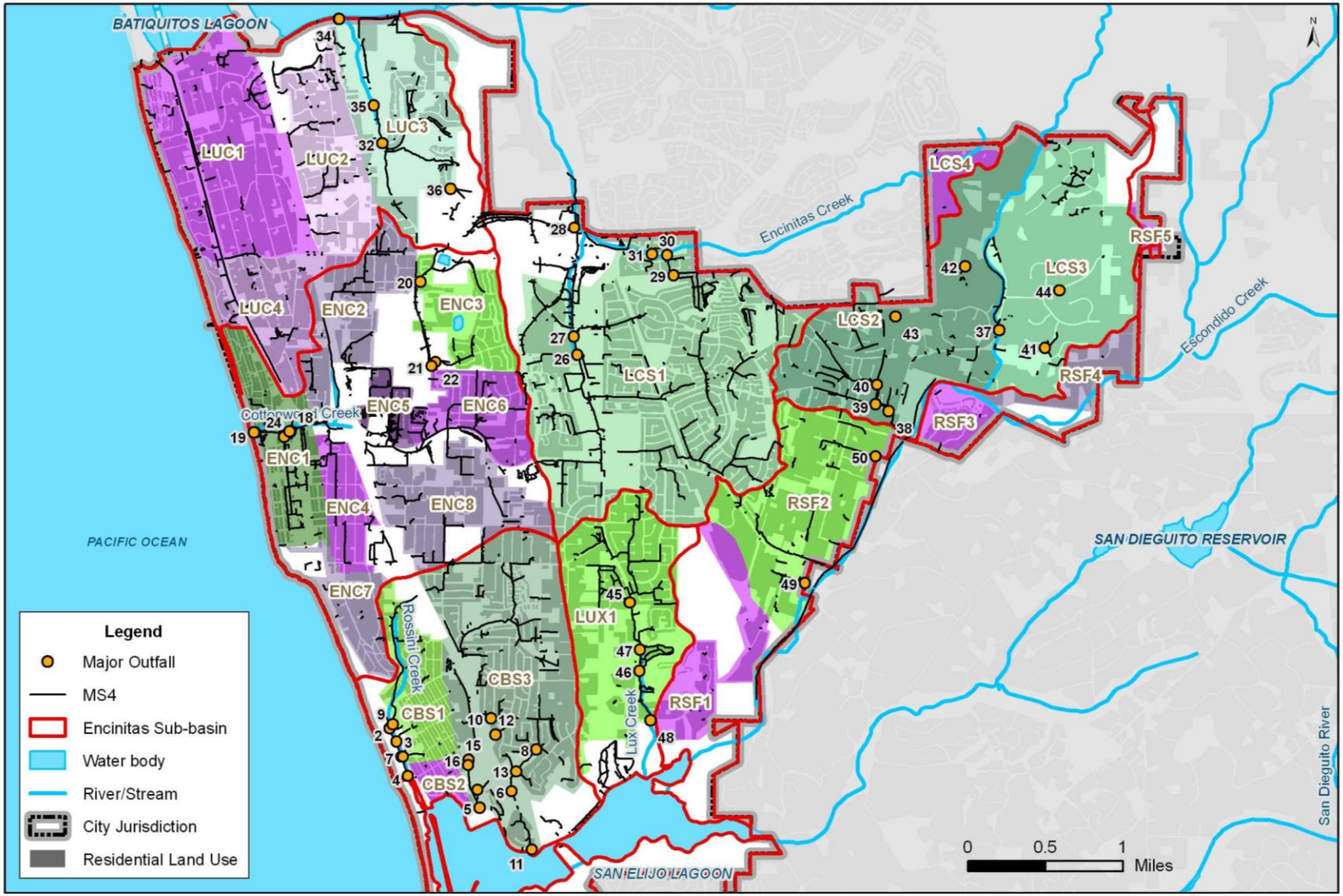
-All RMAs are considered active.

-All RMAs except those in the Leucadia sub-basin are considered to drain to 303(d) listed waterbodies and generate pollutants associated with the impairments.

[1] Presence of any CIAs, HOAs, and mobile home parks within each RMA are based on currently available data and may be adjusted in the future as RMA evaluations progress.

[2] Based on the Long Term Effectiveness Assessment (County of San Diego 2011).

Figure 9-1. City of Encinitas Residential Management Areas Map



Green shaded areas: RMAs assessed through dry weather MS4 outfall monitoring; **Purple** shaded areas: RMAs assessed through drive-by assessments
White areas: non-residential land use
Data sources: City of Encinitas, SanGIS

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10 Public Education and Participation

10.1 Introduction

Routine daily activities can potentially contribute pollution to urban runoff and consequently affect the quality of the receiving waters. While some individual activities may not have a significant effect on water quality, collectively these activities may contribute a significant amount of pollutants to receiving waters. Receiving water quality is a concern to all, not only because water degradation can have a negative effect on public health and safety, but it can also negatively impact the aquatic environment, riparian habitat, tourist and beach oriented economies, property values, and the aesthetic value of the area surrounding the water body.

The economic health and community character of the City of Encinitas (City) has always been based on its beach-community culture. This culture is one of the keys to an effective education program. The citizens of Encinitas relate to the need for clean beaches and clean water, and it is this message that is the foundation of the City's education program. This message will be disseminated to the public through the City's Clean Water Program's education and public participation components. The focus of the Clean Water Program is to increase public knowledge about stormwater issues, while also offering opportunities for public involvement in the process of reducing pollutants to receiving waters, which is communicated during outreach events, inspections, and during enforcement activities. Additionally, the City distributes printed educational material via the City's website, conducts workshops, and outreaches to trade and merchant associations.

Education is an important step in working toward improving receiving water quality both locally and regionally. By increasing public awareness and encouraging a change in both the attitude and the behavior of the general public and the regulated community, the City may reduce or eliminate stormwater pollution caused by common daily activities. The overall goals of the education component are to provide an education program that will:

1. Increase the knowledge of the target communities regarding: municipal separate storm sewer systems (MS4), the impacts of urban runoff from MS4s on receiving waters, and potential best management practice (BMP) solutions the target audience may use to reduce urban runoff and impacts to receiving waters.
2. Change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment.

10.2 Education

In accordance with Section E.7 of the Municipal Permit[6] and the strategies described in the Carlsbad Water Quality Improvement Plan (WQIP), the City of Encinitas will provide a comprehensive stormwater education program that will promote and encourage behaviors that reduce stormwater pollution. The City aspires to produce notable increases in the knowledge of its target audiences. The City will employ the efforts discussed in this section in an effort to develop sustainable behavior changes in target communities and activities that may contribute watershed pollutants of concern.

Many education outreach efforts are conducted on an ongoing basis, such as direct interaction during city events, routine inspections, pre-construction meetings, or when taking calls from the City's Clean Water Hotline. Educational materials are available throughout the year at special events and at City Hall. Targeted mailings, focused training sessions, and other educational efforts are provided when found to be necessary through monitoring programs, records of complaints, and other similar factors.

Public participation also plays an important role in achieving the goals of the Jurisdictional Runoff Management Program (JRMP). Involving the general public and school children in the stormwater program helps improve stormwater awareness among individuals, and may lead to improved water quality. Collaboration between the City and the community may also help foster a sense of shared responsibility in protecting water quality both locally and regionally. The City encourages public participation through the programs discussed in this section. Educational programs and activities are tailored to meet the needs of the following target audiences:

- Municipal departments and personnel
- Developers and construction site operators
- Industrial and commercial owners and operators
- Residential community, general public, and school children
- "Targeted" audiences, where applicable

Educational messages are communicated to target audiences during staff training events, outreach events, inspections, complaint investigations, and enforcement. Key target audiences and topics that may be covered are summarized in Table 10-1 at the end of this section.

[6] San Diego Regional Water Quality Control Board Order No. R9-2013-0001, as amended by Order No. R9-2015-0001

10.3 Municipal Staff Training

Clean Water Program staff will educate and train City employees and contractors on applicable stormwater regulations to assure that proper stormwater management practices are applied to all municipal projects and activities. It is important for all City staff and contractors to be aware of stormwater regulations so that their knowledge can be shared with citizens throughout the community. Educational opportunities include training sessions, on the job training, and citywide emails and newsletters. Municipal personnel are also made aware of any stormwater related workshops or additional training seminars that are available.

10.3.1 Municipal Development Planning & Construction Activities

The City will provide education and training to planning and development review personnel, construction and maintenance crews, building department, code enforcement, construction inspectors, and other responsible construction personnel. Personnel may also attend outside workshops and trainings pertinent to their job duties.

10.3.2 Municipal, Industrial, and Commercial Activities

The City will provide training for its municipal personnel responsible for conducting stormwater compliance inspections and enforcement of industrial and commercial facilities. In addition to the topics listed in Table 10-1, training and educational programs for inspectors may also cover how to conduct stormwater inspections and how to identify problems or violations.

10.3.3 Other Municipal Activities

Clean Water Program staff will provide training to City departments, including Fire and other contracted companies/employees that may perform activities within the City where pollutants might be generated.

10.4 Public Education

10.4.1 Development Community

The City educates individual project applicants as they go through the permitting process. City staff contribute to regional efforts to train developers and engineers on stormwater requirements for development. The City may also offer local training on BMP design. Table 10-1 includes topics that may be covered as part of the City's educational outreach to the development community.

The City also offers individual education to parties responsible for permanent BMP maintenance installed at completed development projects. Resources are available on the City's website. As feasible, the City may offer training sessions on Permanent BMP Operation and

Maintenance that explain how to comply with the City's inspection and maintenance requirements.

10.4.2 Construction Site Operators

Construction site operators can alter the landscape and natural flow of stormwater runoff and generally create increased amounts of impervious surface. During such activities, construction site owners, developers, and employees could potentially discharge a number of different types of pollutants to receiving waters. It is important that this sector is educated to ensure that BMPs are incorporated during the site design stage, throughout the construction process, and during the post-construction phase, to reduce impacts from construction and development.

Education may be provided to contractors and developers through the following methods:

- Information provided in planning package
- Information provided with in grading and building permit application
- Site specific instructions identified on the grading or building permit
- Announcements at mandatory pre-construction meetings
- Activity-specific brochures given out by inspectors
- Individual communication during inspections
- Fact sheets
- Special mailings

10.4.3 Industrial Facility Operators

Although industrial facilities are not prominent in the City, industrial-related activities still have the ability to negatively impact water quality in the City. Education will be provided to the small number of industrial facilities in the City during routine inspections.

10.4.4 Commercial Facility Operators

Commercial sites include a wide range of businesses including, but not limited to, restaurants, gas stations, automotive businesses, landscapers, nurseries, and mobile businesses. Pollutants may be generated from day-to-day operations, and have the potential to enter stormwater runoff if operations are not conducted properly or without the use of BMPs.

Businesses will be informed of the proper use of BMPs and pollution prevention, as necessary. Methods to distribute education may include the following: individual communication during inspections, brochures for target activities (such as automotive repair, restaurant operation, and landscaping), websites, fact sheets, special mailings of information and data requests, and training sessions for individual facilities and groups.

10.4.5 Residential Community, General Public, and School Children

Residential areas make up a large portion of the land use in the City, and therefore even small pollutant discharges can collectively have the potential to affect the quality of the receiving waters. Activities such as residential car washing and over-irrigation have the potential to contribute pollutants such as heavy metals, detergents, and nutrients to receiving water bodies. Providing residents with appropriate educational materials may help to increase overall awareness and encourage residents to change harmful behaviors, subsequently reducing the potential for pollutants to enter the storm drain system and reach receiving water bodies. The following methods may be used to educate and inform residents, general public, and school children about stormwater related issues.

Media

The City created an Environmental Services Guide, which provides the public with information on trash and recycling, household hazardous waste (HHW), electronic and universal waste, composting, and stormwater pollution prevention. The brochure was distributed to households throughout the City and will continue to be a good source of information for all residents. The Environmental Services Guide is also available on the City's website. The City also distributes flyers and brochures that cover a variety of stormwater related topics, several of which are offered in both English and Spanish.

In 2012 the City developed and installed interpretive and educational signs in prominent locations along Cottonwood Creek, which is located in the heart of downtown Encinitas. A total of seven permanent, high-quality signs provide detailed information about the Cottonwood Creek Watershed, its flora and fauna, actions that the city is doing to protect water quality, and examples of what the public can do to help improve water quality. These signs are seen and read daily. Each sign also displays a Quick Response (QR) code which the public can use to access more educational information on the City's website.

In addition to printed media, the City's Clean Water Program website also provides the public with suggestions to help prevent stormwater pollution, covering topics such as proper disposal of pet waste, cigarette butts, and trash; reducing use of pesticides and other chemicals; hardscape maintenance; disposal of hazardous and less toxic waste; draining pools and hot tubs; and other stormwater related topics. The Clean Water Program website also offers information about water quality and monitoring; development and construction BMPs; industrial and commercial inspections and BMPs; and community outreach and education.

The City also manages the Encinitas Environment website (www.EncinitasEnvironment.org). The website contains information about many environmental concerns, including clean water and stormwater pollution prevention, water conservation, green building, as well as tips and resources for the public to reduce their environmental impact.

Promotional items featuring the Clean Water Hotline phone number, Clean Water Program website, and email are also distributed to residents and the general public.

Community Events and Outreach

Community events and outreach, such as flyers, brochures, watershed maps, Think Blue Stormwater bilingual coloring books and calendars, reusable bags, website postings, advertisements, and other educational materials are an important part of disseminating stormwater information. Community events and outreach programs raise awareness of stormwater issues that exist in the City and encourage the public to improve local water quality by making a few simple changes to regular routines.

The Clean Water Program will continue to be a part of events held throughout the City and the watershed. Events in the Clean Water Program may include beach cleanups, garden festivals, low impact development workshops, and other community events.

Education for School-Aged Children

The Clean Water Program collaborates with other City departments and agencies to offer a variety of education programs for school children. Potential stormwater related topics may include the following, where appropriate:

- Difference between sewers and storm drain systems
- Pollutant types entering receiving waters
- Proper trash disposal and recycling
- Proper use of fertilizers and pesticides
- Car washing impacts
- General pollution prevention techniques
- Local wetlands, creeks, and lagoons – plants and wildlife
- Water cycle
- Impact of urbanization
- Beach postings and closures

10.4.6 Targeted Education

Targeted communities include communities or activities the City has determined may require increased educational efforts. The following factors contribute to the evaluation and identification of education programs for Encinitas' targeted communities:

Activities generating pollutants of concern

Some water bodies within the City of Encinitas are on the current 303(d) list of water quality limited segments for a variety of pollutants. Specifically, nutrients and bacteria are high priority pollutants within the City's watersheds, which can be transported through both non-stormwater and stormwater runoff. Activities commonly associated with these pollutants, such as landscaping activities, will be targeted by the City's educational outreach.

Non-stormwater flows

Consistent with the goals of the Municipal Permit, the City will focus on communities and activities that may, or are known to, contribute non-stormwater flows to the City's MS4 in order to prevent pollutants from being transported downstream. Some categories of non-stormwater discharges were previously allowed under the 2007 Municipal Permit. The City will focus on providing education regarding newly prohibited non-stormwater discharges, such as irrigation runoff, to audiences affected by the Permit changes.

Based on the criteria described above, the City will target the following communities and high-risk activities:

Over-Irrigation

The City will continue to provide public outreach on water conservation which incorporates tips and information on reducing water use, especially through eliminating over-irrigation and using drought tolerant landscaping. The City has partnered with local water authorities to promote rebates to both residences and businesses for water conserving tools such as plumbing fixtures, irrigation controllers, and turf removal. Free water use evaluations are also available in addition to rebates to promote water conservation.

Clean Water Program staff works in conjunction with the San Dieguito Water District and the Olivenhain Municipal Water District to prevent over-irrigation runoff and encourage water conservation. The following methods may be used to disseminate educational material to residents and the general public:

- City's Website: Clean Water Pages, Environmental Pages, Homepage news, etc.
- Informational or Advisory Letters to targeted neighborhoods
- Water district bill inserts and water district public events
- HOA newsletters
- Brochures at City Hall
- Specific Complaint Response related educational literature
- Community events, workshops, and trainings

- Cleanups and trash collection events

Additionally, as part of the City's strategy to reduce dry weather flows, as discussed in the Carlsbad WQIP, and to further the public's understanding and knowledge of low impact development (LID) as an effective mechanism for water quality improvements, the City implemented a pilot project to educate and motivate homeowners to reduce irrigation runoff and wet weather flows. The goal of the workshop was to encourage homeowners to implement:

- Landscape water conservation practices (drip irrigation, turf reduction, etc.)
- Small-scale LID features (downspout disconnects, rainwater harvesting, bioretention basins, etc.).

The pilot project was held in the neighborhood which includes Pacific View Lane and Sea View Court within the Cottonwood Creek Drainage Basin. This neighborhood was targeted due to observed presence of irrigation runoff. Based on lessons learned from the pilot project, the City plans to expand the program to cover additional neighborhoods within the Cottonwood Creek Drainage Area and citywide.

Home Owners Associations and Property Managers

As a part of Carlsbad WQIP implementation, the City will develop and manage an education and outreach program that encourages and/or incentivizes HOAs and business property managers in the Cottonwood Creek Basin to implement measures to reduce dry weather flows and pollutants leaving their properties. Practices could include adjusting property landscaping, maintenance of irrigation systems, conversion to drought tolerant landscaping to prevent non-stormwater discharges from their properties, utilizing water-conservation techniques. City inspections of industrial and commercial properties have shown that the involvement of property managers/owners can also be an efficient way to target a large audience. Managers/owners often educate their tenants on the City's BMP requirements and may enforce the use of BMPs on the property.

Individual Residential Car Washing

As discussed in the IDDE section of the JRMP, residents should implement BMPs, as feasible, and must minimize the amount of pollutants from entering the City's storm drain system, which includes City streets. Residents are encouraged to use professional car washes or implement BMPs at their homes to prevent water produced by residential car washing from entering the stormwater conveyance system. Incidents of individual residential car washing are typically identified during residential inspections and during MS4 outfall monitoring. The City will target residential areas that continue to be a problem with additional educational materials and any necessary enforcement measures.

Mobile Businesses

The City will provide information and outreach regarding stormwater quality to mobile business owners and operators. As necessary, mobile businesses will be given educational materials outlining pollution prevention methods and other BMPs related to their activities.

Spanish-Speaking Population

The City will target the Spanish-speaking population in the City by offering a number of educational brochures and stormwater outreach materials for children in Spanish and English. The City also produces and utilizes bilingual brochures that are targeted at specific trade groups/activities. This includes BMP brochures for the following topics:

- Automotive repair
- Development and construction practices
- Home improvement
- Integrated Pest Management (IPM)
- Restaurant operations
- Yard and garden maintenance

A bilingual Clean Water Program staff member is also available to provide training and response to complaint calls throughout the city.

10.5 Public Participation Programs

Community involvement plays an important role in achieving the goals of the JRMP. The participation of the general public and school children in implementing stormwater programs helps improve stormwater awareness among individuals and may lead to improved water quality. Collaboration between the City and the community helps foster a sense of shared responsibility in protecting water quality both locally and regionally. Some programs, such as cleanup events, have direct water quality benefits. When the public has the opportunity to become more involved, there are several positive outcomes. First, those involved become more knowledgeable about stormwater issues. Secondly, they become educators and stewards for the Clean Water Program and the watershed. Ultimately, they provide important feedback to the Clean Water Program regarding the concerns of the public and will report issues that may need our attention. Public participation helps make the education process more effective. The City encourages public participation though the programs discussed in this section.

Cleanup Events

The City and the Surfrider Foundation host beach cleanups year round and the public is encouraged to participate at sites along the City's coast. These events are organized to remove

trash, recycling, and debris from our coastline. Community involvement continues to grow each year, and the Clean Water Program plans to participate in future cleanups.

Environmental Commission

The City of Encinitas' City Council has created an Environmental Commission that provides policy advice and recommendations to the City Council on issues related to environmental stewardship and sustainability. The Commission assesses the City's current environmental efforts in relation to specified areas of interest and creates and recommends strategies and initiatives that promote conservation and sustainable practices.

Public and Regional Outreach

The Clean Water Program participates in numerous outreach events throughout the City. Coordination is conducted throughout the San Diego Region's watersheds to ensure participation in regional events as well. Outreach to the general public and school children is also provided through the Solana Center for Environmental Innovation and I Love A Clean San Diego via workshops and presentations involving pollution prevention in the watershed, stormwater, household hazardous waste (HHW), composting, and recycling. The Solana Center works closely with the City for many of these workshops and presentations.

Public Reporting

The City has a local Clean Water Hotline (760-633-2787) that connects the caller directly to the staff in the Clean Water Program. An after-hours number (760-633-2922) is also available for after-hours emergencies and connects the caller with the City's external answering service which takes in calls and contacts the on-call City staff person to determine appropriate response actions. A Clean Water Hotline email (cleanwater@encinitasca.gov) is promoted and disseminated through the numerous outlets and venues described in this report. There are also currently two regional stormwater hotline numbers widely advertised within San Diego County: a toll-free Regional Stormwater Hotline (1-888-846-0800), and the Think Blue Hotline (1-888-THINK BLUE or 1-888-844-6525). The County of San Diego staffs both of these hotlines Monday through Friday, 8:00 a.m. - 5:00 p.m. In addition to personal service at these hotlines during regular business hours, the hotlines provide a voicemail message for 24-hour public access.

Household Hazardous Waste Collection

Door-to-door home collection service is available to all residents of the City of Encinitas. Citizens aged 65 years and older and disabled citizens may request pickup service at no charge. Residents not qualifying for free pickup service are charged a nominal fee for home collection.

In an agreement with the Cities of Vista and Poway, residents of the City of Encinitas may also drop off HHW at the Vista (1145 East Taylor Street) or Poway (12325 Crosthwaite Circle) collection centers. These regional, permanent collection centers are open every Saturday (except

holiday weekends) from 9:00 am to 3:00 pm. No fee is charged to Encinitas residents and no appointments are necessary. Proof of residency is required (driver's license, trash or utility bill, or other proof of Encinitas residency). Waste collected is separated, packaged, secured and temporarily stored at the permanent facilities. This waste is then removed on a regular basis for proper recycling or disposal.

Materials accepted via the HHW Home Collection Program and at the Poway and Vista collection centers include:

- **Household Cleaners:** Drain openers, oven cleaners, wood and metal polish / cleaners, toilet bowl cleaners, and disinfectants
- **Automotive Products:** Oil and fuel additives, grease and rust solvents, carburetor and fuel injector cleaners, air conditioning refrigerants, starter fluid, lubricating fluids, radiator fluids and additives, waxes, polishes, cleaners, and transmission additives
- **Home Maintenance and Improvement Products:** Paint thinners, paint strippers, adhesives, paints, stains, varnishes, sealants, and wood preservatives
- **Lawn and Garden Products:** Pesticides, herbicides, and fungicides (poisons)
- **Miscellaneous:** Batteries, fingernail polish removers, pool and photo chemicals

Used Oil Recycling Program

The City has a used oil recycling program that consists of a network of certified automotive waste recycling centers throughout the City. These facilities accept a range of used automobile products including used oil, oil filters, batteries and antifreeze. A significant part of this program is the dissemination of educational information regarding the benefits of, and opportunities for, pollution prevention. This program is specifically for the residents of Encinitas and is funded through grants from the California Integrated Waste Management Board. A list of the participating oil recycling sites is provided in all oil recycling printed material and on the City's website.

Encourage Responsible Cleanup

Residents using municipal facilities are expected and encouraged to take responsibility to clean up after themselves and properly dispose of all waste. To encourage proper pet waste disposal, doggie bag dispensers are located in public parks and along several trails throughout the City. Trash cans are also available in these areas. Both the trash cans and bag dispensers are maintained by the City's Parks and Recreation Department.

Public participation in the updating, development, and implementation of the JRMP

The City has obtained public input on its stormwater program updates, including activities described in the JRMP, through Carlsbad WQIP public workshops, consultation panel meetings,

and public comment periods, and through the City's ordinance update process, which included a public comment period and opportunity to receive public comment at two City Council meetings and one Environmental Commission meeting. Upon submittal to the San Diego Regional Water Quality Control Board, the City's JRMP will be posted online, as required by the Municipal Permit. The City will accept additional comments on the JRMP concurrent with the comment period for the final Carlsbad WQIP.

