COUNTY OF RIVERSIDE
SANTA MARGARITA RIVER REGION

JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
ORDER NO. R9-2010-0016

JUNE 30, 2014

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Acronyms and Abbreviations

ABOP	Anti-freeze, Batteries, Oil, and Latex Paint
ASB	Area of Special Biological Significance
AST	Active/Passive Sediment Treatment
BMP	Best Management Practice
Cal-OES	California Office of Emergency Services
Cal-EPA	California Environmental Protection Agency
CAP	Compliance Assistance Program
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CESQG	Conditionally Exempt Small Quantity Generator
CIA	Common Interest Area
CIEP	Compliance Inspection and Enforcement Program
CMP	Consolidated Monitoring Program
Co-permittees	District, County, and Cities of Murrieta, Temecula and Wildomar
Construction General Permit	NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
DEH	County Department of Environmental Health
District	Riverside County Flood Control and Water Conservation District
ESA	Environmentally Sensitive Area
FPPP	Facility Pollution Prevention Plan
HHW	Household Hazardous Waste
HMP	Hydromodification Management Plan
HOA	Homeowners Association
IC/ID	Illicit Connection/Illegal Discharge
IDDE	Illicit Discharge Detection and Elimination
Industrial General Permit	NPDES General Permit for Stormwater Discharges Associated with Industrial Activities
IPM	Integrated Pest Management
JRMP	Jurisdictional Runoff Management Plan
LID	Low Impact Development
MEP	Maximum Extent Practicable
MHP	Mobile Home Park
MSHCP	Multi Species Habitat Conservation Plan
MS4	Municipal Separate Storm Sewer System
NAL	Non-Stormwater Dry Weather Action Levels
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
O&M	Operation & Maintenance
SAL	Stormwater Action Level
San Diego Regional Board	San Diego Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SIC	Standard Industrial Classification
SMARTS	Stormwater Multiple Application and Report Tracking System
SMR	Santa Margarita Region

State Board	State Water Resources Control Board
SWPPP	Stormwater Pollution Prevention Plan
SWQPA	State Water Quality Protected Area
TMDL	Total Maximum Daily Load
WDID	Waste Discharge Identification
WQMP	Water Quality Management Plan for the Santa Margarita Region of Riverside County
WQMP Projects	Priority Development Projects with a final approved Project-Specific WQMP
WLA	Waste Load Allocation
2010 SMR MS4 Permit	Order No. R9-2010-0016

1.0 EXECUTIVE SUMMARY

This Jurisdictional Runoff Management Program (JRMP) describes the specific Runoff management programs and activities implemented to comply with the requirements of the Municipal Separate Storm Sewer System (MS4) Permit, Order No. R9-2010-0016, issued to the Riverside County Co-permittees in the Santa Margarita Region (SMR) by the San Diego Regional Water Quality Control Board (San Diego Regional Board) on November 10, 2010 (2010 SMR MS4 Permit). This JRMP is the principal document that comprehensively translates the MS4 Permit requirements into actions that the County of Riverside is implementing to comply with the 2010 SMR MS4 Permit. This JRMP will be reviewed at least annually to incorporate new and revised compliance programs specified in the 2010 SMR MS4 Permit.

This JRMP is based on a SMR-wide template developed jointly by the Co-permittees to promote consistency in the compliance programs implemented in the SMR. The JRMP has been customized to describe the County of Riverside's compliance procedures and requirements. The terms and acronyms used in this JRMP are defined in the glossary (Appendix A) and defined terms are capitalized.

2.0 INTRODUCTION TO THE COUNTY OF RIVERSIDE JRMP

2.1 Program Overview

The Clean Water Act of 1987 (CWA) established requirements for discharges of Urban Runoff from MS4s under the National Pollution Discharge Elimination System (NPDES) program. The 2010 SMR MS4 Permit regulates discharges of Runoff from MS4 facilities in the SMR. The Co-permittees covered under the MS4 Permit are the County of Riverside (County), Riverside County Flood Control and Water Conservation District (District) and the cities of Murrieta, Temecula, and Wildomar within the SMR. Each Co-permittee is responsible for compliance with the 2010 SMR MS4 Permit.

This JRMP is a programmatic document developed by the County to describe its specific management of the Runoff management program as well as ordinances, plans, policies and procedures necessary to manage Runoff and comply with the 2010 SMR MS4 Permit. This JRMP comprehensively translates the 2010 SMR MS4 Permit requirements into programs and Implementation Plans for the County.

2.2 Description of County of Riverside MS4 Facilities

The major MS4 facilities owned and operated by the County and regulated under the 2010 SMR MS4 Permit consist of underground storm drains, open channels, retention basins, detention basins, roadside ditches and more.. Each year, the County updates a map of the County MS4 facilities with modifications and additions to its major MS4 facilities in the JRMP Annual Report.

Within the jurisdictional boundaries of the County, additional MS4 facilities and discharges may be present that are not owned by the County. These may include MS4 facilities owned/operated by the District, and other non-MS4 Co-permittee entities, including federal, state, tribal, and private entities and discharges otherwise permitted by the San Diego Regional Board or the State Water Resources Control Board (State Board).

Table 2-1 lists the Receiving Waters that may receive discharges from the County's MS4 facilities, and the associated 303(d) listings. It should be noted that the County is not alone responsible for potential or actual water quality problems or 303(d) listings within any of the identified Receiving Waters; however the programs identified within this JRMP are designed to reduce the discharge of Stormwater Pollutants from the MS4 to the Maximum Extent Practicable (MEP), effectively prohibit Non-Stormwater discharges, and prevent Runoff discharges from the County's MS4 from causing or contributing to a violation of Water Quality Standards.

Table 2-1: 303(d) Listed Receiving Waters
Within and Downstream of the County of Riverside's Jurisdiction

Receiving Water	303(d) Listings
Murrieta Creek	Pesticides, Metals/Metalloids, Nutrients
Santa Gertrudis Creek	Pesticides, Metals/Metalloids, Nutrients, Pathogens
Upper Santa Margarita River	Nutrients, Pathogens, Toxicity
Temecula Creek	Metals/Metalloids, Nutrients, Salinity Toxicity
Warm Springs	Pesticides, Pathogens, Metals/Metalloids, Nutrients
Santa Margarita Lagoon (Camp Pendleton)	Nutrients

3.0 PROGRAM MANAGEMENT

3.1 Departmental Responsibilities

There are multiple County departments with responsibility to implement elements of this JRMP and to meet the requirements of the 2010 MS4 Permit. An organizational chart depicting the departments involved in implementing the NPDES program is provided in Appendix B. Additionally, key personnel (position title) with implementation responsibilities, and a matrix showing each JRMP element, the departments with implementation responsibilities, the specific responsibilities of each department/organizational unit, and the key personnel by position title are also provided in Appendix B.

3.2 Cooperative Activities

3.2.1 Implementation Agreement

The County participates in a cooperative Implementation Agreement with the following Co-permittees within the SMR.

- Riverside County Flood Control and Water Conservation District (Principal Permittee)
- City of Murrieta
- City of Temecula
- City of Wildomar

Through this agreement, the County and the other listed Co-permittees contribute funds to implement various aspects of the 2010 SMR MS4 Permit requirements on a region-wide basis. This approach allows for more consistent compliance with many elements of the 2010 SMR MS4 Permit, implementation of programs, increases cost effectiveness, and provides consistent messages for the public. The regional programs that the County jointly funds and implements regionally through this Implementation Agreement include:

- Joint development of compliance documents required by the 2010 SMR MS4 Permit among the Co-permittees
- Funding of the additional responsibilities of the District as Principal Co-permittee (Described in Section M of the 2010 SMR MS4 Permit)
- Regional public education activities
- Regional training programs for Co-permittee staff
- Water quality monitoring as described in the 2010 SMR MS4 Permit Attachment E, Sections II.A through II.F, exclusive of source identification efforts that may be required of the County based on an exceedance of an Action Level at a County owned Major MS4 Outfall.
- Joint support for other Regional Programs, including

- Household Hazardous Waste and Antifreeze, Batteries, Oil and Latex Paint (ABOP) collection programs
- Participation in the California Stormwater Quality Association (CASQA)

3.2.2 California Department of Fish and Wildlife

The Riverside County Transportation Department (Transportation Department) has entered into a "Long Term Routine Maintenance Lake and Streambed Alteration Agreement" with the California Department of Fish and Wildlife (CDFW) for the operation and maintenance of Transportation Department facilities and related drainage improvements within the unincorporated Riverside County. The rights and responsibilities of that agreement are described in Section 5, Municipal Areas and Activities.

Major modifications to the interagency agreements and changes in the cooperative activities are described in Annual Reporting to the Regional Board.

3.3 Fiscal Analysis {H.}

The County makes capital expenditures and incurs operation and maintenance (O&M) costs to implement this JRMP and to meet the requirements of the 2010 MS4 Permit. Each year the capital expenditures and O&M costs incurred during the reporting period and the budgeted capital expenditures and O&M costs planned for the next fiscal year are provided in the Annual Report. Table 3-1 below describes the sources of funding that the County has available to fund these programs.

Table 3-1. Fiscal Resources

Program Element	Funding Source(s)
Program Management and Reporting	General Fund
Annual Fee for MS4 NPDES Permit	General Fund
Implementation Agreement Shared Cost	General Fund
Elimination of Illicit Connections & Illegal Discharges	General Fund, fines and penalties
Municipal Facilities and Activities	General Fund, TUMF, DIF, Gas Tax
Development Planning	DIF
Private Development Construction (Inspections)	DIF
Industrial and Commercial Sources (Inspections)	Permit Fees
Retrofit Program	Grants
Public Education & Outreach	General Fund

TUMF: Transportation Uniform Mitigation Fee
DIF: Developer Impact Fee

Table 3-2 below describes limitations on how the County can use the various sources of funding.

Table 3-2. Restrictions on Use of Funding Sources

Source of Funds	Restrictions on Use (if applicable)
County Service Area (CSA) 152	Street Sweeping and BMP maintenance
General Fund	Portion used for NPDES implementation and administrative overhead
Fees (Permits)	Inspections
Other: Development Impact Fees	Inspection, Plan Review
Other: TUMF	Transportation

3.4 Legal Authority {E.}

A certification of the County's adequate legal Authority to comply with 40 CFR 122.26(d)(2)(I)(A-F) and the 2010 MS4 Permit is provided in Appendix B. Table 3-3 lists the ordinances that grant the Authority to implement the requirements of the 2010 MS4 Permit and this JRMP. The Runoff Management and Discharge Controls addressed by these ordinances provide the Authority to:

- Control the contribution of Pollutants in discharges of Runoff associated with industrial and construction activity to its MS4 facilities and control the quality of Runoff from Industrial and Construction Sites. This requirement applies both to Industrial and Construction Sites which have coverage under the statewide Industrial or Construction General Stormwater Permits, as well as to those sites which do not. Grading ordinances must be updated and enforced as necessary to comply with this Order;
- Prohibit all identified Illicit Discharges not otherwise allowed pursuant to Section B.2 of the 2010 SMR MS4 Permit;
- Prohibit and eliminate Illicit Connections to the MS4;
- Control the discharge of spills, dumping, or disposal of materials other than Stormwater into the MS4;
- Require compliance with conditions in County's ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 facilities accountable for their contributions of Pollutants and flows);
- Utilize enforcement mechanisms to require compliance with County Stormwater Ordinances, permits, contracts, or orders;
- Control the contribution of Pollutants from one portion of the MS4 to another through interagency agreements with other Co-permittees;
- Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with the Stormwater Ordinance and permits and with the 2010 SMR MS4 Permit, including the prohibition on Illicit Discharges to the MS4. The County has authority to enter,

monitor, inspect, take measurements, review and copy records, and require regular reports from Industrial Facilities discharging into its MS4 facilities, including Construction Sites;

- Require the use of BMPs to prevent or reduce the discharge of Pollutants into the MS4 from Stormwater to the MEP;
- Require documentation on the effectiveness of BMPs implemented to reduce the discharge of Stormwater Pollutants to the MS4 to the MEP; and

Implement and enforce its ordinances within CIA/HOA areas and mobile home parks.
A full list of the County's ordinances that provide this legal authority can be viewed at http://rivcocob.com/ords.htm

Table 3-3

Table 3-3Ordinance No.	Ordinance Short Title	Provision(s) of Ordinance and Description of Authorities Granted	Availability of Ordinance (Online URL or front counter)	Date of last update/status (Pending, draft, or adopted)
754	Stormwater/Urban Runoff Management and Discharge Controls	Visit website for a complete breakdown of the Ordinance and the Description of Authorities Granted	http://rivcocob.com/ords.htm	12/07/2006
427	Regulating the Land Application of Manure	Visit website for a complete breakdown of the Ordinance and the Description of Authorities Granted	http://rivcocob.com/ords.htm	05/03/2001
650	Regulating the Discharge of Sewage in Unincorporated Areas	Visit website for a complete breakdown of the Ordinance and the Description of Authorities Granted	http://rivcocob.com/ords.htm	06/15/2006
689	Prohibiting the Unlawful Dumping of Trash	Visit website for a complete breakdown of the Ordinance and the Description of Authorities Granted	http://rivcocob.com/ords.htm	12/29/1994
859	Establishing Water-efficient Landscape Requirements	Visit website for a complete breakdown of the Ordinance and the Description of Authorities Granted	http://rivcocob.com/ords.htm	10/20/2009

3.5 Enforcement/Compliance Strategy

As described within this JRMP, the County implements a variety of programs and has established ordinances that are designed to meet the goals of the 2010 SMR MS4 Permit, however the County must necessarily rely on the actions or inactions of independent third parties such as residents and businesses for the protection of water quality. Accordingly, consistent with the 2010 SMR MS4 Permit and pursuant to the legal authorities described in Section 3.4, compliance with the County's ordinances is mandated through implementation of various enforcement mechanisms.

This section describes a program-wide Enforcement / Compliance Strategy that serves as guidance to the various County departments in prioritizing and conducting enforcement activities that are consistent with

the 2010 MS4 Permit and appropriate to the severity of the violation. Due to the unique nature of mobile businesses, specific enforcement procedures for Mobile Businesses are described in Section 3.5.3.

3.5.1 Prioritize Violations

The County's ordinances cover a wide range of prohibited activities with varying magnitudes of potential impact on the Beneficial Uses of Receiving Waters. For example, discharges of either Hazardous Materials (e.g., solvents and pesticides) or Non-Hazardous Materials (e.g., food Wastes, trash, and debris) into the MS4 are violations of Stormwater Ordinance subject to enforcement. Similarly, an accidental spill into a catch basin inlet and an intentional discharge from an Illicit Connection are both violations. Prioritizing violations is important in focusing the County's finite resources on those violations that may have the greatest potential impact on the quality of Receiving Waters.

Prioritizing violations is based on many factors, including the experience and professional judgment of the County's staff. The factors that are commonly considered in prioritizing violations of the County's Stormwater Ordinance and Erosion Control Ordinance are presented in Table 3-4.

Table 3-4. Prioritization Factors for Violations

Prioritization Factor	Description
Characteristics of the Potential Pollutant	Based on chemical characteristics and potential to impact Beneficial Uses of Receiving Waters. The more toxic, hazardous, or detrimental to the Beneficial Uses of the Receiving Waters a Pollutant, is the higher priority the discharge.
Sensitivity of the Affected Receiving Waters	The sensitivity of the affected Receiving Waters should be considered directly proportional to the priority of the violation because, for example, a more sensitive Receiving Water may suffer severe adverse effects from the discharge of a particular Pollutant whereas a less sensitive Receiving Water may suffer no adverse effects from the same Pollutant discharge. It is also important to consider that a Receiving Water may be highly sensitive to one potential Pollutant discharge while, at the same time, completely insensitive to another potential Pollutant. Examples of Receiving Waters that may be particularly sensitive include those with municipal supply or wildlife habitat designated Beneficial Uses.
Proximity of Receiving Waters	The closer a Receiving Water is to the discharge, the less chance there is for dispersion, dilution, or degradation of the potential Pollutant. Therefore, the closer the discharge is to Receiving Waters, the higher priority of the violation.
Magnitude of Discharge (volume and mass)	A larger Illegal Discharge should be of a higher priority than a smaller Illegal Discharge because as the magnitude of the Pollutant discharge increases, the extent of impact of the discharge on the environment increases as well.
Responsiveness of the Discharger in taking corrective actions	A discharger who is responsive and implements a good faith effort to correct a violation is more likely to minimize adverse impacts to surface water quality than a discharger who takes no action to correct a violation. Therefore, the priority of a violation should decrease as the responsiveness of the discharger increases.
Intent of the Discharger	Is the violation accidental or the result of an accident or a deliberate attempt to circumvent regulations?
Frequency of the Violation	Violations of local Stormwater Ordinances and erosion control ordinances that are continuous or reoccurring should be of a higher priority than isolated occurrences of violations. The more frequent a violation, the more likely it is that the discharge will impact surface water quality.
Previous History of Non-Compliance of the Responsible Party	A poor history of non-compliance of a discharger should result in a higher prioritization of subsequent violations as compared to a discharger with a good history of compliance because a history of non-compliance is evidence of a discharger's lack of concern for complying with local Stormwater and Erosion Control ordinances.

Table 3-5 provides general guidance for categorizing the relative severity of violations based upon the factors and/or circumstances associated with a violation. Because violations may not clearly fall into any single priority level described in Table 3-5, the priority assigned by County staff to particular violations may involve a subjective weighting of various factors.

Table 3-5. Relative Severity of Violations

Factors Affecting the Severity of Violations	Severity Priority Level		
	High	Medium	Low
Pollutant characteristics	Hazardous Materials (e.g., pesticides and solvents)	Metals, nutrients, sediment, other non-Hazardous Materials	Trash and debris
Sensitivity of Receiving Waters	Drinking water source, wildlife refuge, Illegal Discharges containing Pollutants identified as Impairing the Receiving Water.	Recreational reservoir, riparian habitat	Dry, ephemeral stream
Proximity of Receiving Waters	Adjacent	Several hundred feet away	Several hundred yards away
Discharge magnitude	1000's gallons	100's gallons	10's gallons
Responsiveness of discharger	No action to contain or mitigate discharge	Reactive to control discharge when requested (i.e., cooperative)	Implements spill control plan at own initiative or shows good faith effort to respond
Intent of violation	Intentional	Discharge due to lack of controls or negligence	Implemented and maintained controls that failed (i.e., accident)
Frequency of violation	Continuous	Intermittent	Isolated incident
Previous history of discharger	Enforcement and cleanup historically resisted and more than one previous violation	Enforcement and cleanup performed when threatened and one or less previous violations	Enforcement and cleanup performed when requested and no previous violations

3.5.2 Select Appropriate Enforcement Actions

The County will emphasize and encourage voluntary compliance with its ordinances to the MEP. The enforcement/compliance response should be based on the severity of the violation in consideration of the factors in Table 3-5. The types of enforcement/compliance responses available, depending on the circumstances, and in typical order of increasing severity, are:

- Education and information,
- Verbal warning,
- Written warning,
- Notice of violation or noncompliance,
- Stop work order or cease and desist order,
- Civil citation or injunction,
- Bonding,
- Administrative fine,
- Referral to the Environmental Crimes Strike Force for criminal prosecution (infraction or misdemeanor) and,

Referral to the Regional Board for additional and expanded enforcement actions as identified in the Porter-Cologne Water Quality Act as amended.

3.5.2.1 Administrative Remedies

Education and Information, and Verbal and Written Warnings.

Education and information should be provided to dischargers as an element of each enforcement action. Verbal and written warnings may also be provided depending on the circumstances of the condition that is causing or threatening to cause a violation of the County's ordinances. However, unless the condition is an initial violation of the Stormwater Ordinance and consists of a low priority and severity violation, additional enforcement action may be appropriate.

Notice of Noncompliance.

The Notice of Noncompliance constitutes a basic request that the property owner or facility operator rectify the condition causing or threatening to cause noncompliance with the County's ordinances. The Notice of Noncompliance is generally issued when one or more of the following circumstances exist:

- The violation or threat is not significant and has been short in duration,
- The responsible party is cooperative and has indicated a willingness to remedy the conditions,
- The violation or threat is an isolated incident, and
- The violation or threat does not affect and will not harm human health or the environment.
- An actual condition of noncompliance exists, but the condition cannot be remedied within a relatively short period of time.
- The owner of the property or facility operator has indicated willingness to come into compliance by meeting milestones established in a reasonable schedule.

The violation does not pose an immediate threat to human health or the environment.

Stop Work Order or Cease and Desist Order.

The Stop Work Order or Cease and Desist Order are appropriate when the immediate action of the owner of property or operator of a facility is necessary to stop an existing discharge, which is occurring in violation of an ordinance. The Cease and Desist Order may also be appropriately issued as a first step in ordering the removal of nuisance conditions, which threaten to cause an unauthorized discharge of Pollutants if exposed to rain or surface water Runoff. The Cease and Desist Order is generally issued when one or more of the following circumstances exist:

- The violation or threat is immediate in nature and may require an emergency spill response or immediate nuisance abatement if left unattended.
- The violation or threat exhibits a potential situation that may harm human health or the environment.
- Contacts with the property owner or facility operator indicate that further Authority of the Co-permittee may need to be demonstrated before remedial action is forthcoming.

Prior Notices of Noncompliance have not obtained a favorable response.
Prior to issuance of any Cease and Desist Order or commencement of other civil or criminal enforcement action against any person, the County should deliver to the person a written Notice of Noncompliance,

which states the act or acts constituting the violation and directs that the violation be corrected. The Notice of Noncompliance should provide the person with a reasonable time period to correct the violation before further proceedings are brought against the person. However, a Notice of Noncompliance should not be the first enforcement method used if egregious or unusual circumstances indicate that a stronger enforcement method is appropriate.

3.5.2.2 Criminal Enforcement

Misdemeanors.

Criminal enforcement is appropriate when evidence of noncompliance indicates that the violator of the Ordinance has acted willfully with intent to cause, allow continuing or concealing a discharge in violation of the Ordinance.

Infractions.

At the discretion of the County's attorneys, misdemeanor acts may be treated as infractions. Factors that the attorney may use in determining whether the misdemeanor is more appropriately treated as an infraction may include the:

- Duration of the violation or threatened violation.
- Compliance history of the person, business or entity.
- Effort made to comply with an established compliance schedule.
- Existence of prior enforcement actions.

Actual harm to human health or the environment from the violation.

Issuance of Citation.

Where criminal enforcement is indicated, the inspector will issue a citation including the:

- Name and address of the violator,
- Provisions of the ordinance violated, and

Time and place of required appearance before a magistrate.

The offending party must sign the citation thereby promising to appear. If the cited party refuses to sign the citation, the inspector may cause the arrest of the discharger, or may refer the matter to the municipal attorney for issuance of a warrant for arrest. Inspectors should be aware that cited parties have the right to demand the immediate review by a magistrate, and such a request must be granted. Inspectors should respond to such a request by referring the request to the County of Riverside's Sheriff Department.

Referral to Environmental Crimes Strike Force

The Riverside County Environmental Crimes Strike Force is a committee designed to pursue enforcement of serious environmental crimes. Referral of a case to the Environmental Crimes Strike Force would occur after repeated attempts at obtaining compliance have failed. The contact for the Environmental Crimes Task Force is Daniel Workman, Senior Investigator, Riverside County District Attorney Office (951.955.0755 dworkman@rivcodda.org). If Mr. Workman is not available, an Environmental Crimes Investigator can be contacted at 951.955.5430.

Referral to the Regional Water Quality Control Board

In instances where all County enforcement actions have been exhausted and non-compliance still exists, the County will make referrals to the Regional Board for additional and expanded enforcement actions as identified in the Porter-Cologne Water Quality Act, as amended.

3.5.2.3 Appropriate Enforcement/Compliance Responses

Table 3-6 provides an example of appropriate enforcement responses that correspond to the severity of a violation as determined from Table 3-5. Recognizing the unique characteristics of mobile businesses, enforcement actions against such businesses will typically follow the procedure described in Section 3.5.3.

Table 3-6. Enforcement Responses for Violations Where Overlapping Authority Exists

Incident Severity Priority Level	Appropriate Enforcement Responses (1)	Lead Enforcement Agency	
		County	Regional Board Support
Regional Board Intervention Requested	Referral to Regional Board for extreme circumstances requiring Regional Board intervention	X (2)	X (2)
High	Referral to Environmental Crimes Strike Force	X	X
	Citation	X	X
	Infraction	X	X
	Misdemeanor	X	X
Medium	Infraction	X	X
	Misdemeanor	X	X
	Stop work order or cease and desist order	X	
	Notice of non-compliance	X	
Low	Notice of non-compliance	X	
	Written warning	X	
	Verbal warning	X	
	Education and information	X	

(1) Education and information should be incorporated into all enforcement responses.

(2) Regional Board Lead Agency, with support from County

The County takes the lead in initiating enforcement actions related to violations of its Stormwater Ordinance within its jurisdiction, however the Regional Board may be asked to provide support in enforcement actions related to incidents that are or escalate to a high-priority status. State law limits the Authority of the County to assess significant fines and penalties. However, the Regional Board has substantial abilities to assess fines and penalties under state and federal law that can be used to augment local enforcement where superior regulatory Authority and the ability to assess fines and penalties would be beneficial. Additionally, the Regional Board will be responsible for performing all enforcement actions related to compliance with the Statewide General Permits.

3.5.3 Enforcement Strategy for Violations Originating from Mobile Businesses {F.3.b.(3)(ii)}

Predominantly, violations by Mobile Businesses are reported by the public or by County field personnel. Appropriate field personnel are also trained to identify potential Non-Stormwater Discharges and other discharge of Pollutants from Mobile Businesses during the course of their normal duties. Violations originating from Mobile Businesses may be received by the County in the form of complaint calls from the public. For example, the District currently operates, on behalf of the County, a centralized **24-hour hotline (800-506-2556)** that may be used by the public to, among other things, report illegal discharges into public streets, the MS4 and other waterbodies. These calls can be received in English or Spanish and are routed to the appropriate Co-permittee departments or contacts. The County also implements Wet and Dry Weather monitoring programs that may indicate the presence of Non-Stormwater Discharges and other discharges of Pollutants to the MS4.

When put on notice by staff or a third party of a potential violation of County ordinances originating from a Mobile Business that is not already being responded to by another responsible agency (e.g., other Co-permittee), the County investigates and take the following actions, as applicable:

- If the reported incident is outside of the County's jurisdiction, referral to the appropriate agency and/or the Regional Board will be made;
- Identify the name and contact information for the Mobile Business;
- The County responds to reported violations originating from a Mobile Business within its jurisdiction within two (2) business days of determining the name and contact information for the Mobile Business;
- Inspections performed in response to a report are documented using the standard complaint reporting forms; and

When appropriate, samples of Non-Stormwater Discharges originating from Mobile Businesses that enter the MS4 may be collected.
As described in Section 8.5, investigations of Mobile Businesses are performed by the County in response to reports of potential violations originating from Mobile Businesses received from the public, staff and/or other agencies. The County has adopted ordinances prohibiting such discharges and established programs to enforce them.

Where violations that originate from Mobile Businesses are discovered, the County will take appropriate enforcement action. Recognizing the unique characteristics of Mobile Businesses, the typical escalating enforcement protocol includes the following; however steps may be adjusted as appropriate to the nature of the violation:

Initial Violation

1) County staff provides educational materials to the Mobile Business operator informing them of the minimum Source Control and Pollution Prevention BMPs they must implement (refer to Section 8.5.1). This includes a review of applicable BMP fact sheets, and letting the operator know the proper procedures for disposal of Pollutants and Non-Stormwater discharges originating from Mobile Businesses.

2) If applicable, the County will require the Mobile Business owner to obtain a local business license.

3) The County may give notice that the Mobile Business operator shall cease any activity which causes Non-Stormwater Discharge to the MS4 until they implement the minimum BMPs (see below for list of recommended BMPs).

4) If discharge is observed at time of inspection, County staff shall require the Mobile Business operator to immediately contain the discharge and perform any necessary remediation or cleanup from the MS4.

Repeat Violations

For repeat violations by the same operator, the County follows the remainder of the Enforcement Compliance strategy in Section 3.5 which may include, as appropriate, issuing written warnings, Notices of Violation, citations, or referrals to the Regional Board.

3.5.4 Coordination of Enforcement/Compliance Activities

Coordination with other Co-permittees and government agencies including the Regional Board is essential for successful implementation of an enforcement/compliance program. The entire MS4 is not controlled by a single federal, tribal, state, local or private entity, nor does any single entity have Authority to take enforcement action for violations occurring outside of its jurisdiction. Further, other governmental agencies may have additional enforcement authorities that are appropriate to the situation. The County coordinates its enforcement activities, as practicable, with the appropriate Co-permittees, government agencies and tribes in accordance with the following guidelines:

3.5.4.1 Identify Lead Agency

- Enforcement will be coordinated when multiple agencies have jurisdiction and an agency has not been able to obtain compliance by the discharger.
- Unless otherwise agreed to in writing, the lead enforcement agency role will be assigned on the basis of the origin of the discharge.
- The Regional Board may be asked to be the lead enforcement agency for higher priority Illegal Discharges in areas of overlapping Authority, such as for discharges to Receiving Waters, and will be the lead enforcement agency for all enforcement actions related to compliance with the State Industrial or Construction General Stormwater Permits.
- Investigation and other relevant information will be shared between the participating agencies in a timely fashion.

3.5.4.2 Lead Enforcement Agency Responsibilities.

The lead enforcement agency will assume the following responsibilities:

- Coordinating activities and assigning responsibilities (e.g., investigations, site visits, etc.) among participating agencies;
- Maintaining communication and information exchange among participating agencies;

- Ensuring that follow-up actions are implemented; and

Documentation and reporting as required.

3.5.4.3 Coordination with the Regional Board

Under the Porter-Cologne Water Quality Act, the State has provided the Regional Boards with overriding Authority to manage water quality and administer compliance with state and federal water quality law. This Authority includes the ability to impose more significant fines and other sanctions than the Co-permittees. With this Authority, the Regional Board may be more effective in obtaining the cooperation and compliance from those who violate Stormwater regulations. The Regional Board is notified by the County when findings of potential non-compliance with the State's Industrial and Construction General Stormwater Permits have been identified or when the County has been unable to obtain the compliance of a party responsible for violating its Stormwater Ordinance or erosion control ordinance. The list of contact names maintained by the District identifies the appropriate Regional Board staff to contact to initiate coordination of enforcement activities or to notify the Regional Board of potential findings of non-compliance. Where appropriate, notifications of potential non-compliance should be forwarded to the designated Regional Board contact person by the stormwater compliance coordinator.

3.5.4.4 Coordination with Other Agencies

In addition to the Regional Board, the County may also find it useful or necessary to coordinate or report findings of potential non-compliance to other government agencies with jurisdiction over water quality issues including the California Department of Fish and Wildlife and the United States Fish and Wildlife Service. The list of contact names maintained by the District identifies the appropriate staff at these agencies to contact to initiate coordination of enforcement activities or to notify of potential findings of non-compliance. In addition, the County may cooperate with other Copermittees in the Santa Margarita Region in developing and implementing programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education.

3.5.5 Recordkeeping

Enforcement actions taken, and tools such as citations or tickets utilized, and the discharger's return to compliance are tracked in the databases described in the JRMP. Information to be retained by the County regarding their enforcement program includes:

- Documentation of staff training;
- Inspection notes or reports;
- Warning letters, violation notices, etc.;
- Documentation of follow-up actions;
- Contact reports from meetings or conversations with violators, other Co-permittees, or other agencies; and
- Copies of notifications of potential non-compliance.

3.6 Receiving Water Limitations {A.3.}

The 2010 SMR MS4 Permit states that discharges from County MS4 that have been found to cause or contribute to the violation of water quality standards (designated beneficial uses, water quality objectives developed to protect beneficial uses, and the State policy with respect to maintaining high quality waters) are prohibited. The County complies with this prohibition through timely implementation of control measures and other actions as described in this JRMP to reduce pollutants in stormwater discharges in accordance with the 2010 MS4 Permit.

If it is determined that discharges from County MS4 are causing or contributing to an exceedance of Water Quality Standards that persist, notwithstanding implementation of the control measures specified in the JRMP, the County will implement the following procedure:

Notification

If the County determines that discharges from its MS4 are causing or contributing to an exceedance within a receiving water of an applicable Receiving Water Quality Standard, within thirty (30) working days, the County's Code Enforcement Program Manager/NPDES Coordinator or the County's NPDES Program Administrator will provide oral or e-mail notification to the Executive Officer, identifying the pertinent information and data supporting the determination, and commit to submitting a full report in accordance with the reporting procedures below.

If the County's NPDES Program Administrator is notified by the Executive Officer of a determination by the Regional Board that discharges from the County's MS4 are causing or contributing to an exceedance within a receiving water of an applicable Receiving Water Quality Standard, within ten (10) working days the County's NPDES Program Administrator will via e-mail acknowledge such notification, and formally request any pertinent supporting information and data not included in the original notification. Following receipt and validation of all information supporting such a determination, the County will commit to providing a full report in accordance with the reporting procedures below.

Reporting

If the exceedance documented pursuant to the notification above is solely due to discharges to the MS4 from activities or areas outside the County's jurisdiction or control, within ten (10) working days of becoming aware of the situation, the County will provide documentation of these discharges to the Executive Officer. Subsequently, the County will document the situation within the Annual Report.

Otherwise, following the notifications above the County will, within the annual report covering the date of the notification (unless the Executive Officer directs an earlier submittal), provide a report with:

1) A description of the BMPs that are currently being implemented through the JRMP and any additional BMPs that will be implemented to prevent or reduce those Pollutants that are causing or contributing to the exceedance of the applicable Receiving Water Quality Standards. The report may be incorporated in the Annual Report unless the San Diego Regional Board directs an earlier submittal; and

2) An implementation schedule for any new/revised BMPs. If the Executive Officer directs any modifications to the report, within thirty (30) days, the County will submit a revised report.

Update Compliance Programs

Within thirty (30) days following approval by the Executive Officer of the report described above, the County will revise the applicable sections of this JRMP and the monitoring program, to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required. The County will implement the revised JRMP and monitoring program in accordance with the approved schedule for implementation of any new/revised BMPs

3.7 Program Reporting, Evaluation, and Revision {K.3}

The County implements the following Annual Reporting, program evaluation, and program revision requirements described in the 2010 SMR MS4 Permit.

3.7.1 Annual Reporting {K.3.a.}

Each year the County prepares a JRMP Annual Report summarizing the implementation of the jurisdictional activities described in the JRMP during the reporting period for submittal to the Regional Board. Each Annual Report must verify and document compliance with the 2010 SMR MS4 Permit. The County retains records in accordance with the Standard Provisions in Attachment B of the 2010 SMR MS4 Permit, available for review, that document compliance with each requirement of the Permit. The County submits the Annual Report including documentation of implementation of the compliance programs utilizing standardized reporting forms. The reporting forms will be amended as needed to facilitate changes in compliance programs or more accurate reporting of compliance programs.

3.7.2 Program Effectiveness Assessment and Reporting {J.}

The County regularly assesses its compliance programs described in the JRMP to identify improvements that will promote the reduction of Pollutants in Runoff to the MEP while also supporting the responsible management and allocation of the public resources available for implementation.

The strategy for assessing the effectiveness of the JRMP is described in Appendix B.

3.7.3 JRMP Revisions {F.}

As part of the Annual Reporting process, the County will review the JRMP to identify the need, if any, for revisions. The County may propose revisions to the JRMP under the following conditions:

- Where needed improvements are identified based on staff experience in implementing the JRMP;
- Upon completion of newly developed program elements;
- In response to Effectiveness Assessments as described in section 3.7.2;
- In response to persistent Action Level exceedances;
- In response to the BMP strategy identified in the Watershed Work plan (see section 3.8);
- As directed by the Executive Officer to reflect regional and watershed-specific requirements and/or Waste Load Allocations (WLAs) developed and approved pursuant to the Total Maximum Daily Load (TMDL) process for Impaired Waterbodies; and

- As directed by the Executive Officer where the JRMP must be revised in order to address exceedances of Receiving Water Limitations that have been determined to be contributed to or caused by Runoff.

3.8 Watershed Work Plan {G}

The County participates in the development and updating of a Watershed Water Quality Work plan (Watershed Work plan) that is designed to identify, prioritize, address and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed. This plan is available at: http://rcflood.org/NPDES/SantaMargaritaWS.aspx

4.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE){F.4.}

The County implements the following program to actively detect and eliminate Illicit Discharges and disposal into the MS4, in accordance with Provision F.4 of the 2010 SMR MS4 Permit.

4.1 Overview

4.1.1 Prohibited Discharges

The County, through its legal Authority (Section 3.4), enforcement mechanisms (Section 3.5), and various other programs summarized in Section 4.2 below, effectively prohibits all types of Non-Stormwater discharges into its MS4 facilities unless such discharge is authorized by a separate NPDES permit or specifically allowed under the 2010 SMR MS4 Permit (summarized in Section 4.1.2 below).

4.1.2 Conditionally Allowed Non-Stormwater Discharges {B.2.}

The County is not required to prohibit the following categories of non-stormwater discharges:

- Diverted stream flows;
- Rising ground waters;
- Uncontaminated groundwater infiltration (as defined in 40 CFR 35.2005 (20)) to MS4s;
- Uncontaminated pumped groundwater[1];
- Foundation drains[2];
- Springs;
- Water from crawl space pumps[3];
- Footing drains[4];
- Air conditioning condensation;
- Flows from riparian habitats and wetlands;
- Water line flushing[5& 6].

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[1] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[2] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[3] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[4] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[5] This exemption does not include fire suppression sprinkler system maintenance and testing discharges. Those discharges may be regulated under Section B.3 of the 2010 SMR MS4 Permit

[6] Requires enrollment under Order R9-2010-0003.

- Discharges from potable water sources not subject to NPDES No. CAG679001, other than water main breaks;
- Individual residential car washing;
- De-chlorinated swimming pool discharges;[7] and

Emergency firefighting flows (i.e. flows necessary for the protection of life or property).[8]

4.2 IC/ID Prevention {F.4.}

The programs described in Sections 5 through 9 of this JRMP are designed to prevent IC/IDs from occurring. Additionally, Section 11 of this JRMP describes the public education efforts implemented to ensure that the public is informed of these requirements. Below are some highlights of specific elements of the County's programs that help prevent IC/IDs.

4.2.1 Legal Authority {F.4.a.(1)}

As described in Section 3.4, the County maintains a Stormwater Ordinance prohibiting IC/IDs.

4.2.2 Connections to County of Riverside MS4 Facilities

The County's Transportation Department requires all proposed or detected third-party connections to its MS4 facilities to obtain an Encroachment Permit. Through this permit process, the County ensures that the connection is not designed to drain Illegal Discharges into the MS4.

4.2.3 Inspections {F.4.a.(2)}

The inspection programs implemented by the County described in Sections 5 through 9 of this JRMP provide an opportunity to identify Illicit Connections and for inspectors to work with the property owner to remedy problems that may potentially result in an Illegal Discharge. If routine inspections or Dry Weather monitoring indicate Illicit Connections or Illegal Discharges, they will be investigated and eliminated or permitted as described in Sections 4.3 and 4.4.

4.2.4 Maintain MS4 Map {F.4.b.}

An updated map of MS4 facilities owned by the County and District is maintained and provided to the Regional Board in the Annual JRMP report. The maps include all segments of the MS4 owned, operated, and maintained by the County and the District, as well as all known locations of inlets that discharge and/or collect Runoff into the MS4 facilities, all known locations of connections with other MS4s (e.g., Caltrans), and all known locations of all the outfalls that discharge Runoff to Receiving Waters from the County's MS4 facilities. The accuracy of the MS4 map has been confirmed during dry weather field screening and analytical monitoring and will be updated at least annually. The MS4 map including any GIS layers will be submitted annually with the updated JRMP. This map is useful in identifying and narrowing down potential source areas in response to an observed IC/ID or Action Level exceedance.

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[7] Excluding saline swimming pool discharges.

[8] Specifically excluding non-emergency firefighting flows, i.e. flows from controlled or practice blazes and maintenance activities, and building fire suppression system maintenance discharges, i.e. sprinkler line flushing.

4.2.5 Outfall Monitoring {F.4.d.}

The County and District conduct dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 facilities within its jurisdiction to detect IC/IDs as described in Section 13.

4.2.6 Waste Collection Programs

4.2.6.1 Household Hazardous Waste (HHW) Collection and Anti-freeze, Batteries, Oil, and Latex Paint (ABOP) Collection Programs

Through the Implementation Agreement (see Section 3.2) the County participates in the HHW and ABOP collection programs in conjunction with the Riverside County Waste Management Department. Mobile HHW collection events are held at sites in the SMR and are scheduled periodically on weekends. Through the Implementation Agreement, the District, on behalf of the County, also supports one permanent ABOP collection site in the SMR, which is located at:

Murrieta Maintenance Yard / Riverside County Transportation Department
25315 Jefferson Avenue, Murrieta, 92562

The site is open Saturdays from 9:00 a.m. until 2:00 p.m. with the exception of holiday weekends. Mobile and permanent site locations may vary over time. Details, site locations, maps and schedules of operation for both the HHW and ABOP collection events are available through the County of Riverside Department of Environmental Health (DEH) by calling 1-888-722-4234 or 951-358-5055 or through the internet at:

http://www.rivcowm.org/opencms/hhw/pdf/HHWEventFlyerPDFs/91709-MASTERHHWSchedule.pdf.

Along with materials collected at HHW and ABOP sites, cathode ray tubes can be taken to County landfills for recycling. Used motor oil for recycling may be taken to certified collection centers throughout Riverside County in addition to the ABOP sites.

4.2.6.2 Conditionally Exempt Small Quantity Generator (CESQG)

The CESQG Program is a Hazardous Waste pick-up disposal service for eligible businesses/non-profit organizations in Riverside County. This program provides an affordable way to legally dispose of limited quantities of Hazardous Waste. Businesses that generate 27 gallons or 220 pounds of Hazardous Waste or 2.2 pounds of extremely Hazardous Waste per month can participate in the CESQG program. Businesses are required to use a licensed hauler to manifest and transport their Hazardous Waste. The most common participants in the CESQG program are painters, print shops, auto shops, builders, churches, schools, non-profit groups and property managers. An appointment for pickup of Hazardous Waste or further information on the CESQG program can be obtained by calling 1-800-952-5566.

4.3 IC/ID Detection {F.4}

In the mid-1990s, the Riverside County Co-permittees conducted reconnaissance surveys to identify IC/IDs to the MS4s. The reconnaissance surveys were limited to underground storm drains of 36-inch diameter or larger and open channels and utilized videotaping. Each undocumented connection to the MS4 was traced to its origin. Although 200 undocumented connections to the underground MS4 facilities were found County-wide, none of the connections were determined to be Illicit Connections with regard

to the MS4 NPDES program. As underground facilities are difficult to access and the Co-permittees inspect the construction of new underground MS4 facilities to verify that no Illicit Connections are being made, it has been determined that additional inspections of the underground MS4 facilities are not warranted. However, the County conducts inspections of open channel MS4 facilities to identify Illicit Connections as an element of routine facility maintenance. Illicit Connections identified during these surveys are documented and removed where necessary in order to comply with the 2010 MS4 Permit.

Although the overall programs described in this JRMP are designed to help prevent IC/IDs into the MS4, the following summarizes the specific methods implemented by the County to detect and eliminate potential IC/IDs.

4.3.1 MS4 Facility Inspections {F.4.e}

During the regular maintenance as described in Section 5.3, MS4 facilities are inspected to identify potential Illicit Connections, and evidence of any Illegal Discharges. This is the most direct method to detect IC/IDs. Appropriate field personnel are trained to identify potential IC/IDs during the course of their normal duties. The County staff is familiar with the existing MS4 and the drainage patterns within its jurisdiction and can take steps to identify the source of what appears to be an IC/ID.

4.3.2 Public IC/ID Reports / Hotline {F.4.c}

Predominantly, Illegal Discharges are reported by the public or by County field personnel. Third-party notifications are a direct source of IC/ID information. The public is encouraged to call the Sheriff Department, Code Enforcement or Environmental Health to report observed spills or Illegal Discharges.

Additionally, as described in Section 11, the Riverside County Co-permittees maintain a Public Education and Outreach program that includes education regarding IC/IDs. Procedures to educate the public about Illegal Discharges and Pollution Prevention where problems are found are included in this program. The District operates, on behalf of the Co-permittees, a centralized 24-hour hotline (1-800-506-2556) that may be used by the public to, among other things, report Illegal Discharges from urban areas into public streets, the MS4 and other waterbodies. These calls can be received in English or Spanish and are routed to the appropriate County departments or contacts.

Upon receiving notification from staff or a third-party, the County staff follows the procedures identified in Section 4.4.

4.3.3 IC/ID: Construction Site Inspections {F.1.e.(6)(d)}

As described in Section 7, the County implements programs to track and verify that Construction Sites are complying with their ordinances. As part of that program, the County supplements the Illicit Discharge Detection and Elimination (IDDE) program by assuring that appropriate BMPs are being implemented to prevent Illegal Discharges, and that no Illicit Connections occur during the installation phase of new MS4 facilities. Illegal Connections are prohibited by the County and are initially verified during the plan check process. The County verifies conformance with the approved plans and conducts inspections at Construction Sites. A Stop Work Order is issued if an IC/ID is observed during an inspection, and where applicable County staff will follow the relevant procedures described below. The Stop Work Order will be retracted after the IC/ID has been removed or eliminated.

4.3.4 IC/ID: Industrial/Commercial Facility Inspections {F.3.b.(4)(vi)}

As described in Section 8, the County implements programs to track and verify that Industrial and Commercial Facilities are complying with the Stormwater Ordinance. These surveys list non-compliance issues that require additional attention, including IC/IDs. If IC/IDs are encountered however, the inspector directly contacts County Code Enforcement, which investigates.

4.3.5 Monitoring Activities {Attachment E, II.C.}

The County, in cooperation with the District, implements a Non-Stormwater Dry Weather Action Level (NAL) monitoring program at the Major Outfalls from its MS4 facilities. This monitoring program is intended, in part, to help identify MS4 Outfalls and sub-drainage areas within the County's jurisdiction that may have Illegal Discharges. The monitoring program is described in the Consolidated Monitoring Program (CMP) (http://rcflood.org/NPDES/Monitoring.aspx). Where an Action Level exceedance is detected at a Major Outfall, the Transportation Department conducts source identification efforts as described in Section 4.4.2. Depending upon the initial assessment, the Code Enforcement Department may become involved.

4.3.6 Non-Jurisdictional IC/IDs

Where Non-Jurisdictional IC/IDs are identified within the County's jurisdiction, the responsible party is notified of the Regional Board requirements and the Regional Board's Executive Officer is notified of the Non-Jurisdictional IC/ID.

4.4 IC/ID Response and Reporting {F.4.}

The 2010 SMR MS4 Permit and the Clean Water Act requires the Co-permittees to prohibit, consistent with the MEP standard, Illegal Discharges (including the discharge of spills, leaks, or dumping of any materials other than Stormwater and authorized Non-Stormwater) into the MS4.

The County implements the procedures described in Sections 4.4.1 through 4.4.5 to investigate and inspect portions of its MS4 that, based on the results of field screening, analytical monitoring, or other appropriate information, indicate a reasonable potential of containing IC/IDs or other sources of Pollutants in Non-Stormwater. After receiving a notification of a problem on the area-wide hotline, District staff notifies the appropriate NPDES Coordinator, County Code Enforcement or County Environmental Health Department about the problem. The Code Enforcement Inspector or Environmental Health department staff investigates the problem.

4.4.1 Initial Response Timeframe and Requirements

Based on the information reported, the Code Enforcement Inspector or Environmental Health staff will assess if the IC/ID is an Emergency Situation that poses an immediate threat to human health or the environment. Any sewage spill over 1,000 gallons or that could impact water contact recreation, any spill that could impact wildlife, any Hazardous Material spill where residents are evacuated, any spill of reportable quantities of Hazardous Waste (as defined by 40 CFR 117 and 40 CFR 302), or any other spill reportable to the California OES is classified as a threat to human health or the environment..

a. If the discharge is a threat to human health or the environment:
    i. Such discharges must be reported immediately by phone to the Cal-OES at 1-800-852-7550 and should also be reported to the Executive Officer of the Regional Board by telephone: 858-467-2952. If these reports to these agencies

have already been submitted by other parties, this reporting need not be repeated by the County.

ii. Investigation (if the source is not immediately known) and elimination activities (as described below) must occur immediately within 24 hours of being put on notice by staff or a third-party.

b. If there are obvious Illicit Discharges such as color, odor, or significant exceedances of Action Levels (>10x the Action level), investigation as described below must occur within one business day.

c. If Field Screening Data collected as part of the NAL Monitoring program (as described in Section 4.0 of Volume III of the CMP and Section 13.2 of the JRMP) exceeds Action Levels, the County in coordination with the District will either:
   i. Initiate an investigation (as described below) to identify the source of the discharge within two (2) business days of receiving the data, or
   ii. Document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation will be included in the JRMP Annual Report.

d. If Analytical Laboratory Results collected as part of the NAL Monitoring program (as described in Section 4.0 of Volume III of the CMP and Section 13.2 of the JRMP) exceeds Action Levels at a County or District outfall, the County or District will either:
   i. Initiate an investigation (as described below) to identify the source of the discharge within five (5) business days of receiving the data, or
   ii. Document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation will be included in the County's JRMP Annual Report.

e. Other reported potential Illicit Discharges that do not meet the criteria identified above will be responded to in a timely manner. Responses to such reports may be prioritized.

4.4.2 Investigation {F.4.e.}

The County takes action to eliminate all detected IC/IDs. The Code Enforcement or Environmental Health Department staff conduct investigations based on the data or reports received. The following investigative steps are taken by the County:

1. If there is no active discharge, standing water, or other evidence of recent discharges (stains) at the reported location, Outfall or NAL exceedance location, reconnaissance is complete at that location and observations are documented in the County's complaint database. If necessary the location may be marked for future additional follow-up.

2. If there are multiple active discharges at the reported location or outfall, staff will:
   a. Observe the flows for any odd odors or discoloration
   b. Take photographs of the discharge and the point of entry to MS4 (if known)

c. Attempt to trace the flow/flows to its origin

3. If there is an active discharge or evidence of recent Dry Weather flow at the reported location or Outfall, staff will:
    a. Take photographs of the discharge and the point of entry to MS4 (if known)
    b. Attempt to trace the flow/flows to its origin
    c. Collect the following field parameters – pH, temperature, and specific conductivity.
    d. If the field parameters exceed follow-up criteria identified in the CMP, or if there is other visible evidence of an Illegal Discharge (e.g., stains), a continued investigation will be necessary, see Step 4.

4. Where the initial investigation identified in Step 3 indicated a potential Illegal Discharge, the County will perform a source investigation as follows:

    a. If active discharge with flow
        - Trace the source of the discharge as far upstream as possible.
        - Additional field measurements and/or lab analyses may be performed and documented (as outlined above) where there is no other evidence of the IC/ID source.
    b. If no active discharge but evidence of a recent IC/ID is present at time of investigation, trace the source of the discharge as far upstream as possible.

4.4.3 Elimination {F.4.f}

1. If the source is not identified
    a. Attempt to narrow down potential source areas, and make note in the investigation file.
    b. Where appropriate, public education material in area of IC/ID or complaint may be provided.
    c. Location is marked for future follow-up where appropriate. Follow-up visit(s) will confirm if the IC/ID has recurred and an attempt will be made to locate source. If the IC/ID has not recurred or has been eliminated it is noted and complaint/investigation is closed.
    d. If the investigation was initiated in response to an Action Level exceedance:
        i. Additional NAL sampling will occur at the Outfall in subsequent years.
        ii. If the results of the additional sampling indicate recurring exceedances of the same NAL(s) with an unidentified source, then the County will provide an evaluation in the JRMP Annual Report of needed changes to the programs described in this JRMP to address the common contributing sources that may be causing such an exceedance. Applicable updates will be made to the Watershed Water Quality Work plan (G. of the 2010 SMR MS4 Permit), Retrofitting Existing Development (F.3.d. of the 2010 SMR MS4 Permit) and Program Effectiveness Assessment and Reporting (J. 2010 SMR MS4 Permit) work plans.

2. If the source is identified, and if:
    a. The source is natural (non-anthropogenic influence) in origin and in conveyance into the MS4 then the County need not prohibit the discharge;

i. The County will report its findings and documentation of its source investigation to the Regional Board in the JRMP Annual Report covering the period in which the findings were made.

b. If the source of the exceedance is an exempted category of Non-Stormwater discharge as described in Section 4.1.2, then the County, Code Enforcement or Environmental Health department will determine if this is an isolated circumstance or if the problem is recurrent to the point that the category of discharges must be addressed through the prohibition of that category of discharge as an Illicit Discharge.
    i. The County will submit its findings including a description of the steps taken to address the discharge and the category of discharge, to the Regional Board for review in the applicable JRMP Annual Report covering the period in which the findings were made. Such description will include relevant updates to existing ordinances or new ordinances, orders, or other legal means of addressing the category of discharge, and the anticipated schedule for doing so. The County must also submit a summary of its findings with the Report of Waste Discharge.
c. The source is in the jurisdiction of another Co-permittee, the appropriate Co-permittee is notified, and further action is performed by that Co-permittee.
d. The source is a discharge separately permitted by the Regional Board and/or the State Board that is in violation or potential violation of that permit, then
    i. If applicable, a copy of the regulatory permit issued by the County authorizing the discharge will be obtained.
    ii. The Co-permittee must report, within three business days, the findings to the San Diego Water Board including all pertinent information regarding the discharger and discharge characteristics.
    iii. The findings of the investigation will be noted in the file and the case will be closed.
    iv. If a permitted discharge is perceived to be a threat to human health or the environment will be reported to the Regional Board/Cal-EPA.
e. The source is an Illegal Discharge within the jurisdiction of the County:
    i. The source is provided with educational material about IC/IDs, and an attempt is made to have the source resolve the situation immediately.
    ii. Where appropriate, Code Enforcement or Environmental Health staff will implement enforcement procedures consistent with Section 3.5 of this JRMP.
    iii. Follow-up as appropriate to ensure that the IC/ID is eliminated.
    iv. Report the findings, including any enforcement action(s) taken, and documentation of the source investigation to the San Diego Water Board in the Annual Report.
    v. If the County is unable to eliminate the source of discharge prior to the Annual Report submittal, then the Co-permittee must submit, as part of its JRMP Annual Report, its plan and timeframe to eliminate the source of the exceedance.
    vi. Those dischargers seeking to continue such a discharge must obtain coverage under a separate NPDES permit prior to continuing any such discharge.
f. The source is part of a HazMat incident; it is reported to the Incident Commander upon arrival. Coordination with the HazMat team takes place and samples are only collected

with approval of the Incident Commander as samples may be done in conjunction with future legal action. Under no circumstances is a site entered or field measurements collected if conditions are unsafe.

4.4.4 Clean-up

The County ensures that any Illegal Discharge is cleaned up where necessary and that no further environmental degradation occurs and the responsible party/parties restore the area back to its original state to the MEP.

4.4.5 Sanitary Wastes {F.4.h}

The County implements programs to manage discharges of sewage into its MS4 facilities from various sources including Sanitary Sewer Overflows and private laterals, failing septic systems, and portable toilets.

4.4.5.1 Sanitary Sewer Overflows and Private Laterals

The County cooperates and coordinates with the local sanitation districts as described in Appendix C to swiftly respond to and contain sewage spills that may discharge into its MS4 facilities. As part of those efforts, the County allows local sanitation districts immediate 24-hour access to its MS4 facilities to address and contain sewage spills. The County also works cooperatively with the local sanitation districts to determine and control the impact of infiltration from leaking sanitary sewer systems on Runoff quality.

4.4.5.2 Failing Septic Systems

The County DEH, implements preventative and management measures for septic systems within their jurisdiction, as applicable, including:

- Inventory: The County DEH maintains an inventory of septic systems within its jurisdiction, with updates of new septic systems approved since 2008 available from the DEH;
- Ordinance: The County has established its own ordinance that regulates discharges from failing septic systems (Ordinance Number 650); and

Enforcement: Enforcement against failing septic systems is performed by the County DEH as necessary, in accordance with the enforcement procedures referenced in Section 3.5 of this JRMP; and in accordance with the CBRP.

4.4.5.3 Portable Sanitary Services (Portable Toilets)

Further, the County has added the base of operations for portable toilet suppliers to their Industrial/Commercial Facility inspection lists and prioritized them according to their threat to water quality. The County implements management measures for portable toilet use within their jurisdiction, including:

- Ordinance: The County has established its own or adopted a Riverside County ordinance that regulates portable toilets (Ordinance Number: 650);
- Enforcement: Enforcement against ordinance violations by improper use or deployment of Portable Toilets is performed by Code Enforcement or DEH as necessary, in accordance with the enforcement procedures referenced in Section 3.5 of this JRMP.

5.0 MUNICIPAL AREAS AND ACTIVITIES {F.3.A}

The County implements the following Municipal program to:

- meet the requirements of provision F.3.a of the 2010 SMR MS4 Permit,
- prevent Illicit Discharges into the MS4,
- reduce municipal discharges of Stormwater Pollutants from the MS4 to the MEP, and
- prevent municipal discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

5.1 Planning County Facilities {F.1}

The County implements the processes and procedures described in Section 6 of this JRMP in the planning and design of County projects. This includes, where applicable, the development of a Project-Specific WQMP. Depending on the type of project, the following procedures are implemented by the County to ensure that the planning and design of its public agency Priority Development Projects comply with the requirements of the 2010 SMR MS4 Permit:

All County projects complete a "WQMP Applicability Checklist" (Found in the SMR WQMP) to determine if a WQMP is required.

5.1.1 Public Works Priority Development Projects {F.1.d}

- If the project meets the definition of Priority Development Project as discussed in Section 6.6.3, the Project Development Engineering staff for the Transportation Department or the design/architect engineering contractor for EDA Facilities Management or Parks District prepares a Project-Specific WQMP, consistent with the requirements of the SMR WQMP.
- Prior to initiating grading or construction activities, the Transportation Department Project Manager, EDA Facilities Project Manager, or Parks District Project Manager will ensure that the construction plans for its Priority Development Projects incorporate the BMPs described in the approved final Project-Specific WQMP. Appendix B includes the Position/Title of the reviewers under the respective departments responsible for implementing these reviews and approvals.
- The O&M Plan described in the Project-Specific WQMP will be integrated into the FPPP (see Section 5.3.4.1).

5.1.2 Public Works Transportation Projects {F.1.i}

The Transportation Department prepares a project-specific WQMP as described in Section 5.1.1 for its Transportation Improvement Projects that qualify as a Priority Development Project. A flow diagram showing the planning, design, construction, and maintenance phases for Transportation Improvement Projects relative to the 2010 SMR MS4 Permit is provided in Appendix H.

5.1.3 Public Works Unpaved Roads

The Transportation Department no longer constructs new Unpaved Roads. Further, the Transportation Department no longer accepts new Unpaved Roads into their system of County-maintained roads.

5.1.4 Design of Flood Control Projects {F.3.a.(4)(a)}

As they are not Development Projects intended for human use or occupation, typically no additional Runoff or Pollutants will be expected to be discharged into Receiving Waters as a result of the construction of flood control projects.

5.1.5 Other Public Works Projects

Other Public Works Projects will comply with Section 6.6.7.

5.2 County Construction Activities {F.2}

The various County departments that may have responsibility for construction projects requiring compliance with the Construction General Permit and the organizational unit responsible for submitting documents via SMARTS are:

- Transportation Department-Environmental Planning Division
- Waste Management Department
- Parks & Open Space District
- EDA Facilities Management-Project Management Division

The various County departments implement the applicable requirements of Section 7 of this JRMP in the construction of the County's capital improvement projects. This includes, where applicable, compliance with the latest version of the Construction General Permit. As described in Section 5.1, where applicable the County departments prepare a project-specific WQMP for Priority Development Projects, which meets the post-construction requirements of the Construction General Permit.

Prior to commencement of construction activities, Permit Registration Documents are submitted by using the State Board's Storm Water Multiple Application and Report Tracking System (SMARTS) and submitting a Notice of Intent (NOI) fee. The County department responsible for compliance with the Construction General Permit varies with the type of project being built. Upon completion of the construction project, the County department responsible for the construction project files a Notice of Termination (NOT) and other project close-out documentation via the State Board's SMARTS online database system.