Table 10-1. Training Topics by Target Audience

Training Topic	Municipal Staff	Development Community	Construction Site Operators	Industrial Facility Operators	Commercial Facility Operators	Residential Community and General Public
Laws, Regulations, Permits, & Requirements						
Federal, state, and local water quality laws and regulations	x	x	x	x	x	x
Municipal Permit	x	x	x	x	x	
Statewide General Construction Permit		x	x			
Statewide General Industrial Permit		x		x		
Regional Board's General NPDES Permit for Ground Water Dewatering		x	x	x		
Regional Board 401 Water Quality Certification Program		x	x			
Statewide General NPDES Utility Vault Permit		x	x			
General Urban Runoff Concepts						
Impacts of urban runoff on receiving waters	x	x	x	x	x	x
Distinction between MS4s and sanitary sewers	x	x	x	x	x	x
Methods to reduce irrigation runoff of landscapes	x	x	x	x	x	x
Proper use of fertilizer and pesticides	x	x		x	x	x
Use of Native and drought tolerant landscaping	x					x
Proper pet waste disposal	x					x
Methods to reduce the impact of residential and charity car-washing	x					x
Short- and long-term water quality impacts associated with urbanization (i.e., land-use decisions, development)	x					x
Integration of Low Impact Development (LID) BMP requirements into the local regulatory program(s) and requirements		x	x			
BMP types: facility or activity specific, LID, source control, and treatment control		x				

Table 10-1. Training Topics by Target Audience (Continued)

Training Topic	Municipal Staff	Development Community	Construction Site Operators	Industrial Facility Operators	Commercial Facility Operators	Residential Community and General Public
Best Management Practices (BMP)						
Pollution prevention and safe alternatives	x	x	x	x	x	x
Reduction of pollutants associated with pesticides, herbicides, and fertilizers	x	x	x	x	x	x
Good housekeeping practices (e.g., sweeping impervious surfaces instead of hosing)	x	x	x	x	x	x
Proper waste disposal (e.g., garbage, pet/animal waste, green waste, household hazardous waste (HHW), appliances, tires, furniture, vehicles, boat/recreational vehicle waste, catch basin/MS4 cleanout waste)	x	x	x	x	x	x
Non-stormwater disposal alternatives (e.g., all wash waters)	x	x	x	x	x	x
Preventative maintenance	x	x	x	x	x	x
Equipment/vehicle maintenance and repair	x	x	x	x	x	x
Spill response, containment, and recovery	x	x	x	x	x	x
Recycling	x	x	x	x	x	x
BMP maintenance	x	x	x	x	x	x
Erosion prevention	x	x	x	x	x	x
Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities		x	x			

Table 10-1. Training Topics by Target Audience (Continued)

Training Topic	Municipal Staff	Development Community	Construction Site Operators	Industrial Facility Operators	Commercial Facility Operators	Residential Community and General Public
Methods of minimizing impacts to receiving water quality resulting from development, including the following: ▪ Stormwater Management Plan development ▪ Methods to control downstream erosion ▪ Identification of pollutants of concern ▪ LID BMP techniques ▪ Source control BMPs ▪ Selection of the most effective permanent BMPs		x	x			
Other Topics						
Water quality awareness for emergency first responders	x	x	x			
Illicit Discharge Detection and Elimination observations and follow-up during daily work activities		x	x			
Inspection, plan review, and enforcement policies and procedures to verify consistent application		x	x			
Hydrostatic testing		x	x			
Public reporting mechanisms	x	x	x	x	x	x
Potable water discharges to the MS4	x	x	x	x	x	x
Integrated Pest Management techniques	x	x	x	x	x	x
Benefits of native vegetation	x	x	x			x
Drought awareness and water conservation	x	x	x	x	x	x
Dechlorination techniques		x				x
Proper disposal of HHW		x	x	x	x	x

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11 Fiscal Analysis

11.1 Introduction

Regional Water Quality Control Board, San Diego Region (RWQCB) Order No. R9-2013-0001, as amended by Order No. R9-2015-0001, (Municipal Permit) requires the City of Encinitas (City) to secure the resources necessary to implement its Jurisdictional Runoff Management Program (JRMP). This includes the actions the City has committed to in the Water Quality Improvement Plans (WQIP) for the Carlsbad Watershed Management Areas (WMA). Those actions, referred to as "strategies" in the WQIPs, are summarized in Appendix I of the JRMP.

The City is also responsible for reporting a stormwater program fiscal analysis, including information about expenditures and funding sources, to the RWQCB each year. To satisfy this requirement, each department, division, or section involved in the stormwater program compiles financial information and provides it to the Stormwater staff within the Public Works Department, which analyzes the fiscal information and reports the findings to the RWQCB.

11.2 Municipal Permit Compliance Funding Needs and Sources

Each budget cycle, estimated costs for implementing the stormwater program are prepared as part of the citywide budgeting process. The specific amounts allocated, and their corresponding funding sources are set in each year's final adopted operating and capital improvement budgets.

11.2.1 Funding Needs

The stormwater program funding needs are primarily driven by the following regulations:

- The Municipal Permit, including the JRMP requirements of Provision E and the WQIP requirements of Provision B
- The Moonlight Beach bacteria total maximum daily load (TMDL), which is incorporated into the Municipal Permit and which the Carlsbad WQIP has been prepared to address

The activities necessary to comply with these regulations are described in the JRMP. Examples of these activities include street sweeping, storm drain cleaning, maintaining structural treatment devices, water quality monitoring, and inspecting construction sites and businesses to verify they are implementing appropriate measures to protect water quality. Increased efforts in focused areas of the City, which are necessary to meet WQIP numeric goals, are also included. All WQIP strategies are listed in JRMP Appendix I.

11.2.2 Funding Sources

Primary program funding for stormwater management activities comes from the City's General Fund. The City also typically receives some grant funding, including from the Used Oil Block Grant and Department of Conservation Recycling Grant programs, to support recycling, solid waste, and household hazardous waste programs. Other grant funding is secured when available to address program specific goals and objectives.

11.3 Fiscal Analysis Reporting

As part of the required annual reporting process each year, the City will prepare a summary of expenditures from both the current reporting period and upcoming fiscal years.

Information necessary to complete the fiscal analysis each year will be collected from each responsible department or division. In accordance with Municipal Permit Provision E.8 (Fiscal Analysis), the City will report stormwater expenditures for capital projects, operation and maintenance, and staffing. Staffing and operation and maintenance costs mainly relate to day-to-day program activities, such as storm drain cleaning, reviewing plan submittals for development projects, and enforcing compliance with the stormwater requirements in the Municipal Code. Capital project expenditures are typically associated with City construction projects, referred to as Capital Improvement Projects (CIP). Stormwater CIP costs may include, for example, installing Low Impact Development (LID) features on City property.

The City will report its fiscal analysis information in its JRMP annual reports until the RWQCB approves the WQIPs. The deadline for JRMP annual report submittal during the transitional period is October 31, following the end of the fiscal year. For example, FY 2015 ends on July 1, 2015, and the FY 2015 JRMP annual report is due to the RWQCB on October 31, 2015. After the WQIPs are approved, the JRMP annual report forms and fiscal analysis data will not be provided directly to the RWQCB on their own. Instead, they will be included as part of the WQIP annual reports. The City's fiscal analysis data will be included in the WQIP annual report for the WQIP to which the City is a party, the Carlsbad WMA WQIP. The WQIP annual report for each reporting period is due January 31 of the following year. For example, the FY 2018 WQIP annual reports will be due on January 31, 2019. It is anticipated that the WQIPs will be approved during FY 2016 and that the first WQIP annual reports will be due in January 2017.

12 Conclusions and Recommendations

The City has updated its Jurisdictional Runoff Management Program (JRMP) based upon Municipal Permit requirements and on priorities, goals, and schedules identified in the Carlsbad Watershed Management Area (WMA) Water Quality Improvement Plan (WQIP). Broadly, updates include adjusting existing JRMP programs and developing new programs to target WQIP priorities to meet Municipal Permit requirements.

The City anticipates the continuing assessment and refinement of its local activities in consideration of the adaptive management of the WQIP. This approach is expected to reduce discharges of pollutants and non-stormwater flow volumes in the City's storm drain system and support the attainment of established water quality goals defined in the WQIP.

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13 References

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County of San Diego, 2011. *Long-Term Effectiveness Assessment San Diego Stormwater Copermittees Urban Runoff Management Programs Final Report.* Submitted on behalf of the Copermittees of RWQCB Order No. R9-2007-0001.

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Appendix A

Stormwater Management and Discharge Control Ordinance (Ordinance 2015-07)

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CHAPTER 20.08
STORMWATER MANAGEMENT
(Ordinance 2015-07)

20.08.010 Title. This Chapter shall be known as the "City of Encinitas Stormwater Management and Discharge Control Ordinance".

20.08.020 Purpose and Intent. The purpose of this Chapter is to protect the health, safety and welfare of the public by regulating all discharges into the Stormwater Conveyance System and the Waters of the State in order to preserve and enhance water quality for beneficial uses by:

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

The intent of this Chapter is to use the police power of the city to protect, enhance, and regulate water quality in a manner which complies with all applicable laws related to water quality, including the federal Clean Water Act, the state Porter-Cologne Water Quality Control Act, and the California Regional Water Quality Control Board San Diego Region Order No. R9-2013-0001 adopted on May 8, 2013, NPDES No. CAS0109266 and any subsequent amendments, revisions, or reissuance of the permit.

20.08.030 Definitions. For purposes of this Chapter only, the terms below have the following meaning:

A. "Beneficial Uses" means uses of water necessary for the survival or well-being of humans, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. Beneficial uses of the Waters of the State that may be protected against include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. Beneficial Uses are equivalent to Designated Uses under federal law. [California Water Code Section 13050(f)].

B. "Best Management Practices" or "BMPs" means schedules of activities, pollution treatment practices or devices, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, operation and maintenance

procedures, and other management practices or devices to prevent or reduce the discharge of pollutants directly or indirectly to Stormwater, Receiving Waters, or the Stormwater Conveyance System. BMPs may be structural or non-structural. Best Management Practices include, but are not limited to, site design, source control, treatment control, natural design methods, low flow diversions to the sewer, and structures such as infiltration basins, clarifiers, oil and grease separators, and filters. BMPs may include any type of pollution prevention and pollution control measure the can help to achieve compliance with this Chapter.

C. "Clean Water Act Section 303(d) Impaired Water Body" or "Impaired Water Body" means an impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology based pollution controls required by the Clean Water Act. The discharge of urban runoff to these water bodies is significant because these discharges can cause or contribute to violations of applicable water quality standards.

D. "City" means the City of Encinitas.

E. "Discharge" when used as a verb, means to allow pollutants to directly or indirectly enter Stormwater, or to allow Stormwater or non-Stormwater to directly or indirectly enter the Stormwater Conveyance System or Receiving Waters, from an activity or operations. When used as a noun, "Discharge" means the pollutants, Stormwater and/or non-Stormwater that is discharged.

F. "Discharger" means any person engaged in activities or operations, or owning facilities, which may result in pollutants entering Stormwater, the Stormwater Conveyance System or Receiving Waters. "Dischargers" include, but are not limited to, real and personal property owners, occupants, tenants, lessees, contractors, developers, managers and employees.

G. "Enforcement Staff" means any City employee or authorized contractor hired by the City who is assigned to duties involving permits and other City approvals, inspections, or enforcement related to this Chapter.

H. "Environmentally Sensitive Areas (ESA)" include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Multi Species Conservation Program within the Cities and County of San Diego; and any other similar environmentally sensitive areas which have been identified by the City. "Directly adjacent" means situated within 200 feet of the Environmentally Sensitive

Area. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.

I. "Groundwater" means subsurface water that occurs beneath the water table in soils and geologic formations that are fully saturated. Water table is the depth or elevation at which soil pore spaces or fractures and voids become completely saturated with water.

J. "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.

K. "Illegal Discharge" is any discharge to the Stormwater Conveyance System that is not composed entirely of Stormwater or is not discharged in compliance with this Chapter. This includes, but is not limited to, discharges of non-Stormwater that are not exempt as defined by this Chapter**,** 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 this Chapter unless compliance with all applicable permit conditions is maintained.

L. "Impervious Surface" means constructed or modified surfaces that cannot effectively infiltrate rainfall such as building rooftops, pavement, sidewalks, driveways, etc.

M. "Impervious Surface Area" means the ground area covered or sheltered by an impervious surface, measured in plan view, i.e., as if from directly above. For example, the "impervious surface area" for a pitched roof is equal to the ground area it shelters, rather than the surface area of the roof itself.

N. "BMP Maintenance" refers to the regular action taken to maintain the as-designed performance and functionality of a permanent or temporary BMP, and includes, but is not limited to, repairs to the BMP as necessary, and replacement of the BMP by an equally effective or more effective BMP at the end of its useful life.

O. "Maximum Extent Practicable" or "MEP" refers to the standard established by Congress in Clean Water Act section 402(p)(3)(B)(iii) that municipal dischargers of Stormwater must meet; MEP is an acceptability standard for Best Management Practices based on a level of pollutant reduction that can be achieved by the most effective set of BMPs that can be implemented and still remain practicable; MEP generally emphasizes pollution prevention and source control BMPs as the first line

of defense in combination with treatment methods as a backup.

P. "Municipal Separate Storm Sewer System (MS4)" (*see also, Stormwater Conveyance System)* means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designated or used for collecting or conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.26.

Q. "MS4 Permit" refers to RWQCB Order No. R9-2013-0001, and any subsequent amendments, revisions, or reissuance of the permit.

R. "Non Point Source" refers to diffuse, widespread sources of pollution. These sources may be large or small, but are generally numerous throughout a watershed. Non Point Sources include but are not limited to urban, agricultural, or industrial areas, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation. Non Point Source Pollution can occur year round any time rainfall, snow melt, irrigation, or any other source of water runs over land or through the ground, picks up pollutants from these numerous, diffuse sources and deposits them into rivers, lakes, and coastal waters or introduces them into ground water.

S. "Non-Stormwater Discharge" is any discharge to the Stormwater Conveyance System or Receiving Waters that is not composed entirely of Stormwater.

T. "NPDES Permit" means a National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency, the State Water Resources Control Board ("SWRCB"), or the California Regional Water Quality Control Board for the San Diego Region ("RWQCB").

U. "Permanent BMP" means a structural, source control, or treatment control best management practice designed to detain, retain, filter, remove and/or prevent the release of pollutants to surface waters from development projects and required to remain in perpetuity, after construction of a project is completed.

V. "Person" means an individual, corporation, partnership, limited liability company,

joint venture, non-profit organization, trust, association, or governmental agency.

W. "Pollutant" is broadly defined as any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated.

X. "Pollution" is the alteration of the quality of the Receiving Waters to a degree that unreasonably affects the Beneficial Use of the Receiving Waters or the facilities that serve the beneficial uses. "Pollution" also includes contamination which creates a hazard to the public health through poisoning or the spread of disease.

Y. "Point Source" means any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged.

Z. "RWQCB" means the California Regional Water Quality Control Board for the San Diego Region.

AA. "Receiving Waters" means all waters that are "Waters of the State" within the scope of the State Water Code, including but not limited to, natural streams, creeks, rivers, reservoirs, lakes, ponds, water in vernal pools, lagoons, estuaries, bays, the Pacific Ocean, and ground water.

BB. "Stormwater" means runoff which originates from precipitation events. "Storm water" is that portion of precipitation that flows across a surface to the storm drain system or Receiving Waters. Examples of this phenomenon include: the water that flows off a building's roof when it rains (runoff from an impervious surface); the water that flows into streams when snow on the ground begins to melt (runoff from a semi-pervious surface); and the water that flows from a vegetated surface when rainfall is in excess of the rate at which it can infiltrate into the underlying soil (runoff from a pervious surface). During precipitation events in urban areas, rain water picks up and transports pollutants through Stormwater Conveyance Systems, and ultimately to Receiving Waters.

CC. "Stormwater Conveyance System" (see also, "MS4") means private and public drainage facilities within the City of Encinitas by which Stormwater may be conveyed to waters of the United States, including but not limited to, streets, roads, catch basins, natural and artificial channels, natural and artificial drainage features, aqueducts, canyons, stream beds, gullies, curbs, gutters, ditches, and storm drains. Historic and current development makes use of natural drainage patterns and features as conveyances for urban runoff. Urban streams used in this manner are part of the Stormwater Conveyance System regardless of whether they are natural, man-made, or

partially modified features. In these cases, the urban stream is both a Stormwater Conveyance System and a Receiving Water.

DD. "Structural BMP" means a BMP that relies on either a physical condition (other than an entirely natural and undisturbed condition), or on a constructed or installed device to reduce or prevent pollutants in Stormwater discharges and exempt non Stormwater discharges. Constructed or enhanced BMPs that depend on natural materials and processes (e.g., constructed drainage swales or buffers, or constructed wetlands), that require periodic maintenance to function as designed, are Structural BMPs.

EE. "SWRCB" means the State Water Resources Control Board.

FF. "Treatment Control Best Management Practice (TCBMP)" is a permanent BMP designed to remove pollutants by gravity settling, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

GG. "Waters of the State" means any water, surface or underground, including saline waters within the boundaries of California. The definition of the "Waters of the State" is broader than that for the "Waters of the United States" in that all water in the State is considered to be a "Waters of the State" regardless of circumstances or condition. Under this definition, a municipal storm sewer system (MS4) is always considered to be a "Waters of the State". [California Water Code Section 13050 (e)].

HH. "Waters of the United States" means water subject to the regulatory jurisdiction of the United States under the Federal Clean Water Act and applicable case law. In general, this includes "navigable" waters, waters tributary to "navigable" waters, and adjacent wetlands. [40 Code of Federal Regulations section 122.2.]

20.08.040 Discharge Prohibitions.

A. Discharge of Stormwater. No person shall discharge Stormwater directly or indirectly into the Stormwater Conveyance System or Receiving Waters, unless discharged in compliance with this Chapter.

B. Discharge of Non-Stormwater Prohibited. No person shall discharge non-Stormwater directly or indirectly into the Stormwater Conveyance System or Receiving Waters, except as provided below in Section 20.08.050.

C. Liability for Illegal Discharge. Liability for any illegal discharge shall be the responsibility of the person(s) causing, contributing, or responsible for the illegal discharge, and such person(s) shall defend, indemnify, and hold harmless the City in any administrative or judicial enforcement action relating to such discharges.

D. Prevention of Illegal Discharges. Throwing, depositing, leaving, abandoning, maintaining or keeping materials or wastes on public or private lands in a manner and place that results in or contributes to a violation of the MS4 Permit is unlawful.

E. Violations of the MS4 Permit. It is unlawful for any person to cause, or threaten to cause, either individually or jointly any discharge into or from the MS4 that results in or contributes to a violation of the MS4 Permit.

20.08.050 Exemptions to Discharge Prohibitions

A. Permitted Discharges. Any discharge to the MS4 that is regulated under a NPDES permit issued to the discharger and administered by the State of California pursuant to Division 7 of the California Water Code is allowed, provided that the discharger is in compliance with all requirements of the NPDES permit and other applicable laws and regulations.

B. Groundwater Discharges Typically Requiring Permits. Non-stormwater discharges to the MS4 from the following categories are allowed if: (i) the discharger obtains coverage under NPDES Permit No. CAG919002 (RWQCB Order No. R9-2008-0002, or subsequent order) for discharges to surface waters other than San Diego Bay, and the discharger is in compliance with all requirements of the applicable NPDES permit and all other applicable laws and regulations; or (ii) the RWQCB determines in writing that coverage under NPDES Permit No. CAG919002 (or subsequent permit) is not required. Otherwise, non-stormwater discharges from the following categories are illegal discharges:

1. Discharges from uncontaminated pumped groundwater;
2. Discharges from foundation drains when the system is designed to be located at or below the groundwater table to actively or passively extract groundwater during any part of the year;
3. Discharges from water from crawl space pumps;
4. Discharges from water from footing drains when the system is designed to be located at or below the groundwater table to actively or passively extract groundwater during any part of the year.

C. Discharges from Water Lines. Non-stormwater discharges to the MS4 from water line flushing and water main breaks are allowed if the discharges have coverage under NPDES Permit No. CAG679001 (Regional Water Quality Control Board Order No. R9-2010-0003, or subsequent order), and the discharger is in compliance with all requirements of that NPDES permit and other applicable laws and regulations. This category includes water line flushing and water main break discharges from water purveyors issued a water supply permit by the California Department of Public Health or federal military installations. Discharges from recycled or reclaimed water lines to the MS4 are allowed if the discharges have coverage under an NPDES permit, and the discharger is in compliance with the applicable NPDES permit and other applicable laws and regulations. Otherwise, discharges from water lines are illegal discharges.

D. Allowable Discharges. Non-Stormwater discharges to the MS4 from the following categories are allowed, unless the authorized Enforcement Staff or the Regional Water Quality Control Board identifies the discharge as a source of pollutants to receiving waters, in which case the discharge is considered an illegal discharge:

1. Discharges from diverted stream flows;
2. Discharges from rising groundwater;
3. Discharges from uncontaminated groundwater infiltration to the MS4;
4. Discharges from springs;
5. Discharges from flows from riparian habitats and wetlands;
6. Discharges from potable water sources, except as set forth in Encinitas Municipal Code Section 20.08.050 and except that irrigation runoff discharges are considered illegal discharges and are not allowed;
7. Discharges from foundation drains when the system is designed to be located above the groundwater table at all times of the year, and the system is only expected to produce non-stormwater discharges under unusual circumstances; and
8. Discharges from footing drains when the system is designed to be located above the groundwater table at all times of the year, and the system is only expected to produce non-Stormwater discharges under unusual circumstances.

E. Conditionally Allowed Discharges. Non-Stormwater discharges from the following categories are allowed if they are addressed as follows. Otherwise, non-Stormwater discharges from the following categories are illegal discharges:

1. Air conditioning condensation. Air conditioning condensation shall be directed to landscaped areas or other pervious surfaces, or to the sanitary sewer, where feasible, as determined by the authorized Enforcement Staff.
2. Individual residential vehicle washing. Wash water from individual residential vehicle washing should be directed to landscaped areas or other pervious surfaces, where feasible as determined by the authorized Enforcement Staff. Minimizing water use, detergent, and other vehicle wash products, and other BMPs to prevent the discharge of pollutants to the MS4 are encouraged. Non-commercial car washes, such as fundraisers and other similar activities, are not considered individual residential vehicle washing, and are therefore considered Illegal Discharges.
3. Water from swimming pools.
    a. Chlorinated swimming pool water. Chlorine, algaecide, filter backwash, and other pollutants shall be eliminated prior to discharging swimming pool water to the MS4.
    b. Saline swimming pool water. Saline swimming pool water must 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.

F. Firefighting Activities. Non-Stormwater discharges to the MS4 from firefighting activities are allowed if they are addressed as follows:

1. Non-emergency firefighting discharges. 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.
2. Emergency firefighting discharges. BMPs are encouraged to prevent pollutants from entering the MS4. During emergencies, priority of efforts should be directed toward life, property, and the environment (in descending order). BMPs shall not interfere with emergency response operations or impact public health and safety.

G. Conditionally Allowed Discharges Not Absolute. Any conditionally allowed discharge described above which the Enforcement Staff determines is a significant source of pollutants to Receiving Waters shall be prohibited unless the Discharger complies with additional BMPs imposed by the Enforcement Staff to reduce pollutants in the discharge to the Maximum Extent Practicable and the BMPs are effective. Such prohibitions shall take effect after written notice to the Discharger by the Enforcement Staff containing a schedule for compliance based on the necessity to protect public health and safety or the environment.

20.08.060 Notification and Mitigation of Illegal Discharges.

A Discharger shall immediately notify Enforcement Staff of an Illegal Discharge and take immediate action to control and contain the Illegal Discharge. The Discharger shall also mitigate any damage caused by the Illegal Discharge.

The Enforcement Staff may order the Discharger to prepare and implement an approved mitigation plan with a time schedule for completion.

20.08.070 Illegal Connections. No person shall establish, use, or maintain an Illegal Connection to the Stormwater Conveyance System or the Receiving Waters.

20.08.080 Littering and Sweeping.

No person shall throw, deposit, leave, maintain, keep or permit to be thrown, deposited, placed, left or maintained, any refuse, pet waste, rubbish, garbage, or other discarded or abandoned objects, in or upon any street, alley, parking lot, sidewalk, curb, gutter, storm drain, catch basin, conduit, or other drainage structure or lot except in receptacles maintained for the regular disposal of garbage. Impervious surfaces which drain directly or indirectly into the Stormwater Conveyance

System shall be kept free of dirt and debris by regular sweeping. The sweepings shall be placed in garbage receptacles and shall not be allowed to enter the Stormwater Conveyance System.

20.08.090 Compliance with Best Management Practices (BMPs).

No Discharger shall fail to implement, install, use, or maintain Best Management Practices pursuant to the Stormwater Standards Manual and to this Chapter.