During construction closeout the County will assure satisfactory completion of the requirements in a project-specific WQMP by:

- Verifying that Structural Stormwater BMPs have been constructed and installed in conformance with approved plans and specifications;
- Assuming responsibility for the long-term funding and implementation, operation, maintenance, repair, and/or replacement of BMPs;
- Confirming that procedures are in place to implement all Non-Structural BMPs;

- Verifying that public agency Industrial Facilities that are subject to California's General Permit for Stormwater Discharges Associated with Industrial Activities as defined by Standard Industrial Classification (SIC) code obtain coverage and provide a copy of the NOI submitted to the State Board and/or a copy of the notification of the issuance of a Waste Discharge Identification (WDID) Number.

Where applicable, the operation and maintenance procedures for the Treatment Control BMPs included in the project-specific WQMP will be incorporated into a municipal Facility Pollution Prevention Plan (FPPP), as described in Section 5.3.4.1. For County projects, upon completion of construction when contract close-out occurs the responsibility for implementation, operation, and maintenance of BMPs will transfer from the contractor to the appropriate department and become part of the County's program for operation and maintenance of County's facilities, described in Section 5.3 below.

5.3 Operation and Maintenance of County of Riverside Areas and Activities {F.3.a.}

The County implements the following measures to ensure that their Municipal Areas and Activities meet the requirements of Section F.3.a of the 2010 SMR MS4 Permit, reduce County discharges of Stormwater Pollutants from its MS4 facilities to the MEP, and prevents discharges from its MS4 facilities from causing or contributing to a violation of Water Quality Standards. This section describes the program implemented by the County for the operation, maintenance and inspection of their Municipal Areas and Activities.

5.3.1 Source Identification / Inventory {F.3.a.(1)}

The County maintains an inventory of its Municipal Areas and Activities that have the potential to generate Pollutants. This inventory is maintained by the each department, with the County Executive Office responsible for a compiled master inventory. A copy of the master inventory is included with each Annual Report to the Regional Board. Linear facilities, such as roads, streets and highways, are not individually inventoried. The County's MS4 Facilities are shown on an MS4 map which is updated and provided in each Annual Report.

Transportation Department Facilities within the SMR are:

- Anza Maintenance Yard
- Murrieta Maintenance Yard
- Bundy Canyon Material Site
- East Benton Material Site
- Terwiller Material Site

The locations of these Transportation Department facilities are shown on a map included in Appendix H. Each of these Transportation Department facilities is managed to retain storm water runoff onsite.

5.3.2 Typical Minimum BMPs {F.3.a.(2)(b)

Based on the areas and activities inventoried and the Pollutants of Concern identified, a list of potential minimum Source Control / Pollution Prevention BMPs was developed by the Riverside County

Permittees. This list utilizes the BMP designations used in the 2003 California Stormwater Best Management Practice Handbooks (Industrial and Municipal Handbooks). A matrix identifying potential BMPs that may be appropriate to implement for the Municipal Facilities and their associated activities is presented in Table 5-5. Fact sheets describing each of the Source Control BMPs can be viewed or downloaded from http://www.cabmphandbooks.com/

5.3.3 BMPs for County Activities

This list is not intended to be all-inclusive, and appropriate minimum BMPs applicable to specific facilities or activities are identified as described in Sections 5.3.3 and 5.3.4. The BMPs listed in this section are both effective and widely accepted. Minimum BMPs for each Municipal Area are incorporated into each Facility Pollution Prevention Plan (FPPP).

5.3.3.1 BMPs for Transportation Department Activities

The Municipal Activities conducted by the Transportation Department include:

- Road maintenance, including sweeping, striping, pavement marking, pavement saw-cutting, pothole repair, slurry sealing, shoulder repair;
- Right-of-way maintenance (mowing, tree trimming, herbicide application, ditch clearing, culvert repair or replacement, etc.);
- Catch basin cleaning;
- Signal light maintenance and repair;
- Intersection detector loop installation and maintenance;
- Installation, repair, and replacement of signs and guardrail;
- Graffiti removal;
- Operation of maintenance yards;
- Vehicle and equipment fueling;
- Vehicle and equipment cleaning;
- Vehicle and equipment repair;
- Outdoor loading/unloading of materials and equipment;
- Outdoor storage of materials and equipment;
- Low volume transfer operations (waste, properly permitted);
- Waste handling and disposal;
- Building and grounds maintenance; and
- Operation of aggregate material sites.

Stormwater pollution prevention bulletins addressing the Transportation Department mobile activities have been distributed monthly and reviewed during tailgate meetings.

5.3.3.2 BMPs for Other County Department Activities

The Municipal Activities conducted by other departments in the County include:

- Operation of waste transfer stations (Waste Management Department);
- Graffiti removal (Code Enforcement);
- Pesticide and/or herbicide application (Environmental Health-Vector Control);
- Power washing (EDA Facilities Management);
- Landscape maintenance (EDA Facilities Management, Parks District);
- Swimming pool maintenance (Parks District);
- Operation of corporation yards (vehicle and equipment maintenance, storage, etc.) (Purchasing/Fleet Services, Parks District, Waste Management Department);
- Sidewalk, and parking lot maintenance; (EDA Facilities Management)
- Painting; (Parks District, EDA Facilities Management)
- Fertilizer application; (EDA Facilities Management, Parks District)
- Vehicle and equipment fueling; (Purchasing Fleet Services, Waste Management Department)
- Vehicle and equipment cleaning and repair (Purchasing Fleet Services, Waste Management Department)Outdoor loading/unloading of materials; (Purchase Department, Wastes Management Department, Parks District)
- Outdoor liquid container storage; Waste Management Department, Purchasing Fleet Services)
- Outdoor storage of raw materials; (Waste Management Department)
- Waste handling and disposal; (Waste Management Department as it relates to Landfill operations)
- Building and grounds maintenance;(EDA Facilities Management, Parks District)
- Construction; (EDA Facilities, Parks District, Waste Management)

Where these listed activities take place at a Municipal Facility, the FPPP applicable to that facility describes the specific BMPs deployed. BMPs that are used when performing the routine activities identified above are provided below or in Table 5-1. Also, mobile activities based out of the Municipal Facility and the BMPs that are used in performing those mobile activities are also described in the FPPP.

5.3.3.3 Special Event BMPs {F.3.a.(2)(c)}

The County EDA Facilities Management and Parks District also designates BMPs for special events that the County holds that are expected to generate significant trash and litter. Controls considered, as applicable to each event, include:

- Temporary screens on catch basins and storm drain inlets;
- Temporary fencing to prevent windblown trash from entering adjacent water bodies and MS4 channels;

- Proper management of trash and litter;
- Catch basin cleaning following the special event and prior to an anticipated rain event;
- Street sweeping of roads, streets, highways and parking facilities following the special event; and

Other equivalent controls.
The Transportation Department does not sponsor special events that are expected to generate significant trash and litter.

5.3.3.4 Fire BMPs {B.3.a.}

In coordination with the Riverside County Fire Agencies, the Riverside County Permittees developed a list of appropriate BMPs to be implemented to reduce Pollutants from fire training activities, fire hydrant testing or flushing and BMPs feasible for emergency firefighting flows. These BMPs and the strategy for providing training and updating the list of BMPs are described in Appendix C.

5.3.4 BMPs for County Areas

5.3.4.1 Facility Pollution Prevention Plans (FPPP) {F.3.a.(2)}

An FPPP has been prepared and is maintained for each Municipal Facility. Each FPPP is designed to identify the minimum Pollution Prevention Methods and BMPs applicable to each Facility and the mobile activities based out of each Facility. The FPPP is typically maintained onsite at each individual facility, however, for facilities (e.g., parks, trails) that do not maintain onsite staff, maintenance equipment or materials, a copy of the FPPP for the applicable category of Municipal Activity is maintained at the centralized maintenance facility (e.g., corporate yard) corresponding to the operations category or where the maintenance contracts are administered (i.e., County main office). The inventory of Municipal Facilities identifies the location of the FPPP for each facility, and staff responsible for implementation and update of the FPPP. Each FPPP also includes a Facility Inspection Form that is used to record inspection findings.

For any County facilities that are tributary to and within the same hydrologic unit as a 303(d) listed waterbody and/or within, adjacent to, or discharging directly to an ESA, the FPPP includes any enhanced measures deemed necessary to mitigate Pollutants shown to be generated by the site, for which the water body segment is Impaired. As TMDLs are developed and/or action level exceedances are detected, the BMPs implemented at these facilities may be revisited to ensure that all appropriate enhanced measures deemed necessary by the County are implemented.

For other County-owned areas that do not have an FPPP (such as vacant land), appropriate BMPs including those identified in the remaining Subsections of 5.3.4., are implemented on an as-needed basis as problems are identified.

5.3.4.2 BMP Implementation for Management of Pesticides, Herbicides, and Fertilizers {F.3.a.(3)}

The County implements BMPs to reduce the contribution of stormwater Pollutants to the MEP associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from its municipal areas and activities to MS4 facilities and Receiving Waters. Such BMPs are described in the FPPP applicable to the facility and generally include:

(a) Educational activities, permits, certifications and other measures for municipal applicators and distributors;

(b) Integrated Pest Management (I.P.M.) measures that rely on non-chemical solutions where possible;

(c) The use of native vegetation where consistent with the facility's intended use and landscaping plan;

(d) Schedules for irrigation and chemical application such that they are not applied in advance of anticipated rain events or during rain events ; and

(e) The collection and proper disposal of unused pesticides, herbicides, and fertilizers.

Transportation Department personnel responsible for herbicide storage, handling, application, and disposal are certified, and maintain their certification by through continuing education. Application of herbicides is reported on a monthly basis to the County of Riverside Agricultural Commissioner. The Transportation Department does not utilize insecticides or fertilizers.

The Transportation Department does have "landscaped areas" within its right-of-way are that are maintained by Landscaping and Lighting Maintenance Districts. The Landscaping and Lighting Maintenance Districts utilize landscaping contractors for maintenance, including maintenance of irrigation systems. Where landscape maintenance is performed by contractors, the contractor is required by agreement to comply with all laws and regulations. The contractor is required to report the use of pesticides directly to the County of Riverside Agricultural Commissioner on a monthly basis.

5.3.4.3 BMP Implementation for Flood Control Structures {F.3.a.(4)}

Flood control structures in the unincorporated area of the Santa Margarita River Watershed are planned, constructed, operated, and maintained by the District.

5.3.4.4 BMP Implementation for Sweeping of Municipal Areas {F.3.a.(5)}

There are streets in the unincorporated area of the County that are swept twice a month under Community Service Area 152, as shown on a map entitled "CSA152 Roads – Santa Margarita River Watershed" that is provided in Appendix H. The remaining roads owned, operated, and maintained by the Transportation Department are roads that generate a low volume of trash and are swept as necessary based upon the inspection/observation of Transportation Department personnel or notification from the public.

5.3.4.5 County Unpaved Roads Maintenance {F.3.a.(10)}

The Transportation Department implements erosion and sediment control BMPs when conducting maintenance of Unpaved Roads owned and operated by the County. Whenever possible, unpaved roads that require maintenance are graded to direct runoff from the Unpaved Road onto adjacent flat, vegetated areas. When runoff must be directed onto a slope, the spacing of over-side drains is reduced to minimize the volume and velocity of the runoff in any one location. Additionally, appropriate energy dissipation materials (gravel bags, straw bales, riprap, fiber rolls, etc.) are used consistent with the specific location. Maintenance of County-owned Unpaved Roads that are directly adjacent to creeks and riparian habitat are maintained only when absolutely necessary to protect public safety (safe use and access by emergency vehicles). When re-grading and maintenance of Unpaved Roads is necessary, roads are graded with consideration of road safety and minimizing the potential for erosion and sedimentation. When major

maintenance requires the replacement of culverts, the natural stream geomorphology is considered in order to minimize future maintenance and to reduce the potential for failure.

5.3.5 Operation and Maintenance of MS4 Facilities and Treatment Controls {F.3.a.(6)}

The County's open channels, catch basins, storm drain inlets, and retention/detention basins are inspected, cleaned, and maintained as described below. Wastes and materials removed are disposed of per applicable laws and appropriate BMPs are deployed as necessary to minimize impacts to the Receiving Waters to the MEP. During the annual inspection and maintenance of MS4 facilities, the County inspects for visual evidence of Illegal Discharges, litter and/or debris accumulation, and other maintenance issues.

(a) Treatment Controls: The County implements a schedule of inspection and maintenance activities to verify proper operation of all its Treatment Controls BMPs designed to reduce Stormwater Pollutant discharges to or from its MS4 facilities. For Treatment Control BMPs integrated into a County facility, the BMPs are integrated and identified within the applicable FPPP (see Section 5.3.4.1). The County does have some catch basins that utilize filter inserts (predominantly Fossil Filter™) in one zone of Landscaping and Lighting Maintenance District No. 89-1-Consolidated, which is administered by the Transportation Department. These catch basin filters are routinely maintained by a contractor at least three (3) times a year and are inspected as described in Section 5.4 below.

(b) MS4 Facilities: The County implements a schedule of maintenance activities for its MS4 facilities (including but not limited to catch basins, storm drain inlets, detention basins, etc.). The maintenance activities include:

- Inspection and removal of accumulated Waste at least annually between May 1st and September 30th of each year for all MS4 facilities;
- Additional facility cleaning as necessary between October 1st and April 30th of each year;
- Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year;
- Open channels and basins are cleaned of observed anthropogenic litter in a timely manner;
- Maintenance activities within open channels must not adversely impact Beneficial Uses;
- Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed;
- Proper disposal of Waste removed pursuant to applicable laws; and
- Measures to eliminate Waste discharges during MS4 maintenance and cleaning activities.

5.3.5.1 Flood Control Structure Evaluations {F.3.a.(4)(c)}

Flood control structures in the unincorporated area of the Santa Margarita River Watershed are planned, constructed, operated, and maintained by the District.

5.3.5.2 Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance {F.3.a.(7)}

The County does not own nor operate a municipal sanitary sewer system, however the County does cooperate with Eastern Municipal Water District and Rancho California Water District for responding to

and addressing any observed infiltration into the County's MS4 facilities. In addition, the County implements the following controls to limit infiltration of seepage from sanitary sewers to MS4 facilities where necessary:

i. Adequate plan checking for Construction and Development Projects;
ii. Incident response training for its employees that may identify sanitary sewer spills;
iii. Code enforcement inspections;
iv. MS4 maintenance and inspections;
v. Interagency coordination with sewer agencies; and
vi. Proper education of its staff and contractors conducting field operations on the MS4.

5.4 Inspection of Municipal Areas and Activities {F.3.a.(8)}

The County inspects the following high priority Municipal Areas and Activities annually:

i. Roads, streets, highways, and parking facilities
ii. Flood management projects and flood control devices not otherwise inspected per Section F.3.a.(6)(b) of the 2010 SMR MS4 Permit
iii. Areas and activities tributary to and within the same hydrologic subarea as a CWA Section 303(d) Impaired water body segment, where an area or activity generates Pollutants for which the water body segment is Impaired
iv. Areas and activities within or adjacent to or discharging directly to Receiving Waters within ESAs
v. Municipal Facilities:
    [a] Active or closed municipal landfills;
    [b] Solid waste transfer facilities;
    [c] Land application sites;
    [d] Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles; and
    [e] Household hazardous waste collection facilities.
vi. Municipal airfields
vii. Parks and recreation facilities
viii. Special event venues following special events (festivals, sporting events, etc.)
ix. Power washing activities
x. All County WQMP projects with Structural post-construction BMPs, including verification that the Structural post-construction BMPs on those projects have been appropriately maintained consistent with the WQMP and/or the FPPP. {F.1.f.(2)(b)(iii)}
xi. Other municipal areas and activities that the County determines may contribute a significant Pollutant load to the MS4

Inspections of the County's MS4 facilities are performed concurrently with the maintenance schedule described in Section 5.3.5. Other Municipal Areas and Activities are inspected as needed and in

response to water quality data, valid public complaints, and findings from County or contract staff. Based upon site inspection findings, the County implements all follow-up actions necessary to comply with the 2010 SMR MS4 Permit.

Each Transportation Department District Supervisor inspects all roads within his district at least once annually. The District Supervisor and his district personnel as part of their daily routine responsibilities observe the roads and the right-of-way for Illegal Dumping, sediment build-up on the traveled way, proper drainage, pavement condition, signage, obscured line-of-site due to vegetation, etc. The Transportation Department conducts annual storm water compliance assessments at each of its maintenance yards and material sites. During the annual compliance assessment the FPPP, including the site map, is reviewed for accuracy. If operational or structural changes have occurred, the FPPP is updated.

5.5 Enforcement of Municipal Areas and Activities {F.3.a.(9)}

The County enforces its Stormwater Ordinance(s) for all its Municipal Areas and Activities as necessary to maintain compliance with the 2010 SMR MS4 Permit.

6.0 DEVELOPMENT PLANNING {F.1.}

The County implements the following programs related to the planning and permitting of Development Projects[9] within the County's jurisdiction. This program is designed to:

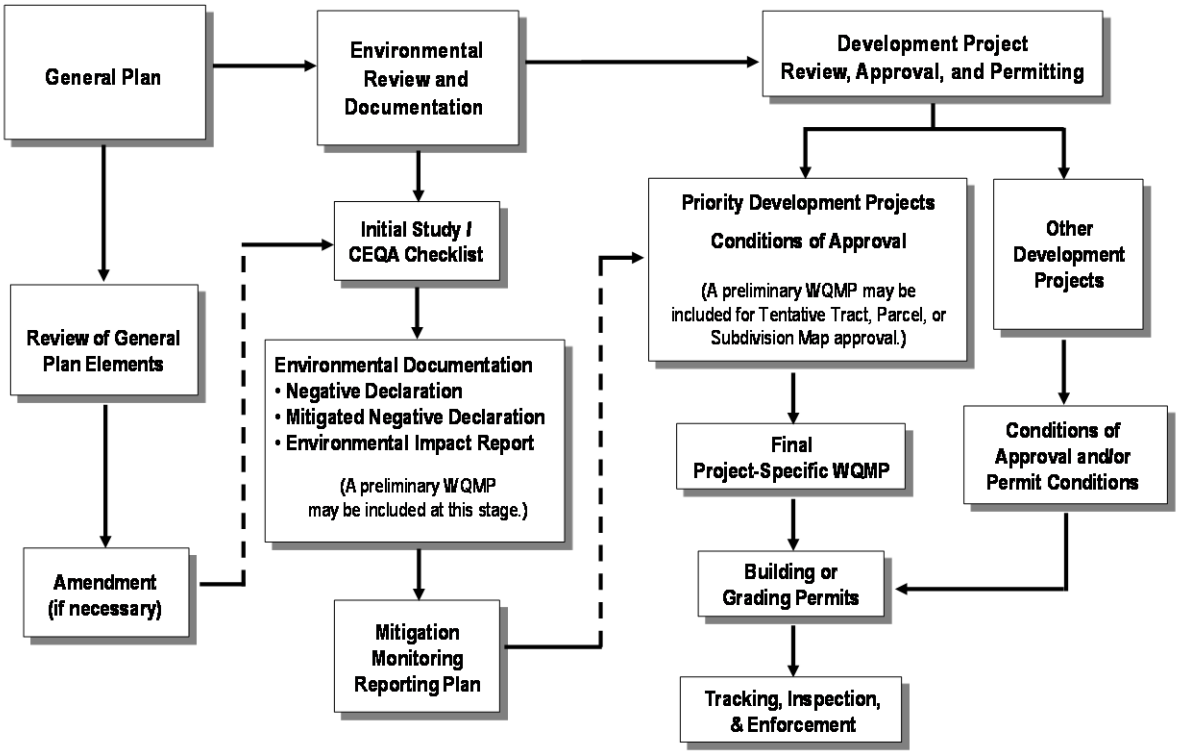
- Reduce Development Project discharges of Stormwater Pollutants from the MS4 to the MEP;
- Prevent Development Project discharges from the MS4 from causing or contributing to a violation of Water Quality Standards;
- Prevent Illicit Discharges into the MS4; and
- Manage increases in Runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt Pollutant generation, or other impacts to Beneficial Uses and stream habitat due to increased erosive force.

6.1 Introduction

This program element links the County General Plan, the environmental review process, and the development approval and permitting processes to the later phases of detailed design, construction and operation. A General Plan specifies policies that guide development. The environmental review process examines potential impacts from proposed development with respect to the General Plan policies and many environmental issues, including water quality, and includes consideration of mitigation measures to reduce any identified significant impacts. The development approval and permitting processes carries forth project-specific requirements in the form of conditions of approval, design specifications, tracking, inspection, and enforcement actions. Figure 6-1 is a generalized flow diagram that depicts the relationship of the General Plan, environmental review process and development planning and permit process, as well as the project design, construction, and operation phases.

[9] Construction, rehabilitation, redevelopment, or reconstruction of any public or private residential project, industrial, commercial, or any other projects.

Figure 6-1. Relationship between General Plan, Environmental Review Process and Development Approval & Permitting Process



6.2 General Plan {F.1.a.}

The County has reviewed its General Plan to ensure that it includes water quality and watershed protection principles and policies as appropriate to allow the County to direct land-use decisions and to require implementation of consistent water quality protection measures for all Development, Redevelopment, and Retrofit projects.

The General Plan allows the County to implement the Water Quality & Watershed Protection Principles & Policies described below. The specific requirements for Development, Redevelopment and Retrofit projects are implemented through the programs described in Sections 6.3 through 6.9.

- Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of Development and Redevelopment and, where feasible, slow Runoff and maximize on-site infiltration of Runoff.
- Implement Pollution Prevention methods supplemented by Pollutant Source Control and Treatment Control BMPs. Use small collection strategies located at, or as close as possible to, the source (i.e.,

the point where water initially meets the ground) to minimize the transport of Runoff and Pollutants offsite and into an MS4.

- Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones; and encourage land acquisition of such areas.
- Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.
- Prior to making land use decisions, utilize methods available to estimate increases in Pollutant loads and flows resulting from projected future development; require incorporation of BMPs to mitigate the projected increases in Pollutant loads and flows.
- Avoid development of areas that are particularly susceptible to Erosion and sediment loss; or establish development guidance that identifies these areas and protects them from Erosion and sediment loss.
- Reduce Pollutants associated with vehicles and increasing traffic resulting from development.Post-development Runoff from a site must not contain Pollutant loads that cause or contribute to an exceedance of Receiving Water Quality Objectives and which have not been reduced to the MEP.

Some of the preceding concepts are addressed as part of the project-specific WQMP process or through the conditioning of a project in the development review process, rather than as explicit elements of the General Plan.

Further, the County has incorporated the Multiple Species Habitat Conservation Plan (MSHCP) into their General Plan. As of June 2012, approximately 136 square miles, or 25% of the Santa Margarita Region, has been successfully conserved as part of the Co-permittee's implementation of the MSHCP, including significant lands adjacent to or encompassing Receiving Waters, and addresses many of the water quality and watershed protection concepts identified in the 2010 SMR MS4 Permit. Additionally, through the continued implementation of the MSHCP, much of the remaining non-urbanized area will ultimately be conserved, totaling approximately 43% of the Santa Margarita Region. The MSHCP also finds that the Co-permittees' General Plans, zoning ordinances, and policies include measures capable of implementing the following planning concepts, which are consistent with the 2010 SMR MS4 Permit considerations such as:

- Measures to ensure that the quality and quantity of Runoff discharged to MSHCP conservation areas is not altered in any adverse way when compared to existing drainage conditions;
- Measures to avoid discharge of untreated surface Runoff from developed and paved areas into MSHCP conservation areas; and measures to require MS4s to be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within MSHCP conservation areas.

6.3 Environmental Review Process {F.1.b.}

The County prescribes the necessary requirements so that proposed Development Project discharges of Stormwater Pollutants from its MS4 facilities will be reduced to the MEP, and will comply with the County's ordinances, permits, plans, and requirements, and with the 2010 SMR MS4 Permit.

In addition, the County has reviewed its CEQA processes to ensure that runoff management is properly considered and addressed. When acting as CEQA Lead Agency for a proposed Development Project at the earliest possible time in the process, the County identifies the resources under the jurisdiction of the Regional Board which may be affected by the project, including the potential need for a CWA §401 water quality certification, NPDES permit, or Waste Discharge Requirements. The County coordinates project review with Regional Board staff pursuant to the requirements of CEQA. Upon request by Regional Board staff, this coordination may include the timely provision of the proposed project applicant's identity and contact information for facilitation of consultation meetings.

6.3.1 Project Application Form

A Project Application Form is used by the County requiring the applicant to describe or include the following information in the project application:

- Expected percent change in pervious surface area of the site;
- WQMP Applicability Checklist;
- Submittal of preliminary Project-Specific WQMP, if applicable; and
- Where a Project-Specific WQMP is not applicable, descriptions of how the proposed project will incorporate the measures described in Section 6.6.6 {F.1.c.}

The County's Project Application Form is included in Appendix D.

6.3.2 LID Barriers Review {F.1.d.(4)(a)}

The County has reviewed its local codes, policies and ordinances and identified the potential barriers to the implementation of LID BMPs in Table 6-1. In addition, the County participated in the Local Government Commission's Barrier's to LID study. A copy of this study is included in Appendix D. This table also identifies the steps required to remove those barriers, where feasible, by the end of the 2010 SMR MS4 Permit term (i.e., by November 10, 2015):

Table 6-1 Potential barriers to LID BMPs

Reference	LID BMP	Potential Barriers identified	Steps required to remove barriers
F.1.c.(2)(a)	Conserve natural areas, including existing trees, other native vegetation, and soils	None	
F.1.c.(2)(b)	Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised	As identified for public safety response; materials such as pervious pavers, concrete and asphalt cannot be used by fire apparatus due to weight and minimum size and width limitations	
F.1.c.(2)(c)	Minimize the impervious footprint of the project	None	
F.1.c.(2)(d)	Minimize soil compaction to landscaped areas	None	
F.1.c.(2)(e)	Minimize disturbances to natural drainages	None	
F.1.c.(2)(f)	Disconnect impervious surfaces through distributed pervious areas	None	
F.1.d.(4)(b)(i)	Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and Ephemeral and Intermittent streams)	None	
F.1.d.(4)(b)(ii)	Construct pervious areas to effectively receive and infiltrate, retain and/or treat Runoff from impervious areas, and to minimize soil compaction in these areas	None	
F.1.d.(4)(b)(iii)	Construct low-traffic areas with permeable surfaces, where appropriate soil conditions exist	As identified for public safety response; materials such as pervious pavers, concrete and asphalt cannot be used by fire apparatus due to weight and minimum size and width limitations	
F.1.d.(4)(c)(i)	Structural Infiltration BMPs	None	
F.1.d.(4)(c)(i)	Structural Harvest and Use BMPs	None	
F.1.d.(4)(c)(ii)	Structural Bio-retention BMPs	None, except for underground vault that may pose an environmental risk	
F.1.d.(4)(c)(ii)	Other structural LID BMPs (such as vegetated extended detention basins)	None	

The County will update the above table as necessary through the implementation of their development planning activities, whether through identification of additional barriers, or as any identified barriers are removed. Any changes to the above table will be reported in the County's JRMP Annual Report.

6.4 Water Quality Management Plan {F.1.d}

The County, in collaboration with the other SMR Co-permittees, has developed a WQMP for the Santa Margarita Region of Riverside County, which describes the process for application of required LID Principles (Site Design), Source Control BMPs, LID BMPs, and Treatment Control BMPs, on Priority Development Projects to ensure that the land use approval and permitting process will:

- Reduce Priority Development Project discharges of Stormwater Pollutants from the MS4 to the MEP, and Prevent Priority Development Project Runoff discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

The SMR WQMP and a Project-Specific WQMP are provided on the following website at: http://rcflood.org/NPDES/Developers.aspx

6.5 Hydromodification Management Plan {F.1.h.}

An updated Hydromodification Management Plan (HMP) has been developed by the Co-permittees to manage increases in Runoff discharge rates and duration from Priority Development Projects. The objectives of the HMP are that:

- Estimated proposed project Runoff discharge rates and durations do not exceed the pre-project discharge rates and durations.
- For proposed projects on an already developed site, the estimated proposed project Runoff discharge rates and durations do not exceed the pre-project discharge rates and durations, where the pre-project discharge rates and durations are that of the pre-development, naturally occurring condition.

The final HMP and WQMP are now being implemented as of July 11, 2014.

6.6 Development Project Review, Approval, and Permitting {F.1.d.}

6.6.1 Process Overview

The County, during the planning process, and prior to project approval and issuance of local permits, prescribes the necessary requirements so that Development Project discharges of Stormwater Pollutants from 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 County's ordinances, permits, plans, and requirements, and with the 2010 SMR MS4 Permit.

All Development Projects that are submitted to the County for discretionary approval or permitting are required to fill out a Project Application Form. Based on the results of that checklist, each project is categorized as either a "Priority Development Project" or as an "Other Development Project." Since July 2005 the County has required a project applicant to prepare a project-specific WQMP for all Priority Development Projects. The requirements for Other Development Projects are described in Section 6.6.7

The County's Planning Department coordinates the land use case processing, which includes compliance with CEQA procedures, general plan conformity, ordinance consistency, and public health and safety requirements. The County's Planning Department works closely with many other departments to ensure proper review of these issues. The Environmental/Development Review Division of the Transportation Department nowprovides review and approval of project-specific WQMPs for land development projects in the unincorporated areas of the County. Previously this task was accomplished by the District.

6.6.2 Identification of Development Projects Requiring a Project-Specific WQMP {F1.d(1) & (2)}

The County's Planning Department's Project Application Form includes a WQMP Applicability Checklist as discussed in Section 6.3.1. In reviewing project applications, the County's Planning Department reviews the WQMP Applicability Checklist and the other information provided in the project application to verify the applicant's determination as a *Priority Development Project* or an *Other Development Project*. If the applicant incorrectly certified that the proposed project did not require a Project-Specific WQMP, the County's Planning Department will notify the project applicant and effectively place a hold on the project application until a preliminary Project-Specific WQMP is submitted.

If a Project-Specific WQMP is required, the County's Planning Department will verify that a preliminary Project-Specific WQMP is included with the project application packet. The County's Planning Department will then forward copies of the project application, including the project-specific WQMP, to the Environmental/Development Review Division of the Transportation Department for review and, as applicable, issuance of conditions of approval. Conditions of approval will not be issued unless the project-specific WQMP is found to be acceptable by the County.