20.08.0100 Conclusive Determination of Maximum Extent Practicable.

The Best Management Practices established pursuant to the Stormwater Standards Manual and to this Chapter shall reduce pollutants from the use or activity to the Maximum Extent Practicable. For purposes of enforcement of this Chapter, the Enforcement Staffs determination of the Maximum Extent Practicable shall be conclusive.

20.08.110 Best Management Practices (BMP) Requirements for All Dischargers

A. Best Management Practices. Any person engaged in activities which may result in discharges to the Stormwater Conveyance System shall, to the Maximum Extent Practicable, undertake all measures to reduce the risk of non–Stormwater discharges and pollutant discharges. The following requirements shall apply:

1. Every person undertaking any activity or use of a premises that may cause or contribute to Stormwater pollution or contamination, Illicit Discharges, or non-Stormwater discharges to the MS4 shall comply with BMP guidelines or pollution control requirements, as may be established by the Authorized Staff. BMPs shall be maintained routinely throughout the life of the activity. Such BMPs include the minimum BMPs set forth in the Stormwater Standards Manual.
2. Authorized Enforcement Staff may require any business or operation that is engaged in activities which may result in pollutant discharges to the MS4 to develop and implement a Stormwater Pollution Prevention Plan, which must include an employee training program and the applicable minimum BMPs from the Stormwater Standards Manual.
3. Each discharger that is subject to any NPDES Permit shall comply with all requirements of all such permits. The discharger must also make reports submitted to the RWQCB or other permitting agency, including monitoring data, available to the City upon request.
4. Parties undertaking land disturbance activities shall comply with all applicable requirements of this Chapter, the Stormwater Standards Manual, Engineering Design Manual and Encinitas Municipal Code Chapter 23.24 (Grading and Erosion Control).

20.08.120 BMP Requirements for Land Disturbance Activity

A. Permit Issuance. No land owner or development project proponent shall receive any City grading, clearing, building or other land development permit required for land disturbance activity without first meeting the requirements of this Chapter and the Stormwater Standards Manual with respect to the portion of the development project and the land disturbance activity to which the permit at issue would apply.

B. Owners and Operators both Responsible and Liable. Persons or entities performing land disturbance activities (including, but not limited to, construction activities) in the City, and the owners of land on which land disturbance activities are performed, are dischargers for purposes of this Chapter; provided, however, that a local government or public authority is not a discharger as to activities conducted by others in public rights-of-way.

C. Plan Submittals. All applications to the City for a permit or approval associated with a land disturbance activity must demonstrate how the proposed activity will comply with all applicable requirements in a format specified by the City. The submitted materials shall specify the manner in which the discharger/applicant will implement the BMPs required by this Chapter and the Engineering Design Manual for the activity at issue.

20.08.130 Requirements for Development and Redevelopment Projects

A. Application to Development and Redevelopment Projects. No land owner or development project proponent in the City shall receive any City grading, clearing, building or other land development permit required for land development activity or redevelopment activity unless the project meets or will meet the requirements of this Chapter and the applicable requirements defined in the Engineering Design Manual.

B. Owners and Developers Responsible and Liable. Developers, development project proponents, and land owners for land on which development activities are performed, are dischargers for purposes of this Chapter; provided, however, that a local government or public authority is not a discharger as to activities conducted by others in public rights-of-way.

C. Permanent Best Management Practices Required. Land development and redevelopment activities with the potential to add pollutants to Stormwater or to affect the flow rate or velocity of Stormwater runoff after construction is completed, shall be designed to include and shall implement BMPs to ensure that pollutants and runoff from the development will be reduced to the MEP, will not significantly degrade receiving water quality, and will not cause or contribute to an exceedance of Water Quality Standards in accordance with the requirements defined in the Engineering Design Manual.

20.08.140 Maintenance of BMPs

A. Existing Development. Dischargers shall maintain the designed functionality of the BMPs they rely upon to achieve and maintain compliance with this Chapter.

B. Permanent BMPs. The owners and occupants of lands on which Permanent BMPs have been installed to meet the requirements of this Chapter shall ensure the maintenance of those BMPs pursuant to this Chapter, 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 this Chapter) fail to do so.

C. Maintenance Obligations Assumed by Covenant or Other Agreement. Primary responsibility to maintain a BMP may be transferred through a covenant or other agreement. If that covenant provides that it will be submitted to the City pursuant to this Chapter as part of a development permit application, and if that covenant is so submitted, the person or entity accepting a maintenance obligation in such a covenant or agreement will also be legally obliged to maintain that BMP pursuant to this Chapter.

D. Obligation to Maintain BMPs not Avoided by Covenants or Other Agreements. For purposes of City enforcement, no covenant or other agreement imposing an obligation to maintain a BMP can relieve a person or entity of any obligation to maintain a BMP imposed by this Chapter.

E. Disclosure of Maintenance Obligations. Any developer who transfers ownership of land on which a BMP is located or will be located, or who otherwise transfers ownership of a BMP or responsibility for the maintenance of a BMP to another person or entity, shall provide clear written notice of the maintenance obligations associated with that BMP to the new or additional responsible party prior to that transfer.

F. Maintenance Plans for Land Development Activities. The proponents of any land development activity or redevelopment activity that requires installation of Permanent BMPs shall provide to the City for review and approval prior to issuance of permits for the project, a plan for maintenance of all Permanent BMPs associated with the project in accordance with the Engineering Design Manual. The plan shall specify the persons or entities responsible for maintenance activity, the persons or entities responsible for funding, schedules and procedures for inspection and maintenance of the BMPs, worker training requirements, and any other activities necessary to ensure BMP maintenance. The plan shall provide for servicing of all Permanent BMPs, at least annually, and for the retention of inspection and maintenance records for at least three years.

G. Access for Maintenance. Permanent BMPs shall be provided adequate access for long-term inspection and maintenance purposes.

H. Assurance of Maintenance for Land Development Projects. The proponents of any land development activity or redevelopment activity that requires a City permit shall provide to the City, prior to issuance of permits for the project, proof of a mechanism acceptable to the City which will ensure ongoing long-term maintenance of all Permanent 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 City and becomes effective.

I. Permanent BMP Inspection and Maintenance Verification. The owners and

occupants of lands on which permanent BMPs have been installed to meet the requirements of this Chapter shall maintain records of routine inspection and maintenance of permanent BMPs. Records shall be submitted to the City upon request.

20.08.150 Discharger Sampling, Testing, Monitoring, and Reporting.

The Enforcement Staff may require Dischargers to perform sampling, testing, monitoring and reporting of results as a Best Management Practice. In addition, the Enforcement Staff may order a Discharger to conduct testing or monitoring and to report the results to the City in any of the following scenarios:

1. the Enforcement Staff determines that testing or monitoring is needed to determine whether BMPs are effectively preventing or reducing pollutants in Stormwater to the Maximum Extent Practicable, or to determine whether the facility is a significant source of contaminants to Waters of the State; or

2. the Enforcement Staff determines that testing or monitoring is needed to assess the impacts of an illegal discharge on health, safety or the environment; or

3. an Illegal Discharge has not been eliminated after written notice by the Enforcement Staff or

4. the Discharger is in violation of any provision of this Chapter; or the Regional Water Quality Control Board requires the City to provide information on the Discharger's activities.

Testing and monitoring ordered pursuant to this section may include the following:

1. Visual monitoring of dry weather flows, wet weather erosion, or BMPs;
2. Visual monitoring of premises for spills or discharges;
3. Laboratory analyses of Stormwater or non-Stormwater discharges for Pollutants;
4. Background or baseline monitoring or analysis; and
5. Monitoring of Receiving Waters or sediments that may be affected by Pollutant discharges by the Discharger.

The Enforcement Staff may direct the time and manner in which the results of required testing and monitoring are reported, and shall determine when required sampling, testing or monitoring may be discontinued. The sampling, testing, monitoring and reporting shall be at the expense of the Discharger.

20.08.160 City Authority to Sample, Inspect and Monitor.

A. Regulatory Inspections. The Enforcement Staff or his designee may inspect the premises of any Discharger at reasonable times and in a reasonable manner to carry out the purposes of this Chapter. If a Discharger refuses to allow entry for an inspection, an inspection warrant shall be obtained prior to inspection.

B. Scope of Inspections. Inspections may include all actions necessary to determine whether any Illegal Discharges or Illegal Connections exist, whether the BMPs installed and implemented are adequate to comply with this Chapter, whether those BMPs are being properly maintained, and whether the Discharger complies with other requirements of this Chapter. This may include sampling, metering, monitoring, visual inspections, and records review. Where samples are collected the Discharger may request and receive split samples. Records, reports, analyses, or other required information may be inspected and copied, and photographs taken for purposes of enforcement of this Chapter.

C. Installation of Sampling Devices. As part of the inspection, the Enforcement Staff may authorize the installation of sampling or metering devices.

20.08.170 Establishment of a Fee.

The City Council may establish a fee by resolution to recover the cost of inspection, sampling, metering, or monitoring by the Enforcement Staff.

20.08.180 Violation of a State NPDES Permit. A violation of an NPDES Stormwater Permit other than the MS4 Permit that results in or threatens to result in a Discharge of Pollutants to the Stormwater Conveyance System shall also be considered a violation of this Chapter and may be enforced as such.

20.08.190 Permits and Approvals.

Compliance with this Chapter shall be a condition of every permit or approval granted or issued by the City. Failure to comply with this Chapter shall be grounds for revocation of any such permit or approval.

20.08.200 Violation is a Nuisance.

The City Council hereby declares that any violation of this Chapter is a threat to public health, safety, and welfare and is deemed a public nuisance.

20.08.210 Enforcement of this Chapter.

A. Misdemeanor Violation. Notwithstanding any other provision of this Code, a violation of this Chapter is a misdemeanor punishable by a fine of not more than one thousand dollars ($1,000) or imprisonment in the County Jail for a period of not more than six months or both fine and imprisonment. Any such violation may be charged as an infraction at the discretion of the City Attorney. Any person convicted of an infraction under the provisions of this Chapter shall be punishable by a fine not to exceed five hundred dollars ($500) for a first or second offense in one

year, and not to exceed one thousand dollars ($1000) for a third violation in one year.

B. Orders of the Public Works Director. The Public Works Director is authorized to issue Cease and Desist Orders or Stop Work Orders to any person who is in violation of this Chapter. Failure to comply with a written order of the Public Works Director shall be a violation of this Chapter and shall be grounds for the imposition of the civil penalties described in this section.

C. Civil Penalties. Any person who violates a provision of this Chapter may be assessed a civil penalty not to exceed one thousand dollars ($1,000) for each violation, for each day the violation is committed, continued, permitted or maintained. The civil penalties may be imposed by the Enforcement Staff after written notice and a hearing before the City Manager or his designee at which the person may present evidence and cross examine the witnesses in support of the charges. Civil penalties may also be assessed by the court in a civil action filed by the City to enforce the provisions of this Chapter.

D. Abatement. Any violation of this Chapter may be abated as a public nuisance and costs of abatement may be recovered by the City as allowed by law.

E. Administrative Fines. Any violation of this Chapter is subject to administrative fines as provided by this Code.

F. Judicial Action. This Chapter is enforceable by any judicial action allowed by law, including, but not limited to, injunctive relief.

G. Liens. Costs of enforcement of this Chapter, including but not limited to, costs of investigation, sampling and monitoring costs, and unpaid administrative fines and civil penalties, shall constitute a lien against the real property on which the violation occurs and on the real property of any person who violates this Chapter until such lien is satisfied. The lien may be recorded and executed in the same manner as a judgment lien. Prior to the recordation of the lien, the property owner shall be given written notice of the lien and an opportunity to contest the validity of the lien and the amount at a hearing held by the City Manager or his designee.

H. Remedies Not Exclusive. Remedies under this Chapter shall be in addition to each other, and in addition to any other legally available remedy, and do not limit or supersede any other enforcement action, civil, criminal or administrative.

20.08.220 Severability. If any section, subsection, or part of this Chapter is declared invalid by a court of competent jurisdiction, the remaining provisions shall continue to be valid and enforceable so as to effectuate the purpose and intent of this ordinance.

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Appendix B

Enforcement Response Plan

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Appendix B.
City of Encinitas Enforcement Response Plan

1 Introduction

The City enforces compliance with the requirements of its Stormwater Ordinance (Encinitas Municipal Code (EMC) Chapter 20.08), including the minimum best management practice (BMP) requirements in the Stormwater Standards Manual. In accordance with Section E.6 of the Municipal Permit[1], compliance with the City's ordinances will be assessed through a variety of means, including inspections, responses to hotline calls/emails, and the routine MS4 outfall monitoring. Where violations of the Stormwater Ordinance are identified, the enforcement actions and procedures described in this Enforcement Response Plan will be employed to enforce stormwater requirements.

The City typically employs a tiered, escalating enforcement system. However, the City reserves the right to use whatever tools Enforcement Staff deem most appropriate for a given situation, as dictated by the specifics of each case. EMC Chapter 20.08 defines Enforcement Staff as staff who have been assigned the responsibility of evaluating and enforcing compliance with the Stormwater Ordinance.

Enforcement actions, including escalated enforcement actions, are described in the following section. It should be noted that experience and professional judgment of City staff are important in guiding the appropriate response to a violation. The enforcement actions that are considered escalated are unique to each program area; therefore the definition of what constitutes an escalated enforcement action is defined individually in Sections 4 through 9 of this Enforcement Response Plan. Escalated enforcement actions will continue to increase in severity, as necessary, to compel compliance as soon as possible.

2 Enforcement Actions

Several different types of enforcement actions can be used to enforce compliance with the Stormwater Ordinance, as discussed below. Enforcement actions may be taken in accordance with EMC Chapter 20.08.

[1] San Diego Regional Water Quality Control Board Order No. R9-2013-0001, as amended by Order No. R9-2015-0001

2.1 Written and Verbal Warnings

A written or verbal warning is typically the City's first level of enforcement action when a violation of stormwater requirements is observed such as an illegal discharge or illegal connection. Standard enforcement types in this category include correct work notices, advisory letters, and warnings. When written warnings are issued, a time frame to correct the violation is given, and a follow-up date is scheduled. The responsible party is informed that non-compliance with notices will result in more severe penalties.

2.2 Notices of Violation

Notices of violation (NOV) are generally considered a higher level of enforcement than the warning actions defined in Section 2.1. When an NOV is issued, a time frame to correct the violation is given, and a follow-up date is scheduled. The responsible party is informed that continued non-compliance will result in more severe penalties.

2.3 Administrative Citations or Fines

Enforcement Staff may issue stormwater citations for violations of the City's Municipal Code or the Municipal Permit. Maximum citation amounts depend on the number of previous violations by the same responsible party, of the same section of the Encinitas Municipal Code which have taken place within the last 12 months, as follows:

- First violation: $100 (per day/per violation)
- Second violation: $200 (per day/per violation)
- Additional violations: $1000 (per day/per violation)

The fine amounts shall be cumulative where multiple violations occur. When an administrative citation is issued, the responsible party may request a hearing to contest the enforcement official's determination that a violation of the City's stormwater requirements has occurred. Details on the City's hearing and appeals process can be found in EMC Chapter 1.08.

2.4 Public Nuisance Abatement

Violations that are deemed to be a threat to public health, safety, and welfare may be identified as a public nuisance. Costs for pollution detection and abatement may be recovered from the discharger, in addition to any other penalties imposed by the City, such as administrative citations. If the discharger does not pay the costs in full, a lien may be placed against the property.

2.5 Stop Work Order

Enforcement Staff may order work to be stopped if such work is in violation of the Encinitas Municipal Code. Stop work orders are issued in writing. Any person receiving a stop work

order is required to immediately stop such work until approved by Enforcement Staff to proceed with the work.

As discussed in Enforcement Response Plan Section 8 (Construction Management Enforcement), a stop work order is generally used as an elevated enforcement tool for active land development projects—both public and private. In some cases a stop work order may be applied to a business, but this is rare. Because stop work orders prohibit further regular site activity until compliance has been achieved, they are effective compliance mechanisms. Stop work orders are typically issued if corrections have not been adequately addressed after taking lower level enforcement actions, or if an observed violation poses a significant threat to water quality.

To restart work once a stop work order has been issued, the responsible party must request that Enforcement Staff re-inspect the site to verify that the deficiencies have been satisfactorily corrected. When Enforcement Staff verifies in writing that the appropriate corrections have been implemented, activities may resume.

2.6 Permit Suspension or Revocation

Violations of the Encinitas Municipal Code may be grounds for permit and/or other city license suspension or revocation. City permits, licenses, or other approvals may be suspended or revoked after notice and an opportunity for a hearing. For instance, in severe cases of non-compliance, or significant discharges relating to development and/or construction activities, the City may revoke the building or grading permits that a contractor is working under for the project or deny future permits on the project. The responsible party will then need to re-apply for permits and meet the requirements the City may have placed on the project before resuming the project.

2.7 Enforcement of Contracts

If a contractor is performing work for the City, then the City may use the provisions within the contract for enforcement of non-compliance. Such contract provisions may allow the City to refuse payment, stop work (without time penalties), and/or revoke contracts if contractors performing activities do not comply with all appropriate permits, laws, regulations, and ordinances.

2.8 Civil Penalties

Civil penalties may be assessed for violations of the Stormwater Ordinance. Penalties of up to $1,000 for each violation may be assessed, for each day the violation is committed, continued, permitted or maintained. The civil penalties may be imposed by the Enforcement Staff after written notice and a hearing before the City Manager or his designee at which time the person may present evidence and cross examine the witnesses in support of the charges.

2.9 Misdemeanor Penalties

Non-compliance with any part of the Stormwater Ordinance may be charged as an infraction or a misdemeanor. Any person convicted of an infraction may be assessed a fine not to exceed $500 for a first or second offense in one year, and not to exceed $1,000 for a third violation in one year. Misdemeanor penalties can be up to $1,000.

2.10 Liens

Costs of enforcement of the Stormwater Ordinance, including but not limited to, costs of investigation, sampling and monitoring costs, and unpaid administrative fines and civil penalties, shall constitute a lien against the real property on which the violation occurs and on the real property of any person who violates the Stormwater Ordinance until such lien is satisfied. Prior to the recordation of the lien, the property owner shall be given written notice of the lien and an opportunity to contest the validity of the lien and the amount at a hearing held by the City Manager or his designee.

2.11 Judicial Enforcement Actions

The City Attorney is authorized to file criminal and civil actions and to seek civil penalties and/or other remedies to enforce the City's ordinances. This includes, but is not limited to, injunctive relief. There is no requirement that administrative enforcement procedures be pursued before such actions are filed.

3 Enforcement Documentation

During each investigation, all observed non-compliance activity is documented. The following information, where applicable, is recorded for use in administrative and judicial enforcement actions:

- Chronology of events
- Case summary
- Time and expense log
- Inspection reports
- Complaints
- Phone conversation records
- Correspondence
- Maps and diagrams
- Photographs
- Witness list
- Explanation of the violations
- Field notes
- Emergency incident reports
- Lab results
- Chain-of-custody for samples
- Permit applications
- Sampling plans
- Other supporting documents

- Reports from regulatory agencies

4 Municipal Enforcement

During routine municipal facility inspections, Enforcement Staff will assess facility areas and activities to ensure all are maintained in accordance with City regulations, ordinances, and BMP requirements. If BMPs are found to be deficient or otherwise ineffective, the responsible party or department will be provided with required corrective actions. If the responsible City staff member or department/division does not perform the necessary corrective actions in response to the direction of their immediate superior, escalated enforcement action will be taken by involving higher ranking representatives within the responsible department or division, who may enact internal disciplinary procedures, until the deficiencies are resolved.

If the inspector notes that specific areas of a leased facility require additional BMPs, the City can require the implementation of BMPs in addition to the required minimum for the specific area/activity. If a leased facility continues to be out of compliance, the City may choose to discontinue the lease, which would remove the tenant from that particular site. Discontinuing a lease is considered an escalated enforcement action.

As required by the Municipal Permit, Enforcement Staff will seek to resolve incidents of observed non-compliance within 30 calendar days, or prior to the next rain event, whichever is sooner. In cases where the violation cannot be resolved within 30 days, the reason additional time was needed for case resolution will be documented and kept on file. If escalated enforcement is not used when compliance is not achieved within 30 days, a rationale for why escalated enforcement actions were not used will also be documented.

5 Industrial and Commercial Enforcement

During industrial and commercial facility inspections, Enforcement Staff document each observed violation of stormwater ordinance requirements. Enforcement action is taken where necessary to achieve compliance. Depending on the nature and severity of the violation, enforcement may consist of any of the following actions defined in Section 2. Typical enforcement actions are listed below; escalated enforcement actions are marked with an asterisk (*):

- Written warnings, correct work notices, or advisory letters
- NOVs*
- Administrative citations*
- Public nuisance abatement*
- Revocation of permits or licenses*

Inspectors seek to resolve non-compliance promptly and establish appropriate compliance timeframes on a case-by-case basis. Escalated enforcement measures are used as needed to gain compliance. Note that the City maintains the authority to require facilities to prepare a written BMP Plan or to conduct sampling and analysis where deemed necessary by the City.

If Enforcement Staff observe a significant and/or immediate threat to water quality, action will be taken to require the facility owner and/or operator to cease and correct the discharge or activity. Conditions that could warrant such action may include runoff from a business that is not reasonably controlled by existing protective measures or a BMP failure resulting or potentially resulting in a release of pollutants that may substantially degrade water quality. Violations deemed to pose a threat to health or the environment will be reported to the RWQCB verbally within 24 hours and in writing within 5 days, as required by Attachment B of the Municipal Permit (see also Section 9, Illicit Discharge Detection and Elimination Enforcement). Events of non-compliance are evaluated according to the following criteria to determine whether the events pose a threat to human or environmental health:

- The event of non-compliance resulted in a spill or discharge of hazardous materials, pollutants, or runoff containing pollutants that had an effect on a receiving water body.
- The quantity and/or concentration of the pollutants in the spill or discharge affecting the receiving water was such that it may cause or contribute to an exceedance in water quality objectives as specified in the Water Quality Control Plan for the San Diego Basin Plan.

As required by the Municipal Permit, Enforcement Staff will seek to resolve incidents of observed non-compliance within 30 calendar days, or prior to the next rain event, whichever is sooner. In cases where the violation cannot be resolved within 30 days, the reason additional time was needed for case resolution will be documented and kept on file. If escalated enforcement is not used when compliance is not achieved within 30 days, a rationale for why escalated enforcement actions were not used will also be documented.

When a site is subject to the Industrial General Permit (IGP), City staff may also collaborate with RWQCB staff on enforcement actions. The City will notify the RWQCB of any industrial facilities required to obtain coverage under the IGP that, to the City's knowledge, have not filed for coverage, within five calendar days from the time the City becomes aware of the circumstances. At a minimum, the business name, business type, and address will be provided to the RWQCB. Written notification may be provided electronically by email to Nonfilers_R9@waterboards.ca.gov.

5.1 Mobile Business Enforcement

Violations associated with mobile businesses are typically related to illegal discharges. The City's enforcement approach to such discharges will require the discharge to be abated and the area cleaned. Businesses that do not possess the materials necessary to implement the required BMPs will be required to demonstrate to the City that they have obtained such materials and can properly use them before the City allows them to resume operations within its jurisdiction. Discharges related to non-compliance deemed to pose a threat to health or the environment will be reported using the same process described above in Section 5. If violations are not resolved within 30 days, the reason additional time was necessary will be documented. If escalated enforcement is not used when compliance is not achieved within 30 days, a rationale for why escalated enforcement actions were not used will also be documented.

6 Residential Enforcement

The following mechanisms will be used by the City to determine areas where enforcement actions may be necessary, where appropriate:

- Public reporting via the Clean Water Program hotline, email, or City's website
- Analysis of field screening and analytical monitoring results
- Observations from City personnel or City contracted personnel

Residential-based stormwater 'complaints' are typically received through calls or emails to the City's Clean Water Program Hotline. Residents occasionally contact City staff directly while in the field. Activities by City staff also assist in identifying residential-based violations, including residential area inspections and observations, scheduled MS4 outfall monitoring, and routine maintenance activities such as storm drain system inspection and cleaning. Targeted investigations of areas upstream of outfalls with obvious pollutants present during Dry Weather MS4 Outfall Monitoring and complaint response investigations provide additional information sources. The combination of public reporting, direct observations, targeted investigations, and in-field monitoring provide effective oversight of residential areas and activities.

During investigations of incidents discovered through the mechanisms described above, the City will continue to use the opportunity to address any other issues of concern and provide educational materials where appropriate. Enforcement mechanisms are implemented to eliminate each IC/ID once its source has been identified. Further details of enforcement mechanisms pertaining to IC/IDs can be found in Section 9, Illicit Discharge Detection and Elimination Enforcement.