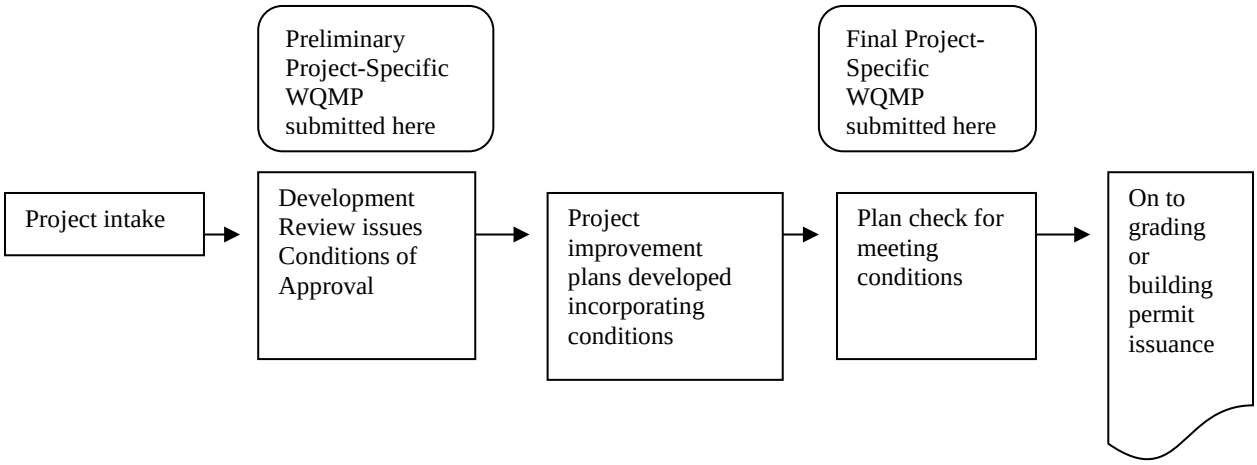
6.6.3 Conditions of Approval {F.1.c}

The Environmental/Development Review Division of the Transportation Department applies standard conditions of approval to ensure that the requirements of the 2010 SMR MS4 Permit are met. The County has developed standardized conditions of approval and/or building/grading permit conditions that may be used. Standard Conditions of Approval used by the County are provided in Appendix D.

6.6.4 Review of Preliminary Project-Specific WQMPs

The County's Transportation Department requires preliminary Project-Specific WQMPs to be submitted with the project application. The level of detail in the preliminary Project-Specific WQMP must be consistent with the level of detail for the overall project design at the time project approval is sought. Prior to issuance of grading or building permits, the project applicant must submit the final Project-Specific WQMP for review and approval. The Environmental/Development Review Division of the Transportation Department utilizes a WQMP Review Checklist to facilitate thorough and consistent reviews of preliminary and final project-specific WQMPs. The Private Project WQMP Checklist is an exhibit to the SMR WQMP. Figure 6-2 shows a typical review and approval process.

Figure 6-2. Flowchart of Project Review, Approval & Permitting Process



6.6.5 Review and Approval of Final Project-Specific WQMPs {F.1.d.(9)(a)}

Based on the Conditions of Approval and prior to approval of a final Project-Specific WQMP, the Environmental/Development Review Division of the Transportation Department will ensure that:

- The final Project-Specific WQMP is prepared and is consistent with the requirements of the SMR WQMP;
- LID BMPs have been incorporated into the site to the extent feasible; or if the project proponent has acceptably demonstrated that LID BMPs are technically infeasible for the project, the County will document within the project file a finding of technical infeasibility;
- The entity or entities responsible for BMP implementation and maintenance have been identified; and
- The mechanism for BMP funding is identified.

The Environmental/Development Review Division of the Transportation Department will ensure all requirements have been addressed prior to approval of a final Project-Specific WQMP.

6.6.6 Approval Process Criteria and Requirements for All Development Projects {F.1.c}

For all proposed Development Projects during the planning process, and prior to project approval and issuance of local permits, the County prescribes the necessary requirements so that Development Project discharges of Stormwater Pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of Water Quality Standards, and will comply with its ordinances, permits, plans, and requirements, and with the 2010 SMR MS4 Permit..

Performance Criteria: Discharges from each approved Development Project are subject to the following management measures:

(1) Source control BMPs that reduce Stormwater Pollutants of Concern in Runoff; prevent Illicit Discharges into the MS4; prevent irrigation runoff; storm drain system stenciling or signage; properly design outdoor material storage areas; properly design outdoor work areas; and properly design trash storage areas.

(2) The following LID BMPs listed below must be implemented at all Development Projects where applicable and feasible.

(a) Conserve natural areas, including existing trees, other vegetation, and soils;
(b) Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised;
(c) Minimize the impervious footprint of the project;
(d) Minimize soil compaction of landscaped areas;
(e) Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.); and
(f) Disconnect impervious surfaces through distributed pervious areas.

(3) Buffer zones for natural water bodies, where technically feasible. Where buffer zones are technically infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc.

(4) Other measures necessary so that grading or other construction activities meet the provisions specified in Section 7.0 of this JRMP.

(5) Submittal of documentation of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.

(6) Infiltration and Groundwater Protection
To protect groundwater quality, restrictions are applied to the use of Treatment Control BMPs that are designed to primarily function as large, centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions are designed so that the use of such infiltration Treatment Control BMPs does not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each Treatment Control BMP designed to primarily function as a centralized infiltration device is required to meet the restrictions below, unless the Development Project demonstrates that a restriction is not necessary to protect groundwater quality. The County may develop alternative restrictions on the use of Treatment Control BMPs which are designed to primarily function as centralized infiltration devices. These alternative restrictions can partially or wholly replace the restrictions listed below. The restrictions do not apply to small infiltration systems dispersed throughout a Development Project.

(a) Runoff must undergo pretreatment such as sedimentation or filtration prior to infiltration;
(b) All dry weather flows containing significant Pollutant loads must be diverted from infiltration devices and treated through other BMPs;
(c) Pollution Prevention and Source Control BMPs must be implemented at a level appropriate to protect groundwater quality at sites where infiltration Treatment Control BMPs is to be used;
(d) Infiltration Treatment Control BMPs must be adequately maintained so that they remove Stormwater Pollutants to the MEP;
(e) The vertical distance from the base of any infiltration Treatment Control BMP to the seasonal high groundwater mark must be at least 10 feet. Where groundwater basins do not support Beneficial Uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
(f) The soil through which infiltration is to occur must have physical and chemical characteristics (such as appropriate cat ion exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of Runoff for the protection of groundwater Beneficial Uses;

(g) Infiltration Treatment Control BMPs must not be used for areas of industrial or light industrial activity and other high threat to water quality land uses and activities as designated by each Co-permittee unless first treated or filtered to remove Pollutants prior to infiltration; and
(h) Infiltration Treatment Control BMPs must be located a minimum of 100 feet horizontally from any water supply wells.

(7) Where feasible, landscaping with native or low water species shall be preferred in areas that drain to the MS4 or to Waters of the U.S.

(8) Rain water harvesting and water reuse, where feasible, must be encouraged as part of the site design and construction to reduce Pollutants in Stormwater discharges to the MEP.

6.6.7 Requirements for Other Development Projects [F.1.c]

The County's Transportation Department requires Other Development Projects to incorporate LID Principles (Site Design) and Source Control BMPs, where applicable and feasible, into project plans through conditions of approval or building/grading permit conditions. LID BMPs and Treatment Control BMPs may be required on a case-by-case basis for Other Development Projects that directly discharge Runoff to Receiving Waters listed as Impaired on California's CWA Section 303(d) List of Water Quality Limited Segments.

Additionally, where an Other Development Project proposes a new Private Unpaved Road, the applicant must incorporate the following, or alternative BMPs that are equally effective:

- Identify practices that will minimize road related erosion and sediment transport;
- Grade Unpaved Roads to slope outward where consistent with road engineering safety standards;Incorporate installation of water bars as appropriate; andProvide Unpaved Road and culvert designs that do not impact drainage functions.

6.6.8 Unpaved Roads Development {F.1.i}

The County Transportation Department does not allow public unpaved roads or accept unpaved roads for maintenance. Private unpaved roads should implement erosion and sediment control measures to MEP as identified in 6.6.1.

6.6.9 Plan Check: Issuance of Grading or Building Permits

6.6.9.1 Plan Check for Priority Development Projects

The County's Transportation Department reviews the relevant CEQA documentation (including the Mitigation Monitoring and Reporting Program, if applicable), the conditions of approval, and the final approved Project-Specific WQMP as part of the plan check process. Once a Priority Development Project reaches the plan check phase, the project applicant should have an approved final Project-Specific WQMP in conformance with the SMR WQMP.

Construction plans submitted by the project applicant for plan check are reviewed by the Transportation Department to verify that they properly incorporate all Site Design, Structural LID and/or Treatment Control BMPs identified in the approved final Project-specific WQMP. The designs of Structural Source Control BMPs, LID BMPs, and Treatment Control BMPs are reviewed to verify inclusion of control

measures necessary to effectively minimize the creation of Nuisance or Pollution associated with vectors, such as mosquitoes, rodents, flies, etc. The design review during plan check also verifies that Structural BMPs provide adequate access for ongoing maintenance of the BMP after construction. The construction plans are also reviewed for consistency with the BMP design criteria and guidance provided in the SMR WQMP.

6.6.9.2 Plan Check for Other Development Projects

For Other Development Projects, the Transportation Department and Building and Safety reviews the construction plans submitted for a grading or building permit to ensure that the plans incorporate all applicable and appropriate Site Design, Source Control and LID BMPs as described in Section 6.6.7.

6.6.9.3 Standard Notes for Improvement Plans

Prior to the issuance of a grading or building permit, the County's Building & Safety Department requires standard notes to be added to the plan set to address Pollution Prevention during the construction phase of a project. Standardized notes are discussed below.

- Erosion control BMPs shall be implemented and maintained to minimize and/or prevent the entrainment of soil in Runoff from disturbed soil areas on Construction Sites.
- Sediment control BMPs shall be implemented and maintained to prevent and/or minimize the transport of soil from the Construction Site.
- Stockpiles of soil shall be properly contained to eliminate or reduce sediment transport from the site to streets, drainage facilities or adjacent properties via Runoff, vehicle tracking, or wind.
- Appropriate BMPs for construction-related materials, Wastes, spills or residues shall be implemented to eliminate or reduce transport from the site to streets, drainage facilities, or adjoining properties by wind or Runoff.
- Runoff from equipment and vehicle washing shall be contained at Construction Sites and must not be discharged to Receiving Waters or the MS4.
- All construction contractor and subcontractor personnel are to be made aware of the required BMPs and good housekeeping measures for the project site and any associated construction staging areas.
- At the end of each day of construction activity all construction debris and Waste materials shall be collected and properly contained in trash or recycle bins.
- Construction Sites shall be maintained in such a condition that a storm does not carry Wastes or Pollutants off the site. Discharges other than Stormwater (Non-Stormwater discharges) are prohibited, except as authorized by an individual NPDES permit or the Construction General Permit. Potential Pollutants include but are not limited to: solid or liquid chemical spills; Wastes from paints, stains, sealants, solvents, detergents, glues, lime, pesticides, herbicides, fertilizers, wood preservatives, asbestos fibers, paint flakes or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator or battery fluids; concrete and related cutting or curing residues; floatable Wastes; Wastes from engine/equipment steam cleaning or chemical degreasing; Wastes from street cleaning; and super-chlorinated potable water from line flushing and testing. During construction, disposal of such materials should occur in a specified and controlled temporary area on-site physically separated from

potential Stormwater Runoff, with ultimate disposal in accordance with local, state and federal requirements.

- Discharging contaminated groundwater produced by dewatering groundwater that has infiltrated into the Construction Site is prohibited. Discharging of contaminated soils via surface erosion is also prohibited. Discharging non-contaminated groundwater produced by dewatering activities may require an NPDES permit issued by the San Diego Regional Board.
- Construction Sites shall be managed to minimize the exposure time of disturbed soil areas through phasing and scheduling of grading to the extent feasible and the use of temporary and permanent soil stabilization.
- BMPs shall be maintained at all times. In addition, BMPs shall be inspected prior to predicted storm events and following storm events.

6.7 Field Verification of BMPs & Permit Close-out {F.1.e.}

6.7.1 Release of Conditions of Approval

The end of the construction phase is typically accompanied by the close out of permits and issuance of certificates of use and/or occupancy. The Transportation Department's Environmental Compliance Division uses this juncture to assure satisfactory completion of all requirements in a Project-Specific WQMP and/or the conditions of approval by verifying that the following items, as applicable, have been completed prior to granting occupancy:

- All Site Design, LID, structural Source Control, and Treatment Control BMPs have been constructed and installed in conformance with approved plans and specifications and functional in accordance with the approved Project-Specific WQMP (if applicable); and that they include control measures to effectively minimize the creation of Nuisance or Pollution associated with vectors, such as mosquitoes, rodents, flies, etc.;
- A mechanism or agreement acceptable to the County has been executed for the long-term funding, implementation, operation, maintenance, repair, and where necessary, the replacement of BMPs;
- The owner/operator is prepared to implement all Non-Structural BMPs, and to implement, operate, and maintain all Site Design, LID, structural Source Control, and Treatment Control BMPs;
- An adequate number of copies of the Project-Specific WQMP, if applicable, are available onsite; and
- An Industrial Facility subject to the Industrial General Permit as defined by Standard Industrial Classification (SIC) code has obtained coverage by providing a copy of the NOI with associated WDID number or other proof of filing submitted via the SMARTS to the State Board. Where such an Industrial Facility is identified but coverage cannot be verified, the County notifies the San Diego Regional Board and the owner/operator that the facility may be required to obtain coverage under the Industrial General Permit.

6.7.2 Maintenance Responsibility

The responsibility for implementation, operation, and maintenance of BMPs may be with a private entity or a public agency under various arrangements and with various funding sources. The responsibility to

provide for the long-term implementation, operation, and maintenance of BMPs associated with Priority Development Projects or Other Development Projects may:

- Remain with a private entity (property owner, home owners association, etc.); or
- Be transferred to a public entity (e.g., a city, county, special district, etc.) through dedication of the property; or

Be transferred to a public entity, or another private party through a contract.
Following satisfactory inspection, the County may accept Structural BMPs within public right-of-ways, and may accept Structural BMPs on land dedicated to public ownership. Upon acceptance of the BMPs, responsibility for operation and maintenance of Structural BMPs will transfer from the developer or contractor to the appropriate entity, including the funding mechanism identified in the approved final Project-Specific WQMP for Priority Development Projects or the conditions of approval or building/grading permit conditions for Other Development Projects.

If a property owner or a private entity retains or assumes responsibility for implementation, operation, and maintenance of BMPs, the County requires an agreement that can take the form of:

- A Covenant and Agreement recorded with the County Recorder;
- A Homeowners Association or Property Owners Association Covenants, Codes, and Restrictions;
- The formation of, or annexation to, a maintenance district or assessment district; or
- Other instrument sufficient to guarantee long-term implementation, operation, and maintenance of BMPs.

6.8 Structural Post-Construction BMP Database and Maintenance Verification {F.1.f}

The Transportation Department's Environmental Compliance Division implements a program to verify the maintenance and effectiveness of post construction Structural BMPs constructed pursuant to an approved final Project-Specific WQMP.

6.8.1 Inventory of WQMP Projects {F.1.f.(1)}

The Transportation Department's Environmental Compliance Division maintains a watershed-based database to track and inventory all Priority Development Projects constructed within the County's jurisdiction that have a final approved Project-Specific WQMP (WQMP Projects) and the post-construction Structural BMPs implemented therein since July 2005. This database does not track nor inventory LID BMPs implemented on a lot by lot basis at single family residential houses – such as rain barrels.

This database includes the following information:

- WQMP Project Name
- Priority for Maintenance Verifications (see Section 6.8.2)

- Type of project (residential, commercial, industrial, multi-use)
- Street address or geographic coordinates of the project
- Watershed where project is located
- Types of BMPs and location(s)
- Date of construction or date of initial verification/certification
- Party responsible for maintenance
- Dates of maintenance verifications
- Findings of maintenance verifications
- Corrective actions identified during maintenance verification, including whether the site was referred to the local vector control agency or department.

6.8.2 Designation of High Priority Projects for Maintenance Verification {F.1.f.(2)(a)}

The Transportation Department's Environmental Compliance Divions designates each WQMP project as either High or Standard Priority based on the following considerations:

- BMP size,
- Recommended maintenance frequency,
- Likelihood of operational and maintenance issues,
- Location,
- Receiving Water quality,
- Compliance record,
- Land use, and
- Other pertinent factors.

At a minimum, High Priority projects include those projects that have been identified by the County as a facility that:

- Generates Pollutants (prior to treatment) within the tributary area of and within the same hydrologic subarea as a 303(d) listed waterbody Impaired for that Pollutant; or
- Generates Pollutants within the tributary area for and within the same hydrologic subarea as an observed Action Level exceedance of that Pollutant.

6.8.3 Maintenance Verification of Structural Post-Construction BMPs {F.1.f.(2)(b)}

The Transportation Department's Environmental Compliance Division verifies that the required post-construction Structural BMPs on the inventoried WQMP Projects have been implemented, are maintained, and are operating effectively through inspections, self-certifications, surveys, or other equally effective approaches with the following conditions:

6.8.3.1 WQMP Structural BMP Inspection Schedule

Table 6-2 WQMP Structural BMP Inspection Schedule

WQMP Project Priority	Verification frequency
Standard	Once every 5 years
High	Annually

In addition to the above table, all County-owned projects with post-construction Structural BMPs are inspected annually as described in Section 5.4.

6.8.3.2 Verification Methods

The Transportation Department's Environmental Compliance Division conducts direct inspections of WQMP Projects to comply with the BMP verification requirements. The Environmental Compliance Division staff first reviews the approved final Project-Specific WQMP, and verifies that all post-construction Structural BMPs identified in the WQMP are implemented and have been appropriately maintained in accordance with the O&M Plan identified in the Project-Specific WQMP. A standardized inspection / verification form may be utilized and is provided in Appendix E.

The Transportation Department's Environmental Compliance Division may establish a program for third party verifications and/or self-certifications that WQMP projects can utilize. Adequate documentation must be submitted to the Environmental Compliance Division to provide assurance that the required maintenance has been completed. Setup of this program is currently being strategized.

6.8.4 Post Construction BMP Recordation {F.1.d.(9)(b)}

The Transportation Department ensures that WQMP Post Construction BMP Maintenance Agreements are recorded through the Assessor Clerk Recorders Office. This has established a mechanism to ensure that appropriate easements and ownerships are properly recorded in public records and the WQMP information is conveyed to all appropriate parties when there is a change in project or site ownership.

6.9 Enforcement for Development {F.1.g}

The legal Authority and enforcement policies and procedures of the County are described in Section 3 of this JRMP. The Transportation Department's Environmental Compliance Division conducts appropriate follow-up measures to ensure the Treatment Control BMPs continue to reduce Stormwater Pollutants as originally designed. These measures include re-inspections, and where necessary enforcement (as described in Section 3.5).

7.0 PRIVATE DEVELOPMENT CONSTRUCTION ACTIVITY {F.2.}

The County implements the following program that is designed to:

- meet the requirements of provision F.2 of the 2010 SMR MS4 Permit,
- require implementation and maintenance of Structural and Non-Structural BMPs to reduce Pollutants in Stormwater Runoff from Construction Sites to the MS4,
- reduce Construction Site discharges of Stormwater Pollutants from the MS4 to the MEP, and
- prevent Construction Site discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

7.1 Source Identification / Inventory {F.2.b}

The Transportation Department's Environmental Compliance Division maintains an updated watershed-based inventory database of Construction Sites within the County's jurisdiction. This inventory is provided in each Annual Report. Construction Sites are any projects, including projects requiring coverage under the General Construction Permit, that involve soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation. Construction Sites are included in the inventory regardless of whether the Construction Site is subject to the Construction General Stormwater Permit or other individual construction Stormwater NPDES permits. This database is updated with new projects added when the project is issued a building or grading permit or when the pre-construction meeting has occurred. Projects may be removed from the database when construction is completed and the project's building or grading permit is closed. The County's Construction Site database includes the following project information:

- Facility/Project name,
- Facility/Project address,
- Tract number(s) or Assessor Parcel Number (APN),
- Watershed / Sub-watershed,
- Project type,
- Project priority,
- Date of inspections performed at each site,
- Site size,
- WDID #,
- Grading Permit #,
- Other permits,
- Developer's information,
- Site contact information, and

- Enforcement actions taken.

7.2 Construction Site Planning and Project Approval Process {F.2.c}

The County considers potential water quality impacts prior to approval and issuance of building and grading permits. Prior to issuance of Building / Grading Permits, the County:

- Requires implementation of the applicable designated BMPs (Section 7.3) and other measures that are selected so that Illicit Discharges into the MS4 are prevented, Stormwater Pollutants discharged from the Construction Site will be reduced to the MEP, and construction activity discharges from the MS4 are prevented from causing or contributing to a violation of Water Quality Standards.
- Ensures that the project proponent's Runoff management plan (or equivalent Construction Site BMP plan) is required to comply, and reviewed by the Building & Safety Department and Transportation Department to verify compliance with the local grading ordinance, other applicable local ordinances, and the 2010 SMR MS4 Permit. This construction site BMP plan does not need to be reviewed to ensure that it complies with the Construction General Permit,
- Verifies that project proponents subject to the Construction General Permit have existing coverage. Where coverage under the Construction General Permit appears to apply, the Transportation Department's Environmental Compliance Section inspectors verify coverage using the State Board's SMARTS web page. For such projects, the Regional and/or the State Board are responsible for conducting inspections and verifying compliance with the Construction General Permit. The County's review of the project's Runoff Management Plan, as well as the County's inspections conducted as described in Section 7.4 below, are to ensure compliance with the County's ordinances and the 2010 MS4 Permit.
- Categorizes the project as a high, medium, or low threat to water quality for the purposes of inspection, as described in Section 7.4.

7.3 Construction Site BMPs {F.2.d}

The County has designated a minimum set of BMPs and other measures to be implemented at all Construction Sites, as applicable to the site and the activities being conducted. The County requires implementation of the designated minimum BMPs and any additional measures necessary to comply with the 2010 SMR MS4 Permit at each Construction Site within its jurisdiction year round. BMP implementation requirements, however, can vary based on Rainy and Dry Seasons. Dry Season BMP implementation must plan for and address unseasonal rain events that may occur during the Dry Season (May 1 through September 30).

7.3.1 Minimum Erosion and Sediment Control Practices {F.2.d(1)(b)}

- Erosion prevention. Erosion prevention is to be used as the most important measure for keeping sediment on site during construction;
- Sediment controls. Sediment controls are to be used as a supplement to erosion prevention for keeping sediment on-site during construction;

- Slope stabilization must be used on all active slopes during rain events regardless of the season and on all inactive slopes year round;
- Permanent re-vegetation or landscaping must be installed as early as feasible; and
- Erosion and sediment controls must be required during the construction of Unpaved Roads.

7.3.2 Minimum Management Measures {F.2.d(1)(a)}

BMP Name	Stormwater BMP Handbook Portal: Construction	Caltrans Construction Site BMP Manual	MS4 Permit Requirement Reference F.2.d.(1):
Stabilize Exposed Soils (one or more or the methods below will be used as needed)			
Chemical Stabilization (Soil Binders)	EC-5	SS-5	(a): (iv), (vii) (viii) (b): (i)
Polyacrylamide	SE-11	SS-5	(a): (iv), (vii) (viii) b): (i)
Mulching			
Hydraulic Mulch	EC-3	SS-3	(a): (iv), (vii) (viii) b): (i)
Straw Mulch	EC-6	SS-6	(a): (iv), (vii) b): (i),
Wood Mulching	EC-8	SS-8	(a): (iv), (vii) b): (i)
Permanent Seeding	N/A	N/A	(a): (iv), (vii) b): (i) (iv)
Sodding	N/A	N/A	(a): (iv), (vii), (viii) b): (i) (iv)
Soil Roughening			
Temporary Seeding/Hydro-seeding	EC-4	SS-4	(a): (iv), (vii) (viii) b): (i)
Protect Steep Slopes			
Earth Dikes/Drainage Swales/Lined Ditches	EC-9	SS-9	b): (i), (iii)
Fiber Roll	SE-5	SC-5	b): (i) (iii)
Geotextiles	EC-7	SS-7	b): (i) (iii)
Gradient Terraces	N/A	N/A	b): (i) (iii)
Soil Retention	N/A	N/A	b): (i) (iii)
Straw Bale Barrier	SE-9	SC-9	b): (i) (iii)
Temporary Slope Drain	EC-11	SS-11	b): (i) (iii)
Protect Waterways			
Check Dams	SE-4	SC-4	
Outlet Protection/Velocity Dissipation Devices	EC-10	SS-10	(a): (xii) b): (i)
Streambank Stabilization	EC-12	SS-12	(a): (xii)
Temporary Stream Crossings	NS-4	NS-4	b): (i)
Phase Construction			
Construction Sequencing (Scheduling)	EC-1	SS-1	(a): (ii), (iii), (iv), (v), (vi), vii b): (i)
Dust Control (Wind Erosion Control)	WE-1	WE-1	(a): (iv), (viii)
Preserve Site Condition			
Entrance/Outlet Tire Wash	TC-3	TC-3	(a): (ix),

BMP Name	Stormwater BMP Handbook Portal: Construction	Caltrans Construction Site BMP Manual	MS4 Permit Requirement Reference F.2.d.(1):
Preservation of Existing Vegetation	EC-2	SS-2	(iii) (iv), (xii) b): (i)
Stabilized Construction Entrance/Exit	TC-1	TC-1	(a): (ix)
Stabilized Construction Roadway	TC-2	TC-2	(a): (ix) b): (i) (iv)
Scheduling	EC-1	SS-1	(a): (ii) (iii), (iv), (v), (vi), vii b): (i)
Waste Management			
Waste Handling and Disposal	SC-34	WM-5 through WM-10	(a): (i), (xi.), (x), (xi)
Pollution Prevention			
Spill prevention, Control and Cleanup	SC-11	WM-4	(a): (i.), (x)

The County requires project proponents to submit for review a Runoff Management Plan, otherwise known as a Storm Water Pollution Prevention Plan(SWPPP)/Erosion Control Plan. The Runoff Management Plan:

- Establishes limitations of grading to a maximum disturbed area as determined by County before either temporary or permanent erosion controls are implemented to prevent Stormwater Pollution. The County establishes maximum graded area on a case-by-case basis depending on the specifics of each project, and documented in the grading permit documents. The County has the option of utilizing a temporary increase in the size of disturbed soil areas, by a set amount beyond the maximum, if the individual site is in compliance with the County's ordinances and the site has adequate control practices implemented to prevent Stormwater Pollution;
- Requires preservation of natural hydrologic features where feasible;
- Preservation of riparian buffers and corridors where feasible;
- Evaluation and maintenance of all BMPs, until removed; and
- Retention, reduction, and proper management of all Stormwater Pollutant discharges on site to the MEP standard.

Since BMP technology is constantly changing, the County may consider other BMPs of equivalent or better performance on a case-by-case basis.

7.3.3 Enhanced BMPs {F.2.d.(2)}

The County requires implementation of enhanced measures to address the threat to water quality posed by all Construction Sites tributary to CWA Section 303(d) water body segments Impaired for sediment or turbidity. Currently there are no CWA Section 303(d) water body segments Impaired for sediment or turbidity to which the County's MS4 facilities discharge. Where necessary, the County also requires implementation of enhanced measures for Construction Sites within, or adjacent to, or discharging directly to Receiving Waters within an ESA (as defined in Attachment C of the 2010 SMR MS4 Permit).

7.3.4 Active/Passive Sediment Treatment (AST) {F.2.d.(3)}:

The County requires implementation of AST for sediment at Construction Sites (or portions thereof) that the County determines to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors are to be considered by the County:

(a) Soil erosion potential or soil type;

(b) The site's slopes;

(c) Project size and type;

(d) Sensitivity of Receiving Water bodies;

(e) Proximity to Receiving Water bodies;

(f) Non-Stormwater discharges;

(g) Ineffectiveness of other BMPs;

(h) Proximity and sensitivity of aquatic threatened and endangered species of concern;

(i) Known effects of AST chemicals; and

(j) Any other relevant factors.

As defined in the MS4 Permit, AST is a treatment mechanism that uses mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge. Such measures are highly expensive and are expected only to be required in cases where there is an exceptional threat and/or demonstrable impacts to receiving water quality and all other available BMPs have been ineffective for the site.

7.4 Construction Site Inspection {F.2.E}

The Transportation Department's Environmental Compliance Division conducts Construction Site inspections for compliance with its ordinances (grading, stormwater, etc.), permits (construction, grading, etc.), and the 2010 SMR MS4 Permit. When conducting inspections of Construction Sites the County inspectors utilize the inspection form provided in Appendix E. Priorities for inspecting Construction Sites must consider the nature and size of the construction activity, topography, and the characteristics of soils and Receiving Water quality. The Transportation Department's Environmental Compliance Section inspect the inventoried Construction Sites according to the schedule shown in Table 7-1.

7.4.1 Rainy Season[10] Inspection Frequency

Table 7-1: Construction Site Inspection Frequency

Priority	Supporting Criteria [(a)]	Rainy Season Inspection Frequency
High	• Sites that disturb an area greater than 30 acres with rough grading or with active, unstabilized slopes occurring during the Rainy Season • Sites disturbing an area greater than one (1) acre within the same hydrologic subarea and tributary to Receiving Waters with CWA Section 303(d) listed waters for sediment or turbidity Impairments or within, directly adjacent to, or discharging directly to a Receiving Water within an ESA. • Other sites determined by the County as a significant threat to water quality, considering the following factors: o Soil erosion potential (e.g. Hillside sites) o Project size and type o Sensitivity of and proximity to Receiving Waters (particularly ESAs since no Receiving Waters are 303(d) listed for sediment or turbidity) o History or presence of Illegal Non-Stormwater Discharges o Known past record of non-compliance by the operators of the Construction Site o Any other relevant factors.	Every Two Weeks
Medium	Project Size Sites disturbing an area of one acre or more.	Monthly
Low	Project Size Sites disturbing less than 1 acre.	As needed

7.4.2 Dry Season Inspection Frequency

The Transportation Department's Environmental Compliance Division inspects all Construction Sites as needed during the Dry Season. Sites meeting the criteria in Section F.2.e.(1) of the 2010 SMR MS4 Permit are inspected at least once in August or September each year.

7.4.3 Re-inspections

Based upon site inspection findings, the Transportation Department's Environmental Compliance Section implements all follow-up actions (i.e., re-inspection, enforcement) necessary to comply with the 2010 SMR MS4 Permit. Re-inspection frequencies are determined based upon the severity of deficiencies, the nature of the construction activity, and the characteristics of soils and Receiving Water quality.