Follow-up inspections are conducted for BMP deficiencies and violations in residential areas as needed. Depending on the nature and severity of the violation, enforcement may consist of any of the actions defined in Section 2. Typical enforcement actions are listed below; escalated enforcement actions are marked with an asterisk (*):

- Verbal Warnings
- Written warnings, correct work notices, or advisory letters
- NOVs*
- Administrative citations*
- Public nuisance abatement*

Violations deemed to pose a threat to health or the environment will be reported to the RWQCB verbally within 24 hours and in writing within 5 days, as required by Attachment B of the Municipal Permit (see also Enforcement Response Plan Section 9).

As required by the Municipal Permit, City inspectors will seek to resolve incidents of observed non-compliance within 30 calendar days, or prior to the next rain event, whichever is sooner. In cases where the violation cannot be resolved within 30 days, the reason additional time was needed for case resolution will be documented and kept on file. If escalated enforcement is not used when compliance is not achieved within 30 days, a rationale for why escalated enforcement actions were not used will also be documented.

7 Development Planning Enforcement

The City may use a variety of enforcement methods to ensure stormwater requirements are appropriately implemented for all development projects within the City's jurisdiction. This section discusses enforcement for project planning and permament structural BMP components, whereas Section 8 discusses active construction enforcement activities.

7.1 Development Review and Approval

The City implements a development review and plan check process that verifies permanent BMPs are included in project designs in accordance with the City's requirements. Projects are not allowed to begin construction before plans have been approved. Section 4 of the JRMP provides more information about the review process.

7.2 Pre-Occupancy Installation Verification

Since all structural BMPs included in the Hydrology Report are required to be shown on the project's grading plans, Engineering inspectors confirm that structural BMPs are being constructed per plan during routine inspections. If structural BMP construction or installation varies from approved plans, the City requires that in-field corrections be made, or for the

project engineer to confirm that revisions continue to comply with project requirements. Any proposed revisions must be approved by City plan check staff. The approved revision must be drawn with signed approval by City plan check engineers. Engineering inspectors complete a 'final' inspection to verify structural BMPs have been installed in accordance with the grading plans prior to release of project occupancy. Occupancy is not granted until all BMPs have been installed.

7.3 Ongoing Operation and Maintenance for Completed Projects

Following occupancy, ongoing operation and maintenance is verified through inspections or through review of submitted maintenance verification certifications. Clean Water Program staff are responsible for this part of the program. If a project is found not to be maintaining BMPs as required, depending on the nature and severity of the violation, enforcement may consist of any of the actions defined in Section 2. Typical enforcement actions are listed below; escalated enforcement actions are marked with an asterisk (*):

- Verbal warnings
- Written warnings, correct work notices, or advisory letters
- NOVs*
- Administrative citations*
- Public nuisance abatement, which may include placing a lien against the property*

If Enforcement Staff finds maintenance deficiencies with any structural BMPs at a site, the deficiencies are documented and necessary corrective actions are provided to the responsible party. Minor deficiencies and corrective actions may warrant resolution through a documented verbal warning. If the responsible party performs all necessary corrective actions promptly, the case is closed, and the resolution is documented. Where appropriate, the Enforcement Staff may decide to formally document non-compliance by issuing a written warning with required corrective actions. Responsible parties are required to perform the corrective actions and demonstrate that all necessary maintenance activities were completed through a re-inspection with the Enforcement Staff or through providing photographs of corrections. The Enforcement Staff may also request additional documentation (e.g., maintenance records or invoices) or perform a re-inspection at their discretion.

Annual self-certification is also a requirement of the City's annual inspection program. Priority Development Project sites with structural BMPs are required to submit certification that documents the BMPs' on-going maintenance and functionality. If a responsible party fails to provide a certification to the City, a written warning is issued. The warning documents non-compliance per failure to timely submit a certification form and the BMP maintenance

responsibilities related to the annual certification process. The warning also designates the required self-certification to be submitted. If a responsible party fails to sufficiently respond to a written notice from the City by the response deadline, Enforcement Staff may issue a Notice of Violation. If the responsible party still fails to perform the necessary corrective actions, the Enforcement Staff may issue an administrative citation.

To document compliance status, follow-up inspections may be performed at sites where structural BMP deficiencies have been identified. Escalated enforcement action may be used, where appropriate, to facilitate compliance with structural BMP maintenance requirements. If a development site continues to demonstrate non-compliance and is not responsive to administrative enforcement actions, judicial enforcement actions may be initiated.

Violations deemed to pose a threat to health or the environment will be reported to the RWQCB verbally within 24 hours and in writing within 5 days, as required by Attachment B of the Municipal Permit (see also Section 9, Illicit Discharge Detection and Elimination Enforcement).

Enforcement Staff will seek to resolve incidents of observed non-compliance within 30 calendar days, or prior to the next rain event, whichever is sooner. In cases where the violation cannot be resolved within 30 days, the reason additional time was needed for case resolution will be documented, as required by the Municipal Permit. If escalated enforcement is not used when compliance is not achieved within 30 days, a rationale for why escalated enforcement actions were not used will also be documented.

8 Construction Management Enforcement

The City is responsible for enforcement of applicable local ordinances and permits at all construction sites in its jurisdiction. When violations are observed during a site inspection, the City will implement appropriate enforcement measures based on the severity of the violation. Verbal warnings are not used as means of enforcement at active construction sites. Enforcement can range from correction notices to more severe enforcement such as NOVs and stop work orders. Stronger enforcement measures will be used as necessary if proper corrective actions are not implemented during the allotted time frame or if the severity of the violation warrants stricter enforcement.

The typical progressive enforcement steps that the City may implement include the following actions considered escalated enforcement are marked with an asterisk (*):

- Written warnings, correct work notices, or advisory letters
- NOVs
- Administrative citations
- Enforcement of contracts (City projects)
- Stop work orders*

- BMP implementation by City-hired contractor, with cost reimbursement to the City*
- Revocation of permits*

The City will notify the RWQCB in writing within five (5) calendar days of issuing escalated enforcement to a construction site that poses a significant threat to water quality as a result of violations or other non-compliance with its permits and applicable local ordinances, and the requirements of this Order. Determination of whether a site poses a significant threat may be based on factors such as amount (acres) of disturbed area lacking appropriate BMP implementation, proximity to receiving water body, receiving water body sensitivity, whether rain is imminent, and whether a discharge has already occurred as a result of inadequate BMP implementation. Written notification may be provided electronically by email to the appropriate RWQCB staff.

The City works closely with all development projects prior to the commencement of construction activities. All construction sites are expected to be aware of the City's construction BMP requirements. Accordingly, a written correction notice will be the first enforcement step. NOVs and administrative citations may be used if sites do not comply after receiving written warnings. However, if a construction site demonstrates continued non-compliance, more severe actions, such as a stop work order or judicial enforcement action, may be imposed. Construction site inspections are performed by City inspection staff to evaluate compliance with minimum BMP requirements (Appendix C) and applicable ordinances and permits. Follow-up inspections conducted as a result of construction BMP deficiencies will be performed. Site inspections are discussed in greater detail in Section 5.

The City seeks to resolve violations as quickly as possible, including prior to rain events where feasible. In cases of significant or repeated non-compliance, the City may opt to hire an outside contractor to implement required BMPs at a construction site. The City will require cost recovery from the responsible party (private projects) or contractor (City projects) for the costs of BMP implementation in this scenario. In cases where a violation cannot be resolved within 30 days, the reason additional time was needed for case resolution will be documented, as required by the Municipal Permit. If escalated enforcement is not used when compliance is not achieved within 30 days, a rationale for why escalated enforcement actions were not used will also be documented.

The City implements a robust process to ensure construction sites obtain CGP coverage before they begin work, as described in JRMP Section 5 (Construction Management). When a site is subject to the Construction General Permit (CGP), City staff may also collaborate with RWQCB staff on enforcement actions. The City will notify the RWQCB in writing within five calendar days of issuing escalated enforcement to a construction site that poses a significant threat to

water quality as a result of violations or other non-compliance. Written notification may be provided to the appropriate RWQCB staff member by email. If any construction site that is subject to the CGP but has not obtained coverage (e.g., a project that had been operating without permits) is discovered in the field, the City will notify the RWQCB within five (5) calendar days from the time the City became aware of the circumstances. Written notification may be provided electronically by email to Nonfilers_R9@waterboards.ca.gov.

Violations deemed to pose a threat to health or the environment will be reported to the RWQCB verbally within 24 hours and in writing within 5 days, as required by Attachment B of the Municipal Permit. Criteria listed below may be used in addition to the criteria listed in Section 9, Illicit Discharge Detection and Elimination Enforcement, to assess the threats to health or the environmentthreats of non-compliance, whether from stormwater or non-stormwater discharges, where applicable:

- Estimated area of erosion caused by discharge
- Total suspended solids concentration and/or turbidity of discharge
- Other materials discharged that pose a threat (concrete washout, sanitary washes, etc.)

9 Illicit Discharge Detection and Elimination Enforcement

The City implements and enforces its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its storm drain system. If the City identifies the source as a controllable source of non-stormwater or as an IC/ID, the administrative and judicial enforcement measures previously listed will be used, as necessary, to eliminate IC/IDs.

If a complaint is received that indicates a potential IC/ID, Enforcement Staff will conduct a field investigation for complaints with details suggesting an actual or potential discharge to the storm drain system or receiving water body. If investigators find evidence of a violation with the potential to release pollutants or an actual IC/ID, every effort is made to find the responsible party to resolve the situation. Parties found to be responsible for a violation or IC/ID are required to clean up or remove pollutants to the maximum extent practicable.

The appropriate level of enforcement for IC/IDs is determined on a case-by-case basis and is based on factors such as the severity of the violation, the threat to human or environmental health, site-specific circumstances, and past compliance history. If the situation is determined to pose an immediate risk to public health or the environment, an NOV or administrative citation may be issued immediately. When public health is at risk, the City may coordinate with other agencies or teams that are specially trained to assess and mitigate the discharge (e.g., those involving hazardous wastes/materials, etc.). Violations deemed to pose a threat to health or the environment will be reported to the RWQCB verbally within 24 hours and in writing

within 5 days, as required by Attachment B of the Municipal Permit. Section 3 of the JRMP provides additional detail on IC/ID investigation, response, and reporting.

Criteria listed below may be used to determine the human or environmental health threats of a non-compliance event, whether from stormwater or non-stormwater discharges, where applicable:

- Estimated pollutant load discharged from site
- Estimated volume of discharge
- Types of pollutants discharged, including if toxic materials were discharged
- Sensitivity of the receiving water body, including if it is 303(d) listed for any of the pollutants in the discharge
- Proximity of site to sensitive habitat/endangered species
- Proximity of site to public water supply (well head, monitoring wells)
- Quantity, if any of the discharge reached the receiving water body
- Beneficial uses for affected water bodies

Upstream investigations of suspected illicit discharges are conducted, and appropriate enforcement action is taken and documented when/if the discharge source is determined. As necessary, follow-up inspections will be conducted to confirm compliance with enforcement actions.

As required by the Municipal Permit, Enforcement Staff will seek to resolve incidents of observed non-compliance within 30 calendar days, or prior to the next rain event, whichever is sooner. In cases where the violation cannot be resolved within 30 days, the reason additional time was needed for case resolution will be documented and kept on file. If escalated enforcement is not used when compliance is not achieved within 30 days, a rationale for why escalated enforcement actions were not used will also be documented.

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Appendix C

Stormwater Standards Manual

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City of Encinitas

Stormwater Standards Manual

June 2015

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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 15
2.2.1 Construction BMP Planning and Management Requirements 15

2.2.2 Summary of Minimum BMP Requirements 15

2.3 Post-Construction BMPs for Development Projects 23

Tables

Table 1. Minimum BMPs for Industrial, Commercial, Municipal, and Residential Sites/Sources 5
Table 2. BMPs for Construction Sites 19

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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 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.	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. B. No person shall establish, use, or maintain an Illegal Connection to the Stormwater Conveyance System or the Receiving Waters.	EMC 20.08.070
2	Eliminate illegal discharges.	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. 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.	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.	<u>Industrial, Commercial, and Municipal Implementation</u> 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. 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. 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. <u>Residential Implementation</u> 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.	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.	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. 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.	EMC 20.08.050
6	Eliminate irrigation runoff.	A. Irrigation runoff to the storm drain system shall be eliminated through proper landscape maintenance and watering practices.	EMC 20.08.040
7	Properly dispose of discharges from swimming pools and spas.	A. Chlorine, algaecide, filter backwash, and other pollutants shall be eliminated prior to discharging swimming pool water to the MS4. 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.	EMC20.08.050
8	Control air conditioning condensation discharges.	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.	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.	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. 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.	EMC 20.08.040
10	Eliminate pumped groundwater, foundation, and footing drain discharges.	The following types of discharges should be eliminated where feasible. Where not feasible, a National Pollutant Discharge Elimination System (NPDES) permit[2] 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. A. Pumped groundwater, including water from crawl space pumps. 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.	EMC 20.08.050
11	Regularly clean and maintain structural BMPs, including LID installations, to ensure proper performance.	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. B. Maintenance of permanent BMPs shall be conducted as frequently as necessary to maintain the designated functionality of the BMP(s).	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.	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. 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.	EMC 20.08.080
13	Implement good housekeeping to keep site free of trash and debris.	A. Outdoor areas shall be cleaned as needed to keep them free of accumulations of trash, sediment, litter, and other debris.	EMC 20.08.080
14	Keep storm drain inlets free of sediment, trash, and debris.	A. Accumulated materials shall be removed from, and around on-site storm drains.	EMC 20.08.080 & 20.08.110
15	Implement controls to minimize pollution from exposed outdoor work areas.	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: A. Protect areas where outdoor activities are performed from runoff from upstream areas. B. Do not conduct outdoor activities that may generate pollutants when it is raining. C. Thoroughly clean outdoor work areas at least daily to remove accumulated sediment, debris, oil and grease, particulate matter, and other pollutants.	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.	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.	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.	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.	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.	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.	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.	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.	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.	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.	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.	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

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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Appendix D

Municipal Facilities Inventory and Maps

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Contents

Table

- Municipal Facilities Inventory

Maps

- City of Encinitas Municipal Separate Storm Sewer System (MS4)
- City of Encinitas Municipal Treatment Control BMPs
- Sewer Jurisdictions
- City of Encinitas Street Sweeping Frequency
- City of Encinitas Municipal Facilities

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Appendix D. Municipal Facilities Inventory

								Pollutants Potentially Generated[1] (L = Likely, PO = Possible, UL = Unlikely)									
	Facility Name	Address	Land Use/Activities	Inspection Priority	Sub-basin	HSA	Adjacent to ESA	Heavy Metals[2]	Organics	Oil & Grease[2]	Sediment	Pesticides	Nutrients	Oxygen Demanding	Bacteria/ Viruses	Trash	Pollutant(s) Are Associated with Downstream 303(d) Listing
1	"A" Tank Site	601 Santa Fe Dr	Tank storage site/municipal yard	High	Encinitas	904.61		L	PO	L	L	PO	PO	PO	PO	PO	
2	Beacon's Beach	948 Neptune Ave	Beach access/parking lot	High	Leucadia	904.51		L	L	L	L	UL	UL	UL	PO	L	
3	Calle Magdalena Public Works Facility	160 Calle Magdalena	Administrative offices/municipal yard/vehicle maintenance/materials storage	High	Encinitas	904.51		L	PO	L	L	PO	PO	PO	PO	PO	
4	Cardiff Sports Park	1661 Lake Dr	Recreational facilities/landscaped areas/parking lot	High	Cardiff	904.61		UL[2]	UL	UL[2]	L	L	L	L	L	PO	
5	Cardiff Sports Park Expansion	1623 Lake Dr	Recreational facilities/landscaped areas	High	Cardiff	904.61		UL[2]	UL	UL[2]	L	L	L	L	L	PO	
6	Cottonwood Creek Park	95 N Vulcan Ave	Park/landscaped areas/parking lot	High	Encinitas	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	x
7	Encinitas Ranch Golf Course	1275 Quail Gardens Dr	Golf course	High	Encinitas/ Leucadia	904.51	x	UL[2]	UL	UL[2]	L	L	L	L	L	PO	
8	Encinitas Viewpoint Park	56 E D Street	Park/landscaped areas	High	Encinitas	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	x
9	Glen Park	2149 Orinda Dr	Park/landscaped areas/parking lot	High	Cardiff	904.61		UL[2]	UL	UL[2]	L	L	L	L	L	PO	
10	Grandview Beach	1700 Neptune Ave	Beach access/parking lot	High	Leucadia	904.51		L	L	L	L	UL	UL	UL	PO	L	
11	H Street Viewpoint	498 H St	Vista point	High	Encinitas	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	x
12	Hawk View Park	1309 Blue Heron Dr	Park/landscaped areas	High	Leucadia	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	
13	J Street Viewpoint	398 J St	Vista point/landscaped areas	High	Encinitas	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	x
14	Las Verdes Park	1390 Paseo De Las Verdes	Park/landscaped areas	High	Encinitas	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	x
15	Leo Mullen Sports Park	951 Via Cantebria	Park/landscaped areas/parking lot	High	La Costa South	904.51	x	UL[2]	UL	UL[2]	L	L	L	L	L	PO	
16	Leucadia Oaks Park	1511 N Vulcan Ave	Park/landscaped areas	High	Leucadia	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	
17	Leucadia Roadside Park	860 N Coast Highway 101	Park/landscaped areas	High	Leucadia	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	
18	Little Oaks Equestrian Park	2879 Lone Jack Rd	Park/horse corral/landscaped areas	High	Lower Escondido Creek	904.61		UL[2]	UL	UL[2]	L	L	L	L	L	PO	
19	Mildred Macpherson Park	1045 S Vulcan Ave	Park/landscaped areas	High	Encinitas	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	x
20	Moonlight Beach	400 B St	Beach access/park/landscaped area/parking lot	High	Encinitas	904.51	x	UL[2]	UL	UL[2]	L	L	L	L	L	PO	x
21	MS4	City Wide	MS4	High	All Sub-basins	All	Portions	UL	UL	UL	PO[3]	UL	UL	PO[3]	PO[3]	UL	
22	Oakcrest Park	1219 Encinitas Blvd	Park/landscaped areas/parking lot	High	La Costa South	904.51	x	UL[2]	UL	UL[2]	L	L	L	L	L	PO	
23	Orpheus Park	482 Orpheus Ave	Park/landscaped areas	High	Leucadia	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	
24	Paul Ecke Sports Park	278 Saxony Rd	Park/landscaped areas/parking lot	High	Encinitas	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	x
25	Requeza Street Facility	397 Requeza St	Municipal yard/sediment/materials storage	High	Encinitas	904.51		L	PO	L	L	PO	PO	PO	PO	PO	
26	Roads, Streets And Highways	City Wide		High	All Sub-basins	All	Portions	L	L	L	L	UL	UL	UL	PO	L	

Appendix D. Municipal Facilities Inventory

	Facility Name	Address	Land Use/Activities	Inspection Priority	Sub-basin	HSA	Adjacent to ESA	Heavy Metals[2]	Organics	Oil & Grease[2]	Sediment	Pesticides	Nutrients	Oxygen Demanding	Bacteria/ Viruses	Trash	Pollutant(s) Are Associated with Downstream 303(d) Listing
27	Wastewater Collection Facility[4]	2695 Manchester Ave	Administrative offices/Municipal yard	High	Cardiff	904.61	x	PO	PO	PO	PO	UL	PO	L	L	UL	
28	Scott Valley Park	1602 Willowhaven	Park/landscaped areas	High	La Costa South	904.51	x	UL[2]	UL	UL[2]	L	L	L	L	L	PO	
29	Sun Vista Park	2011 Avenida La Posta	Park/landscaped areas	High	La Costa South	904.51		UL[2]	UL	UL[2]	L	L	L	L	L	PO	
30	Swami's Beach	1298 S Coast Highway 101	Beach access/parking lot	High	Encinitas	904.51		L	L	L	L	UL	UL	UL	PO	L	
31	Wiro Park	2232 El Camino Del Norte	Park/landscaped areas	High	Lower Escondido Creek/Rancho Santa Fe	904.61		UL[2]	UL	UL[2]	L	L	L	L	L	PO	
32	Cardiff Pump Station	2690 Manchester Ave	Pump station	Low	Cardiff	904.61	x	PO[5]	UL	PO[5]	UL	UL	PO[5]	PO[5]	PO[5]	UL	
33	Civic Center	505 S Vulcan Ave	Administrative offices/parking lot	Low	Encinitas	904.51		PO	PO	PO	PO	PO	PO	PO	PO	PO	
34	Encinitas Community & Senior Center	1140 Oakcrest Park Dr	Administrative offices/parking lot	Low	Encinitas	904.51	x	PO	PO	PO	PO	PO	PO	PO	PO	PO	
35	D Street Beach	450 D St	Beach access and vista point	Low	Encinitas	904.51		UL	UL	UL	UL	UL	UL	UL	UL	PO	
36	Fire Station #1	415 2nd St	Fire station	Low	Encinitas	904.51		PO	PO	PO	PO	UL	UL	UL	PO	PO	
37	Fire Station #2	1867 Mackinnon Ave	Fire station	Low	Cardiff	904.61		PO	PO	PO	PO	UL	UL	UL	PO	PO	
38	Fire Station #3	801 Orpheus Ave	Fire station	Low	Leucadia	904.51		PO	PO	PO	PO	UL	UL	UL	PO	PO	
39	Fire Station #4	2011 Village Park	Fire station	Low	La Costa South	904.51		PO	PO	PO	PO	UL	UL	UL	PO	PO	
40	Fire Station #5	540 Balour Dr	Fire station	Low	Encinitas	904.51		PO	PO	PO	PO	UL	UL	UL	PO	PO	
41	Fire Station #6	770 Rancho Santa Fe Rd	Fire station	Low	Lower Escondido Creek	904.61		PO	PO	PO	PO	UL	UL	UL	PO	PO	
42	Hall Property	425 Santa Fe Dr	Undeveloped park site	Low	Cardiff	904.61		UL	UL	UL	PO	UL	UL	UL	UL	UL	
43	Highway 101 Pump Station	S. Coast Highway 101	Pump station	Low	Cardiff	904.61	x	PO[5]	UL	PO[5]	UL	UL	PO[5]	PO[5]	PO[5]	UL	
44	I Street Viewpoint	498 I St	Vista point	Low	Encinitas	904.51		UL	UL	UL	UL	UL	UL	UL	UL	PO	
45	Indian Head Canyon	Saxony Rd/Quail Hollow Dr	Undeveloped park site	Low	Leucadia	904.51	x	UL	UL	UL	PO	UL	UL	UL	UL	UL	
46	Moonlight Beach Pump Station	305 3rd St	Pump station	Low	Encinitas	904.51	x	PO[5]	UL	PO[5]	UL	UL	PO[5]	PO[5]	PO[5]	UL	
47	Olivenhain Pump Station	Manchester Ave & I-5	Pump Station	Low	Cardiff	904.61	x	PO[5]	UL	PO[5]	UL	UL	PO[5]	PO[5]	PO[5]	UL	
48	Phoebe Pump Station	1200 Block of N Coast Highway 101	Pump Station	Low	Leucadia	904.51		PO[5]	UL	PO[5]	UL	UL	PO[5]	PO[5]	PO[5]	UL	
49	San Dieguito Water District[6]		Pump Station	Low	La Costa South/Encinitas	904.51/ 904.61		UL	UL	UL	UL	UL	UL	UL	UL	UL	
50	San Dieguito Water District[6]		Water reservoir/water storage	Low	La Costa South/Encinitas	904.51/ 904.61		UL	UL	UL	UL	UL	UL	UL	UL	UL	
51	San Dieguito Water District[6]		Water reservoir/water storage	Low	Encinitas	904.61		UL	UL	UL	UL	UL	UL	UL	UL	UL	
52	San Dieguito Water District[6]		Water recycling reservoir	Low	Encinitas	904.61		UL	UL	UL	UL	UL	UL	UL	UL	UL	
53	San Dieguito Water District[6]		Pressure regulating station/no activities on site	Low	Encinitas	904.61		UL	UL	UL	UL	UL	UL	UL	UL	UL	

Appendix D. Municipal Facilities Inventory

	Facility Name	Address	Land Use/Activities	Inspection Priority	Sub-basin	HSA	Adjacent to ESA	Heavy Metals[2]	Organics	Oil & Grease[2]	Sediment	Pesticides	Nutrients	Oxygen Demanding	Bacteria/ Viruses	Trash	Pollutant(s) Are Associated with Downstream 303(d) Listing
54	San Dieguito Water District[6]		Pressure regulating station/no activities on site	Low	Cardiff	904.61		UL	UL	UL	UL	UL	UL	UL	UL	UL	
55	Swami's Bluffs Parcels	1400 S Coast Highway 101	Undeveloped site	Low	Encinitas	904.51		UL	UL	UL	PO	UL	UL	UL	UL	UL	
56	Standard Pacific Park	Olympus / Piraeus	Undeveloped site	Low	Leucadia	904.51	x	UL	UL	UL	PO	UL	UL	UL	UL	UL	
57	Stonesteps Beach	350 S El Portal St	Beach access and vista point	Low	Leucadia	904.51		UL	UL	UL	UL	UL	UL	UL	UL	PO	
58	UV Bacteria Treatment Facility	305 3rd St	UV Treatment Facility	Low	Encinitas	904.51	x	UL	UL	UL	UL	UL	UL	UL	UL	UL	

Notes:

-SIC and NAICS codes are designed to categorize business operations and are not considered applicable to municipal facilities. All inventoried municipal facilities are considered active.