[10] The Rainy Season – (aka Wet Season) is the period of time from October 1 forward to April 30 when the Santa Margarita Region experiences the most rainfall.

7.4.4 Conducting Inspections

At a minimum, the following items are addressed by County staff during Construction Site inspections:

- Check for coverage under the Construction General Permit NOI and/or WDID No. during initial inspections;
- Assessment of compliance with County ordinances and permits related to Runoff, including the implementation and maintenance of designated minimum BMPs;
- Assessment of BMP effectiveness;
- Visual observations for Non-Stormwater discharges, potential Illicit Connections, and potential discharge of Pollutants in Stormwater Runoff;
- Review of site monitoring data results, if the site monitors its Runoff;
- Education and outreach on Stormwater Pollution Prevention, as needed; and

Creation of a written or electronic inspection report.
The Transportation Department's Environmental Compliance Division tracks the number of inspections for each inventoried Construction Site within the County's jurisdiction throughout the reporting period to verify that each site is inspected at the minimum frequencies required. The Construction Site inspection form is included in Appendix E.

7.5 Enforcement {F.2.f }

The County has developed and implements an escalating enforcement process (Section 3.5) that is designed to achieve prompt corrective actions at Construction Sites for non-compliance with the County's permits, requirements and Ordinances. The Transportation Department's Environmental Compliance Division in coordination with Code Enforcement responds to construction complaints received from third-parties and to ensure the San Diego Regional Board that corrective actions have been implemented, if warranted.

7.6 Reporting of Non-Compliant Construction Sites {F.2.g}

The County NPDES Administrator will notify the San Diego Regional Board when the County issues high level enforcement (as defined in Section 3.5) to a Construction Site that poses a significant threat to water quality in its jurisdiction as a result of violations of its Stormwater Ordinances.

In addition, the County NPDES Administrator annually notifies the San Diego Regional Board, prior to the commencement of the Rainy Season (October 1st), of all Construction Sites with alleged violations that pose a significant threat to water quality. Information may be provided as part of the JRMP Annual Report if submitted prior to the Rainy Season. Information provided must include, but is not be limited to, the following:

(a) WDID number if enrolled under the Construction General Permit

(b) Site location, including address

(c) Current violations or suspected violations

8.0 INDUSTRIAL AND COMMERCIAL SOURCES {F.1.B.}

The County implements the following Industrial and Commercial Program which has been designed to:

- help prevent Illicit Discharges into the MS4,
- reduce industrial and commercial discharges of Stormwater Pollutants into and from the MS4 to the MEP, and
- prevent Industrial and Commercial Facility discharges to the MS4 from causing or contributing to a violation of Water Quality Standards in Receiving Waters.

The County will continue to review the effectiveness of the Industrial and Commercial Facility inspection program annually and make additional program modifications as necessary.

8.1 Industrial/Commercial Source Identification & Inventory {F.1.b.(1)(a)}

The County developed and maintains an updated inventory/database of Industrial and Commercial Facilities within its jurisdiction that could contribute a significant Pollutant load to the MS4, as identified by the 2010 SMR MS4 Permit. Facilities are included in this inventory regardless of whether the facility is subject to the Industrial General Permit, or other individual NPDES permits issued by the State Board or the San Diego Regional Board. This inventory/database is maintained by the Transportation Department's Environmental Compliance Division and an electronic copy is included as an attachment to each Annual Report.

The Transportation Department's Environmental Compliance Division regularly updates the inventory/database using information obtained during facility inspections or from any of the following sources: conditional use permits, plot plans, building permits, business licenses, occupancy permits, Hazardous Materials permits, and Hazardous Waste generator permits are approved for the development of a new Industrial Facility.

8.1.1 Facility Categories

The Industrial and Commercial Facilities inventory/database includes the following categories of potential sources:

Industrial Sites/Sources

- Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
- Operating and closed landfills;
- Facilities subject to SARA Title III; and
- Hazardous Waste treatment, disposal, storage and recovery facilities.

Commercial Sites/Sources

- 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;
- Mobile automobile or other vehicle washing;
- Automobile (or other vehicle) parking lots and storage facilities;
- Retail or wholesale fueling;
- Pest control services;
- Eating or drinking establishments, including such retail establishments with food markets;
- Mobile carpet, drape or furniture cleaning;
- Cement mixing or cutting;
- Masonry;
- Painting and coating;
- Botanical or zoological gardens and exhibits;
- Landscaping;
- Nurseries and greenhouses;
- Golf courses, parks and other recreational areas/facilities;
- Cemeteries;
- Pool and fountain cleaning;
- Marinas;
- Portable sanitary services;
- Building material retailers and storage;
- Animal boarding facilities and kennels;
- Mobile pet services;
- Power washing services;
- Plumbing services; and
- Other sites and sources as identified by the Co-permittee as having a history of un-authorized discharges to the MS4.

ESAs and 303(d) Listed Waterbodies

All other Industrial or Commercial Sites / sources tributary to and within the same hydrologic subarea as a CWA Section 303(d) Impaired water body segment, where the County has determined that the site/source generates Pollutants for which the water body segment is Impaired. All other Commercial or Industrial Sites/sources within or directly adjacent to or discharging directly to Receiving Waters within

ESAs (as defined in Attachment C of the 2010 SMR MS4 Permit) or that the County has determined generate Pollutants tributary to and within the same hydrologic subarea as an observed exceedance of an Action Level of those Pollutants.

8.1.2 Inventory Information

The information for each facility in the Industrial and Commercial Facility Database includes the following information:

- Name of facility;
- Address;
  - Mailing address (if different)
  - Assessor's parcel number
- Pollutants potentially generated by the facility;
- Identification of whether the facility is tributary to a CWA §303(d) water body segment and generates Pollutants for which the water body segment is Impaired;
- A narrative description including SIC codes which best reflects the principal products or services provided by the facility.
  - Location reference (such as, geographic coordinates, cross streets, etc.)
  - Facility Category (per Section 8.1.1)
  - Hydrologic Unit Code
  - Facility contact
  - Facility contact phone number
  - WDID number associated with the Industrial General Permit (if any)
  - Other NPDES permit or Waste Discharge Requirements
  - Site size

8.1.3 Facilities That Pose a High Threat to Water Quality

The Transportation Department's Environmental Compliance Division staff identify those facilities that pose a high threat to Receiving Water quality. All inventoried sites are inspected at least once during a five-year period. In evaluating threat to water quality, the 2010 SMR MS4 Permit identifies the following factors that are to be considered:

(i) Type of activity (SIC code);

(ii) Materials used at the facility;

(iii) Wastes generated;

(iv) Pollutant discharge potential, including whether the facility generates a Pollutant that exceeds an Action Level;

(v) Non-Stormwater discharges;

(vi) Size of facility;

(vii) Proximity to Receiving Water bodies;

(viii) Sensitivity of Receiving Water bodies;

(ix) Whether the facility is subject to the General Industrial Permit or an individual NPDES permit;

(x) Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability;

(xi) Facility design; total area of the site, portion of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and Runoff;

(xiii) The facility's compliance history; and

(xiv) Any other relevant factors.

Primarily, the designation of Industrial and Commercial Facilities that are a high threat to Receiving Water quality will be assessed using the monitoring described in the CMP and through the Watershed Water Quality Work plan assessments. As described in the Santa Margarita Watershed Water Quality Workplan, where an MS4 Outfall Action Level exceedance is detected in a Receiving Water with chronic exceedances of Basin Plan Objectives for the same Pollutant, the County will evaluate appropriate response actions to address that Action Level exceedance. Where the appropriate response action is identified as enhanced or focused industrial or commercial inspections, all facilities in the inventory that are tributary to that outfall and are known to generate Pollutants associated with the Action Level exceedance (per the inventoried information about the facility) will be designated as high priority facilities. Further prioritization among inventoried industrial and commercial facilities may be performed by the County using the remaining factors identified above.

8.2 General BMP Implementation

8.2.1 Pollution Prevention BMPs {F.1.b.(2)(a)}

The County has designated the following set of minimum Pollution Prevention BMPs for the Industrial and Commercial Facilities within its jurisdiction to reduce the discharge of Pollutants to the MEP:

- Good Housekeeping
- Proper Materials Handling and Storage
- Proper Waste Handling
- Preventive Maintenance
- Spill Prevention and Response Procedures (where applicable)
- Facility Personnel Training

Through the process of conducting inspections of Industrial and Commercial Facilities, the inspectors make the facilities aware of these minimum BMPs and additional BMPs (when appropriate) and of the County's applicable ordinance(s).

8.2.2 Minimum BMPs {F.1.b.(2)(b)}

The County has also designated the following minimum set of BMPs for all applicable inventoried Industrial and Commercial Sites/sources within its jurisdiction that are specific to facility types and Pollutant-generating activities. During the inspection of inventoried Industrial and Commercial facilities, the following minimum BMPs are verified as applicable to the facility. Where applicable, CASQA BMP Fact sheets are noted:

Item #	Minimum BMP	CASQA BMP Fact Sheet
1	Hazardous Waste/Materials storage areas are clean, no signs of leakage, and protected from rainfall and Runoff;	SC-34
2	Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and no signs of leakage from the trash bins	SC-34
3	Aboveground tanks have been properly maintained including no signs of leakage, and secondary containment in good condition	SC-11, SC-31, SC-33
4	Onsite storm drain inlets are protected from inappropriate Non-Stormwater discharges	SC-44
5	Oil/water separators are connected to sanitary sewer	NA
6	Wash water from wash pads (steam cleaning or high pressure cleaning) is directed to the sanitary sewer and does not discharge to the MS4	SC-10
7	Mop bucket wash water is discharged to sanitary sewer via clarifier	SC-10
8	Parking lot areas are free of trash, debris, and fluids other than water	SC-43
9	Facility has coverage under the Industrial General Permit, if appropriate	NA
10	Oil and grease Wastes are not discharged onto a parking lot, street or adjacent catch basin	SC-10
11	Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and the bins have not been washed out into the MS4	SC-43
12	Floor mats, filters and garbage containers are not washed in adjacent parking lots, alleys, sidewalks, or streets and no wash water is discharged to MS4s	SC-10
13	Parking lot areas are cleaned by sweeping, not by hosing down, and the facility operator uses dry methods for spill cleanup	SC-43

The County will continue to regularly review and update these designated BMPs for adequacy and subsequently submit any updates in the JRMP Annual Report.

8.2.3 Enhanced BMPs for ESAs and 303(d) Impairments {F.1.b.(2)(c)}

The County designates enhanced measures as necessary for inventoried Industrial and Commercial Sites/sources that:

- Are tributary to and within the same hydrologic subarea as CWA Section 303(d) Impaired water body segments (where the County has determined that the site/source generates Pollutants for which the water body segment is Impaired).
- Are within or directly adjacent to or discharging directly to Receiving Waters within ESAs.

8.2.4 BMP Implementation {F.1.b.(2)(d)}

The County requires the implementation of the designated minimum and enhanced BMPs and any additional measures necessary based on inspections, incident responses, and water quality data to comply with the 2010 SMR MS4 Permit at each Industrial and Commercial Site/source within its jurisdiction. To ensure that the designated BMPs are implemented by the facility owner/operator, the County implements the following programmatic BMPs:

- Maintain and update Inventory of facilities (Section 8.1)
- Designates appropriate BMPs to be implemented by each facility (Section 8.2)
- Conducts inspections (Section 8.4)
- Enforces County ordinances (Section 3.5)

8.3 Mobile Businesses Program {F.1.b.(3)}

The County has developed and is implementing a program to reduce the discharge of Stormwater Pollutants from Mobile Businesses to the MEP and to prohibit Non-Stormwater discharges pursuant to Section B of the 2010 SMR MS4 Permit. The County maintains as part of its commercial source inventory a listing of Mobile Businesses known to operate within its jurisdiction that conduct services listed in Section 8.1.

8.3.1 Minimum BMPs for Mobile Businesses {F.1.b.(3)(i)}

Based on the activities associated with the Mobile Businesses identified in the County's jurisdiction, the following list of potential Source Control BMPs was developed for each of the categories of Mobile Businesses:

Power Washing Activities

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater (such as with a shop vac)
- Disposal of wastewater to a permitted industrial liquid waste disposal site or sanitary sewer

Mobile carpet, drape or furniture cleaning

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater (such as with a shop vac)
- Disposal of wastewater to a permitted industrial liquid waste disposal site or sanitary sewer

Mobile equipment repair, maintenance, fueling or cleaning

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater or fluids such as oils, greases, and fuels
- Disposal of wastewater to a permitted industrial liquid waste disposal site or sanitary sewer
- Proper handling and disposal of hazardous materials and wastes

Pest control services

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater or other waste streams to protect MS4
- Proper Disposal techniques for disposal of pesicides

Cement mixing or cutting

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater (such as with a shop vac)
- Disposal of wastewater to a permitted industrial liquid waste disposal site or sanitary sewer

Masonry

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater (such as with a shop vac)
- Disposal of wastewater to a permitted industrial liquid waste disposal site or sanitary sewer

Mobile painting and coating

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Proper handling and disposal of hazardous materials and hazardous waste

Landscaping

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater (such as with a shop vac)
- Disposal of wastewater to a permitted industrial liquid waste disposal site or sanitary sewer

Pool and Fountain Cleaning

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater (such as with a shop vac)
- Disposal of wastewater to a permitted industrial liquid waste disposal site or sanitary sewer

Portable Sanitary Services

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater (such as shop vac)
- Disposal of wastewater to a permitted industrial liquid waste disposal site or sanitary sewer

Mobile Pet Services

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater (such as shop vac)
- Disposal of wastewater to a permitted industrial liquid waste disposal site or sanitary sewer

Plumbing Services

- Applicable permits and fees are paid
- Staff training for protection of MS4
- Ability to protect storm drains from discharge into MS4
- Ability to collect wastewater (such as shop vac)
- Disposal of wastewater to a permitted industrial liquid waste disposal site or sanitary sewer

8.3.2 Notification and Response {F.1.b.(3)(iii)}

The County notifies all Mobile Businesses based within, or discovered operating within their jurisdiction concerning the minimum Source Control and Pollution Prevention BMPs that they must implement when conducting their activities. The County identifies Mobile Businesses based within, or operating within their jurisdictions by requiring Mobile Businesses to register with the County as a business that has an NPDES impact.

When put on notice by staff or a third-party of a potential violation originating from a Mobile Business that is not already being responded to by another responsible agency (e.g., other Copermittee), the County investigates and take the actions as described in Section 3.5.3.

8.3.3 Database {F.1.b.(3)(a)}

The Industrial/Commercial Facility Database (described in Section 8.1) maintained by the Transportation Department's Environmental Compliance Division staff includes the known Mobile Businesses and their base of operation. The database will assist in identifying the information necessary for the County to take enforcement action.

8.4 Industrial and Commercial Facility Inspections {F.3.b.}

The County conducts Industrial and Commercial site inspections for compliance with its ordinances, permits, and the 2010 MS4 Permit.

8.4.1 Inspection Frequencies {F.1.b.(4)(b)}

At a minimum all sites determined by the County to pose a high threat to water quality (Section 8.1.3) are inspected annually. All other inventoried sites are inspected at least once during a five year period.

8.4.2 Inspection Procedures {F.3.b.(4)}

When conducting facility/business inspections, at a minimum, the following are addressed:

- Review of BMP implementation plans not including Project-Specific WQMPs required pursuant to Section F.1.d of the 2010 SMR MS4 Permit, if the site uses or is required to use such a plan;
- Review of facility monitoring data, if the site monitors its Runoff;
- Check for coverage under the General Industrial Permit NOI and/or WDID, if applicable;
- Assessment of compliance with County ordinances and County issued permits related to Runoff;
- Assessment of the implementation, maintenance and effectiveness of the designated minimum and/or enhanced BMPs;
- Visual observations for Non-Stormwater discharges, potential Illicit Connections, and potential discharge of Pollutants in Stormwater Runoff; and
- Education and training on Stormwater Pollution prevention, as conditions warrant.

8.4.3 Inspection Program Approach

The County ensures that all inventoried facilities are inspected pursuant to the frequencies and procedures identified in Sections 8.4.1 and 8.4.2, respectively. These requirements are met through a combination of approaches as described below.

8.4.3.1 County Business License Inspection Program

The Riverside County Department of Building and Safety has established a stand-alone Stormwater Compliance Inspection and Enforcement Program (CIEP) for Industrial and Commercial Facilities in the unincorporated areas of the County only. Ordinance 857 (Business Registration and Licensing) was adopted on September 12, 2006 by the County Board of Supervisors and provides the basis for registering all businesses that are within the unincorporated areas of the County. In Fiscal Year 12/13, a total of 1,100 business licenses were issued. A total of 844 businesses were inspected in Fiscal Year 12/13. A database has been established to register businesses and inspections take place to determine the compliance status of the registrants with the County's Stormwater Ordinance. Businesses that are determined to have a potential impact on the requirements of the 2010 SAR MS4 Permit are prioritized and inspected based upon the County's inspection frequency. High priority businesses are inspected on an annual basis. Medium priority businesses are inspected once every five years. The inspectors determine the inspection priority at the initial inspection or at the time of the normal inspection frequency. The inspector can revise the inspection priority based on what the inspector observes at the time of the inspection.

8.4.3.2 Third Party Certifications {F.1.d(4)(c)}

The County may in the future propose to develop and implement a third party certification program subject to San Diego Regional Board Executive Officer acceptance. This program would verify Industrial and Commercial Site/source compliance with the County's ordinances, permits, and this Order. To the extent that third party certifications are conducted to fulfill the requirements of Section F.3.b.(4) of the 2010 SMR MS4 Permit, the County will retain responsibility for compliance with the 2010 SMR MS4 Permit and will be responsible for conducting and documenting quality assurance and quality control of the third-party certifications.

If the County proposes a third party certification program it will include the following:

(i) A description of the procedures and measures for quality assurance and quality control;

(ii) A listing of sites/sources that may and may not participate in the program;

(iii) The representative percentage of certifications that would qualify to satisfy the inspection requirements in Section F.3.b(4)(c) of the 2010 SMR MS4 Permit;

(iv) Photo documentation of potential stormwater violations identified during the third party inspection;

(v) Reporting to the County of identified significant potential violations, including imminent or observed Illegal Discharges, within 24 hours of the third party inspection;

(vi) Reporting to the County of all findings within one week of the inspection being conducted; and

(vii) County follow-up and/or enforcement actions for identified potential Stormwater violations within two business days of the potential violation report receipt.

Based upon site inspection findings, the County will implement all follow-up actions and enforcement necessary to comply with the 2010 SMR MS4 Permit.

8.4.4 Regional Board Inspections {F.1.d.(4)(c)}

To the extent that the San Diego Regional Board has conducted an inspection of an Industrial Site during a particular year, the requirement for the County to inspect that same facility during the same year is deemed satisfied.

8.4.5 Tracking Inspections

The County tracks the number of inspections for the inventoried Industrial and Commercial Sites/sources throughout the reporting period to verify that the sites/sources are inspected at the minimum frequencies listed in the 2010 SMR MS4 Permit.

8.4.6 Enforcement of Industrial and Commercial Sites/Sources

The County enforces its Stormwater Ordinance for all Industrial and Commercial Sites/sources as necessary to maintain compliance with the 2010 SMR MS4 Permit. The Enforcement/Compliance Strategy is described in Section 3.5 of this JRMP.

8.4.7 Reporting of Non-Compliant Sites {F.1.d(6)}

The County provides annual notification to the San Diego Regional Board, prior to the commencement of the Wet Season, of any unresolved high level enforcement action that poses a significant threat to water quality in its jurisdiction as a result of violations of the Stormwater Ordinance.

9.0 RESIDENTIAL SOURCES {F.c}

The County implements the following residential program, which has been designed to:

- meet the requirements of Section F.3.c. of the 2010 SMR MS4 Permit,
- help prevent Illicit Discharges into the MS4,
- reduce residential discharges of Stormwater Pollutants from the MS4 to the MEP, and
- prevent residential discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

9.1 Program Approach

The County actively encourages the use of Pollution Prevention methods by residents, particularly for those high priority residential areas and activities described previously. The following describes the programs implemented by the County:

- Training County personnel who have regular contact with residential areas (e.g., park maintenance personnel, street sweepers, code enforcement officers, etc.) to serve as informal inspectors performing field reviews. The training programs are further described in Section 12.
- Participation in County-wide Public Education Efforts including (as further described in Section 11.
  - Maintenance of brochures on various topics pertinent to the high priority residential activities described in Section 11.
  - Maintenance of a public education website
  - Issuance of quarterly e-newsletters
  - Outreach at Community events
  - Outreach at Home Improvement stores
  - Elementary School assembly presentations
  - Maintenance of a "1-800" hotline for reporting of complaints or illegal discharges

9.2 High Priority Residential Areas and Activities {F.3.c.(1)}

The 2010 SMR MS4 Permit identifies the following residential activities as posing a high threat to water quality:

- Automobile repair, maintenance, washing and parking.
- Home and garden care activities and product use (pesticides and fertilizers);
- Disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, cleaning products);

- Any residential areas tributary to and within the same hydrologic subarea as a CWA Section 303(d) Impaired water body, where the residence generates Pollutants for which the water body is Impaired; and
- Any residential areas within or directly adjacent to or discharging directly to Receiving Waters within an ESA.

9.3 Designated BMPs {F.3.c.(2)(b)}

The County has designated a set of minimum BMPs for high-threat-to-water-quality residential areas and activities within their jurisdiction to reduce the discharge of Pollutants to the MEP. The minimum BMPs, all of which are Pollution Prevention BMPs, are shown in Table 9-1.

The residential activities described in Table 9-1 are assumed to occur with equal likelihood in all residential areas within the County's jurisdiction. The implementation of the residential program and the minimum BMPs designated is therefore designed to address these activities on a watershed-wide basis. This includes addressing Pollutants from Residential areas that may be tributary to and potentially impacting a CWA Section 303(d) Impaired water body, and for addressing residential discharges into ESAs. This list of residential areas and activities and associated BMPs may be updated by the County in response to the Santa Margarita Watershed Water Quality Work Plan assessments.

The County requires implementation of the minimum BMPs and any additional measures necessary to comply with the Prohibitions and Receiving Water Limitations and restrictions on Non-Stormwater discharges as specified in the 2010 SMR MS4 Permit.

Table 9-1: Designated Residential BMPs

	Area or Activity	Designated BMPs	Reference Material
A	Residential: Automobile repair, maintenance, washing and parking	• Collect and properly dispose of automotive fluids and other waste • Clean up spills using dry cleanup methods where possible • Store Hazardous Materials away from rain and Runoff • Avoid hosing down parking areas • Prevent all leaks and/or spills from entering the street or MS4	Brochures (See Section 11): • Automotive Maintenance and Car Care Brochure • Outdoor Cleaning CASQA BMP Fact Sheets: • SC-20 • SC-21 • SC-22 • SC-43
B	Home and garden care activities and product use (pesticides, herbicides and fertilizers)	• Prevent irrigation runoff • Store and apply pesticides, fertilizers and other chemicals in accordance with their labeling • Avoid applying pesticides, herbicides and fertilizers before forecasted rain	Brochures (See Section 11): • Landscape and Garden • 10 Ways to Save Water Outdoors CASQA BMP Fact Sheets: • SC-73 • SD-10 • SD-12
C	Disposal of trash, pet waste, green waste, and Household Hazardous Waste (e.g., paints, cleaning products)	• Properly dispose of pet waste • Collect green waste and never blow such waste into the street, gutter or MS4 • Never dispose of Waste in a street, gutter or MS4 • Take Household Hazardous Waste to a designated collection center	• Brochures (See Section 11): • After the Storm • What's the Scoop • Tips for Horse Care • Landscape and Garden • Pools, Spas and Fountains HHW and ABOP Collection Events http://www.rivcowm.org/opencms/hhw/index.html Videos: • Animal Care • Household Hazardous Waste • Managing your Lawn and Garden • Outdoor Activities

9.4 Hazardous Waste BMPs {F.3.c.(2)(c)}

The County participates in regional activities to facilitate the proper collection and management of used oil, Toxic and Hazardous materials, and other household Wastes. This includes assisting in the distribution of information regarding the dates and locations of temporary and permanent HHW and ABOP collection events and facilities, financial support of HHW and ABOP collection facilities and events, and curbside or special collection sites managed by the County or private entities, such as solid waste haulers.

9.5 Common Interest Areas, Home Owner Associations and Mobile Home Parks {F.3.c.(4)}

The County requires implementation of effective management measures in Common Interest Areas (CIAs), Home Owner Associations (HOAs) and mobile home parks (MHPs) to ensure that Runoff within and from these areas meets the objectives of the 2010 SMR MS4 Permit. The designated BMPs for residential CIAs, HOAs, and MHPs are as described in Section 9.3. Additional BMPs may be required based on a review of pertinent factors, including:

- Maintenance duties and procedures typically used by CIA/HOA maintenance associations within its jurisdiction;
- Whether streets and storm drains are publicly or privately owned within the CIA/HOA or MHP;
- Whether the CIA/HOA or MHP has been identified as a high priority residential area based on an evaluation of the site potential to generate Pollutants contributing to a 303(d) listed waterbody or an observed Action Level exceedance; and
- Other activities conducted or authorized by the HOA that may pose a significant risk to inland Receiving Waters.

Additional BMPs that may be applicable to CIAs, HOAs, and/or MHPs (in addition to those referenced in Section 9.3) are shown in Table 9-2.

Table 9-2: Additional BMPs for CIAs, HOAs, and MHPs

Area or Activity		Designated BMPs	Reference Material
A	Outdoor Cleaning Activities	• Clean up spills using dry cleanup methods where possible • Avoid hosing down parking areas • Prevent all wash water, leaks and/or spills from entering the street or MS4	Brochures (See Section 11): • Outdoor Cleaning CASQA BMP Fact Sheets: • SC-43
B	Community Pools / Fountains	• Properly maintain community pools and/or fountains to avoid Illegal Discharges • Properly store all chemicals and equipment used in maintaining the pools/fountains	• Brochures (See Section 11): • Pools, Spas and Fountains CASQA BMP Fact Sheets: • SC-72
C	Community streets, roads and parking lots	• Sweep streets/roads as necessary to prevent accumulated trash or debris from entering the MS4 • Schedule repairs for Dry Weather, and protect nearby storm drain inlets for repairs that must occur during the Wet Season	CASQA BMP Fact Sheets: • SC-43 • SC-70
D	Community-owned MS4	• Regularly inspect and remove litter and/or other debris from inlets- before the Wet Season • If there is evidence of Illegal Discharges or dumping, attempt to find and eliminate the source. Refer to the local code enforcement agency if necessary. • Post no-dumping signs in areas where trash or other illegal dumping accumulates	CASQA BMP Fact Sheets: • SC-10 • SC-74

9.6 Enforcement {F.3.c.(3)}

If during an inspection in response to a complaint, a Code Enforcement inspector observes that a residence or a CIA/HOA/MHP is non-compliant with the County Stormwater Ordinance, (including the prohibition of non-exempt Non-Stormwater discharges), the County begins enforcement procedures. Procedures for enforcement of the Stormwater Ordinance are described in Section 3.5 and the process for elimination of IC/IDs is described in Section 4.

10.0 RETROFITTING EXISTING DEVELOPMENT{F.3.D.}

The goals of the Existing Development Retrofitting program are to:

- address the impacts of existing development through retrofit projects that reduce impacts from Hydromodification,
- promote LID,
- support riparian and aquatic habitat restoration,
- reduce the discharges of Stormwater Pollutants from the MS4 to the MEP, and
- prevent discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

Where feasible, at the discretion of the County, the Existing Development Retrofitting Program may be coordinated with flood control projects and other infrastructure improvement programs.

To facilitate consistent implementation of the Existing Retrofit Program in the Santa Margarita Region, the Co-permittees prepared the Santa Margarita Region Retrofit Program Study, which is available at http://rcflood.org/downloads/NPDES/Documents/SM_JRMP/RetrofitStudyProgram.pdf The components of this Retrofit Program Study represent an adaptive approach to meeting the Retrofit requirements of the MS4 Permit.

The Retrofit Program itself consists of a multi-step process to identify and ultimately prioritize the actions and efforts that are best suited to addressing specific water quality issues in the Santa Margarita Region. The steps in this Retrofit Program enable the Co-permittees first to identify water quality, watershed, infrastructure, or other issues or Conditions of Concern; second to develop context for the issues; and finally to use a series of tools, called the "Retrofit Program Framework," to identify the best strategy or strategies to address them, up to and including Retrofit projects. The tools can be applied and re-combined as the Co-permittees' programs evolve and develop, to identify Retrofit project needs, priorities, and opportunities, and to select and design appropriate Structural or Non-Structural BMPs that may provide the most cost-effective reduction measures for Pollutants or Conditions of Concern.

10.1 Identification of Conditions of Concern

The potential issues which may trigger a Retrofit evaluation are listed in Table 10-1, and correspond to the "Problem or Condition (NAL/SAL Exceedance)" column headings in the BMP Menu, (Appendix B of the Retrofit Program Study).

Table 10-1: Observations Potentially Triggering a Retrofit Program Framework Analysis

Irrigation Runoff	
Hydrologic modification/channel instability	
Illicit Connection/Discharge	
Action Level Exceedances or TMDLs related to:	
Metals	Pesticides
Organics	Nutrients
Oil & grease	Bacteria
Sediment	

10.2 Source Assessment & Identification

When the County identifies a problem listed in Table 10-1, Step 2 of the Retrofit Program Framework identifies that the County will conduct source identification in an attempt to determine the source and/or areas of development that may potentially be retrofit. To aid in the source identification, the Retrofit Program Study provides land use maps as well as information about Pollutants associated with those land uses, and factors that can be used to help guide the County to narrow down potential sources. The procedures for source identification are described in Section 4.4.2 of this JRMP.

One possible outcome of the source assessment could be identification of a single point source. Under this scenario, the County would implement JRMP enforcement programs to eliminate the source of the issue. The other possible outcome is that there is not an identifiable point source of the issue. In this instance, Step 3 of the Retrofit Program Framework is to assess the current JRMP program implementation relative to the Pollutant or condition of concern, its likely source, the land use and management setting, and the County's responsibilities and initiatives that may or should be able to address the issue. The purpose of this step is to assess whether the problem or condition may be mitigated through more effective or aggressive implementation of its existing authorities and programs in the JRMP, or if supplemental actions—such as Retrofit projects (Non-Structural and/or Structural)—may be required. The results of this evaluation may reveal that the existing JRMP program implementation could be enhanced to address the issue; in that case any deficiencies or needed improvements in County programs would be addressed and reported in the JRMP Annual Report.

If the JRMP programs are being adequately implemented the County can use Steps 4 and 5 of the Retrofit Program Framework, to evaluate structural and non-structural Retrofit BMPs. An early step in the evaluation would be to assess if Non-Structural Retrofit BMPs would be an appropriate solution. In instances where a Non-Structural Retrofit BMP is not a feasible option to address the identified problem and where the Watershed Work Plan has identified the problem as a Priority 1 issue, the County can use the BMP menu to evaluate Structural BMPs.

10.3 Identification of Candidate Areas for Retrofitting *{F.3.d.1.}*

Existing areas of development (i.e., municipal, industrial, commercial, residential) within the County have been identified and inventoried as candidates for Retrofitting in the Santa Margarita Region Retrofit Program Study. Potential Retrofitting candidates include but are not limited to:

1. Areas of development that generate Pollutants of Concern to a TMDL or an ESA;
2. Receiving Waters that are channelized or otherwise hardened;
3. Areas of development tributary to Receiving Waters that are channelized or otherwise hardened;
4. Areas of development tributary to Receiving Waters that are significantly eroded; and
5. Areas of development tributary to an Area of Special Biological Significance (ASBS) or State Water Quality Protected Area (SWQPA).

The potential retrofitting candidate areas are identified in Figure 20 of the Santa Margarita Region Retrofit Program Study. When a specific problem has been identified per the Retrofit Program Framework, this initial inventory will be tailored to identify and prioritize focused areas of development as necessary during the source identification process described in Section 10.4.

10.4 Prioritization of Candidate Areas for Retrofitting *{F.3.d.2.}*

The inventoried areas of existing development that are tributary to the identified Condition of Concern will be evaluated and ranked as part of Step 4 and/or Step 5 of the Retrofit Program Framework, as necessary, to prioritize Retrofit projects. Criteria for evaluation include, but are not limited to:

1. Feasibility;
2. Cost effectiveness;
3. Pollutant removal effectiveness, including reducing Pollutants exceeding Action Levels;
4. Tributary area potentially treated;
5. Maintenance requirements;
6. Landowner cooperation;
7. Neighborhood acceptance;
8. Aesthetic qualities;
9. Efficacy at addressing concern; and
10. Potential improvements on public health and safety.

A prioritized inventory of existing areas of development identified as candidates for retrofitting will be developed and provided in the JRMP Annual Report, as applicable in response to steps 4 and 5 of the Retrofit Program Framework.

10.5 Incorporation into Watershed Work Plan *{F.3.d.3.}*

The County will consider the results of the Retrofit Program Framework, when applicable, in prioritizing Watershed Work Plans for the following year in accordance with Section G.1 of the 2010 SMR MS4 Permit and in assessing the JRMP program effectiveness in accordance with Section J of the Permit.

Evaluation of Retrofit BMP options will consider program jurisdiction (e.g., regulated construction sites vs. agricultural operations with waivers), evaluation of whether Non-Structural Retrofit BMP approaches are sufficient to address the problem, and, if necessary, evaluation of sites and BMPs for structural Retrofit projects. As noted above, the methodology in the Retrofit Program Framework prioritizes the use of Non-Structural BMPs, which can be implemented far more quickly and often at a much lower cost.

Structural BMPs are assessed where the identified issue is identified as a Priority 1 issue in the Watershed Work Plan, and the Non-Structural BMPs are insufficient to address the problem. Highly feasible projects expected to benefit water quality will be given a high priority to implement Source Control and Treatment Control BMPs. Where Structural BMPs are proposed and where feasible, the Retrofit projects may be designed in accordance with the WQMP requirements within Sections F.1.d.(3) through F.1.d.(8) and the Hydromodification requirements in Section F.1.h. of the 2010 SMR MS4 Permit.

10.6 Encouraging Private Retrofitting Projects *{F.3.d.4.}*

The County will cooperate with private landowners to encourage site specific Retrofitting projects, where identified as necessary to address a pollutant or condition of concern pursuant to steps 4 and 5 of the Retrofit Program Framework, or where deemed appropriate by the County as part of enforcement measures where a source is found. The following practices will be considered in cooperating and encouraging private landowners to Retrofit their existing development, which are included in the BMP Menu, (Appendix B of the Retrofit Program Study):

1. Demonstration Retrofit projects; Retrofits on public land and easements that treat Runoff from private developments;
2. Education and outreach;
3. Subsidies for Retrofit projects;
4. Requiring Retrofit projects as enforcement, mitigation or ordinance compliance;
5. Public and private partnerships; and
6. Fees for existing discharges to the MS4 and reduction of fees for Retrofit implementation.

10.7 Tracking Retrofit BMPs*{F.3.d.(5)}*

The known completed Retrofit BMPs will be included in the watershed-based database established to track and inventory post-construction Structural BMPs in accordance with Section F.1.f. of the 2010 SMR MS4 Permit. Retrofit BMPs on publicly owned properties will be inspected to verify that they are operating effectively and have been adequately maintained per Section F.1.f of the 2010 SMR MS4 Permit. Privately owned Retrofit BMPs will be inspected as needed.

10.8 Regional Mitigation Projects*{F.3.d.(6)}*

Where constraints on Retrofitting preclude effective BMP deployment on existing developments at locations critical to protect Receiving Waters pursuant to Step 5 of the Retrofit Program Framework, a regional mitigation project may be proposed to improve water quality. Such regional projects may include but are not limited to:

1. Regional water quality treatment BMPs;
2. Urban creek or wetlands restoration and preservation;
3. Day-lighting and restoring underground creeks;
4. Localized rainfall storage and reuse to the extent such projects are fully protective of downstream water rights;
5. Hydromodification projects; and
6. Removal of invasive plant species.

11.0 PUBLIC EDUCATION COMPONENT {F.6.}

Developing programs to increase public awareness and to involve the public can be an effective method for controlling Pollution associated with Runoff. Emphasizing the relevant impact of Runoff to target audiences increases the likelihood that the messages will be noticed and that the audience will support and participate in program implementation. The Riverside County Permittees have developed a county-wide Public Education and Outreach Program that is implemented by the District.

To leverage Co-permittee resources, the Public Education and Outreach Program may partner with other entities including Riverside County's Waste Management Department, Western Riverside Council of Governments, other county-wide Stormwater public education programs in Southern California, the Riverside-Corona Resource Conservation District, and others to promote conservation, Pollution Prevention and environmental awareness. The public education program may also expand outreach opportunities by collaborating with entities such as Riverside County's Agricultural Commissioner and University California Cooperative Extension to promote proper use of pesticides and herbicides to specific target groups such as pesticide applicators and home gardeners.

The Public Education and Outreach Program maintains an Internet website that provides information to residents and businesses about Stormwater management and offers Stormwater Pollution Prevention activities. The website also provides a materials order form for educational materials, and has a tracking mechanism for the number of queries. The website address is http://rcflood.org/stormwater/ .

11.1 Target Audiences

The County ensures that appropriate education and outreach is available to the following target audiences:

- County departments and personnel
- New Development / Redevelopment Project Applicants, developers, contractors, property owners, and other responsible parties
- Construction Site owners and operators
- Commercial Facility owners and operators
- Industrial Facility owners and operators
- Residential community and general public

11.2 Education of Public Audiences

11.2.1 General Education

The County, through the Implementation Agreement described in Section 3.2.1, coordinates with the other Co-permittees to develop and implement county-wide educational activities through the regional 'Only Rain Down the Storm Drain' program implemented by the District. Where necessary those regional activities are supplemented by the County with additional localized educational / outreach activities.

In general, these education programs educate each target audience on the following topics, as appropriate and applicable to the target audience's potential Stormwater and Non-Stormwater discharges to the MS4:

(a) Applicable water quality laws, regulations, permits, and requirements;

(b) BMPs;

(c) General Runoff concepts;

(d) Existing water quality, including local water quality conditions, Impaired waterbodies and ESAs; and

(e) Other topics, as determined by the Co-permittee(s), such as public reporting mechanisms, water conservation, LID techniques, and public health and vector issues associated with Runoff.

In addition, the County implements educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.

11.2.2 Target Audience Topics

The County ensures that their education program provides the following information

New Development / Redevelopment and Construction Sites {F.6.b.(2)}

As early in the planning and development process as possible and all through the permitting and construction process, the County notifies parties responsible for the construction project about the importance of educating all construction workers in the field about Stormwater issues and BMPs, in addition to the general topics under Section F.6.a.(1) of the 2010 SMR MS4 Permit.

Commercial and Industrial Sites / Sources {F.6.b.(3)}

At least once during the five-year period of this Order, the County will notify the owner/operator of each of its inventoried commercial and industrial site/source of the BMP requirements applicable to the site/source.

Residential and General Public {F.6.b.(4)}

The County, through the implementation agreement, collaborates with the other Co-permittees to fund the development and implementation of the regional 'Only Rain Down the Storm Drain' public education program. One of the goals of this program is to educate residential and general public target communities on potential Pollutant generating activities (e.g., car washing, mobile operations, yard maintenance) and Pollutant generating products (e.g., pesticides, fertilizers, household chemicals). The target audiences for the residential and general public education programs include underserved target audiences (e.g., disadvantaged communities), residents and managers of CIA/HOA areas, and owners and residents of MHPs.

11.2.1 Methods

The Table 11-1 describes the public education and outreach methods that target public audiences.

Table 11-1: Public Education Education/Outreach Methods

Target Audience	JRMP Program Areas Addressed	Education / Outreach Methods
New Development / Redevelopment Project Applicants, Developers, Contractors, Property Owners, and other Responsible Parties	• F.1 • F.6.a • F.6.b.(2)	Training • Regional SMR WQMP Launch Training (upon approval of revised SMR WQMP) • Regional HMP Launch Training (upon approval of HMP) Guidance Documents • SMR WQMP and HMP Guidance • Regional LID BMP Design Handbook (http://rcflood.org/npdes/lidbmp.aspx) • CASQA Low Impact Development Manual for Southern California (https://www.casqa.org/LID/tabid/240/Default.aspx) • CASQA Stormwater BMP Handbooks (http://www.cabmphandbooks.com/) Applications / Forms • Project Application form • WQMP Applicability Checklist Electronic Outreach • Regional Quarterly E-newsletters • Website Other • Regional Quarterly E-newsletters
Construction Site Owners and Operators	• F.2. • F.6.a. • F.6.b.(2)	Applications / Forms • Grading Permit Application form • Construction Checklist (a sample is provided in WQMP Chapter 5) Print Material • After the Storm • General Construction site supervision • Outdoor Cleaning Activities • Construction Poster Electronic Outreach • Regional Quarterly E-newsletters • Website

Target Audience	JRMP Program Areas Addressed	Education / Outreach Methods
Commercial / Industrial Owners and Operators	• F.3.b. • F.6.a. • F.6.b.(3)	Applications / Forms • Business Registration form Direct Outreach • Business Partnerships with garden centers / nurseries, paint stores, hardware stores, home improvement stores, and pet facilities, including training for store staff on specific stormwater / BMP issues Print Material • After the Storm • Did you know your facility may need a stormwater permit? • Automotive Maintenance and Car Care • Outdoor Cleaning Activities • Food Service Industry • Industrial / Commercial Facilities • Landscape and Garden • Pools, Spas and Fountains Electronic Outreach • Regional Quarterly E-newsletters • E-blasts to mobile service providers • Website
Residential Community and General Public	• F.3.c. • F.6.a. • F.6.b.(4)	Direct Outreach • Attendance at region-wide community events • Attendance at local community events • Elementary School Presentations • Outreach at Home Improvement Stores Print Material • After the Storm • 10 Ways to Save Water Outdoors • Landscape and Garden • Living on the Edge • Stream Stabilization Fact Sheet • Tips for Horse Care • Septic Tank Systems • Automotive Maintenance and Car Care • Outdoor Cleaning Activities • Pools, Spas and Fountains • What's the Scoop? • Tear sheets on various BMP topics placed in stores as part of Commercial / Industrial outreach Electronic Outreach • Regional Quarterly E-newsletters • Website

12.0 COUNTY STAFF TRAINING{F.6.}

The County's education program ensures that County staff and contractors responsible for implementing the requirements of the 2010 SMR MS4 Permit have an understanding of the following topics as applicable to their responsibilities.

(i) Applicable water quality laws and regulations;

(ii) The potential effects and impacts that Co-permittee departments and personnel activities related to their job duties can have on water quality);

(iii) Plan review policies and procedures to verify consistent application;

(iv) Methods of minimizing impacts to receiving water quality resulting from development, construction, and other potential Pollutant generating activities;

(v) Proper implementation of erosion and sediment control, Source Control, Treatment Control, and other BMPs to minimize the impacts to Receiving Water quality resulting from development, construction, and other potential Pollutant generating activities;

(vi) Applicable recordkeeping and tracking mechanisms; and

(vii) Inspection and enforcement procedures, BMP implementation, and review of monitoring data

12.1 Methods

Table 12-1 describes the educational activities conducted that target County staff:

Table 12-1: County of Riverside Staff Education/Outreach Methods

Target Audience	JRMP Program Area Addressed	Education / Outreach Methods
Management	All	• Staff Meetings • Regional City Manager coordination meetings
NPDES Coordinator	All	• SMR Technical Advisory Committee (TAC) Meetings • SMR Co-permittee staff meetings • Regional NPDES training (all applicable modules) • County Water Quality Management Meetings
Development Planning Staff	• F.1. • F.6.a. • F.6.b.(1)	• Regional WQMP Training • HMP Training (to be developed upon approval of HMP) • Co-permittee staff training
Construction Site Approval, Inspection and Enforcement	• F.2. • F.4. • F.6.a. • F.6.b.(1)	• Regional Construction Inspection Training • Co-permittee staff training
Municipal Maintenance	• F.3.a. • F.4. • F.6.a. • F.6.b.(1)	• Regional Municipal Maintenance Training • Pesticide applicator certification • Co-permittee staff training

Target Audience	JRMP Program Area Addressed	Education / Outreach Methods
Code Enforcement	• F.3.b. • F.4. • F.6.a. • F.6.b.(1)	• Regional Commercial / Industrial Inspection Training • Co-permittee staff training

12.2 Frequency {F.6.b.(1)(b)(2)}

The County trains its staff responsible for oversight and conducting stormwater compliance inspections and enforcement of construction activities (e.g. construction, building, code enforcement, grading review staffs, inspectors, and other responsible construction staff) annually prior to the rainy season.

The County staff responsible for conducting stormwater compliance inspections of Industrial and Commercial Facilities receive training at least once a year.

13.0 MONITORING PROGRAM {N.}

13.1 Overview

The District, through the Implementation Agreement (Section 3.2.1), implements the Santa Margarita Monitoring Plan on behalf of the County. The Monitoring Plan, available at: http://rcflood.org/NPDES/Monitoring.aspx, addresses the County's responsibilities in the Receiving Waters, MS4 Discharge and Reporting Program No. R9-2010-0016 (MRP, Attachment E to the 2010 SMR MS4 Permit).

Additionally, County Code Enforcement conducts source identification monitoring as required per Section II.B.2 and II.C.2 of the MRP, when an exceedance of an Action Level occurs.

13.2 Non-Stormwater Dry Weather Action Levels {C.}

The District will notify the County of Analytical results (either laboratory or field screening) that exceed the Non-stormwater Dry Weather Action Levels (NALs) presented in Table 3 of the 2010 SMR MS4 Permit. In response to such an exceedance, County Code Enforcement will investigate and seek to identify the source of the exceedance in a timely manner following the procedures described in Section 4.4.2 and 4.4.3. However, if the County identifies a number of NAL exceedances that prevents it from adequately conducting source investigations at all sites in a timely manner, then the County will submit a prioritization plan and timeline that identifies the timeframe and planned actions to investigate and report its findings on all of the exceedances to the Regional Board.

The 2010 MS4 Permit notes that neither the absence of exceedances of NALs nor compliance with required actions following observed exceedances, excuses any non-compliance with the requirement to effectively prohibit all types of unauthorized Non-Stormwater discharges into the MS4 or any non-compliance with the prohibitions in the MS4 Permit. During any Annual Reporting period in which one or more exceedances of NALs have been documented the County in coordination with the District will report a description of whether and how the observed exceedances did or did not result in a discharge from the MS4 that caused, or threatened to cause or contribute to a condition of Pollution, Contamination, or Nuisance in the Receiving Waters.

13.3 Stormwater Action Levels {D.}

The District implements the Wet Weather MS4 Discharge Monitoring program and annually evaluates the data compared to the Stormwater Action Levels (SALs) identified in Table 4 of the 2010 SMR MS4 Permit. At each monitoring station, a running average of 20% or greater of exceedances of any discharge of stormwater from the MS4 to Waters of the U.S. that exceed the SALs for each of the Pollutants listed in Table 4 (below) in Receiving Waters receiving discharges from the County's MS4 facilities requires the County to affirmatively augment and implement all necessary stormwater controls and measures described in this JRMP to reduce the discharge of the associated class of Pollutants(s) to the MEP. The County will utilize the exceedance information when adjusting and executing its annual work plans. The magnitude, frequency, and number of constituents exceeding the SAL(s), in addition to Receiving Water quality data and other information, will be considered when prioritizing and reacting to SAL exceedances in an iterative manner.

Appendix A – Glossary

Glossary

Name	Definition
2010 SMR MS4 Permit	Order R9-2010-0016, an NPDES MS4 Permit issued by the San Diego Regional Board.
Action Level	See Non-Stormwater Action Levels and Stormwater Action Levels
Beneficial Use	The uses of water necessary for the survival or well being of man, 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 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 groundwater 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)].
Best Management Practice (BMP)	Any procedure or device designed to minimize the quantity of Pollutants that enter the MS4 or to control stormwater flow. See Chapter Two.
Bioretention BMP	A type of LID Retention BMP that is designed to capture the Design Capture Volume and absorb that volume entirely into a biologically active soil media. Water retained in this soil media is then evapotranspired by plants in the BMP, or slowly allowed to infiltrate into the underlying soils. This BMP inherently maximizes both Infiltration and Evapotranspiration of Runoff based on the actual limitations of the soil and environment.
Biotreatment BMP	A type of **LID BMP** that can be used in certain circumstances when LID Retention BMPs are not feasible. These BMPs provide similar functions and benefits as LID Bioretention BMPs, such as inclusion of natural biological processes and maximizing opportunities for Infiltration and Evapotranspiration, however, they are not designed to retain the Design Capture Volume in an engineered soil media. Examples of Biotreatment BMPs include extended detention basins, bioswales and constructed wetlands.
California Stormwater Quality Association (CASQA)	Publisher of the California Stormwater Best Management Practices Handbooks, available at www.cabmphandbooks.com
Cease and Desist Order	See Stop Work Order
CEQA	California Environmental Quality Act
Citation	An official summons to appear (as before a court)
Condition of Concern	Conditions that may affect the designated Beneficial Uses of a Receiving Water

Glossary

Name	Definition
Condition(s) of Approval (COA)	Requirements a Copermittee may adopt for a project in connection with a discretionary action (e.g., approval of a subdivision map or issuance of a use permit). COAs may specify features required to be incorporated into the final plans for the project and may also specify uses, activities, and operational measures that must be observed over the life of the project.
Construction Site	Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to clearing, grading, disturbances to ground such as stockpiling, and excavation.
Copermittee	District, County and Cities of Murrieta, Temecula and Wildomar. The terms *'local Copermittee'* and *'your Copermittee'* refers to the Copermittee that has jurisdiction over the proposed **Priority Development Project**.
CWA	The Federal Clean Water Act
Design Capture Volume (VBMP)	The volume of runoff from the **Design Storm**. This is design sizing standard for LID BMPs, as well as for conventional Treatment Control BMPs whose design is based on treating a particular volume of runoff.
Design Flow Rate (QBMP)	The flow rate resulting from an hourly rainfall intensity of 0.2 inch per hour. The Design Flow Rate will depend on the types of post-development surfaces on the site. Flow-based BMP designs can only be used when implementing conventional Treatment Control BMPs.
Design Storm	The 85th percentile 24-hour storm depth, based on local historical rainfall records. See Exhibit A of the SMR WQMP.
Development Project	Any project that proposes construction, rehabilitation, redevelopment, or reconstruction of any public or private residential, industrial or commercial facility, or any other projects designed for post-construction human activity or occupation.
Directly Connected	Any impervious surface which drains into a catch basin, area drain, or other conveyance structure (such as a street) without first directing the flow across pervious areas (e.g., lawns).
Discretionary Approval	A project which requires the exercise of judgment or deliberation by the public agency or body when they decide to approve or disapprove a particular activity. Discretionary approvals are distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances or regulations. **Check with the Copermittee to determine if a particular action is considered Discretionary.**
Drainage Management Area (DMA)	Individual, discrete drainage areas that typically follow grade breaks and roof ridge lines

Glossary

Name	Definition
Drawdown Time	The time required for a detention or retention BMP to drain and return to the dry-weather condition. For detention BMPs, Drawdown Time is a function of basin volume and outlet orifice size. For infiltration BMPs, Drawdown Time is a function of basin volume and infiltration rate. For Harvest and use BMPs, Drawdown Time is a function of the cistern volume and the demand for use of captured stormwater.
Dry Season	May 1st through September 30th
Dry Weather	Weather is considered dry if the preceding 72 hours has been without precipitation.
DU	Dwelling Unit
EIATIA	Effective Impervious Area To Irrigated Area that would be required to achieve the minimum 40% long-term retention of runoff when harvesting stormwater runoff for outdoor irrigation. See Section 2 of the SMR WQMP.
EIR	Environmental Impact Report
Emergency Situation	IC/IDs that pose an immediate threat to human health or the environment. Any sewage spill over 1,000 gallons or that could impact water recreation, any spill that could impact wildlife, any Hazardous Material spill where residents are evacuated, any spill of reportable quantities of Hazardous Waste (as defined by 40 CFR 117 and 40 CFR 302), or any other spill reportable to the California Emergency Management Agency (Cal-EMA, formerly known as the Office of Emergency Services or OES) is classified as a threat to human health or the environment.
Ephemeral	Water bodies, or segments thereof, that contain water only for a short period following precipitation events.
Erosion	When land is diminished or worn away due to wind, water or glacial ice. Often the eroded debris (silt or sediment) becomes a Pollutant via Stormwater Runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building and timber harvesting.
ESA	Environmentally Sensitive Area. At minimum, as defined in the 2010 MS4 Permit, all Receiving Waters are considered ESAs.
Evapotranspiration	The process of transferring moisture from the earth to the atmosphere by evaporation of water and transpiration from plants.
Facility Pollution Prevention Plan (FPPP)	A plan that the Copermittee maintains that describes the BMPs that are implemented at their municipal facilities to reduce stormwater pollution to the MEP and prohibit illegal discharges.
Final Project-Specific WQMP	A fully completed version of the Water Quality Management Plan that must be submitted and approved prior to recordation of the final map, parcel map or issuance of building permit. See also Preliminary Project-Specific WQMP.

Glossary

Name	Definition
General Plan	Document that specifies policies that guide development.
Harvest and Use BMPs	Stormwater BMPs that capture stormwater runoff in a vault or cistern, and stores that water for later use, such as for irrigation.
Hazardous Materials	Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by the USEPA in 40 CFR 116 to be reported if a designated quantity of the material is spilled into the Waters of the U.S. or emitted into the environment.
Hazardous Waste	As defined by 40 CFR 117 and 40 CFR 302
Head	In hydraulics, energy represented as a difference in elevation. In slow-flowing open systems, such as most stormwater BMPs, this is the difference in water surface elevation, e.g., between an inlet and outlet.
Hydrograph	Runoff flow rate graphed as a function of time.
Hydrologic Soil Group (HSG)	Classification of soils by the NRCS into A, B, C and D groups according to infiltration characteristics.
Hydromodification	The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport.
Hydromodification Management Plan (HMP)	A Plan that, once developed by the Copermittees, will specify requirements that must be implemented so that projects will not cause Hydromodification.
Illegal Discharge	Defined in 40 CFR 122.26(b)(2) as any discharge to the MS4 that is not composed entirely of stormwater, except discharges pursuant to an NPDES permit, discharges that are identified in Section 4.1.2 of the JRMP, and other discharges authorized by the Executive Officer of the Regional Board.
Illicit Connection	Any unauthorized connection to the MS4 that conveys an Illicit Discharge
Impairment	Describes a condition where a waterbody is presumed by the Regional Board to not be supporting its Beneficial Uses, based on exceedances of certain water quality objectives..
Impervious Area	
Impervious surface	Any surface in the landscape that cannot effectively absorb or infiltrate urban runoff; for example, conventionally paved: sidewalks, rooftops, roads and parking areas.
Implementation Agreement	An agreement among the Copermittees that establishes the responsibilities of each Copermittee and a procedure for funding the shared costs.

Glossary

Name	Definition
Industrial Facility	Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including: those subject to the General Industrial Permit or other individual NPDES permit; Operating and closed landfills; Facilities subject to SARA Title III; and Hazardous waste treatment, disposal, storage and recovery facilities.
Infiltration BMPs	A type of LID Retention BMP where the primary treatment mechanism is through seepage of runoff into a site's underlying soil.
Infiltration Rate	Rate at which water can be added to a soil without creating runoff (in/hr).
Infraction	Violation
Integrated Pest Management (IPM)	A decision-making process for managing pests that combines biological, cultural, mechanical, physical and chemical tools, and other management practices to control pests in a safe, cost effective and environmentally sound manner that contributes to the protection of public health
Intermittent	Waterbodies, or segments thereof, that contain water for extended periods during the year, but not at all times.
JRMP	Jurisdictional Runoff Management Plan
JRMP Annual Report	Report summarizing a Copermittee's compliance information to be submitted annually to the Regional Board on or before each October 31st of each year, beginning on October 31, 2013. The reporting period for these JRMP Annual Reports must be the previous fiscal year.
LID BMPs	LID BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the Pollution of Waters of the United states through Stormwater management and land development strategies that emphasize conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. LID BMPs include retention practices that do not allow Runoff, suchas infiltration, rain water harvesting and reuse, and evapotranspiration. LID BMPs also include flow-through practices such as biofiltration that may have some discharge of Stormwater following Pollutant reduction.
LID Principles	LID Principles are Site Design concepts that help prevent or minimize the causes (or drivers) of project impacts, and help mimic the pre-development hydrology. Implementing LID Principles will help minimize the need for specific Stormwater BMPs on a project.

Glossary

Name	Definition
LID Retention BMP	A type of Stormwater BMP that is designed to store the Design Capture Volume, and avoid any discharge to downstream systems in storms up to the Design Storm. For the purposes of this WQMP, LID Retention BMPs include Infiltration BMPs, Harvest and Use BMPs, Pervious Pavement BMPs and Bioretention BMPs. See also Other LID BMPs
Low Impact Development (LID)	A stormwater management and land development strategy that emphasizes conservation and the use of onsite natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.
Major Outfall	Outfalls owned by a Copermittee with a pipe diameter of 36 inches or greater or drainage areas draining 50 acres or more. See also **Outfall.**
Maximum Extent Practicable (MEP)	Standard, established by the 1987 amendments to the Clean Water Act, for the reduction of Pollutant discharges from MS4s.
Misdemeanor	A crime less serious than a felony.
Mobile Business	Businesses that conduct services listed in section 8.1.1 but do not operate out of a fixed location.
Municipal Facility	A facility owned by a Copermittee
Municipal Separate Storm Sewer System (MS4)	A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains) as defined in 40 CFR 122.26(b)(8).
National Pollutant Discharge Elimination System (NPDES)	As part of the 1972 Clean Water Act, Congress established the NPDES permitting system to regulate the discharge of Pollutants from municipal sanitary sewers and industries. The NPDES was expanded in 1987 to incorporate permits for discharges from MS4s as well (aka MS4 Permits).
Non-Hazardous Materials	For example, food wastes, trash and debris
Non-Jurisdictional IC/ID	An IC/ID originating from a property over which the Copermittee has no applicable jurisdictional authority such as a special district (e.g., school, water, wastewater), federal, state, or tribal property.
Non-Stormwater	All discharges to and from an MS4 that do not originate from precipitation events (i.e., all discharges from an MS4 other than Stormwater). Non-Stormwater includes Illicit Discharges, non-prohibited discharges, and NPDES permitted discharges.

Glossary

Name	Definition
Non-Stormwater Action Levels	This Order includes action levels for pollutants in non-stormwater, dry weather discharges from the MS4. The non-stormwater action levels are designed to ensure that the Order's requirement to effectively prohibit all types of unauthorized discharges of non-stormwater into the MS4 is being complied with. Non-stormwater action levels in the Order are based upon numeric or narrative water quality objectives and criteria as defined in the Basin Plan, the State Water Board's Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (State Implementation Policy or SIP). An exceedance of an action level requires specified responsive action by the Copermittees. This Order describes what actions the Copermittees must take when an exceedance of an action level is observed. Exceedances of non-stormwater action levels do not alone constitute a violation of this Order but could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-stormwater discharges into the MS4 or other prohibitions established in this Order. Failure to undertake required source investigation and elimination action following an
Non-Structural BMPs	See LID Principles
Notice of Noncompliance	The Notice of Noncompliance constitutes a basic request that the property owner or facility operator rectify the condition causing or threatening to cause noncompliance
NRCS	Natural Resources Conservation Service
O&M	Operation and Maintenance. All BMPs implemented as part of a WQMP must continue to be operational and must be maintained throughout the life of the project.
Operational Source Control BMPs	Source Control programs or activities implemented by a site operator to prevent pollution. Examples include regular sweeping of parking lots and other 'housekeeping' efforts.
Other Development Projects	All Discretionary Development Projects that are not categorized as Priority Development Projects.
Other LID BMPs	Stormwater BMPs that incorporate features that provide for natural biological processes while maximizing opportunities for Infiltration and Evapotranspiration. These are distinguished from **LID Retention BMPs**, with the latter being BMPs that, in addition to the above features, are also designed to retain stormwater runoff.
Outfall	Means a Point Source as defined by 40 CFR 122.2.a, the point where a municipal separate storm sewer discharges to Waters of the U.S. and does not include open conveyances connecting two municipal separate storm sewers, pipes, tunnels or other conveyances which connect segments of the same stream or other Waters of the U.S. and are used to convey waters of the U.S. [40 CFR 122.26(b)(9)].
Permanent Source Control BMP	A type of source control BMP that is a structural part of the site, such as roofs and berms over and around trash and recycling areas.