-See JRMP Section 6.2.4 for a description of the methodology used to assign whether facilities are tributary to a 303(d) listed water body and likelygenerating pollutants of concern.

1. Assessments of pollutants potentially generated are based on the Copermitees' LTEA and the field experience of D-Max Engineering. D-Max has conducted more than 24,000 storm water compliance inspections during which pollutant discharge potentials were assessed.
2. Discharge of heavy metals and oil and grease is possible if the facility has on-site parking.
3. Sediment and oxygen demanding substances are possible pollutants for earthen or natural conveyances. Bacteria, but generally not viruses and other pathogens, may re-grow in MS4s under certain conditions. While other pollutants may be discharged from the MS4, the MS4 itself is not a direct source of those pollutants.
4. The wastwater treatment plant is covered under the State General Industrial Permit. The WDID number is 9 37I001545.
5. The sanitary sewer system and pump stations are only a potential source of pollutants in the event of sewer line breaks or SSOs.
6. The San Dieguito Water District's facility addresses have been omitted for security purposes.

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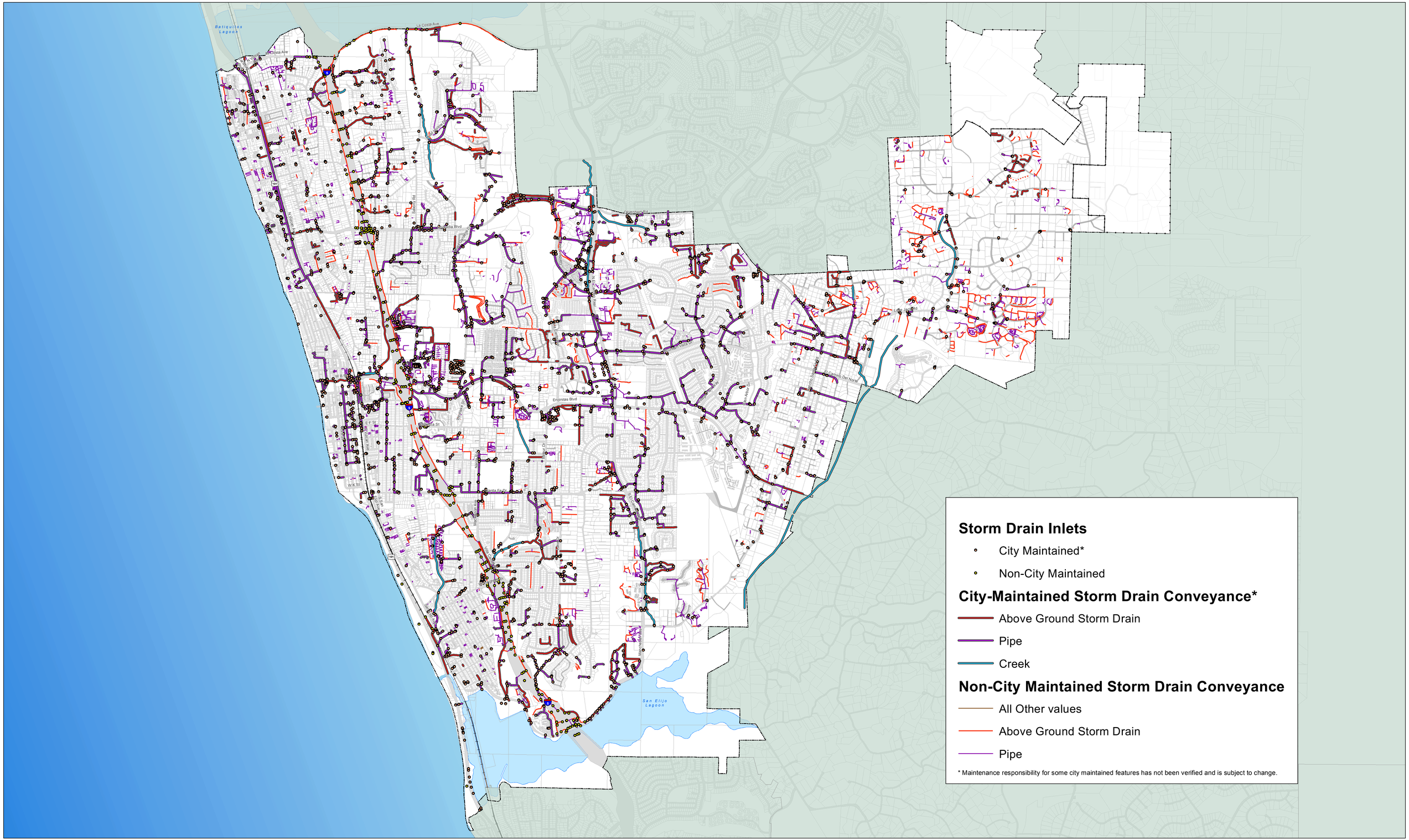

City of Encinitas
Municipal Separate Storm Sewer System (MS4)

DISCLAIMER:

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Every reasonable effort has been made to assure the accuracy of the data provided, nevertheless, some information may not be accurate.
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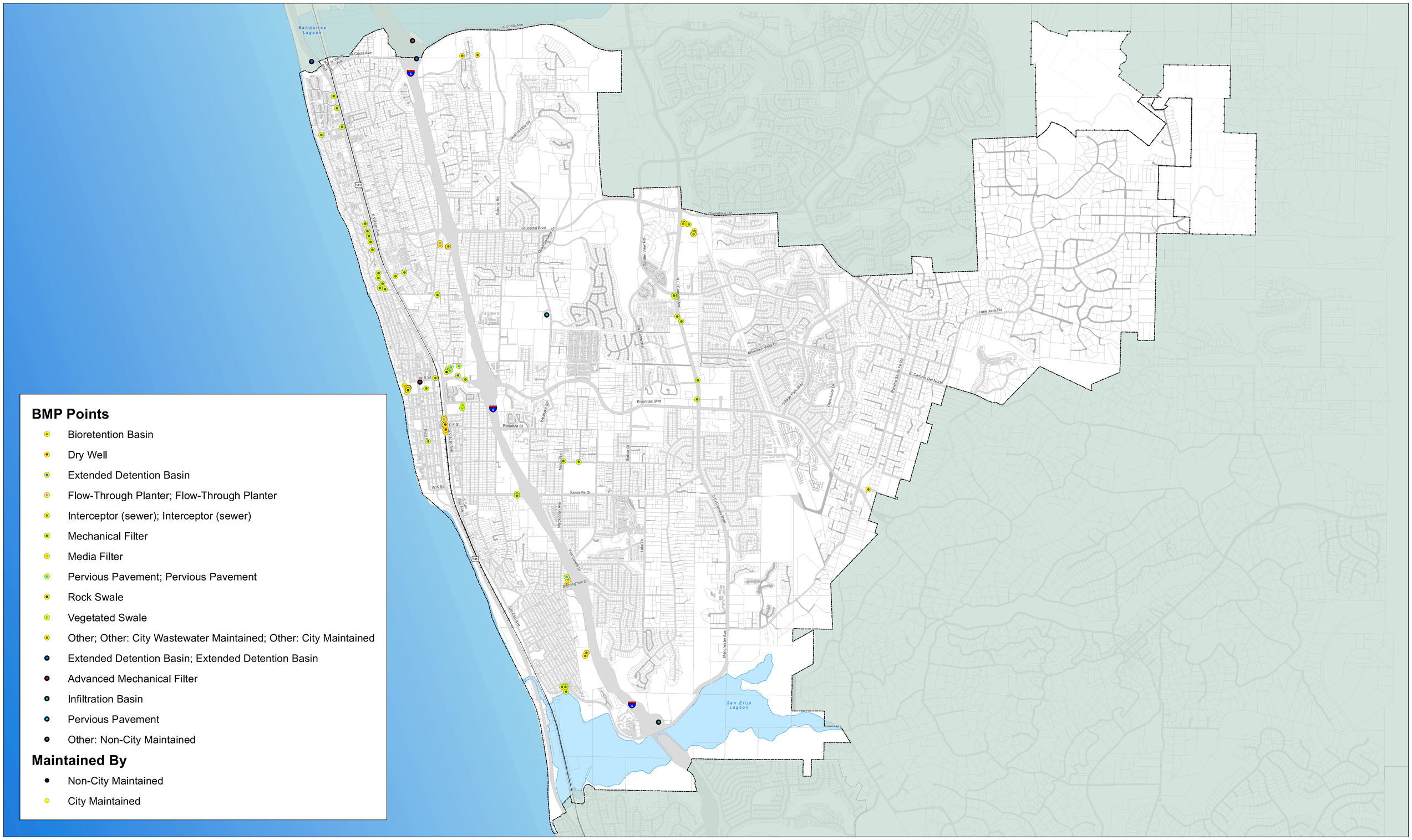

BMP Points

- Bioretention Basin
- Dry Well
- Extended Detention Basin
- Flow-Through Planter; Flow-Through Planter
- Interceptor (sewer); Interceptor (sewer)
- Mechanical Filter
- Media Filter
- Pervious Pavement; Pervious Pavement
- Rock Swale
- Vegetated Swale
- Other; Other: City Wastewater Maintained; Other: City Maintained
- Extended Detention Basin; Extended Detention Basin
- Advanced Mechanical Filter
- Infiltration Basin
- Pervious Pavement
- Other: Non-City Maintained

Maintained By

- Non-City Maintained
- City Maintained

City of Encinitas
Municipal Treatment Control BMPs

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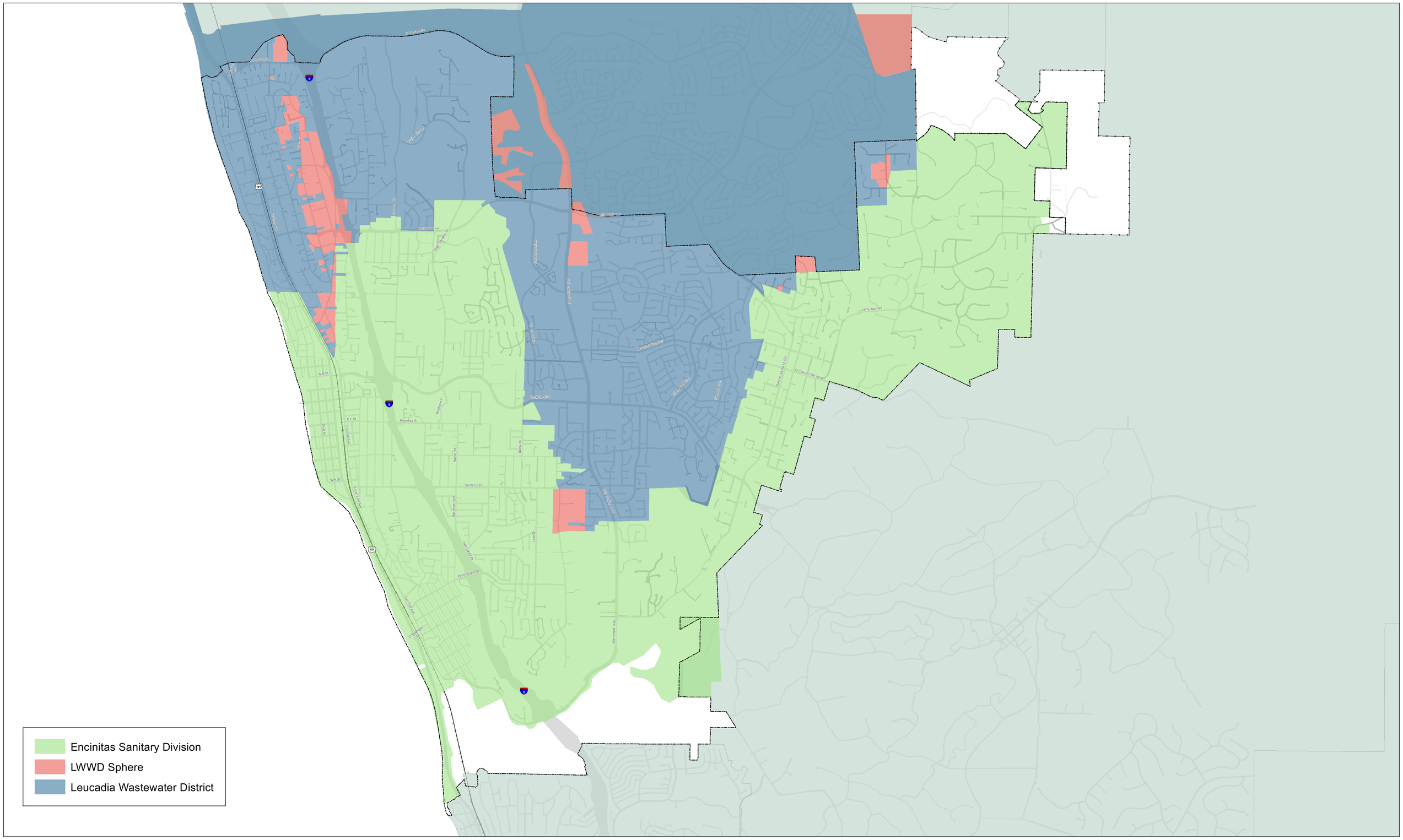

City of Encinitas Sewer Jurisdictions

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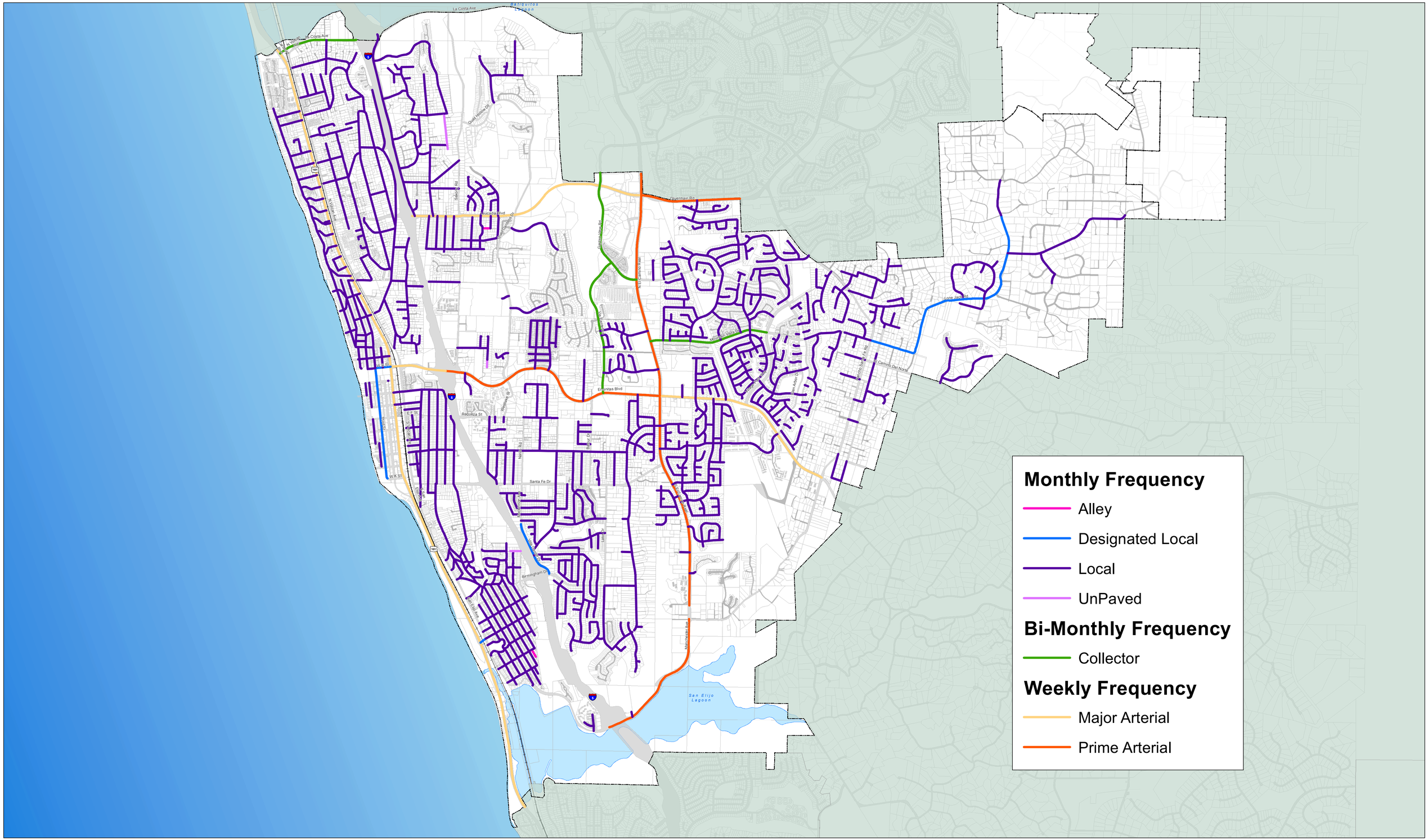
Monthly Frequency
Alley
Designated Local
Local
UnPaved
Bi-Monthly Frequency
Collector
Weekly Frequency
Major Arterial
Prime Arterial
La Costa Ave
Quail Hollow Dr
Saint Rita Rd
Rancho Santa Fe Rd
Encinitas Blvd
Leucadia Blvd
Piedras Blvd
Rancho Santa Fe Rd
Calle Magdalena
Calle Magdalena
Calle Magdalena

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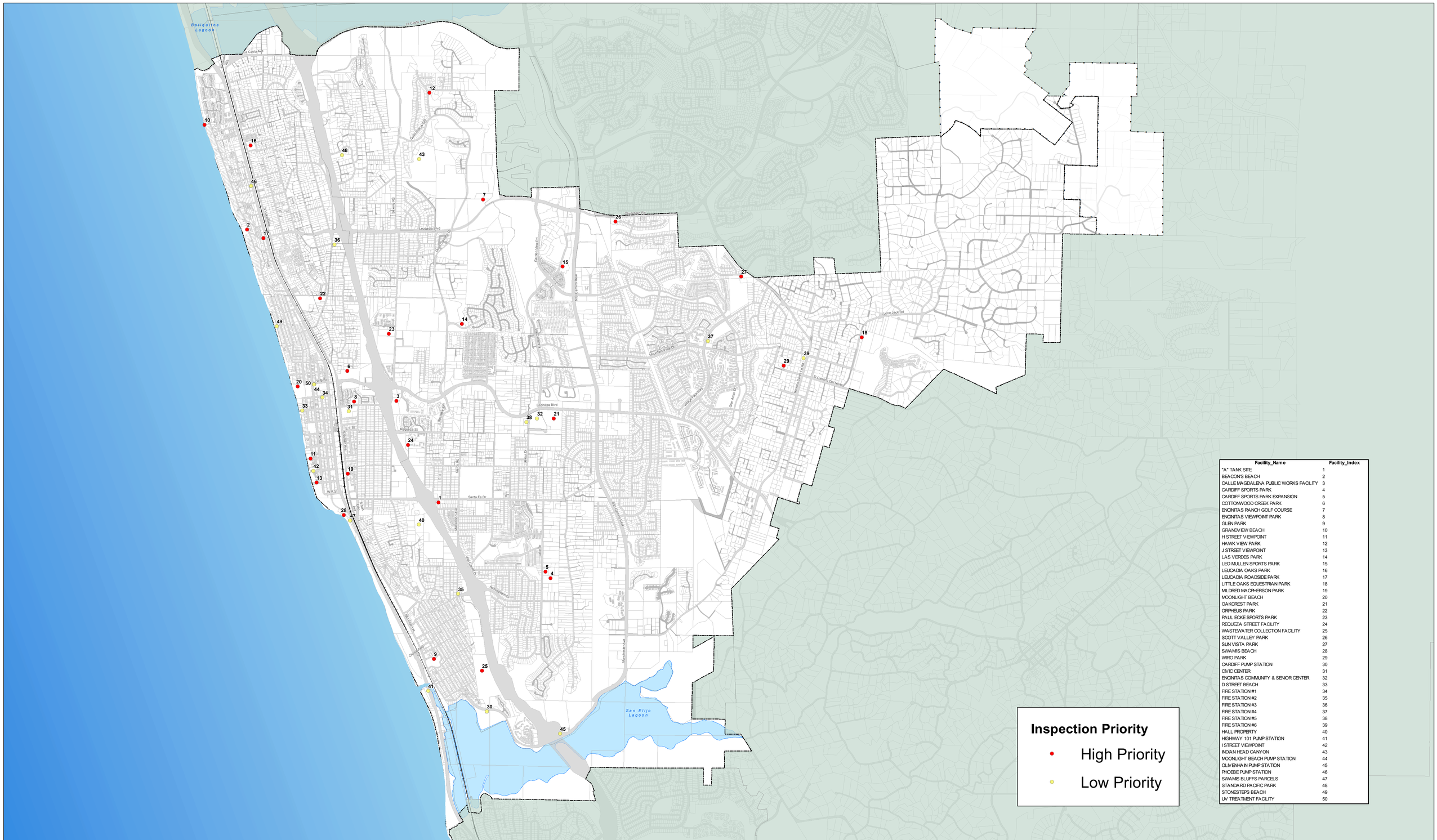

Facility_Name	Facility_Index
"A" TANK SITE	1
BEACON'S BEACH	2
CALLE MAGDALENA PUBLIC WORKS FACILITY	3
CARDIFF SPORTS PARK	4
CARDIFF SPORTS PARK EXPANSION	5
COTTONWOOD CREEK PARK	6
ENCINITAS RANCH GOLF COURSE	7
ENCINITAS VIEWPOINT PARK	8
GLEN PARK	9
GRANDVIEW BEACH	10
H STREET VIEWPOINT	11
HAWK VIEW PARK	12
J STREET VIEWPOINT	13
LAS VERDES PARK	14
LEO MULLEN SPORTS PARK	15
LEUCADIA OAKS PARK	16
LEUCADIA ROADSIDE PARK	17
LITTLE OAKS EQUESTRIAN PARK	18
MILDRED MACPHERSON PARK	19
MOONLIGHT BEACH	20
OAKCREST PARK	21
ORPHEUS PARK	22
PAUL ECKE SPORTS PARK	23
REQUEZA STREET FACILITY	24
WASTEWATER COLLECTION FACILITY	25
SCOTT VALLEY PARK	26
SUN VISTA PARK	27
SWAMI'S BEACH	28
WIRO PARK	29
CARDIFF PUMP STATION	30
CIVIC CENTER	31
ENCINITAS COMMUNITY & SENIOR CENTER	32
D STREET BEACH	33
FIRE STATION #1	34
FIRE STATION #2	35
FIRE STATION #3	36
FIRE STATION #4	37
FIRE STATION #5	38
FIRE STATION #6	39
HALL PROPERTY	40
HIGHWAY 101 PUMP STATION	41
I STREET VIEWPOINT	42
INDIAN HEAD CANYON	43
MOONLIGHT BEACH PUMP STATION	44
OLIVENHAIN PUMP STATION	45
PHOEBE PUMP STATION	46
SWAMIS BLUFFS PARCELS	47
STANDARD PACIFIC PARK	48
STONESTEPS BEACH	49
UV TREATMENT FACILITY	50

City of Encinitas Municipal Facilities

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Appendix E

Retrofit and Rehabilitation Program

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Appendix E. Retrofit and Rehabilitation Program

1 Introduction

The Municipal Permit [1] requires all 21 municipal agencies subject to it (collectively, "Copermittees"), including the City of Encinitas (City), to identify potential retrofits in areas of existing development and segments of streams, channels, and/or other habitat areas that could be rehabilitated. Retrofits and stream or habitat rehabilitation projects can reduce discharges of indicator bacteria and other pollutants to the municipal separate storm sewer system (MS4). Addressing indicator bacteria, the highest priority water quality condition (HPWQC) for the Carlsbad Watershed Management Area (WMA), is a key objective of the program.

Two general steps are necessary to complete retrofit or rehabilitation projects: identifying candidate projects and then identifying potential implementation approaches for identified projects. The following sections discuss the strategies the City will use to identify, prioritize, and implement potential projects that will address the HPWQC and other pollutants.