Glossary

Name	Definition
Permeable or Pervious or Porous Pavements	Pavements for roadways, sidewalks, or plazas that are designed to infiltrate runoff *through* the pavement. Types of Permeable Pavements include pervious concrete, pervious asphalt, porous pavers and granular materials.
Pollutant	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.
Pollutant of Concern	Pollutants for which water bodies are listed as impaired under CWA Section 303(d), pollutants associated with the land use type of a development, and/or pollutants commonly associated with runoff.
Pollution Prevention BMP	Practices that reduce or eliminate the generation of Pollutants.
Pre-Development	Conditions that would exist naturally.
Preliminary Project-Specific WQMP	A preliminary project-specific WQMP is commonly required to be submitted with an application for entitlements and development approvals and must be approved by the Copermittee before any approvals or entitlements will be granted.
Priority Development Project	Development Projects that meet the categories and criteria identified in Table 1-1 (see 2010 SMR MS4 Permit, item F.1.d.).
Priority Pollutant of Concern	Pollutants that are associated with a proposed project and are listed as impaired under CWA Section 303(d).
Project-Specific WQMP	A plan specifying and documenting permanent LID Principles and Stormwater BMPs to control post-construction Pollutants and stormwater runoff for the life of the project, and to maintain Stormwater BMPs for the life of the project. Copermittees may require a preliminary Project-Specific WQMP submittal, to be followed by a final Project-Specific WQMP.
Proprietary Stormwater BMPs	Products designed and marketed by private businesses for treatment of stormwater.
Rainy Season	October 1st through April 30th
Rational Method	A method of calculating runoff flows based on rainfall intensity, tributary area, and a coefficient representing the proportion of rainfall that runs off. In the Rational Method Q=C*I*A as further described in Section 2 of the WQMP.
Receiving Water	Any water body that is identified in the San Diego Basin Plan. The San Diego Basin Plan is available from the San Diego Regional Board's website at www.waterboards.ca.gov/sandiego.

Glossary

Name	Definition
Redevelopment	A Development Project that involves the creation, addition and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.
Regional Water Quality Control Board (or Regional Board)	Regional Boards are responsible for implementing Pollution control provisions of the CWA and California Water Code within their jurisdiction. There are nine Regional Boards in California. The Regional Boards issued the 2010 MS4 Permit to the Copermittees on November 10, 2010.
Retrofit	Programs and projects to address the impacts of existing development through reducing the impacts from hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.
Runoff	All flows in a stormwater conveyance system that consists of the following components: (1) stormwater (wet weather flows) and (2) non-stormwater including dry weather flows.
Runoff Management Plan	A site-specific plan identifying BMPs to manage the quality and quantity of runoff from a project site.
Santa Margarita Region (SMR)	The portion of Riverside County covered by Order R9-2010-0016, an NPDES MS4 Permit issued by the Santa Diego Regional Board.
Sedimentation	The action or process of forming or depositing sediment.
Self-treating area	Natural or landscaped area (as described in Section 3.3 of the WQMP) that drains offsite without comingling with developed portions of the site.
Site Design	See **LID Principles**.
Source Control BMP	A facility or procedure to prevent Pollutants from coming into contact with rainfall and/or runoff.
Stop Work Order or Cease and Desist Order	As used in the JRMP, an order from a Copermittee to stop a particular activity.
Stormwater	Per 40 CFR 122.26(b)(13), means stormwater runoff, snowmelt runoff, and surface runoff and drainage. Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.

Glossary

Name	Definition
Stormwater Action Level	SALs were computed as the 90th percentile of the data set, utilizing the statistical based population approach, one of three approaches recommended by the State Water Board's Storm Water Panel in its report 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006)". SALs are identified in Section D of the 2010 SMR MS4 Permit. Copermittees must implement a timely, comprehensive, cost-effective stormwater pollution control program to reduce the discharge of pollutants in stormwater from the permitted areas so as not to exceed the SALs. Exceedance of SALs may indicate inadequacy of programmatic measures and BMPs required in this Order.
Stormwater Ordinance	The ordinance or set of ordinances that are consistent with the Legal Authorities described in section 3.4 of this JRMP.
Stormwater Pollutant	A Pollutant associated with Stormwater.
Stormwater Pollution Prevention Plan (SWPPP)	A plan providing for temporary measures to control sediment and other Pollutants *during* construction. In contrast with the WQMP which is a plan to reduce pollutant in runoff during the post-construction use and life of the project.
Structural Stormwater BMPs	Structural Post-Construction BMPs that are designed to address stormwater runoff impacts from the completed site, and throughout the use and life of the project.. Stormwater BMPs consist of LID Principles, LID BMPs, Conventional Treatment BMPs, Hydromodification BMPs, and Permanent Source Control BMPs.
Total Maximum Daily Load (TMDL)	A TMDL is the maximum amount of a Pollutant that can be discharged into a waterbody from all sources (point and non-point) and still maintain Water Quality Standards. Under CWA Section 303(d), TMDLs must be developed for all waterbodies that do not meet Water Quality Standards after application of technology-based controls.
Toxicity	Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.
Treatment Control BMP	Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological or chemical process.
TUTIA	Toilet Users To Impervious Area ratio, that would be required to achieve the minimum 40% long-term retention of runoff when harvesting stormwater runoff for toilet use. See Chapter 2 of the WQMP.
Unpaved Road	A long, narrow stretch without pavement used for traveling by motor passenger vehicles between two or more points. Unpaved roads are generally constructed of dirt, gravel, aggregate or macadam and may be improved or unimproved.

Glossary

Name	Definition
Waste	As defined in CWC Section 13050(d), "waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal."
Waste Discharge Requirements	As defined in Section 13374 of the California Water Code, the term "Waste Discharge Requirements" is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board usually reserves reference to the term "permit" to Waste Discharge Requirements for discharges to surface Waters of the U.S.
Water Quality Management Plan (WQMP, or SMR WQMP)	Referred to as a Standard Stormwater Mitigation Plan (SSMP) in the 2010 SMR MS4 Permit. This is a plan to reduce the discharge of pollutants to the MEP from the post-construction use and life of a project.
Water Quality Objectives	Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water. [California Water Code Section 13050 (h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans. Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a receiving water and still generally ensure that the beneficial uses of the receiving water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne's definition of pollution. A condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are
Water Quality Standards	The beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.) of water and the Water Quality Objectives necessary to protect those uses.

Glossary

Name	Definition
Waters of the U.S.	As defined in the 40 CFR 122.2, the Waters of the U.S. are defined as: "(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this
Wet Season	October 1st to April 30th
Wet Weather	Weather is considered wet if precipitation measuring over 0.10 inches has been received during the preceding 72 hours.

Appendix B – Program Management

B.1 Departmental Responsibilities Matrix
B.2 JRMP Organizational Chart
B.3 Legal Authority
B.4 JRMP Certification
B.5 Effectiveness Assessments
B.6 Stormwater Ordinances (available at http://rivcocob.com/ord.htm)

Table B-1. JRMP Departmental Responsibilities

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
3.0 Program Management	3.1 – Departmental Responsibilities – Maintain matrix	County Executive Office	NPDES Program Administrator
	3.2 – Cooperative Activities	County Executive Office	NPDES Program Administrator
	3.3 – Fiscal Analysis {H}	County Executive Office	NPDES Program Administrator
	3.4 – Legal Authority{E.}	County Counsel	County Counsel
	3.5 – Enforcement/Compliance Strategy	(see individual program sections)	(see individual program sections)
	3.6 – Receiving Water Limitations{A.}	Flood Control & Water Conservation District, Transportation Department	NPDES Coordinators
	3.7 – Program Reporting, Evaluation and Revision {J., K., L}	County Transportation Department	NPDES Coordinator
4.0 Elimination of Illicit Connections and Illegal Discharges {F.4}	4. 1.1 Prohibited Discharges {A.1., 2}	Code Enforcement and Environmental Health	NPDES Coordinator and Transportation NPDES and Environmental Compliance Coordinator
	4.2.1 Legal Authority {E.}	County Counsel	County Counsel
	4.2.2 Connections to MS4 Facilities	Maintain Inventory & Map - Transportation Department and Flood control and Water Conservation District	Transportation NPDES and Environmental Compliance Coordinator
	4.2.3 Inspections	(see individual program sections)	(see individual program sections)
	4.2.4 Maintain MS4 Facility Map{F.4.b.}	County Transportation Department and Flood Control and Water Conservation District	Transportation NPDES and Environmental Compliance Coordinator and NPDES Coordinator

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
	4.2.5 Public Reporting of IC/IDs	Flood control & Water conservation District for regional 1-800 hotline Code Enforcement Department for locally reported IC/IDs	N/A Code Enforcement officer
	4.2.6 Dry Weather Field Screening	Flood Control & Water Conservation District	NPDES Coordinator
	4.2.7 Waste Collection Programs	Flood Control & Water Conservation District administers contract with Riverside County Waste Management	N/A
	4.3.1 MS4 Facility Inspections {F.4.e}	Transportation Department/As described for section 5	Transportation Department/As described for section 5
	4.3.2 Public IC/ID Reports {F.4.c}	Code Enforcement	NPDES Coordinator
	4.3.3 IC/ID Construction Site Inspections {F.1.e.(6)(d); F.2.e}	Transportation Department	Construction Inspector
	4.3.4 IC/ID Industrial / Commercial Facilities Inspections {F.3.b.(4)(vi)}	Department of Environmental Health DES/HAZMAT See Section 8.4 herein	NPDES Coordinator
	4.3.5 IC/ID Monitoring Activities {Attachment E. II.C}	Code Enforcement/Transportation Department	NPDES Coordinator
	4.3.6 Non-Jurisdictional IC/IDs	Code Enforcement/Transportation Department	NPDES Coordinator (for notifications)
	4.4 IC/ID Response and Reporting {F.4}	Initial Investigation Code Enforcement and Environmental Health	Code Enforcement staff and Environmental Health staff
		Source Investigation – Code Enforcement	Code Enforcement Staff
		Elimination – Code Enforcement	Code Enforcement Staff
	4.4.5 Sanitary Wastes F.4.h}	Portable Toilets – Environmental Health	Environmental Health Staff
		Failing Septic Systems – Public Works	Environmental Health staff

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
		Department	
5.0 Permittee Facilities and Activities {F.3.a}	5.1 Planning Facilities {F.1}	Transportation and EDA-Facilities	Planning Supervisor
	5.1.1 - Public Works Priority Development Projects {F.1.d}	Transportation and EDA-Facilities	Engineering Supervisor
	5.1.2 – Public Works Transportation Projects F.1.d.(2)(g)}	Transportation Department	Engineering Supervisor
	5.1.3 Public Works Unpaved Roads {F.1.i}	Transportation Department	Engineering Supervisor
	5.1.4 Design of Flood Control Projects {F.3.a.(4)(a)	Flood Control & Water Conservation District	Engineering Supervisor
	5.1.5 Other public works projects {	EDA-Facilities	NPDES Coordinator
	5.2 – Permittee Construction Activities {F.2.}	Submit PRDs - Transportation and EDA-Facilities	Engineering Supervisor
		Prepare Construction SWPPP – Transportation and EDA-Facilities	Engineering Supervisor
		Notify Executive Officer of Non Compliance – Transportation, EDA-Facilities	Project Manager
		Conduct monitoring – Transportation and EDA-Facilities	Project Manager
		Submit NOT – Transportation and EDA-Facilities	Project Manager
	5.3 – Operation & Maintenance of Permittee Areas & Activities {F.3.a.}	Transportation and EDA-Facilities	NPDES Coordinator
	5.3.1 Source Identification/ Inventory {F.3.a.(1)}	Transportation and EDA-Facilities	NPDES Coordinator
	5.3.2 Typical Minimum BMPs {F.3.a.(2)(b)}	Transportation and EDA-Facilities	NPDES Coordinator

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
	5.3.3.1 Special Event BMPs {F.e.a(2)(c)}	Transportation and EDA-Facilities	NPDES Coordinator
	5.3.3.2 Fire BMPs {B.3.a.}	Non-emergency BMPs - Fire Department	
		NOI for De Minimus Permit – Fire Department	
	5.3.3 BMPs for Activities {F.3.a.(a)(2)(b)}	Transportation and EDA-Facilities	NPDES Coordinator
	5.3.5 Maintenance of MS4 facilities and treatment control BMPs {F.3.a.(6)}	Transportation and EDA-Facilities	Transportation staff EDA-Facilities staff
	5.4 Annual Inspection {F.3.A.(8)}	Transportation and EDA-Facilities	NPDES Coordinator
	5.5 Enforcement of Municipal Areas and Activities {F.3.a.(9)}	Transportation and EDA-Facilities	NPDES Coordinator
6.0 Development Planning {F.1}			
	6.2 General Plan {F.1.a}	Planning Department	Planning Director
	6.3.2 LID Barriers Review {{F.1.d.(4)(a)}	Planning Department	Planning staff
	6.6.2 Approval Process Criteria and Requirements for All Development Projects {F.1.c.}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	6.6.3 Identify Priority Development Projects {F.1.d.(1) & (2)}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	6.6.4 Conditions of Approval	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	6.6.5 Review Preliminary Project-Specific WQMPs{F.1.d.(9)(a)}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	6.6.6 Review and Approval of Final Project-Specific WQMPs {F.1.d.(9)(a)}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	6.6.7 Requirements for Other	Transportation Department	NPDES Coordinator/Environmental

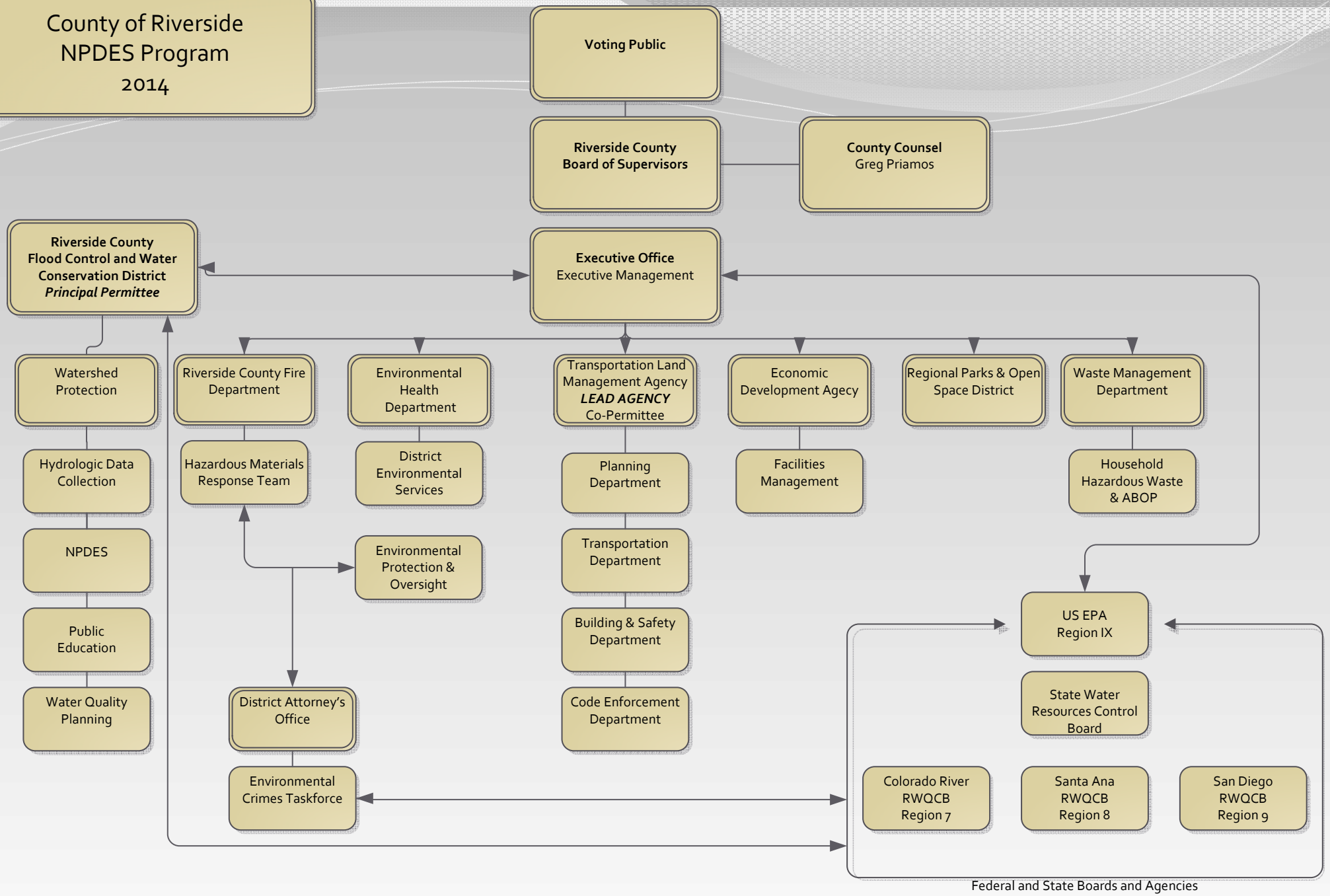
Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
	Development Projects		Compliance Staff
	6.6.8 Unpaved Roads Development	Transportation Department	Transportation NPDES and Environmental Compliance Coordinator
	6.6.9 Plan Check: Issuance of Grading or Building Permits	Building & Safety Department	NPDES Coordinator/Environmental Compliance Staff
	6.7 Field Verify BMPs & Permit Closeout {F.1.e.}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	6.7.2 BMP Maintenance Tracking {F.1.f.}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	6.8 Structural Post-Construction BMP Database and Maintenance Verification {F.1.f}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	6.8.4 Change of Ownership Recordation {F.1.d.(9)(b)}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	6.9 Enforcement for Development {F.1.g}	Code Enforcement	Code Enforcement staff
7.0 Private Development Construction {F.2.}			
	7.1 Source Identification/Inventory {F.2.b}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	7.2 Construction Site Planning and Project Approval Process {F.2.c.}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	7.3 Construction Site BMP Implementation {F.2.d.}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	7.4 Construction Site Inspection {F.2.e.}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	7.5 Construction Enforcement {F.2.f.}	Transportation Department/Code Enforcement	NPDES Coordinator/Environmental Compliance Staff
	7.6 Reporting of Non-Compliant Sites {F.2.g.}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
8.0 Industrial and Commercial Sources {F.3.b.}			
	8.1 Industrial/Commercial Database {F.3.b.(1)}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	8.2 General BMP Implementation {F.3.b.(2)}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	8.3 Mobile Business Program {F.1.b.(3)}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	8.4 Industrial/Commercial Inspections {F.3.b.}	Transportation Department	NPDES Coordinator/Environmental Compliance Staff
	8.4.6 Industrial/Commercial Enforcement {F.1.d.(5)}	Transportation Department/Code Enforcement Staff	NPDES Coordinator/Environmental Compliance Staff
	8.4.7 Reporting of Non-Compliant Sites {F.1.d.(6)}	Transportation Department/Environmental Health/Code Enforcement	NPDES Coordinator/Environmental Compliance Staff/DEH Staff/Code Enforcement Staff
9.0 Residential Sources {F.1.c.}			
	9.3 Designated BMPs {F.3.c.(2)(b)}	Code Enforcement	Code Enforcement inspectors
	9.4 Household Waste Management {F.3.c.(2)(c)}	Waste Management	Environmental Waste Management staff
	9.5 Common Interest Areas/ Homeowner Association Areas / and Mobile Home Parks {F.3.c.(4)}	Code Enforcement	Code Enforcement Inspector
	9.6 Residential Enforcement {F.3.c.(3)}	Code Enforcement	Code Enforcement Inspector

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
10.0 Retrofitting Existing Development {F.3.d.}			
	10.1 Identification of Conditions of Concern {{F.3.d.(1)}	Transportation and EDA-Facilities	NPDES Coordinator
	10.2 Source Assessment & Identification {F.3.d.(2)}	Transportation and EDA-facilities	NPDES Coordinator
	10.3 Identification of Candidate Areas for Retrofitting {F.3.d.(2)}	Transportation and EDA-facilities	NPDES Coordinator
	10.4 Prioritization of Candidate Areas for Retrofitting {F.3.d.(2)}	Transportation and EDA-facilities	NPDES Coordinator
	10.5 Prioritizing Retrofitting Work Plans 10.3 {F.3.d.(3)}	Transportation and EDA-facilities	NPDES Coordinator
	10.6 Private Retrofitting Projects {F.3.d.(4)}	Planning Department, Flood Control & Water Conservation District	NPDES Coordinator
	10.7 Tracking Retrofit BMPs {F.3.d.(5)}	Transportation and EDA-facilities, Flood Control & Water Conservation District	NPDES Coordinator
	10.8 Regional Mitigation Projects {F.3.d.7)}	Transportation and EDA-facilities, Flood Control & Water Conservation District	NPDES Coordinator
11.0 Education {F.6.}			
	11.1 Target Audiences	Flood Control & Water Conservation District	NPDES Coordinator
	11.2 Residential and General Public F.6.b.(4)}	Flood Control & Water Conservation District	NPDES Coordinator
12.0 Copermittee Staff Training	Copermittee Staff	Flood Control & Water Conservation District	NPDES Coordinator

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
13.0 Monitoring Program {N}			
	13.2 NALs {C}	Flood Control & Water Conservation District/Transportation Department	NPDES Coordinator
	13.3 SALs {D}	Flood Control & Water Conservation District/Transportation Department	NPDES Coordinator

County of Riverside NPDES Program 2014



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June 25, 2012

Mr. David Gibson, Executive Officer
California Regional Water Quality Control Board –
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Re: Order No. R9-2010-0016 (NPDES No. CAS 0108766) of the California Regional Water Quality Control Board – San Diego Region.

Dear Mr. Gibson:

This letter is being provided to you and your Board pursuant to Requirement E.2. of the above-referenced Order. This office serves as legal counsel for both the County of Riverside (the "County") and the Riverside County Flood Control and Water Conservation District (the "Flood Control District"). We have reviewed the provisions of the above-referenced Order, the applicable Ordinances of the County of Riverside and the Flood Control District, applicable statutes with regard to organization and police powers of the County and the organization of the Flood Control District, and all other laws, statutes, ordinances, regulations and rules that we deemed appropriate.

Based on this review, this office is of the opinion that the County and the Flood Control District, as "Copermittees," as this term is defined in said Order, both appear to have adequate legal authority to perform their responsibilities as set forth in said Order, and when required by said Order to do so, appear to have adequate legal authority to implement and enforce the applicable provisions of said Order in accordance with applicable state and federal laws. Moreover, the County and the Flood Control District reserve the right to modify and/or update their legal authority as the need arises during the term of said Order so that the provisions contained therein may be more effectively carried out.

Pursuant to Requirement E.2. (a) of the above-referenced Order, runoff-related ordinances for the County are enforceable under the police powers of the California Constitution and/or other provisions of California statutory law and includes the following: Riverside County Ordinance Nos. 348, 427, 457, 460, 461, 541, 592, 615, 617, 650, 651, 689, 728, 754, 812, 830, 843, 856, 857, 858, 859 and 864. In addition, runoff-related ordinances for the Flood Control District are enforceable under certain provisions of the California Constitution, the Riverside County Flood Control and Water Conservation Act (California Water Code – Appendix) and/or other provisions of California statutory law and includes the following: Ordinance Nos. 14, 19 and 20.

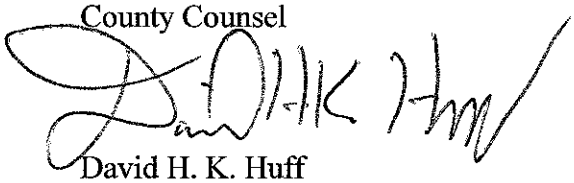
Pursuant to Requirement E.2. (b) of the above-referenced Order, Riverside County Ordinance No. 725 provides local administrative and legal procedures to help assist with mandating compliance with the County's runoff-related ordinances and provides for enforcement actions that can be undertaken through administrative, civil or criminal case avenues.

Pursuant to Requirement E.2. (c) of the above-referenced Order, the County's and the Flood Control District's runoff-related ordinances are adopted by the legislative body of each agency in accordance with provisions of the California Government Code, the Riverside County Flood Control and Water Conservation Act (California Water Code – Appendix) and other applicable provisions of California statutory law. Legal challenges to the County's and the Flood Control District's adopted runoff-related ordinances may be pursued through resort to the judicial court system and in accordance with applicable California and/or Federal law.

Please do not hesitate to contact me in the event that you have any questions or comments, I may be reached at (951) 955-6316 and the e-mail address noted below.

Sincerely,

PAMELA J. WALLS
County Counsel



David H. K. Huff
Deputy County Counsel

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951.955.6300
FAX 951.955.6363

CERTIFICATION

Jurisdictional Runoff Management Plan Update
as Required by the
San Diego Regional Water Quality Control Board
R9-2010-0016

I certify under penalty of law that these documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____ Date: 7/2/14

George Johnson, Assistant County Executive Officer
County of Riverside Executive Office

Table 1: IDDE (Section 4.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities* *2 - Raising Awareness* *3 - Changing Behavior* *4 - Reducing Loads* *5 - Improving Runoff Quality* *6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Number of IC/ID reports received (F.4e.(3))	1	Annual	Annual
Percentage/Number of Dry Weather Source ID Efforts that were completed, and Findings	5	Annual	N/A, Outcome level will depend on outcome of Source ID
Percent/Number of IC/ID related enforcement actions that reached each level of enforcement, as described in section 3.5.2.3 of the JRMP (F.4.f.)	3	ROWD	10+ Years
Estimated volume of anthropogenic trash removed from Permittee MS4 facilities (cubic yards) (F.3.a.(6)(b)(vi))	4	Annual	Annual

Table 2: Municipal Areas and Activities (Section 5.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities* *2 - Raising Awareness* *3 - Changing Behavior* *4 - Reducing Loads* *5 - Improving Runoff Quality* *6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Percent/Number of Permittee facilities with appropriate BMPs identified (F.3.a.(2)(b))	2	Annual	Permit Term
Percent/Number of annual facility inspections that require follow-up actions (F.3.a.(8)(c))	3	ROWD	10+ years
Average percent/number of follow-up actions identified in the previous year's Permittee facility inspections that were addressed (F.3.a.(8)(c))	3	ROWD	10+ years
Number of Permittee facility and MS4 operators and maintenance staff that attended Municipal training (F.6.b.(1))	1	Annual	Annually
Estimated tons of Waste removed by Permittee street sweeping, where applicable (F.3.a.(5))	4	Annual	Annually
Estimated tons of Waste removed from Permittee Open Channels (F.3.a.(6)(b))	4	Annual	Annually
Estimated tons of Waste removed from Permittee storm drain inlets (F.3.a.(6)(b)	4	Annual	Annually

Table 3: Development Planning (Section 6.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities 2 - Raising Awareness 3 - Changing Behavior 4 - Reducing Loads 5 - Improving Runoff Quality 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Number of acres of **Redevelopment** projects that incorporated LID-based BMPs that are built and completed (F.1.f.(1)) *	5	Annual	N/A**
Number of applicable planning staff that attended WQMP training (F.6.b.(1))	1	Annual	Annual
Number / percent of WQMP Projects where Post-Construction BMP verifications have confirmed that BMPs are properly maintained. (F.1.f.(2))	3	ROWD	10+ years

* *Redevelopment of existing sites is understood to have a Level 5 outcome, based on the implementation of updated stormwater controls such as LID on sites that otherwise may have had the potential to discharge a higher level of pollutants. However the Permittees recognize that the improvements in runnoff quality that are expected from redeveloped sites cannot be directly quantified.*

** *No Outcome Timeframe is established as the Copermittees have no control over the rate or timing of Redevelopment*

Table 4: Private Development Construction Activity (Section 7.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities* *2 - Raising Awareness* *3 - Changing Behavior* *4 - Reducing Loads* *5 - Improving Runoff Quality* *6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Construction Site inventory updated (F.2.b.)	1	Annual	Annual
Number of construction sites disturbing over 1 acre that are discovered without applicable building/grading permits. (F.2.e.(6)(b))	3	ROWD	10+ Years
Percent/Number of Construction Sites subjected to enforcement beyond verbal/written warnings (F.2.f.(1))	3	ROWD	10+ Years
Percent/Number of enforcement actions that reached each level of enforcement (F.2.f.(1))	3	ROWD	10+ Years
Number of construction inspection staff that attended Construction training (F.6.b.(b))	1	Annual	Annual

Table 5: Industrial and Commercial (Section 8.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Industrial & Commercial Facilities inventory updated (F.3.b.(1)(a))	1	Annual	Annual
Percent/Number of active Industrial and Commercial sites subjected to enforcement beyond verbal/written warnings (F.3.b.(5))	3	ROWD	10+ Years
Percent/Number of enforcement actions that reached each level of enforcement (F.3.b.(5))	3	ROWD	10+ Years
Number of applicable Industrial & Commercial Facility inspection staff that attended Industrial-Commercial training (F.6.b.(1)(c))	1	Annual	Annual

Table 6: Residential (Section 9.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities* *2 - Raising Awareness* *3 - Changing Behavior* *4 - Reducing Loads* *5 - Improving Runoff Quality* *6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Gallons of used oil collected at collection events (F.3.c.(2)(c))	4	Annual	ROWD
Total pounds collected at HHW/ABOP events (F.3.c.(2)(c))	4	Annual	ROWD
Total number of participants at HHW/ABOP events (F.3.c.(2)(c))	3	ROWD	10+ Years
Percent/Number of residences in Permittee jurisdiction subjected to enforcement beyond verbal/written warnings (F.3.c.(3))	3	ROWD	10+ Years

Table 7: Retrofit Program Section (10.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*
Number of times the Retrofit Program has identified a potential solution to a specific identified problem	1	Annual
Number of non-structural 'retrofit' BMPs that have been implemented	4	ROWD
Number of structural 'retrofit' BMPs that have been implemented	5	ROWD

* *As described in the Retrofit Program, Retrofit BMPs (Non-structural and/or Structural) may not be required to address all identified problems. Accordingly no timeframe has been established to achieve t*

Outcome Timeframe *(time at which program will be reassessed if desired outcome has not been achieved)*
Annual
N/A*
N/A*

he potential outcomes.