2 Candidate Projects

The Municipal Permit requires the City to identify candidate retrofit and stream rehabilitation projects. When resources to complete a retrofit or stream restoration project become available, the list of candidate projects will be used as a resource. Retrofit or rehabilitation projects that are not on the candidate project list may also be implemented; the presence of the candidate project list does not preclude projects that are not included on the list from being pursued.

2.1 Identifying Retrofit and Rehabilitation Candidate Projects

As defined by the Municipal Permit, a retrofit is a "storm water management practice put into place after development has occurred in watersheds where the practices previously did not exist or are ineffective." Potential projects can include, for example, disconnecting roof downspouts and impervious surfaces and redirecting them to pervious areas, installing rain catchment systems, or implementing green streets.

The Municipal Permit states that rehabilitation methods may include in-stream restoration, off-line storm water management practices installed in the system corridor or upland areas, or a combination of in-stream and out-of-stream techniques. Some of these techniques may include

[1] San Diego Regional Water Quality Control Board Order No. R9-2013-0001, as amended by Order No. R9-2015-0001.

riparian zone restoration, constructed wetlands, channel modifications, and daylighting of drainage systems.

The City will consider the following factors when identifying urban retrofit and stream rehabilitation candidate projects.

- **HPWQCs and WQIP Goals.** Projects that directly target the City's HPWQCs and help the City make progress toward WQIP goals are considered ideal candidate projects. The City's primary water quality emphasis in the coming years will be to meet the identified WQIP goals. Therefore projects within the focus areas identified in the WQIP will be sought and encouraged.
- **Feasibility.** The feasibility of the project considers a project's likelihood of obtaining funding, constructability, ease of operation and maintenance, and any other potential impediments. The project's viability takes into account the amount of financial and staff resources the City is able to commit to the project.
- **Land use.** Land use of the area tributary to a potential retrofit project is an important consideration when selecting retrofit and rehabilitation project candidates. Projects that receive runoff from land uses commonly associated with the HPWQCs described above are generally desirable.
- **Multiple benefits of project.** Candidate projects with the potential to contribute to the overall enhancement of the local environment are preferred. Other benefits of retrofit and rehabilitation projects can include, but are not limited to, the following:
    - Enhanced walkability or pedestrian safety and access.
    - Community beautification, such as streetscape aesthetics or incorporating other features with significant artistic value.
    - Improved flood protection.
    - Improved access to green spaces or recreational opportunities.
    - Enhanced or expanded habitat for native plant and animal communities, including threatened or endangered species.
    - Environmental justice.
- **Land availability.** Available space to implement a creek rehabilitation project and ownership of the underlying property are two additional factors that could pose a limitation on a candidate project. For example, if a stream segment is bordered on both sides by existing development, it would be difficult to complete a rehabilitation project. Similarly, if the City does not own the land in the ideal location for a rehabilitation or

retrofit project, this would pose a challenge. If the City owns the property where a project is being considered, that is the best case scenario. If another public agency, like a school district, owns the property, this would be the next best scenario. Whereas, if the land is privately owned, especially if there are several land owners, the project could be more complicated to execute.

- **Amount of impervious area.** Projects that have the potential to treat a large area of impervious surfaces are ideal project candidates. Impervious surfaces are generally recognized as sources of common stormwater pollutants such as oil and grease, heavy metals, and sediment (CASQA, 2003). Impervious surfaces in and of themselves pose a risk to hydromodification downstream.
- **Cost effectiveness.** Projects that are able to remove the greatest amount of pollution for the lowest cost are preferred. Long term BMP maintenance cost will also be considered.
- **Opportunities for infiltration or retention.** Ideal candidates will incorporate structural BMPs suitable for infiltration or retention. The project's suitability is primarily determined by the soil type for the proposed project area, but also by depth to groundwater and proximity to neighboring buildings and infrastructure. Infiltration is the most effective BMP, since it has close to 100 percent pollutant removal efficiency, reduces runoff volume, and requires relatively little maintenance (CASQA, 2003).

2.2 Potential Projects

The purpose of the candidate project list is to identify potential retrofit or rehabilitation projects. Most candidate projects have been identified only at a basic conceptual stage, and a more detailed investigation may find that they are not feasible. Implementation of projects on the candidate project list is also contingent upon funding availability. The current list of candidate projects is provided below:

Existing Development Retrofit Candidate Project Areas

The City's candidate project list for retrofits is focused on the Cottonwood Creek Watershed. The Cottonwood Creek Watershed drains to Moonlight Beach; the HPWQC in this part of the City is indicator bacteria. The City recently completed an assessment of LID retrofit opportunities in the watershed and has published this assessment in the Cottonwood Creek Watershed LID Retrofit Plan (City of Encinitas 2015). The plan identified major LID retrofit projects, which are listed below, and also included descriptions of small-scale retrofits that may be completed by individual residents, as described in Section 3.2 below. The potential LID retrofit projects include:

- Green Street Improvements on Sylvia St and 4th St

- Green Street Improvements on Arden Dr and San Dieguito Dr (between E D St and Melba Rd)
- Parking Lot LID at Encinitas Town and County Shopping Center (411 Encinitas Blvd)
- Green Street Improvements on Highway 101 (between D St and G St)
- Parking Lot LID Improvements at Oak Crest Middle School (675 Balour Dr)
- Green Street Improvements on Ocean View Ave (between Alviso Wy and Ocean View Ter)
- LID Improvements at the City's Public Works Yard (160 Calle Magdalena)
- LID Improvements at Encinitas Viewpoint Park (450 D St)

The Cottonwood Creek Watershed LID Retrofit Plan identified the top four projects from the list above (Table 1). Detailed concept designs for these four proposed LID retrofit projects are included in the LID Retrofit Plan. The City will actively seek funding opportunities to design and construct these four projects. The plan includes numerous other optional LID retrofit projects that have been ranked and prioritized via an extensive watershed assessment process. Any one of these projects may be implemented as a retrofit project. A copy of the plan may be reviewed on the City website.

Table 1: Top Four Cottonwood Creek Watershed Candidate LID Retrofit Sites

Site	Description
Sylvia St and 4th St (between Sylvia St and Athena St)	Some areas of Sylvia Street are crowned with runoff draining to the curb and gutter. Other areas of the street are lower in the center with drainage flowing into centerline valley curbs. There are very few catch basins along Sylvia Street. As a result, in several areas flooding and standing water are often observed. Retrofitting the valley curbs with pervious pavement and adding bioretention areas along the street edges would improve water quality as well as flooding in this area.
Encinitas Town and County Shopping Center (411 Encinitas Blvd)	This commercial area currently drains to valley curbs running through the middle of the parking lot that route runoff to multiple catch basins. Runoff could be treated with a pervious paved valley curb and retrofitting the parking area with bioretention facilities between the lengths of parking stalls.
Highway 101 (between D St and G St)	This area of Highway 101 is crowned and drains to the curb and gutter along the edges of the highway. Runoff then flows into catch basins at the intersections. Runoff produced along Highway 101 could be treated with bioretention and permeable pavement implemented in the right-of-way.
Oak Crest Middle School (675 Balour Dr)	The parking lot at Oak Creek Middle School drains north west to catch basins located along Balour Drive. Runoff could be intercepted in bioretention areas in the existing landscaping and by adding permeable pavement in the parking stalls.

Stream, Channel, and/or Habitat Rehabilitation Candidate Projects

- Encinitas Creek Restoration Project – This project includes reconfiguring the existing linear creek channel into a wider, braided earthen channel network, including open water and wetlands, improved floodplain function, and revegetation with native riparian and wetland plants.
- San Elijo Lagoon Restoration Project—This project includes improvement of tidal flushing by opening hydraulic barriers, removal of organic material and nutrient laden sediment, and restoration of mudflat and salt marsh habitat.

Projects may be added to or removed from the candidate project list as additional data becomes available in the future.

3 Implementation Strategies

Several potential mechanisms may be available to implement identified retrofit and rehabilitation projects, as listed below.

3.1 Grant Funding

Grants, where available, may be used to implement projects. The City has successfully obtained grants in the past, including funding for the Ultraviolet (UV) Bacteria Treatment Facility on Cottonwood Creek just upstream of Moonlight Beach and for the Cottonwood Creek Watershed LID Retrofit Plan.

3.2 Public Outreach

As the Clean Water Program budget and staffing allows, the City may implement public outreach programs that promote small-scale retrofit or rehabilitation projects on private properties. As part of the Cottonwood Creek Watershed LID Retrofit Plan, the City developed and implemented a public outreach pilot project designed to incentivize residents to install LID features in their yards. The pilot program consisted of a targeted workshop held for the Pacific View Lane and Sea View Court neighborhood within the Cottonwood Creek drainage basin. This neighborhood was targeted due to observed presence of irrigation runoff. Based on the success of and lessons learned from the pilot project, the City may expand the program and offer workshops to other neighborhoods or businesses within the Cottonwood Creek watershed.

3.3 Collaboration with Other Agencies

The City may partner with other neighboring jurisdictions to install regional BMPs where such projects are deemed to provide a greater net benefit to the City than projects implemented only by the City. For example, the proposed San Elijo Lagoon restoration project will directly improve beneficial uses in the San Elijo Lagoon. The San Elijo Lagoon Restoration Project is one

of the City's most effective strategies proposed to meet the goals established by the WQIP. The City will support the multi-agency efforts to restore San Elijo Lagoon in coming years.

3.4 Alternative Compliance

Alternative compliance may also be an avenue to complete retrofit or rehabilitation projects. At this time the City has not established an Alternative Compliance Program. However, the Carlsbad WQIP includes the optional Watershed Management Area Analysis per provision B.3.b.(4) of the permit, therefore offsite alternative compliance is an option that the City will consider initiating in the future. If an Alternative Compliance Program is formed, it will meet the requirements detailed in provision E.3.c.(3) of the permit.

References

California Storm Water Quality Association, 2003. *California Storm Water BMP Handbook – New Development &Redevelopment.*

City of Encinitas, 2015. *Cottonwood Creek Watershed LID Retrofit Plan.*

San Diego Regional Water Quality Control Board, 2015. Order No. R9-2013-0001, as amended by Order No. R9-2015-0001. *Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority.*

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Appendix F

Inspection Forms

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Contents

- Clean Water Program Complaint Response Form
- City of Encinitas Inspection Report: Stormwater Quality Inspection for Permanent BMPs
- City of Encinitas Inspection Report: Stormwater Quality Inspection for Construction Activities
- City of Encinitas Stormwater Quality for Construction Activities: Required Actions Verification
- City of Encinitas Stormwater Quality Inspection Report (for Industrial and Commercial Facilities)
- City of Encinitas Municipal Stormwater Quality Inspection Report: Municipal Facilities
- City of Encinitas Stormwater Quality Inspection Report: Parks and Recreation Department Municipal Facilities

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Work Order #_____

CASE CLOSED: ❒ Date ___/___/___

CITY OF ENCINITAS

Clean Water Program Complaint Response

505 South Vulcan Avenue, Encinitas, CA 92024 ◆ 760-633-2787 ◆ FAX 760-633-2818 ◆ TDD 760-633-2700

Complainant Information: ❒ **STAFF** ❒ **PUBLIC**

Name of Complainant: _____ Date/Time Complaint Received: _____

Address: _____ Phone Number: _____

❒ **Immediate Response Required** ❒ **Site Visit (within 5 days)** **Next Rain Event**_____

Assigned To: _____ Referred To: _____Date ___/___/___

Reported Violation Site/Location: _____

Location Type: ❒ Commercial ❒ Construction ❒ Residential ❒ Industrial ❒ Municipal ❒ Unknown

Name of Responsible Party: _____ Business Name (If Applicable):_____

Name of Property Owner: _____ Phone _____

Incident Description: _____

_____

REACHED STORM DRAIN? ❒ **NO** ❒ **YES** **REACHED WATERWAY?** ❒ **NO** ❒ **YES** _____

Currently flowing? **Flow Frequency:** ❒ Continuous ❒ Intermittent ❒ One time _____

❒ **YES** ❒ **NO** **Evidence of Pollutant:** ❒ Dirt ❒ Trash ❒ Oil ❒ Colored Residue

Violation ❒ **Flow Characteristics:** ❒ Color ❒ Odor ❒ Floatables ❒ Other

❒ **Investigation Details:** **(additional space provided on back of form)** **Photos taken: Yes** ❒ **No** ❒

_____

_____

_____

Enforcement History

Are There Prior Enforcement Actions Documented (Check Cityworks, Construction or Mobile Database, & Other Sources) ❒ YES ❒ NO

Prior Enforcement Action: ❒ Educational ❒ Verbal ❒ Notice of Violation ❒ Citation WO No(s): _____

Action Taken: ❒ **Citation #**_____ ❒ **NOV/STOP WORK**_____

❒ Referral to Other Department: _____ ❒ Request for Information _____

❒ Advisory Letter: _____ ❒ Advisory Call Back _____ ❒ Other _____

Education Distributed: ❒ Construction Brochure ❒ Minimum BMP's ❒ 10 Simple Ways ❒ Business Card ❒ Verbal

❒ Green Wrench Guide ❒ Door Hanger ❒ Pen w/Hotline # ❒ CWP Postcard ❒ Other _____

Annual Report Tracking:

1. ❒ **Investigated**
2. ❒ **Non-stormwater discharge identified** ❒ **Eliminated**
3. ❒ **Illicit discharge or connection identified** ❒ **Eliminated**
4. ❒ **Enforcement action issued** ❒ **Escalated enforcement action issued**

NOTES:

CITY OF ENCINITAS

INSPECTION REPORT

Stormwater Quality Inspection for Permanent BMPs

505 South Vulcan Avenue, Encinitas, CA 92024 ◆ 760-633-2787 ◆ cleanwater@encinitasca.gov ◆ TDD 760-633-2700

GENERAL INFORMATION

Permit No/Type: _____ **Property Address:**_____ **Gate Code:**_____

Project Type: ☐ Priority ☐ Standard **Inspection Priority:** ☐ High ☐ Medium ☐ Low **Total Number of BMPs:** _____

Inspection Type: ☐ Annual ☐ Complaint **Inspector Name:** _____ **Date:** __/__/___

Property Ownership: ☐ HOA ☐ Homeowner ☐ Commercial ☐ City ☐ Other:_____ **Access:** ☐ Open ☐ Limited/None

Change of Responsible Party Info: ☐ Yes ☐ No (List new responsible party contact info below.)

Owner Name: _____ **Contact Person:** _____

Mailing Address: _____

Phone: _____ **Email:** _____

Site Personnel Present: _____ **Title:** _____ ☐Not Present

SUMMARY OF CORRECTIVE ACTIONS

Responsible party notified on: __/__/____ Due date: __/__/___

BMP Facility ID / Type	Corrective Actions ☐ None	Completed On
		__/__/____
		__/__/____
		__/__/____
		__/__/____
		__/__/____
		__/__/____
		__/__/____

The corrective actions listed above are required pursuant to Encinitas Municipal Code Chapter 20.08. Failure to comply with minimum Best Management Practices (BMP) Standards may result in further enforcement action by the City of Encinitas.

BMP OPERATION AND MAINTENANCE EVALUATION

BMP FacilityID: _____ BMP Type: _____

Location: _____ Photos Taken: ☐ Yes ☐ No

MAINTENANCE ASSESSMENT QUESTIONS	Yes	No	NA	Comments
1. Is the BMP accessible for inspection?	☐	☐	☐	
2. Is the BMP free of damage?	☐	☐	☐	
3. Is the BMP free of significant trash and debris?	☐	☐	☐	
4. Is the BMP free of excessive sediment?	☐	☐	☐	
5. Is the BMP free of other visual pollutants?	☐	☐	☐	
6. Is the BMP free of unpleasant odors?	☐	☐	☐	
7. Is the BMP free of standing water?	☐	☐	☐	
8. Is the irrigation system in working condition?	☐	☐	☐	
9. Is the BMP free of erosion/scouring?	☐	☐	☐	
10. Is the BMP well vegetated?	☐	☐	☐	
11. Is the BMP free of excessive vegetation?	☐	☐	☐	
12. Are the BMP inlets/outlets free of obstructions?	☐	☐	☐	
13. Is the filter media in working condition?	☐	☐	☐	☐ Not Accessible
14. Inspection/maintenance documents received?	☐	☐	☐	
BMP Status: ☐ Operational ☐ Missing ☐ Unverified Modification ☐ Unverified ☐ Under Construction				
Maintenance Evaluation Summary: ☐ Good Condition ☐ Needs Maintenance and/or Records ☐ NA				

CITY OF ENCINITAS

INSPECTION REPORT

Stormwater Quality Inspection for Permanent BMPs

505 South Vulcan Avenue, Encinitas, CA 92024 ◆ 760-633-2787 ◆ cleanwater@encinitasca.gov ◆ TDD 760-633-2700

Permit No/Type: _____ **Property Address:** _____ **Inspection Date:** __/__/___

BMP OPERATION AND MAINTENANCE EVALUATION

BMP FacilityID: _____ BMP Type: _____

Location: _____ Photos Taken: ☐ Yes ☐ No

MAINTENANCE ASSESSMENT QUESTIONS	Yes	No	NA	Comments
1. Is the BMP accessible for inspection?	☐	☐	☐	
2. Is the BMP free of damage?	☐	☐	☐	
3. Is the BMP free of significant trash and debris?	☐	☐	☐	
4. Is the BMP free of excessive sediment?	☐	☐	☐	
5. Is the BMP free of other visual pollutants?	☐	☐	☐	
6. Is the BMP free of unpleasant odors?	☐	☐	☐	
7. Is the BMP free of standing water?	☐	☐	☐	
8. Is the irrigation system in working condition?	☐	☐	☐	
9. Is the BMP free of erosion/scouring?	☐	☐	☐	
10. Is the BMP well vegetated?	☐	☐	☐	
11. Is the BMP free of excessive vegetation?	☐	☐	☐	
12. Are the BMP inlets/outlets free of obstructions?	☐	☐	☐	
13. Is the filter media in working condition?	☐	☐	☐	☐ Not Accessible
14. Inspection/maintenance documents received?	☐	☐	☐	
BMP Status: ☐ Operational ☐ Missing ☐ Unverified Modification ☐ Unverified ☐ Under Construction				
Maintenance Evaluation Summary: ☐ Good Condition ☐ Needs Maintenance and/or Records ☐ NA				

BMP OPERATION AND MAINTENANCE EVALUATION

BMP FacilityID: _____ BMP Type: _____

Location: _____ Photos Taken: ☐ Yes ☐ No

MAINTENANCE ASSESSMENT QUESTIONS	Yes	No	NA	Comments
1. Is the BMP accessible for inspection?	☐	☐	☐	
2. Is the BMP free of damage?	☐	☐	☐	
3. Is the BMP free of significant trash and debris?	☐	☐	☐	
4. Is the BMP free of excessive sediment?	☐	☐	☐	
5. Is the BMP free of other visual pollutants?	☐	☐	☐	
6. Is the BMP free of unpleasant odors?	☐	☐	☐	
7. Is the BMP free of standing water?	☐	☐	☐	
8. Is the irrigation system in working condition?	☐	☐	☐	
9. Is the BMP free of erosion/scouring?	☐	☐	☐	
10. Is the BMP well vegetated?	☐	☐	☐	
11. Is the BMP free of excessive vegetation?	☐	☐	☐	
12. Are the BMP inlets/outlets free of obstructions?	☐	☐	☐	
13. Is the filter media in working condition?	☐	☐	☐	☐ Not Accessible
14. Inspection/maintenance documents received?	☐	☐	☐	
BMP Status: ☐ Operational ☐ Missing ☐ Unverified Modification ☐ Unverified ☐ Under Construction				
Maintenance Evaluation Summary: ☐ Good Condition ☐ Needs Maintenance and/or Records ☐ NA				

CITY OF ENCINITAS

INSPECTION REPORT

Stormwater Quality Inspection for Construction Activities

505 South Vulcan Avenue, Encinitas, CA 92024 ◆ **760-633-2770** ◆ TDD 760-633-2700

Property Address: _____ Inspection Date: _____

Contact Person: _____ Permit No: _____

Phone Number: _____ Project Size: ❒ Less Than 1 Acre ❒ 1 Acre or more

Site Status: ❒ Active ❒ Inactive ❒ First Inspection ❒ Final Sign-Off Date _____/_____/_____

Inspection Frequency: ❒ 2 Weeks ❒ Monthly ❒ 6 Months ❒ Pre/Post Rain Event ❒ Complaint Assessment

State Construction General Permit? ❒ Yes ❒ No WDID #_____ SWPPP on Site? ❒ Yes ❒ No

Qualified SWPPP Practitioner (QSP) Name: _____ Phone Number / E-Mail: _____

BEST MANAGEMENT PRACTICE (BMP) REQUIREMENTS *All BMPs in the approved erosion control plan are required. City inspectors have the authority to require additional BMPs where necessary.*	INSTALLATION REQUIRED *	MAINTENANCE REQUIRED *	INSTALLATION VERIFIED	NOT APPLICABLE N/A	COMMENTS:
1. Erosion Control BMPs (Slope / Soil Stabilization)					**Comments** — ***PRIMARY BMPs***
a. Mulch					
b. Hydroseeding					
c. Permanent Landscaping					
d. Geotextiles / Mats					
e. Soil Binder					
f. Run-On / Run-Off Control					
g. Other:					
2. Sediment & Perimeter Control BMPs					**Comments** — ***SECONDARY BMPs***
a. Silt Fencing					
b. Sediment Basin / Sediment Trap					
c. Gravel Bag Check Dams					
d. Fiber Rolls					
e. Stabilized Entrance/Exit					
f. Stormdrain Inlet Protection					
g. Other:					
3. Materials Management & Good Housekeeping BMPs					**Comments** — ***ONGOING BMPs***
a. Stockpile Management					
b. Designated Washout Area(s)					
c. Equipment & Vehicle Storage					
d. Trash, Litter, Debris Management					
e. Street Sweeping					
f. Sanitary Waste Area Management					
g. Fuel / Chemical Storage					
h. Non-Stormwater Management					
i. Other:					

*****Required Actions identified above must be addressed, to the satisfaction of the City Inspector, no later than _____/_____/_____ *OR* prior to the next predicted rain event, whichever is sooner. **Failure to comply by this date will result in enforcement action by the City of Encinitas.**

Inspector (Signature) _____ Date _____/_____/_____

Received By (Signature) _____ Date _____/_____/_____

COPY DISTRIBUTION White – Responsible Party Yellow – City Inspector Pink – File REVISED 6/15/2015

CITY OF ENCINITAS

CLEAN WATER PROGRAM

505 South Vulcan Avenue, Encinitas, CA 92024 ◆ **760-633-2770** ◆ FAX 760-633-2818 ◆ TDD 760-633-2700

CONSTRUCTION SITE STORMWATER MANAGEMENT AND DISCHARGE CONTROL

All construction projects in the City of Encinitas are required to implement minimum Best Management Practices (BMPs) as necessary to comply with the current State General Municipal Stormwater Permit, State Construction General Permit (Order No. 2009-0009-DWQ), the City's Stormwater Management Ordinance (EMC 20.08), and the Grading Ordinance (EMC 23.24). Construction is a dynamic operation where changes are expected. Stormwater BMPs for construction sites are usually temporary measures that require frequent maintenance to maintain effectiveness and may require relocation, revision, and re-installation, particularly as project grading progresses. If minimum BMPs are infeasible or deemed inadequate at any specific site, the City will require the implementation of equivalent or alternative BMPs in order to minimize and/or eliminate non-stormwater discharge.

DEFINITIONS

Best Management Practices or "BMPs" means schedules of activities, pollution treatment practices or devices, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, operation and maintenance procedures, and other management practices or devices to prevent or reduce the discharge of pollutants directly or indirectly to Stormwater, Receiving Waters, or the Stormwater Conveyance System.

Illegal Discharge is any discharge to the Stormwater Conveyance System that is not composed entirely of Stormwater.

Inactive Construction Site means that construction activities have ceased for a period of 7 or more consecutive calendar days. At any time of the year, an inactive site must be fully protected from erosion and discharges of sediment.

State General Construction Storm Water Permit means State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Stormwater Associated with Construction Activities, and any amendments thereto.

Stormwater Conveyance System means private and public drainage facilities within the City of Encinitas by which Stormwater may be conveyed to waters of the United States, including but not limited to, streets, roads, catch basins, natural and artificial channels, natural and artificial drainage features, aqueducts, canyons, stream beds, gullies, curbs, gutters, ditches, and storm drains.

Wet Season means October 1 thru April 30 of each year.

EMC 20.08.040 • ILLEGAL DISCHARGES

A. Discharge of Storm Water. No person shall discharge Storm Water directly or indirectly into the Storm Water Conveyance System or Receiving Waters, unless discharged in compliance with this Chapter.

B. Discharge of Non-storm water Prohibited. No person shall discharge non-storm water directly or indirectly into the Storm Water Conveyance System or Receiving Waters.

EMC 20.08.060 • NOTIFICATION AND MITIGATION OF ILLEGAL DISCHARGES

A Discharger shall immediately notify the City Engineer of an Illegal Discharge and take immediate action to control and contain the Illegal Discharge. The Discharger shall also mitigate any damage caused by the Illegal Discharge.

EMC 20.08.080 • LITTERING & SWEEPING

No person shall throw, deposit, leave, maintain, keep or permit to be thrown, deposited, placed, left or maintained, any refuse, pet waste, rubbish, garbage, or other discarded or abandoned objects, in or upon any street, alley, parking lot, sidewalk, curb, gutter, storm drain, catch basin, conduit, or other drainage structure or lot except in receptacles maintained for the regular disposal of garbage. Impervious surfaces which drain directly or indirectly into the Storm Water Conveyance System shall be kept free of dirt and debris by regular sweeping. The sweepings shall be placed in garbage receptacles and shall not be allowed to enter the Storm Water Conveyance System.

EMC 20.08.090 • COMPLIANCE WITH BEST MANAGEMENT PRACTICES

No Discharger shall fail to implement, install, use, or maintain Best Management Practices established by the City Engineer pursuant to this Chapter.

CITY OF ENCINITAS
Stormwater Quality for Construction Activities

REQUIRED ACTIONS VERIFICATION

(760) 633-2770 ◆ cleanwater@encinitasca.gov ◆ TDD 760-633-2700

Verification Date: _____/_____/_____

Site Address: _____

❑ **The following REQUIRED ACTIONS have been completed by the Responsible Party:**

1. Erosion Control BMPs (Slope / Soil Stabilization)		
a.	Mulch	❒
b.	Hydroseeding	❒
c.	Permanent Landscaping	❒
d.	Geotextiles / Mats	❒
e.	Soil Binder	❒
f.	Other:	❒
2. Sediment & Perimeter Control BMPs		
a.	Silt Fencing	❒
b.	Sediment Basin / Sediment Trap	❒
c.	Gravel Bag Check Dams	❒
d.	Fiber Rolls	❒
e.	Stabilized Entrance/Exit	❒
f.	Stormdrain Inlet Protection	❒
g.	Other:	❒
3. Materials Management & Good Housekeeping BMPs		
a.	Stockpile Management	❒
b.	Designated Washout Area(s)	❒
c.	Equipment & Vehicle Storage	❒
d.	Trash, Litter, Debris Management	❒
e.	Street Sweeping	❒
f.	Sanitary Waste Area Management	❒
g.	Fuel / Chemical Storage	❒
h.	Other:	❒

❑ **Enforcement Action Is Required.**

Required Actions Identified on _____/_____/_____ are NOT Complete.

Comments:

_____

_____

_____

_____

Inspector (Signature) **Date**

_____

Responsible Party (Signature) **Date**

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CITY OF ENCINITAS
STORMWATER QUALITY INSPECTION REPORT

for Commercial and Industrial Facilities

Clean Water Hotline: 760-633-2787 Email: cleanwater@encinitasca.gov

http://cwp.encinitasca.gov

Type of Inspection: ☐ Onsite ☐ Drive-by (Date):	☐ Complaint Investigation (Date):	
Business Name:	Size: Sq.Ft.	SIC Code:
Street Address:	Mailing Address:	
Contact Person(s):	Property Manager (PM):	
Business Phone/Fax:	PM Phone/Fax:	
Business Email:	PM Email :	
Does facility have a current Encinitas business certificate? ☐Yes ☐No #: Exp:		

A. Training **Number of Employees:**

1. Are employees trained? ☐Yes ☐No a. Training log at facility? ☐Yes ☐No Last time trained: When hired As needed

B. Liquid Storage (Oil, Grease, Antifreeze) ☐NA

2. ☐Trap- Last Maintained(LM): ☐Interceptor- LM: By: Every ____ months

3. ☐Bin- LM: ☐Clarifier- LM: By: Every ____ months

a. Is there secondary containment? ☐Yes ☐No b. Overhead Coverage? ☐Yes ☐No

4. Are other outdoor items adequately stored/covered? ☐Yes ☐No ☐NA

5. Does facility have a spill kit? ☐Yes ☐No a. Posted spill response plan? ☐Yes ☐No

C. Cleaning Activities Kitty litter Absorbal Rags

6. Are outdoor cleaning activities conducted at facility?: ☐Y ☐N

Washing Floor Mats: ☐Y ☐N Service ☐Y ☐N Vehicle Washing/Fueling: ☐Y ☐N Hosing Off / Power Washing Site: ☐Y ☐N

a. Is wash water contained and disposed of properly? ☐Y ☐N

D. Waste Management	**Yes**	**No**	**N/A**	**Comments**
7. Are the storm drains and site free of litter and debris?				
8. Downspouts directed away from areas of potential pollutants?				

9. Does trash/recycling storage area meet the following requirements?:

Receptacle Lids Closed: ☐Y ☐N Clean/Well Maintained: ☐Y ☐N Are bins not overflowing?: ☐Y ☐N

10. Does the facility properly maintain the following landscape/maintenance issues ☐N/A **☐ PM**

Erosion Control: ☐Y ☐N Over-irrigation Runoff: ☐Y ☐N Reclaimed Water Use: ☐Y ☐N Stockpiles: ☐Y ☐N

E. Other Storm Water Management

11. Is the site free of any evidence of illicit connections and illegal discharges? ☐Yes ☐No

F. Corrective Actions Needed? ☐Yes ☐No If yes, see Inspection Summary

G. Follow Up Inspection? ☐Yes ☐No Date: _____ If yes, see Inspection Summary

H. Education or Best Management Practice (BMP) Information Distributed:

☐Training log ☐Auto Brochure Eng/Span ☐Oil storage and transport information ☐Spill Response Guide

☐10 Simple Ways ☐Post card ☐Doorhanger ☐Business card ☐Verbal Education

☐BMP Minimum requirements Stationary ☐BMP Minimum requirements Mobile ☐Pen ☐Other:

Inspector Name: **Signature:** **Date:**

Notes:

FOR OFFICE USE ONLY

Notes:	
	WO#:
	Follow Up WO#

Revised 5/2015

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CITY OF ENCINITAS
STORMWATER QUALITY INSPECTION REPORT
MUNICIPAL FACILITIES
CLEAN WATER HOTLINE: 760-633-2787

Revised 6/15

Type of Inspection: ☐ Onsite ☐ Drive-by (Date):	
Facility Name:	Size: Sq.Ft.
Street Address:	Mailing Address:
Contact Person(s):	Business Phone/Fax:

A. Training **Number of Employees:**

1. Are employees trained? ☐Yes ☐No a. Training log at facility? ☐Yes ☐No

B. Outdoor Liquid Storage ☐NA

2. ☐Trap- Last Maintained(LM): ☐Interceptor- LM: By: Every ____ months

3. ☐Bin- LM: ☐55 Gallon Drum- LM: By: Every ____ months

a. Is there secondary containment? ☐Yes ☐No b. Overhead Coverage? ☐Yes ☐No

4. Are other outdoor items adequately stored/covered? ☐Yes ☐No ☐NA

5. Does facility have a spill kit? ☐Yes ☐No a. Posted spill response plan? ☐Yes ☐No

C. Outdoor Cleaning Activities ☐NA

6. Does facility conduct any of the following activities outdoors?:

Washing Floor Mats: ☐Y ☐N Vehicle Washing/Fueling: ☐Y ☐N Hosing Off/Power Washing Site: ☐Y ☐N

a. Is wash water contained and disposed of properly? ☐Y ☐N

D. Waste Management	**Yes**	**No**	**N/A**	**Comments**
7. Are the storm drains and site free of litter and debris?				
8. Downspouts directed away from areas of potential pollutants?				

9. Does trash/recycling storage area meet the following requirements?:

Receptacle Lids Closed: ☐Y ☐N Clean/Well Maintained: ☐Y ☐N Are cans/bins overflowing?: ☐Y ☐N

10. Does the facility properly maintain the following issues: ☐NA

Erosion Control: ☐Y ☐N Over-irrigation Runoff: ☐Y ☐N Reclaimed Water Use: ☐Y ☐N Stockpiles: ☐Y ☐N

E. Other Storm Water Management

11. Is the site free of any evidence of illicit connections and illegal discharges? ☐Yes ☐No

F. Corrective Actions Needed? ☐Yes ☐No **If yes, see reverse side and note below***

G. Follow Up Inspection? ☐Yes ☐No Date: _____ **If yes, see reverse side and note below***

H. Education or Best Management Practice (BMP) Information Distributed:

☐Restaurant Brochure Eng/Span ☐What's Cooking Guide Eng/Span ☐Auto Brochure Eng/Span ☐Green Wrench Guide Eng/Span ☐Only Rain ☐10 Simple Ways ☐Yard and Garden Care Eng/Span ☐Doorhanger ☐Business card ☐Green Business ☐Spill Response Guide ☐Other:

Inspector Signature: **Date:**

Facility Contact Signature: **Date:**

Notes:

ASSESSMENT (circle appropriate level - "5" is highest level)		**For Office Use Only**
Level of knowledge regarding stormwater issues: 1 2 3 4 5		WO#:
Level of cleanliness, BMP implementation, orderliness of site: 1 2 3 4 5		Follow Up WO#

**Corrections must be made within 30 days. If corrections cannot be made within 30 days, record the reason why more time was needed on the reverse side of the form. The reason may be reported in annual reports or reviewed by the Regional Board during audits.*

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CITY OF ENCINITAS
STORM WATER QUALITY INSPECTION REPORT
PARKS AND RECREATION DEPARTMENT FACILITIES
CLEAN WATER HOTLINE: 760-633-2787

Revised 6/15

Type of Inspection: ☐ Onsite ☐ Drive-by	(Date):
Facility Name:	
Street Address:	
Contact Person(s):	Business Phone/Fax:

A. Outdoor Liquid Storage ☐NA

1. ☐Trap- Last Maintained(LM): ☐Interceptor- LM: By: Every ____ months
2. ☐Bin- LM: ☐55 Gallon Drum- LM: By: Every ____ months

a. Is there secondary containment? ☐Yes ☐No | b. Overhead Coverage? ☐Yes ☐No

3. Are other outdoor items adequately stored/covered? ☐Yes ☐No ☐NA
4. Does facility or City vehicle have a spill kit? ☐Yes ☐No

B. Outdoor Cleaning Activities ☐NA

5. Does facility conduct any of the following activities outdoors?:

Washing Floor Mats: ☐Y ☐N Hosing Off/Power Washing Site: ☐Y ☐N

a. Is wash water contained and disposed of properly? ☐Y ☐N

C. Waste Management	Yes	No	N/A	Comments
6. Are the storm drains and site free of litter and debris?				
7. Downspouts directed away from areas of potential pollutants?				

8. Does trash/recycling storage area meet the following requirements?:

Receptacle Lids Closed: ☐Y ☐N Clean/Well Maintained: ☐Y ☐N Are cans/bins overflowing?: ☐Y ☐N

9. Does the facility properly maintain the following issues: ☐NA

Erosion Control: ☐Y ☐N Over-irrigation Runoff: ☐Y ☐N Stockpiles: ☐Y ☐N

D. Other Storm Water Management

10. Is the site free of any evidence of illicit connections and illegal discharges? ☐Yes ☐No

E. Corrective Actions Needed? ☐Yes ☐No **If yes, see reverse side and note below***

F. Follow Up Inspection? ☐Yes ☐No Date: _____ **If yes, see reverse side and note below***

Inspector Signature: **Date:**

Facility Contact Signature: **Date:**

Notes:

**Corrections must be made within 30 days. If corrections cannot be made within 30 days, record the reason why more time was needed on the reverse side of the form. The reason may be reported in annual reports or reviewed by the Regional Board during audits.*

For Office Use Only
WO#:
Follow Up WO#

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City of Encinitas

Municipal Facilities Required Corrections Verification

REQUIRED CORRECTIVE ACTIONS

Corrections are required for all BMPs that have the "Correction Required" box checked below.

Corrections Required to Be Completed By: ____/_____/_____

BMP (See Inspection Form)	**Correction Required** (Check if Required)	**Correction Completed** (Check if Completed)
Employee training	☐	☐
Trap or interceptor	☐	☐
Bin or clarifier	☐	☐
Outdoor liquid storage	☐	☐
Other outdoor material storage	☐	☐
Spill kit and spill response plan	☐	☐
Outdoor cleaning activities	☐	☐
Storm drains	☐	☐
Downspouts directed away from pollutant sources	☐	☐
Trash/recycling storage	☐	☐
Landscape maintenance	☐	☐
Illicit connection/illegal discharge prevention	☐	☐
Other Corrective Actions/Comments (Describe):	☐	☐

Have All Required Correction Actions Been Completed? ☐ **Yes** ☐ **No**

Date: _____/_____/_____

If NO, Describe Plan to Complete Remaining Corrections Below

Were Any Corrections Completed More than 30 Days After the Initial Inspection? ☐ **Yes** ☐ **No**

If YES, Provide a Reason Why More than 30 Days Was Required:

_____ _____

Inspector (Signature) **Date**

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Appendix G

City of Encinitas Dry Weather MS4 Outfall Monitoring Procedures

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Appendix G. City of Encinitas Dry Weather MS4 Outfall Monitoring Procedures

1 Introduction

In accordance with the new Municipal Stormwater Permit, Order No. R9-2013-0001 (Municipal Permit) issued by the San Diego Regional Water Quality Control Board (RWQCB), the City of Encinitas (City) is required to monitor discharges from municipal separate storm sewer system (MS4) major outfalls in the Carlsbad Watershed Management Area (WMA) during dry weather.

The City is required to conduct transitional dry weather MS4 outfall monitoring until the monitoring requirements and schedules of Section D.2.b. (Dry Weather MS4 Outfall Discharge Monitoring) of the Municipal Permit has been incorporated in a Water Quality Improvement Plan accepted by the RWQCB the City is required to conduct transitional dry weather MS4 outfall monitoring. During this transitional phase of monitoring, the City must identify discharges as either transient or persistent and prioritize discharges from all inventoried MS4 major outfalls that will be investigated and eliminated. The City is also required to conduct non-stormwater persistent flow MS4 outfall discharge monitoring based on the findings of the transitional and routine dry weather field screening. Persistent flow is defined in the Municipal Permit as "the presence of flowing, pooled, or ponded water more than 72 hours after a measureable rainfall event of 0.1 inch or greater during three consecutive monitoring and/or inspection events."

This document describes procedures for routine dry weather MS4 outfall monitoring and for follow-up investigations to identify sources of flow.

2 MS4 Outfall Discharge Monitoring Station Inventory

The Municipal Permit defines a major outfall as a single pipe with an inside diameter of at least 36 inches or its equivalent (drainage area of more than 50 acres) or as any outfall with an inside diameter of at least 12 inches or its equivalent (drainage area of at least 2 acres) that receives runoff from an industrial area. The City has identified the major outfalls within its jurisdiction and maintains an inventory of them as required by the Municipal Permit. As required by Section D.2.a(1) and E.2.b.(1), the City has further identified those major outfalls draining directly to a receiving water to be used as monitoring sites for the Dry Weather MS4 Outfall Discharge Monitoring Program. In cases where a major outfall is permanently not accessible (e.g., due to private property constraints, safety concerns, excessive vegetation, etc.), the nearest accessible upstream location within the MS4 is designated as the monitoring site on the City's major outfall inventory.

The major MS4 outfall inventory includes the following information:

- Latitude and longitude of MS4 outfall
- WMA and hydrologic subarea
- Outfall size
- Accessibility (i.e. safety and without disturbance of critical habitat)
- Approximate drainage area
- Classification of whether the MS4 outfall is known to have persistent or transient dry weather flows, no dry weather flow, or unknown dry weather flow

The City maintains its list of major MS4 outfalls in an electronic tabular format. A map of the inventoried major MS4 outfalls is included as Attachment A of this monitoring procedures document.

3 Dry Weather MS4 Outfall Discharge Monitoring Site Visits

Transitional dry weather MS4 outfall discharge monitoring will be performed for at least 80 percent of the City's inventoried outfalls within each WMA twice per year. At least 72 hours of dry weather must follow any storm event producing measurable rainfall greater than 0.1 inch prior to conducting field screening. During each site visit, an MS4 outfall monitoring datasheet is completed. The datasheet used will be consistent with the field observation forms in the Carlsbad WQIP Attachment A. The steps involved in obtaining the information to complete the datasheet are listed below.

3.1 Site Location and Documentation

The major outfalls in the City of Encinitas were identified via GIS analysis. Each outfall was subsequently field verified by monitoring staff. Global Positioning System (GPS) coordinates have been recorded for each major outfall.

3.2 Atmospheric Conditions

Weather conditions and rainfall information are recorded on the field datasheet. It is important to record the nature of the tide (i.e., incoming, outgoing, high) and its height if the outfall may be tidally influenced. Since monitoring is only permitted to be conducted during dry weather, it is important to document that the monitoring is being completed during dry weather conditions: >72 hours since the last rain, or <72 hours since the last ran and ≤0.1 inches of precipitation. If neither of those conditions are met, then dry weather monitoring cannot be conducted. The field team should then stop work until dry weather conditions apply again.

3.3 Flow Measurements

At each site, the outfall is assessed for the presence of flow, and the appropriate qualitative option is marked for "Water Flow."

If a site has flowing water, sampling staff should also observe whether the flow reaches the receiving water body. If the sampling site is upstream of the outfall itself due to accessibility constraints, it is usually not possible to visually observe whether the flow reaches the receiving water body. In these cases the "Unknown" option is selected.

At sites with flowing water, the flow rate is also measured and recorded on the field datasheet in gallons per minute (gpm) or cubic feet per second (cfs). If the site location is within a manhole, width, depth and velocity measurements cannot be precisely determined and the flow rate must be estimated. If an outfall has ponded water, the flow is recorded as zero gpm. If an outfall is dry, the flow rate is recorded as "Dry".

The three most common methods used to measure flow rate and a description of each are included below:

Velocity-area method ("leaf float") - The most common method for measuring the discharge of a channel is the velocity-area method. This method requires the physical measurement of the cross-sectional area and the velocity of the flowing water. Discharge is determined as the product of the area times the velocity:

Flow rate (ft^3/sec, or cfs) = Velocity (ft/sec) x Depth (ft) x Width (ft)

The leaf float method involves using a stop watch to measure the time (in seconds) it takes for a leaf or similar object to float across a pre-measured distance (in feet) of the surface of the flowing water. The flow rate can then be calculated by using the equation above. A correction factor between 0.5 and 0.8 should be applied to the flow rate calculation while in the field, based on the width and depth of the flow, as well as the roughness of the conveyance surface material. In general, the rougher the conveyance surface material, the lower the correction factor that must be applied to the flow rate.

Filling a bottle or known volume method - The rate can be determined by measuring the diameter of the outfall and the length of time it takes to fill a 1 liter bottle or any other container with a known volume. Dividing the volume by the time gives a flow rate. Appropriate conversion factors are then applied to convert that flow rate to gpm or cfs if needed.

Partially filled pipe method - This method is applicable to discharges from circular pipes. All measurements should be converted to ft before calculation so that the final flow rate is given in cfs.

The water depth and inside pipe diameter are measured, then the following approach is applied using the partially filled pipe formula chart in Table 1.

- Calculate D/d

- D = water depth (ft) and d = inside pipe diameter (ft)

- Find the tabulated (Ta) value on the partially filled pipe formula chart below using the D/d value (e.g., If D/d = 0.26 then Ta =0.1623)
- Find the area using the formula a = Ta*d^2
- Calculate flow: Q (flow, cfs) = a (ft^2) x Velocity (ft/sec)
- If desired, convert to gpm as follows: 1 cfs = 448.8 gpm

Table 1. Partially Filled Pipe Formula Chart

Calculating the Area (a) of the Cross Section of a Circular Pipe Flowing Partially Full										
D = Depth of water			a = area of water in partially filled							
d = diameter of the pipe			Ta = Tabulated Value					Then a = Ta*d^2		
D/d	**0.00**	**0.01**	**0.02**	**0.03**	**0.04**	**0.05**	**0.06**	**0.07**	**0.08**	**0.09**
0.0	0.0000	0.0013	0.0037	0.0069	0.0105	0.0147	0.0192	0.0242	0.0294	0.0350
0.1	0.0409	0.0470	0.0534	0.0600	0.0668	0.0739	0.0817	0.0885	0.0951	0.1039
0.2	0.1118	0.1199	0.1281	0.1365	0.1440	0.1535	0.1623	0.1711	0.1800	0.1890
0.3	0.1982	0.2074	0.2187	0.2280	0.2355	0.2450	0.2540	0.2642	0.2780	0.2836
0.4	0.2934	0.3032	0.3130	0.3220	0.3328	0.3428	0.3527	0.3627	0.3727	0.3827
0.5	0.3980	0.4030	0.4130	0.4230	0.4330	0.4430	0.4520	0.4620	0.4720	0.4820
0.6	0.4920	0.5020	0.5120	0.5210	0.5310	0.5400	0.5500	0.5590	0.5690	0.5780
0.7	0.5870	0.5960	0.6050	0.6140	0.6230	0.6320	0.6400	0.6490	0.6570	0.6660
0.8	0.6740	0.6810	0.6890	0.6970	0.7040	0.7120	0.7190	0.7250	0.7320	0.7360
0.9	0.7450	0.7500	0.7560	0.7610	0.7660	0.7710	0.7750	0.7790	0.7820	0.7840

Source: County of San Diego. May 2011. *Dry Weather and MS4 Analytical and Field Screening Monitoring Procedures Manual*

3.4 Observations

If a site has either ponded or flowing water, a clean, clear plastic cup or a triple-rinsed clear glass container (e.g., jar, beaker, etc.) is used to collect a sample of the water for visual observation. If the site is within a catch basin or a manhole, a peristaltic pump is used to collect the sample.

Observations for odor, color, clarity, and floatables are assessed and recorded on a field datasheet. When the site is dry, "N/A" is marked for all of these parameters.

Odor: Choose any of the following options that is most representative of the site conditions: none, sewage, sulfides, petroleum, manure, other. Note that "sulfides" indicates the distinct rotten egg smell associated with hydrogen sulfide gas. A petroleum odor usually refers to a smell of gasoline/diesel. Any time a sewage or petroleum odors are noted, some additional source investigation should be completed and/or the appropriate authorities (sewer agency or County of San Diego Department of Environmental Health) should be notified.

Color: Choose one of the following options most representative of the water when viewed *in situ*: none, yellow, brown (silty), white (milky), gray, other.

Clarity: If the water has minimal or no turbidity, mark "clear." For more turbid water, the clarity options "cloudy" and "murky" are distinguished as follows:

- If the field team views the water at the site and can see more than 4" below the surface of the water, the clarity field is marked as "cloudy (> 4" vis)." When visibility is limited to less than 4" below the surface of the water, it is marked as "murky (<4" vis)."

Floatables: Select one or more of the following: none, trash, bubbles/foam, sheen, algae, biofilms, other. Only materials present on or very close to the surface of the water shall be included for this observation. For example, if trash is observed well below the water surface or at a dry site, trash should not be marked as a floatable. However, trash would still be recorded in the trash assessment section in these cases.

Observations of deposits, vegetation, and biology noted at the site, and the structural condition of the outfall, are recorded for all sites, even if the site is dry.

Deposits: Select one or more of the following: none, coarse particulate, fine particulate, stains/minerals, oily deposit, other. Coarse particulates include particles such as sand or gravel and fine particulates include any particulates that are smaller than the coarse particulates, such as from the presence of clay sediment. Stains or oily deposits, if observed, may require upstream source investigations if they appear recent. Mineral deposits can result in orange/red deposits and oil deposits are black in color.

Vegetation: Sites within manholes will almost always have no vegetation, so "none" should be marked on the datasheet. If the vegetation is observed as less than what is typical for the site, due to excessive erosion or plant removal for instance, the site is considered to have "limited" vegetation. Sites with vegetation that is overgrown and is impeding, or may impede, flow from the site, or that may contribute to other water quality issues, are considered to have "excessive" vegetation. Sites observed with typical vegetation for the site are marked as "normal".

Biology: Select all applicable options (more than one can be selected). Note that additional categories of organisms can also be notes by writing them in next to the "other" option.

Structural Condition: "Damaged" means that the outfall structure is cracked, has partially collapsed, or is otherwise in need of repair. "Scour Pond" means an unpaved area just downstream of the outfall has been eroded by outfall discharges such that a depression that allows water to collect and pond has formed. Scour ponds may be

sources of bacteria. "Erosion" means there is evidence of erosion at or downstream of an outfall that could either result in a blockage or to water quality issues. "Blockage" means the flow path through the outfall is significantly obstructed. Outfalls to which none of the above apply and that are in good structural condition are marked as "normal".

Whenever an "other" box is checked, a description should be written in next to the "other" checkbox entry on the datasheet.

3.5 Trash Assessments

Trash assessments are performed for a designated area around each outfall visited for field screening. The area of assessment is determined using the best professional judgment of the field team, and usually includes an area with a length and width of approximately five to fifteen feet. If observed trash, or other observed pollutants, at the site is determined to pose a threat to human health or the environment, the reporting and response procedures described in the IDDE section of the City's Jurisdictional Runoff Management Plan will be followed. Site trash assessment is conducted utilizing the following trash rating system which was used in the regional data sharing template developed by the Copermittees' Regional Monitoring Workgroup in 2013.

Table 2. Trash Assessment Ratings

Copermittee Data Sharing Format Trash Assessment Ratings
None (0 pieces observed)
Low (<50 pieces observed)
Medium (50-400 pieces observed)
High (>400 pieces observed)

4 Non-stormwater Persistent Flow MS4 Outfall Discharge Monitoring

The flow source is assessed for all sites that have ponded or flowing water. If a site has flowing water, an upstream investigation may be necessary to determine the source of flow. The flow source is traced upstream with the assistance of the City's MS4 map. While the Municipal Permit requires source investigations for sites with ponded water, sources usually cannot be located since the upstream MS4 line is typically dry at the time of the upstream investigation. Observations and notes are recorded on the field datasheet for evidence of an IC/ID, flow source, basis for source identification, and source elimination.

4.1 Evidence of Obvious IC/ID

Evidence of an IC/ID is documented on the field datasheet by listing physical characteristics of the flow, such as odor, color, clarity, floatables, deposits, high flow rate, non-standard connection, or anything else that may indicate an IC/ID. For example, murky water may indicate washing activity or discharge from a construction site upstream. Follow up investigations are conducted immediately in cases where obvious IC/IDs are observed.

4.2 Flow Source

Following are potential flow source categories: groundwater, seepage, irrigation runoff, vehicle washing, wet cleaning or power washing, construction, pool or spa discharge, tidal, water line break, NPDES permitted discharge, other, or unable to determine. Examples of NPDES permitted discharges include line flushing by local water utilities and groundwater dewatering conducted after obtaining a discharge permit from the RWQCB. More than one source may be recorded if observed during the upstream investigation. If the site is dry, then "na" (not applicable) should be checked on the field datasheet.

If the field crew identifies the source as a controllable source of non-stormwater or illicit discharge or connection, the City's Enforcement Response Plan will be implemented to prohibit and eliminate the discharge or connection to the MS4. When a source of a non-stormwater discharge has been found to be natural in origin (i.e. non-anthropogenically influenced) and

therefore does not require further investigation, then the City will document information and rationale that supports this conclusion. This supporting information may be provided to the RWQCB upon request.

4.3 Flow Source Elimination

If the source of water is identified, the source elimination status is recorded as "Yes" if it was eliminated and "No if it was not eliminated. An example of flow source elimination is if washing activity from a business is stopped after talking with the responsible party and reporting the issue to the City. If multiple sources were identified, and some, but not all sources were eliminated, "No" should be marked, and a full explanation of actions taken to eliminate any flow source should be described in the comments.

4.4 Flow Source Prioritization for Follow-up Investigation

As part of the field screening, when flowing or ponded water is observed, the field team will review historical data and make observations in the immediate upstream vicinity of the site to see if the primary source or sources of water can be identified. Any identified or suspected specific sources of flow will be recorded and placed into one of the categories listed below. These categories differ slightly from the ones described in the County's *San Diego County Permittees Draft Investigation Procedures* manual. However, the categories listed below can be used to prioritize sources for follow-up and are listed in descending order of priority, with Category 1 being the highest priority.

1. Observed illegal discharges or illicit connections. Discharges in this category may have also posed a threat to human or aquatic health.
2. Discharge type prohibited in 2013 Municipal Permit but allowed in the 2007 Municipal Permit. Examples include irrigation runoff and discharges from foundation or footing drains.
3. Source of discharge is unknown or unable to be determined. For instance, if seepage is observed but it is unknown if the water is from interflow or groundwater.
4. Conditionally exempt discharges, such as individual residential car washing and air conditioning condensate. Note that if observation data, such as high turbidity or sewage smell, indicates that these discharges are significant sources of pollutants, they are classified under Category 1 instead.
5. Discharges from natural sources or NPDES permitted discharges, such as groundwater infiltration.

Whenever evidence of a Category 1 discharge is observed, the City's project manager is contacted immediately for direction about whether additional upstream investigation should be

completed. Category 5 sources do not require any follow-up investigation, although detailed documentation should be collected directly or from past studies to prove that water observed in the MS4 is in fact a Category 5 discharge. For flow sources classified as Categories 2, 3, or 4, the following will also be considered, in order of importance and in combination with staff's best professional judgment, when prioritizing for further investigation:

1. **Flow rate:** Higher flow rates should be higher priority.
2. **Flow reaches receiving water:** Flows observed to reach a receiving water body or highly likely to reach a receiving water body should be higher priority than flows that do not reach the receiving water body.
3. **Historical data:** Sites with that consistently have flowing water should usually be higher priority than sites that sometimes are flowing but sometimes are dry or ponded.

4.5 Additional Flow Source Investigation Methods

If a flow source cannot be identified using the typical investigation methods described above, and there is persistent flow or it is possible an IC/ID may be contributing flow to the site, the field team may use alternate methods for identifying the flow source. Further details regarding different source constituents and follow-up procedures for each source category can be found in the County of San Diego's *San Diego County Permittees Draft Investigation Procedures* manual. A few of the more common alternate source investigation methods are summarized below.

Additional Field or Laboratory Testing

Although not required for routine site visits under the new Municipal Permit, it may be necessary to perform additional field or laboratory tests to determine the source of a persistent flow. The field team should be equipped with meters that are capable of measuring pH, conductivity, and temperature. Sample collection bottles and a cooler should also be available in the event laboratory analysis is necessary.

- Measuring the chlorine concentration and conductivity to assess whether a water line break or leak may be contributing to flow at the site.
- Measuring the conductivity at the site. Higher conductivity values may indicate the infiltration of groundwater into the MS4 pipe, and further investigation may be necessary to confirm this conclusion (e.g. analyzing local ground water monitoring well data if available, sending a camera through the MS4 line, etc).

Review of Plans

As-built drawings for the area of concern may be obtained to verify connections. However, an illicit connection is likely to have occurred after the as-built drawings were created, so additional techniques should also be employed.

Dye Testing

Dye testing is useful to confirm hydraulic connections between the potential source and the location downstream. Fluorescent dye is discharged at the source of the potential IC/ID and is monitored downstream. This method is used only when necessary because the public and appropriate regulatory agencies in the surrounding area need to be informed of the cause of the water discoloration.

Smoke Testing

Smoke testing can be used only on underground stormwater conveyance facilities, to determine potential hydraulic connections between the source and downstream location. Again, the public and appropriate agencies need to be informed of the cause for smoke coming from the storm drain system.

Video Monitoring

Mobile video cameras may be used to record observations in an underground stormwater conveyance facility. The public and regulatory agencies generally do not need to be informed prior to initiating this kind of investigation.

Confined Space Entry

In some cases, underground conveyances are large enough that a crew trained in confined space entry may investigate the section of pipe or culvert in question instead of using video monitoring. All applicable health and safety regulations must be followed. The public and regulatory agencies, however, generally do not need to be informed prior to initiating a confined space entry.

Potential Sewage IC/IDs

Further testing of suspected sewage-related flows is conducted when visual and odor observations do not adequately confirm the presence of sewage.

- Ammonia - Sewage frequently contains ammonia levels of 30 mg/L or greater. This can be measured with an inexpensive field screening kit.
- Bacteria - Sewage generally has high levels of total and fecal coliforms and *Enterococci*. Sewage treatment plants and many laboratories routinely conduct these indicator analyses.
- When the flow source is traced to a private property or other public entity, the City may require the responsible party to engage in their own additional investigation and report the findings to the City. Alternatively, the City may choose to perform a joint investigation with the responsible party or other public entities in order to identify the flow source.

5 Non-Stormwater Persistent Flow MS4 Outfall Discharge Monitoring

Pursuant to Section D.2.b.(2) of the Municipal Permit, if during transitional and routine MS4 outfall discharge monitoring, sites are found to have persistent flow, the City will collect samples for laboratory analysis at the highest priority sites with persistent flow. At least five sites per WMA must be considered high priority and monitored, except that when there are less than five persistently flowing sites in a WMA, the City will monitor all of its major MS4 outfalls within that WMA that have persistent flows. Test results from these samples will be compared to the Non-stormwater Action Levels (NAL) included in Provision C of the Municipal Permit, unless alternative NALs have been established in the Carlsbad WMA WQIP. As of this writing no alternative NALs have been established through the WQIP.

The highest priority persistent flow sites selected for analytical monitoring will be monitored during dry weather at least semi-annually until one of the following occurs:

- The non-stormwater discharges have been effectively eliminated (i.e. no flowing, pooled, or ponded water) for three consecutive dry weather monitoring events.
- The source(s) of the persistent flows has been identified as a category of non-stormwater discharges that does not require an NPDES permit and does not have to be addressed as an illicit discharge because it was not identified as a source of pollutants (i.e. constituents in non-stormwater discharge do not exceed NALs), and the persistent flow can be re-prioritized to a lower priority.
- The constituents in the persistent flow non-stormwater discharge do not exceed NALs, and the persistent flow can be re-prioritized to a lower priority.
- The source(s) of the persistent flows has been identified as a non-stormwater discharge authorized by a separate NPDES permit.
- The site's threat to water quality has been reduced such that it is found to pose a lower threat to water quality than another site with persistent flow that is within the same WMA but has not previously been considered a highest priority site. In that case, the latter site becomes a highest priority site and is subject to analytical monitoring, and the former site no longer is considered highest priority and is no longer subject to analytical monitoring.

The City records removal or re-prioritization of the highest priority persistently flowing MS4 outfalls in the Water Quality Improvement Plan Annual Report.

5.1 Non-Stormwater Persistent Flow MS4 Outfall Discharge Analytical Monitoring

The Municipal Permit requires samples from the highest priority MS4 outfalls with persistent flow to be collected semi-annually and analyzed for the following constituents, which are listed in Table D-7 of the Municipal Permit:

- Total Dissolved Solids
- Total Suspended Solids
- Total Hardness
- Total Phosphorus
- Orthophosphate
- Nitrate and Nitrite (may be reported separately or combined as nitrate + nitrite)
- Total Kjeldahl Nitrogen
- Ammonia
- Cadmium
- Copper
- Lead
- Zinc
- Total coliform bacteria
- Fecal coliform bacteria (or *E. Coli*)
- *Enterococcus* bacteria

Additional parameters associated with NALs and 303(d) listings are also required to be tested. A full list of parameters to be tested at each persistent flow monitoring site can be found by referencing Tables D-2 and D-3 of the Carlsbad WQIP Monitoring Plan (Carlsbad WQIP Attachment D). Note that in addition to laboratory analytical tests, the Carlsbad WQIP Monitoring Plan also requires that field tests be completed for the following parameters during each persistent flow analytical monitoring sampling event:

- pH
- Temperature
- Specific conductivity
- Dissolved oxygen
- Turbidity

Sampling, analysis and quality assurance/quality control are conducted in accordance with the procedures in the Carlsbad WQIP Monitoring Plan. Table D-1 of the Carlsbad WQIP Monitoring Plan specifies suggested target reporting limits and analytical methods. All chemical, bacteriological, and toxicity analyses will be conducted at a laboratory certified for such analyses by the California Department of Public Health or a laboratory approved by the RWQCB. Attachment F of the Carlsbad WQIP Monitoring Plan provides more detail on quality assurance/quality control procedures for MS4 outfall monitoring.

6 Enforcement

When an IC/ID is detected through MS4 outfall monitoring, the City will take action to eliminate the discharge. More information about the City's approach to eliminating illegal discharges is provided in the Enforcement Response Plan (Appendix B of the JRMP).

7 Reporting

Data collected through the City's MS4 outfall monitoring program will be reported annually via a standardized format. It is expected that the standardized data files will be provided to the Carlsbad WQIP group and that the data will be reported to the RWQCB through the Carlsbad WQIP Annual Reports. The City's Jurisdictional Runoff Management Program (JRMP) Annual Report form, which will be submitted to the RWQCB as an attachment to the Carlsbad WQIP Annual Reports, will include the number of IC/IDs detected, identified, and eliminated within the reporting period. Reporting IC/IDs to other agencies such as the RWQCB and the County of San Diego Department of Environmental Health is discussed in Section 3 the City's JRMP document.

8 References

Barnes, Harry H. *Roughness Characteristics of Natural Channels*. Washington, D.C.: U.S. G.P.O., 1967. Print.

California Regional Water Quality Control Board, San Diego Region. May 8, 2013. *Order No. R9-2013-0001.*

County of San Diego. May 2011. *Dry Weather and MS4 Analytical and Field Screening Monitoring Procedures Manual*

County of San Diego. June 2013. *San Diego County Permittees Draft Investigation Procedures*

Attachment 1.

Major MS4 Outfall Monitoring Locations

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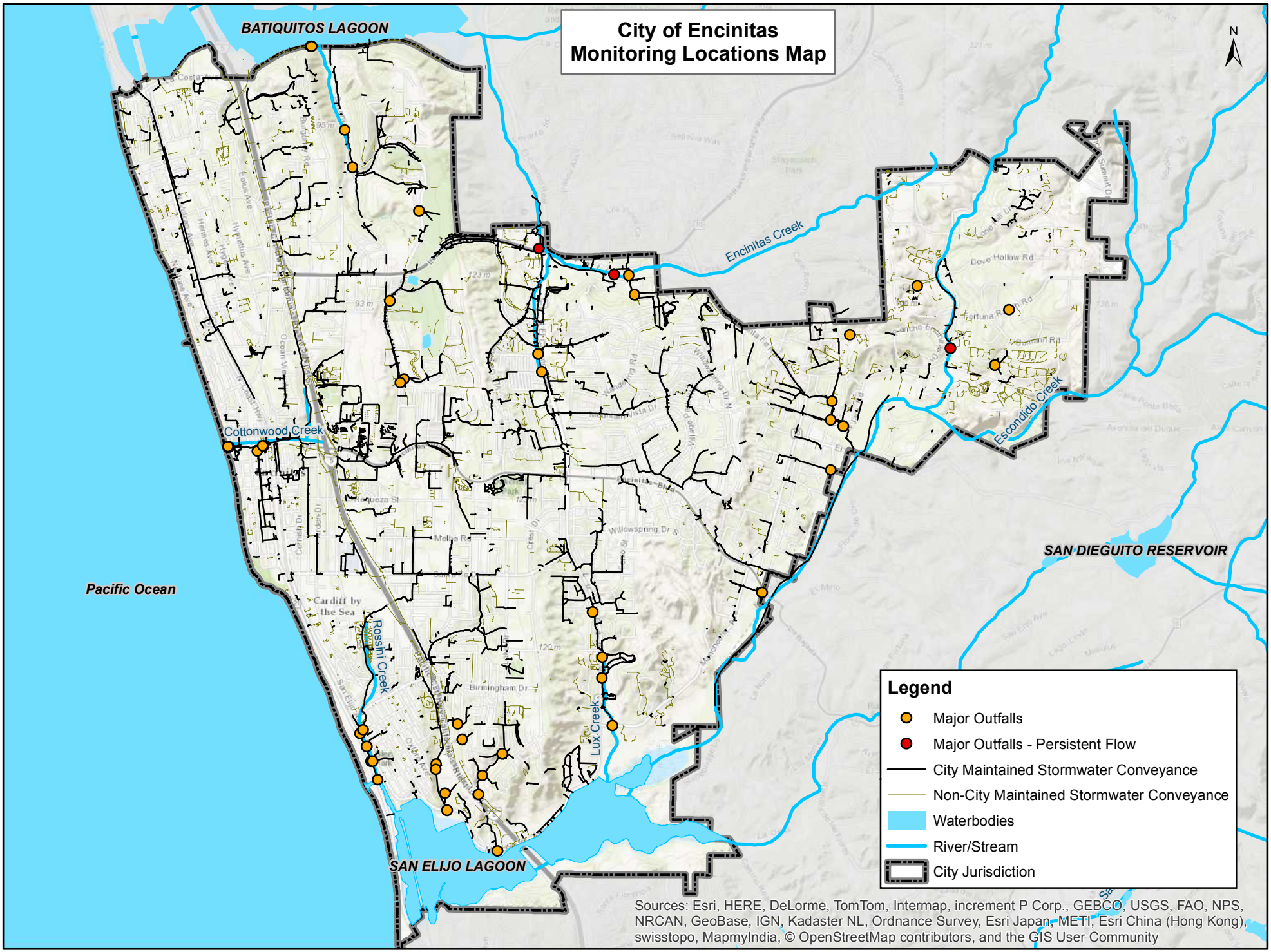

Data Sources: SanGIS and City of Encinitas
"Non-City Maintained" conveyances are maintained by other public agencies or by private parties.

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Appendix H

Environmentally Sensitive Areas

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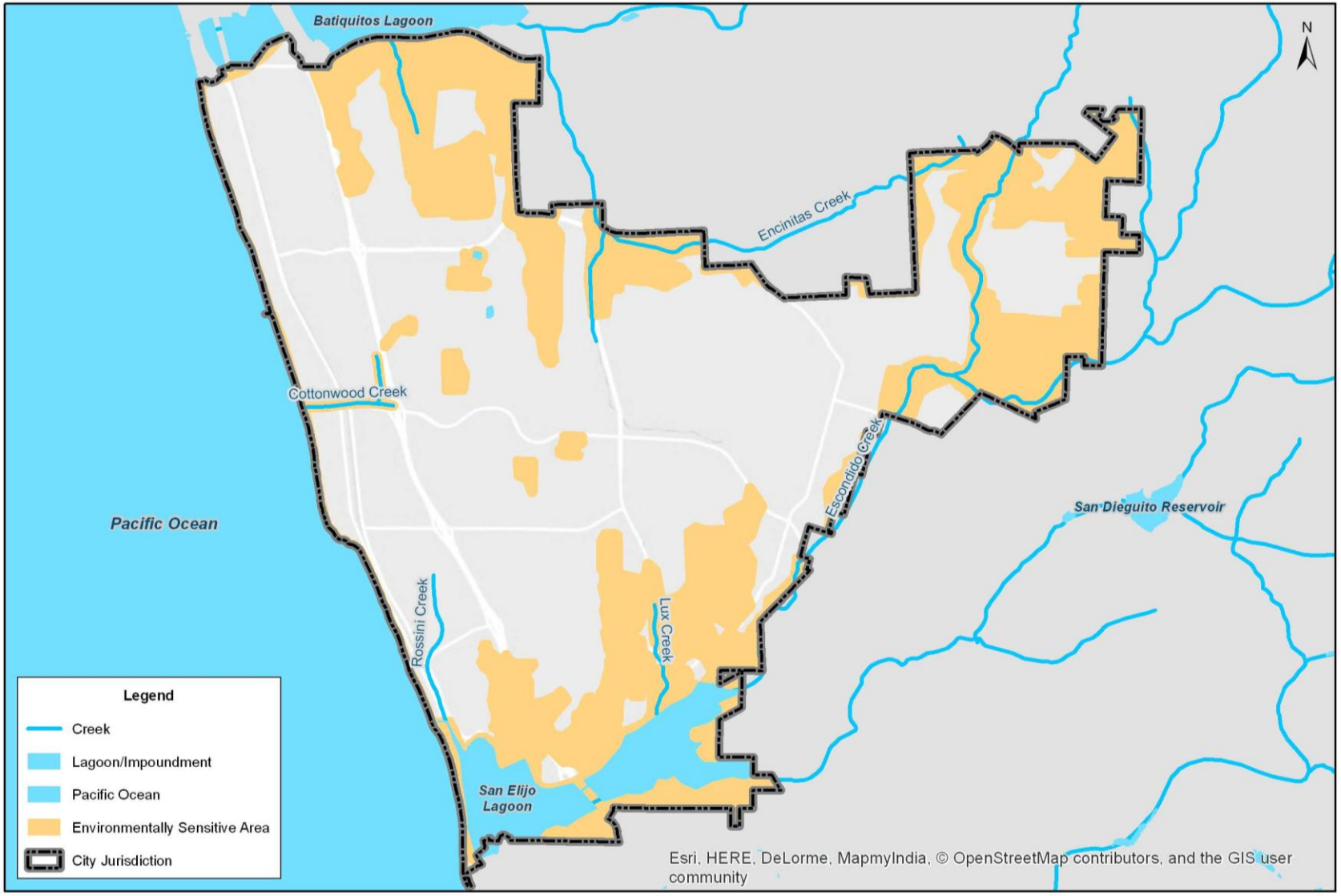
Environmentally Sensitive Areas



Environmentally Sensitive Areas (ESA) as mapped include a 200 ft buffer around each ESA.
Data Sources: SanGIS, City of Encinitas, and State Water Resources Control Board* (SWRCB).
*SWRCB stream data corrected to match local hydrologic data.
For more information about how this map was developed, refer to Section 1 of the JRMP.

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Appendix I

City of Encinitas Water Quality
Improvement Plan Strategies

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Appendix I. City of Encinitas Water Quality Improvement Plan Strategies

Water Quality Improvement Plan Strategies[1]	Where Implemented within Jurisdiction	Location in JRMP (Section or Appendix)	Strategy Type
Ultraviolet Bacteria Treatment Facility Operation	San Marcos HA: Cottonwood Creek Basin	Section 8	WQIP
Ultraviolet Bacteria Treatment Facility Upgrade Feasibility Study	San Marcos HA: Cottonwood Creek Basin	Section 8	WQIP
Low Impact Development Retrofit Program	San Marcos HA: Cottonwood Creek Basin	Retrofit & Rehabilitation Program (Appendix E)	WQIP
Evaluate Sanitary Sewer Maintenance and Overflow Prevention	San Marcos HA: Cottonwood Creek Basin	Section 8	WQIP
Homeowners Association and Property Manager Outreach Program	San Marcos HA: Cottonwood Creek Basin	Section 10	WQIP
Plastic Bag Ban	Citywide	Section 6	WQIP
Increased Inspection Frequency for Select Commercial Sources / Focused Inspections	San Marcos HA: 2nd Street Sub-Basin	Section 6	WQIP
San Elijo Lagoon Restoration	Escondido Creek HA: Cardiff Channel & San Elijo JPA Outfall Areas	Section 10	WQIP
San Elijo JPA Dry Weather Diversion	Escondido Creek HA: Cardiff Channel & San Elijo JPA Outfall Areas	Section 8	WQIP
Dry Weather Flow Abatement Program	Escondido Creek HA: Cardiff Channel	Section 3	WQIP
Administrative BMPs[2, 3]	Citywide	Section 3 - 10	JRMP
Outfall Monitoring	Citywide	Section 3	JRMP
Investigations[2]	Citywide	Section 3	JRMP
Development and Redevelopment Requirements[2]	Citywide	Section 4	JRMP
Construction Site Inspections[2]	Citywide	Section 5	JRMP
Existing Development Facilities, Areas and Activities Inspections[2]	Citywide	Section 6, 7, 9	JRMP
MS4 Inspections/Cleaning[2]	Citywide	Section 8	JRMP
Street Sweeping[2]	Citywide	Section 8	JRMP
General Education and Outreach[2]	Citywide	Section 6, 9, 10	JRMP
Employee Training[2]/Focused Training	Citywide	Section 10	JRMP
Enforcement[2]	Citywide	Enforcement Response Plan (Appendix B)	JRMP
Partnership Program(s) [2]	Citywide	Section 10	JRMP
Program for Retrofitting Areas of Existing Development[2]	Citywide	Retrofit & Rehabilitation Program (Appendix E)	JRMP
Program for Stream, Channel and/or Habitat Restoration in Areas of Existing Development[2]	Citywide	Retrofit & Rehabilitation Program (Appendix E)	JRMP

Notes

-"JRMP" strategies are day-to-day operational strategies. "WQIP" strategies are additional actions beyond the JRMP strategies.

1. Additional details on these strategies are provided in the Carlsbad WMA WQIP.

2. General descriptions provided in Appendix B of the Carlsbad WMA WQIP.

3. Examples of Administrative BMPs include: Program development, maintaining and prioritizing inventories, updating education materials, etc.

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