Table 8: Public Education Section (Section 11.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities 2 - Raising Awareness 3 - Changing Behavior 4 - Reducing Loads 5 - Improving Runoff Quality 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Number of outreach events to schools	1	Annual	Annual
Number of Public Events where outreach was conducted	1	Annual	Annual
Results of Public Ed Surveys	2	ROWD	Permit term
Pounds of trash removed through watershed cleanup events	4	Annually (as events occur)	Annually (as events occur)
Number of home improvement stores provided outreach and customber education information for pesticide use	1	Annual	Annual
Number of E-newsletters signups	2	Annual	ROWD
% of E-Newsletters Clicked	2	Annual	ROWD

Table 9: Santa Margarita Monitoring Plan (Section 13.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities* *2 - Raising Awareness* *3 - Changing Behavior* *4 - Reducing Loads* *5 - Improving Runoff Quality* *6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Number / Percent of Sampled Outfalls exceeding NALs	5	ROWD	10+ Years*
Number / Percent of Sampled Outfalls exceeding SALs	5	ROWD	10+ Years*
Inland Aquatic Habitat Monitoring	6	ROWD	15+ Years*
Receiving Water Stream Assessment Monitoring	6	ROWD	15+ Years*
Receiving Water MLS Dry Weather Monitoring	6	ROWD	15+ Years*
Receiving Water MLS Wet Weather Monitoring	6	ROWD	15+ Years*

* *Accumulation of an adequate dataset to accurately detect changes in water quality may require multiple permit terms.*

Table 10: Watershed Workplan

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Annual Public Review Meeting conducted	1	Annual	Annual
Updated Characterization of Receiving Water Quality	1	Annual	Annual
Updated prioritization of water quality problems	1	Annual	Annual
Descriptions of likely sources updated	1	Annual	Annual
Updated BMP Implementation Strategy	1	Annual	Annual
BMPs implemented according to schedule	1	Annual	Annual
Number of Collaborative Meetings Attended	1	Annual	Annual
Numeric Nutrient Endpoints Study	6	ROWD	5+ Years
Brake Pad Legistlation	3	ROWD	5+ years
Pyrethroid Toxicity Reduction Evaluation plan implemented	3	ROWD	5+ Years

Appendix C – Co-permittee Facilities and Activities

C.1BMPs for Fire Fighting Activities
C.2 Sanitary Sewer Overflow Procedures

BEST MANAGEMENT PRACTICES Plan for FIRE FIGHTING ACTIVITIES

Initially Prepared in Consultation with the Following Fire Fighting Agencies:

City of Corona Fire Department
City of Hemet Fire Department
City of Norco Fire Department
City of Riverside Fire Department
County of Riverside Fire Department/CDF
Idyllwild Fire Protection District
Murrieta Fire Protection District

Revised in compliance with
Order No. R9-2010-0016 (NPDES No. CAS0108766)
Covering the Santa Margarita Region

June 2012

INTENT

The purpose of this plan is to identify Best Management Practices (BMPs) used by fire fighting agencies for Runoff management in the Santa Margarita Region of Riverside County. Section B.3 of the 2010 SMR MS4 Permit adopted by the San Diego Regional Water Quality Control Board (Regional Board) requires each Copermittee to develop and implement a program to address Pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified as significant sources of Pollutants to Waters of the U.S.

The Riverside County MS4 Permittees in cooperation with the Riverside County Fire Agencies have developed fire department activity procedures to provide guidance to Fire Prevention and Firefighting personnel for management of Runoff. Guidance is provided in the form of recommended BMPs that are incorporated as part of the individual Jurisdictional Runoff Management Plans (JRMP), and as applicable into Facility Pollution Prevention Plans.

When followed, implementation of the BMPs will minimize discharges of Runoff to the municipal separate storm sewer system (MS4) associated with non-emergency fire fighting activities.

PROHIBITIONS

Building fire suppression system maintenance discharges (e.g., sprinkler line flushing) and vehicle washing contain Waste. Therefore, the Copermittees are required to prohibit such discharges as Illegal Discharges through ordinance, order, or similar means.

PROCEDURE

Fire Prevention Activities

1. Fire Sprinkler Acceptance and Testing BMPs

    - As noted above, discharges associated with fire suppression systems are prohibited. Such discharges must not be allowed to reach any MS4, Receiving Water, or other conveyance such as a street with curb and gutter.
    - Flows from fire sprinkler acceptance and testing must be contained onsite and/or direct the water flows to landscaped or green areas whenever possible and safe to do so without causing damage or erosion.
    - When practicable, divert sprinkler system flushing flows to the sanitary sewer, with the permission of the local sewer agency.
    - Conduct fire sprinkler testing on non-rainy days.

2. Fire Hydrant Testing BMPs

    - Obtain coverage under Order R9-2002-0020 (link) and implement any compliance requirements specified therein. The following are general guidelines that may need to be complied with:
        - Conduct on non-rainy days.
        - Conduct flows for the shortest duration possible.
        - Use a water diffuser as necessary.
        - Remove debris from the affected curb and gutter before initiating flushing.
        - Direct water flows to landscaped or green areas whenever possible and safe to do so without causing damage or erosion.

Non-emergency Firefighting Activities

1. Discharges Associated With Fire Training Activities

Training activities, which simulate emergency responses, must be performed in a manner that reduces or prevents discharges to the MS4 to the maximum extent practicable. In addition, when the elimination of discharges into the MS4 is unavoidable (i.e. equipment failures), measures will be implemented to minimize impacts to water quality:

- Live and simulated fire training should be conducted, where feasible, in facilities where Runoff controls protecting the MS4 have been engineered and built into the facility.
- When conducting Maximum Capability Training (MCT) exercises, potable water sources may be used when Runoff cannot be contained.
- Direct water flows to landscaped or green belt areas whenever possible.
- Survey the area prior to the training exercise to ensure that debris will not enter the MS4 as a result of the flows generated during the drill.
- When practicable, divert flows to the sanitary sewer with the permission of the local sewer agency.
- Use fog streams or straight streams for short durations when practicable.
- Use lower gallon per minute (GPM) nozzle settings.
- Prevent discharge of foam or other additives to the MS4. If training activities involve the use of foam, block off all potentially affected storm drain inlets with plastic sheeting and sandbags or temporary berms.

2. Discharges Associated With Post-Emergency Fire Fighting Activities

The post-emergency rehabilitation and maintenance of response equipment must be performed in a manner that avoids unnecessary discharges to the MS4.

3. Discharges Associated with Activities Conducted at Fire Facilities

Specific BMPs to be implemented at Copermittee owned Fire Facilities are identified in the Facility Pollution Prevention Plan (FPPP) as described in the JRMP. The following are general BMPs that can be considered for incorporation into the FPPP as determined appropriate and applicable by the Copermittee.

A. Vehicles and Equipment Washing and Cleaning

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 from vehicle and equipment washing and cleaning:

- Use methods of cleaning vehicles that employ the minimal use of water, such as wet chamois or non-water rinses, when applicable.
- Limit the use of all cleaning agents and when feasible only use water.
- Remove debris from any area or facility used for washing and/or cleaning vehicles.
- Prevent Runoff from vehicle and equipment washing and cleaning from entering the MS4 by employing one of the following BMPs.

    a. Direct water flows to landscaped or green areas or contain the water onsite and allow it to evaporate and infiltrate whenever safe to do so without causing damage or erosion.
    b. Use designated wash areas (preferably covered and bermed) to contain and/or divert the wash

water to the sanitary sewer either through the use of "wet-vac" or through a plumbed sanitary sewer connection.

c. Use self-contained water recycling systems.
d. Use off-site commercial washing and steam cleaning facilities.

- Prohibit all steam cleaning discharges from entering the MS4. Direct all steam cleaning discharges to the sanitary sewer.

B. Vehicle Fueling

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 when fueling fire fighting apparatus:

- Protect the fueling area from Stormwater by installing a canopy.
- Pave fueling area surfaces with Portland cement concrete (or other equivalent smooth impervious surface).
- Keep perimeter drains clear of debris at all times.
- Where a perimeter drain is not installed, install a berm or grade area to prevent run-on of Stormwater and spilled liquids.
- Use a dead-end sump to collect spills or install an oil-water separator.
- Utilize vapor recovery nozzles to help control drips as well as air pollution. Discourage "topping-off" of fuel tanks.
- Maintain a spill control kit at the site. Use absorbent materials on small spills and general cleaning rather than hosing down an area. Remove the absorbent materials promptly and dispose as hazardous waste.
- Keep site Facility Pollution Prevention Plan (FPPP) current.

C. Vehicles and Equipment Maintenance and Repair

The following BMPs must be implemented in order to prevent or reduce the discharge of Pollutants to the MS4 from vehicle and equipment maintenance and repair:

- Conduct vehicle and equipment maintenance in areas where precautions have been taken to prevent the entry of spills into the MS4.
- Use dry cleaning methods in maintenance and repair areas when practical.

D. Hose Washing and Cleaning

- Design future facilities used for washing and/or cleaning fire hoses to prevent wash water or other debris from entering the MS4.
- Direct water flows to landscaped or green areas or contain the water onsite and allowing it to percolate through plant material, the landscape, or to evaporate completely, whenever safe to do so without causing damage or erosion.
- Use designated wash areas (preferably covered and bermed) to contain and/or divert the wash water to the sanitary sewer either through the use of a "wet-vac" or through a plumbed sanitary sewer connection.
- Prevent wash water containing detergents, degreasers, or other contaminants from entering the MS4.
- When cleaning the wash area prevent discharge from entering the MS4. Utilize wet mop cleaning methods in small areas, when feasible.
- Use methods of cleaning fire hoses that employ the minimal use of water, such as high-pressure spray

washers, when applicable.

E. Facility Maintenance

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 during facility maintenance:

- Use dry cleaning methods, such as sweeping, to clean impervious areas such as apparatus floors, driveways, patios, and walkways. Place sweepings and debris in receptacles for solid waste disposal.
- Maintain landscaped areas as required, limiting the introduction of leaves and landscape waste into the MS4.
- Monitor and maintain irrigation systems to prevent Runoff.
- Maintain and repair structures in order to prevent the release of water, soils, or waste to the MS4.

F. Solid Waste and Hazardous Materials Storage Areas

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 from solid waste and in hazardous materials storage areas:

- Provide a canopy or roof for solid waste and hazardous materials storage areas.
- Provide secondary containment (i.e. a metal or plastic pan with a raised edge) for hazardous materials storage areas.
- Ensure waste containers and dumpsters are properly secured and sealed. Provide lids for all trash and solid waste receptacles. Keep lids closed to prevent contact with rainfall and to ensure containment of waste within the storage area.

Emergency Fire Fighting Activities

An "emergency" exists from alarm notification until, in the opinion of the incident commander, the emergency has concluded. Discharges occurring during emergency fire fighting activities (i.e. flows necessary for the protection of life and property) do not require BMPs and are not prohibited under the 2010 SMR MS4 Permit.

IMPLEMENTATION STRATEGY

Education, Training, and Outreach

1. Stormwater NPDES Training

Copermittee Fire department personnel should receive annual education and training to increase staff awareness and understanding of Stormwater Pollution issues, BMPs, and their compliance obligations.

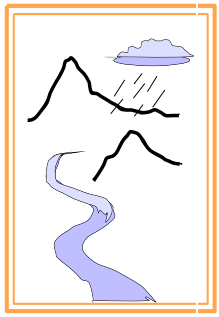
2. Best Management Practices (BMPs) Update

The Copermittees in the Santa Margarita Region will continue to work cooperatively with fire departments to identify, update, and provide guidance on the implementation BMPs, as appropriate, to reduce contaminants in discharges related to fire department agency activities to the maximum extent practicable.

GLOSSARY

With exception of the following, terms used in this document are defined in the JRMP Glossary,:

Maximum Capability Training (MCT)
The MCT involves training exercises in which high water flows are generated to ensure operational readiness. Examples may include: Probation preparation and testing, and organized exercises that prepare or test the abilities of long term employees. Water flows into the storm drain are permissible when using potable water sources (hydrants or water tanks) and debris from the effected curb and gutter have been previously removed.



Unified Sanitary Sewer Spill Response Procedure

Submitted to the
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

(SDRWQCB ORDER NO. R9-2010-0016)

June 30, 2012

BY THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISRICT, COUNTY OF RIVERSIDE, AND CITIES OF RIVERSIDE COUNTY (SAN DIEGO REGION)

NPDES

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Unified Sanitary Sewer Spill Response Procedure

1.0 Background

On November 10, 2010, the California Regional Water Quality Control Board – San Diego Region (Regional Board) issued an area-wide Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (2010 MS4 Permit) to the Riverside County Flood Control and Water Conservation District (District), the County of Riverside (County), and the incorporated cities of Riverside County within the San Diego Region (collectively, Copermittees).

The 2010 MS4 Permit requires the Copermittees to control the discharge of Pollutants into and from the MS4s to Waters of the United States, including from Sewage Spills. The Copermittees however do not own nor operate any portion of the sanitary sewer system nor associated treatment facilities. Sewering agencies that own or operate sanitary sewer collection systems greater than one mile in length are regulated under State Water Resources Control Board Water Quality Order No. 2006-0003 and the accompanying amendment to its monitoring and reporting program (WQ 2008-0002-EXEC). This order, known as the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Sanitary Sewer Order) serves, among other purposes, to prevent and minimize Potential Pollutants from sanitary sewer overflows (SSOs) originating from these sewer collection systems from entering surface waters. Copermittees that own or operate applicable sanitary sewer collection systems are required to obtain coverage under the Sanitary Sewer Order.

The Regional Board has found that effluent from SSOs that may enter the MS4 can ultimately have a negative impact on Beneficial Uses of Receiving Waters. The Copermittees have developed this Sanitary Sewer Spill Response Procedure to prevent, respond to, contain and clean up sewage from SSOs that have or could impact the MS4.

2.0 Purpose

The local Sewering agenciesare required to provide notification, documentation, spill response and reporting of SSOs from their sanitary sewer collection systems pursuant to established federal and state regulations (including the Sanitary Sewer Order), and individual NPDES permits. This Sanitary Sewer Spill Response Procedure provides a mechanism to ensure effective coordination between those sewering agencies and the Copermittees in the event that an SSO threatens to impact, or impacts, the MS4. This procedure will:

- Enhance communication between the Copermittees, sewering agencies and the Regional Board;
- Clarify and streamline interagency SSO response procedures; and
- Provide additional protection of Receiving Waters.

3.0 SSO Response Procedure

Upon determination by a sewering agency or Copermittee, persons in charge, contractor or field crew that an SSO has occurred that may impact the MS4, the following notification, reporting, response, and sampling procedures will be implemented.

3.1 Notifications

3.1.1 Notification Requirements Applicable to Sewering Agencies:

In compliance with the Sanitary Sewer Order, the following notification requirements are applicable to sanitary sewer collection systems and other facilities owned or operated by sewering agencies:

- For any discharges of sewage that result in a discharge to a drainage channel or surface water, the sewering agency will as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the OES, the County Department of Environmental Health, and the Regional Board.
- As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the sewering agency will submit to the Regional Board a certification that the OES and the County Department of Environmental Health have been notified of the discharge.

The sewering agency with jurisdiction for the spill will provide notification immediately (within 24 hours of becoming aware of the circumstances) for all discharges that endanger human health or the environment as follows:

- By phone to the OES at 800-582-7550 and to the Regional Board at 858-467-2952
- At a minimum:
  - Any sewage spill greater than 1,000 gallons
  - Any sewage spill that could impact water contact recreation
  - Any discharge of sewage into or on any Waters of the State (reportable to OES[1])

In addition, the sewering agency will notify the Highway Patrol of SSOs affecting a State Highway in accordance with OES guidance[2].

1 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 4. http://www.oes.ca.gov/

2 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

Other spill incidents, including any unauthorized discharges that are not reportable to the OES, are reported to the Regional Board's Executive Officer as part of the Annual Report as described in Section 3.3.

3.1.2 Notification Requirements Applicable to Copermittees Not Owning or Operating a Sanitary Sewer Collection System

Should a Copermittee discover an SSO or determine that sewage is entering the MS4, the Copermittee shall immediately notify the appropriate sewering agency.

1. Where the sewering agency determines that the SSO originates from its sewer collection system or facilities, the sewering agency will follow the notification procedures described in Section 3.1.1 and established reporting procedures. No further notification or reporting is required by the Copermittee.
2. Where the sewering agency determines that the SSO originates from a private lateral or private property, the sewering agency will contact the property owner for clean up responsibility and will contact the Copermittee with jurisdiction of the spill. For more information on private property SSOs, see Section 6.0. The Copermittee with jurisdiction for the spill will provide notification immediately (within 24 hours of becoming aware of the circumstances) for all discharges that endanger human health or the environment as follows:
    - By phone to the OES at 800-582-7550 and to the Regional Board at 858-467-2952
    - At a minimum:
        - Any sewage spill greater than 1,000 gallons
        - Any sewage spill that could impact water contact recreation
        - Any discharge of sewage into or on any Waters of the State (reportable to OES[3])
    - In addition, the Copermittee with jurisdiction for the spill will notify the Highway Patrol of SSOs affecting a State Highway in accordance with OES guidance[4].

Should a Copermittee discover discharges of sewage in an area not served by a sewering agency, the Copermittee with jurisdiction for the spill will follow the procedures in sections 3.5 and 4.4.5 of the JRMP as applicable.

Other spill incidents, including any unauthorized discharges that are not reportable to the OES, are reported to the Regional Board's Executive Officer as part of the Annual Report as described in Section 3.3.

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3 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

4 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

3.1.3 Agency Contact Information

To identify sewering agency with jurisdiction in the spill area, **see Attachment A**. A list of the current contact phone numbers for various agencies is provided below:

CONTACT:	**PHONE NUMBER:**
County Department of Environmental Health / Environmental Resources Management	951-955-8980
Governor's Office of Emergency Services (OES)	800-852-7550
Copermittee Staff (whose MS4 may be affected by spill)	**See Attachment B**
Regional Water Quality Control Board: San Diego Region	858-467-2952
Riverside County Flood Control and Water Conservation District	951-955-1200
Sewering agency with jurisdiction in spill area	**See Attachment A**
California Highway Patrol (if highway affected by spill)	**911**

3.2 Minimum Information for Notification

Copermittee staff providing notice should make reasonable attempts to reach sewering agency contacts during and after normal working hours. In cases where sewering agency contacts are not available, messages shall be left. The following minimum information should be conveyed by Copermittee staff as appropriate:

- Identity of caller
- Location, date and time of SSO, status of the SSO (actual or threatened release)
- Quantity of sewage released (estimate of flow or volume)
- Need for public safety or traffic control measures
- Cause of the SSO, if known
- Description of immediate measures taken to contain/mitigate SSO
- Estimate of additional containment and/or clean-up options
- Determination if sewage was discharged to MS4 or areas otherwise impacting the MS4 **(Refer to Attachment A)**
- Determination if SSO reached a state highway

A copy of a sample SSO reporting form is included in **Attachment C**.

3.3 Reporting Requirements

Each Sewering agency is responsible for filing all SSO reports as required under federal and state law for discharges from their sanitary sewer systems, including any applicable NPDES or other permits. Sewering agencies are required to report any discharges to the Department of Environmental Health immediately, per the requirements of Health and Safety Codes Section 5411.5.

Copermittees shall additionally follow specific reporting requirements as described in Section 4 of the JRMP.

The Person in Charge at the responsible sewering agency must CC: the final SSO Report provided to the Regional Board to the affected Copermittees via hard copy or electronic means.

3.4 Response Requirements

Responsible sewering agencies will lead response to SSOs and will assume Person in Charge responsibilities in most cases. Person in Charge of spill response:

- Will take all immediate measures necessary to contain release or potential release of sewage and prevent/minimize impacts to water quality and the MS4.

- May cut locks, open manholes, or otherwise enter MS4 as necessary to contain and clean up SSOs.

- Will contact the maintenance/public works department of the appropriate Copermittee as necessary, and as soon as possible, to notify them of actions within their MS4. Contact numbers are included in **Attachment B**. If necessary, Copermittee staff will support spill response by providing MS4 maps or other support if available.

- Will coordinate with Copermittee staff as necessary to ensure that the clean up adequately remedies impacts of the sewage released to the MS4. It should be noted that the Regional Board prefers that MS4 facilities not be sanitized with disinfectant where not immediately impacting public health (i.e. no chlorine shall be used when discharge is within 1,500 feet of a waterway).

- Will coordinate with local fire, police, and traffic departments as necessary to ensure the safety of the response effort, and to manage traffic and local residents.

4.0 Training Requirements

Sewering Agencies and Copermittee staff will ensure that training for this procedure is incorporated into appropriate training programs related to SSO response.

5.0 Detection Involving Infiltration into MS4

In the event that Copermittees encounter evidence of potential sewage infiltration into the MS4 due to water quality monitoring or field observation, the Copermittees will notify the relevant sewering agency (**see Attachment A**) to coordinate a response.

6.0 Private Property SSOs

Sewering agencies and their contractors will respond to all SSOs within their service area. If a private property is the source of an SSO, agencies and their contractors shall assist in the control and containment to ensure that the sewage does not enter the MS4. If the SSO was a result of a private lateral, the private property owner will be informed of the blockage, and will be responsible to remove the blockage. If the SSO was a result of the sewer trunk line blockage, the response crew will correct the problem.

Glossary

Note: With the exception of the following, most terms used in this document are defined in the Glossary to the JRMP.

Sanitary Sewer Overflow (SSO) - A sanitary sewer overflow is any overflow, spill, release, discharge or diversion of wastewater from a sanitary sewer system. SSOs include:

(i) Overflows or releases of wastewater that reach Waters of the U.S.;
(ii) Overflows or releases of wastewater that do not reach Waters of the U.S.; and
(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions in a sanitary sewer, other than a building lateral. Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned is an SSO when sewage is discharged off private property into streets, stormdrains, or Waters of the U.S.

Sanitary Sewer System - Any system of pipes, pump stations, sewer lines, or other conveyances upstream of a wastewater treatment plant headworks used to collect and convey sewage to a treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, highlines, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not SSOs.

Sewage - The waste and wastewater produced by residential and commercial establishments and discharged into sewers.

Waters of the State – Any water, surface or underground, including saline waters within the boundaries of the State.

Attachment A

Sewering Agency Contact Roster

Unified Sanitary Sewer Spill Response Procedure

Attachment A (Sewering Agency Contact Roster)

Eastern Municipal Water District
Integrated Operations Center or
Mr. Mark Chamberlin
Post Office Box 8300
Perris, CA 92572
951.928.3777 ext. 6265 (During & After Work Hours)
Fax: 951.928.6177
chamberm@emwd.org

Rancho California Water District
42135 Winchester Road
Temecula, CA 92590
951.296.6953, Fax: 951.296.6868
951.296.6900 (emergency)

Elsinore Valley Municipal Water District
Ms. Susan Halpin
Post Office Box 3000
Lake Elsinore, CA 925310-3000
951.674.3146 ext. 8203, After hours: 951.258.9299
Fax: 951.245.5946
shalpin@evmwd.net

Attachment B

MS4 Copermittee Contact Roster

Unified Sanitary Sewer Spill Response Procedure

Attachment B (MS4 Copermittee Contact Roster)

City of Menifee
Mr. Don Allison
29683 New Hub Drive, Suite C
Menifee, CA 92586
951.672.6777
dallison@cityofmenifee.us

City of Murrieta
Mr. Bill Woolsey
1 Town Center
24601 Jefferson Avenue
951.461.6073, Fax: 951.698.4509
wwoolsey@murrieta.org

Rancho California Water District
42135 Winchester Road
Temecula, CA 92590
951.296.6953, Fax: 951.296.6868
951.296.6900 (emergency)

Riverside County Environmental Health
Mr. John Watkins
4080 Lemon Street, 9th Floor
Riverside, CA 92501
951.955.3915, Fax: 951.781.9653
Jwatkins@co.riverside.ca.us

Riverside County Executive Office
Mr. Mike Shetler
4080 Lemon Street, 5th Floor
Riverside, CA 92501
951.955.1110, Fax: 951.955.1105
mshetler@rceo.org

Riverside County Flood Control District
Ms. Arlene Chun
1995 Market Street
Riverside, CA 92501
951.955.1330, Fax: 951.788.9965
abchun@rcflood.org

Mark Biloki, Maintenance Superintendent
mbiloki@rcflood.org
951.955.1310, Cell: 951.288.5254, Home: 909.877.2716

Zully Smith, Operations & Maint. Division Manager
zsmith@rcflood.org
951.955.1280, Cell: 951.318.1445

City of Temecula
Mr. Aldo Licitra
43200 Business Park Drive, Temecula, CA 92589-9033
951.308.6387, Field: 951.541.7850, Fax: 951.694.6475
Aldo.licitra@cityoftemecula.org

After Hours: Rodney Tidwell,
Public Works Maint. Supervisor
951.302.4102, Field: 951.303.5497
Rodney.tidwell@cityoftemecula.org

City of Wildomar
Mr. Tim D'Zmura
23873 Clinton Keith Road, Suite 201
Wildomar, CA 92595
951.677.7751, Fax: 951.698.1463
tdzmura@cityofwildomar.org

Attachment C

Sample SSO Reporting Form

SANITARY SEWER OVERFLOW REPORT FORM

This report is: ☐ Preliminary ☐ Final ☐ Revised Final

Sanitary Sewer Overflow Sequential Tracking Number: _____

Reported to: _____
(Enter Fax #, Voicemail #, or Name of Regional Board Staff)

Date Reported: ____/____/_____ (MM/DD/YY)

SANITARY SEWER OVERFLOW REPORT FORM

Sanitary Sewer Overflow Correction - - Description of all Preventative and Corrective Measures Taken or Planned:

_____

Was there measurable precipitation during 72-hour period prior to the overflow?

☐ Yes ☐ No

Initial and Secondary Receiving Waters:

Did the sanitary sewer overflow enter a storm drain?

☐ Yes ☐ No

Did the sanitary sewer overflow reach surface waters other than a storm drain?

☐ Yes ☐ No

Name or description of secondary receiving waters. (If none, state such)

_____

If the sanitary sewer overflow did not reach surface waters, describe the final destination of sewage.

_____

Notification:

Was the local health services agency notified?

☐ Yes ☐ No

If the overflow was over 1,000 gallons, was the Office of Emergency Services (OES) notified?

☐ Yes ☐ No ☐ Not applicable

Affected Area Posting:

Were signs posted to warn of contamination?

☐ Yes ☐ No

Location of Posting (if Posted): _____

How many days were the warning signs posted?: _____

Remarks:

_____

Appendix D – Development Planning

D.1 Project Application Form
D.2 Land Use Application Form
D.3 Barriers to LID Study
D.4 Standard Conditions of Approval

RIVERSIDE COUNTY
PLANNING DEPARTMENT

Carolyn Syms Luna
Director

APPLICATION FOR PRE-APPLICATION REVIEW (PAR)

Pre-Application Review (PAR) is an optional procedure for all development proposals identified as falling into Category I, II, or III, as defined below. The purpose of PAR is to:

1. Advise a prospective applicant of the current County standards and requirements.

2. Assess whether a prospective applicant's development proposal is consistent with the current County standards and requirements before an application is actually files and fees are paid.

3. Shorten the length of time required to process a development proposal once it has been accepted for processing.

4. Encourage development proposal designs that are sensitive to environmental and developmental constraints and that less the need for subsequent costly and time consuming redesigns.

5. Limit requests for special studies to those identified in the PAR letter.

Development proposals that are subject to PAR are divided into three categories on the basis of their relative complexity. The simplest proposals are classified as Category I proposals. The most complex proposals are classified as Category III proposals. For multiple applications, (i.e. GPA, CZ, Plot Plan) the category will be determined by the most complex application.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED.

CASE NUMBER: _____ DATE SUBMITTED: _____

CHECK ONE AS APPROPRIATE:

☐ CATEGORY I	☐ CATEGORY II	☐ CATEGORY III
Temporary Outdoor Event (with EA only)	General Plan Amendment	Specific Plan
Temporary Use Permit 6 months (with EA only)	Specific Plan Amendment	Surface Mining Permit
Variances Filed Alone (with EA only)	Hazardous Waste Facilities Siting Permit	Parcel Map-Commercial/Industrial
Kennels & Catteries (with EA only)	Conditional Use Permit	Tract Map-Multi-Family
Accessory WECS (with EA only)	Public Use Permit	Tract Map-Single Family Residential
	Plot Plan	Vesting Parcel Map–Commercial/ Industrial
	Revised Permit	Vesting Tract Map - Statutory Condo.
	Parcel Map-Residential	Vesting Tract Map – Single Family Residential

Riverside Office · 4080 Lemon Street, 12th Floor
P.O. Box 1409, Riverside, California 92502-1409
(951) 955-3200 · Fax (951) 955-1811

Desert Office · 38686 El Cerrito Road
Palm Desert, California 92211
(760) 863-8277 · Fax (760) 863-7555

APPLICATION FOR PRE-APPLICATION REVIEW (PAR)

☐ CATEGORY I	☐ CATEGORY II	☐ CATEGORY III
	Parcel Map-Revised	Commercial WECS
	Parcel Map-Multi-Family	
	Tract Map-Revised Single Family Res.	
	Tract Map – Revised Multi-Family	
	Vesting Map-Residential Parcel Map	

Applicant's Name: _____ E-Mail: _____

Mailing Address: _____
Street

_____
City *State* *ZIP*

Daytime Phone No: (____) _____ Fax No: (____) _____

Project Description: _____

_____

_____

Assessor's Parcel Number(s): _____

Section: _____ Township: _____ Range: _____

Approximate Gross Acreage: _____

General location (nearby or cross streets): North of _____, South of

_____, East of _____, West of _____

Thomas Brothers map, edition year, page number, and coordinates: _____

FILING INSTRUCTIONS FOR PRE-APPLICATION REVIEW APPLICATION

The following instructions are intended to provide the necessary information and procedures to facilitate the processing of a Pre-Application Review application. Your cooperation with these instructions will insure that your application can be processed in the most expeditious manner possible.

THE PRE-APPLICATION REVIEW FILING PACKAGE MUST CONSIST OF THE FOLLOWING:

1. A completed application form.
2. Fifteen (15) copies of a complete and comprehensive PAR Exhibit.
3. Applicable deposit-based fee, as set forth in County Ordinance No. 671.

The amount of information that must be submitted with a PAR application increases with the complexity of the development proposal. All exhibit(s) must be clearly drawn and legible. The following matrix identifies the minimum information required. The Planning Director may require additional information if the information submitted does not adequately define the proposal.

EXHIBIT REQUIREMENTS	CATEGORY		
	1	2	3
1. Name, address, and telephone number of applicant	X	X	X
2. Name, address, and telephone number of land owner	X	X	X
3. Name, address, and telephone number of map/exhibit preparer	X	X	X
4. Assessor Parcel No. & Property Address (if available)	X	X	X
5. Scale of exhibit (Engineer's Scale) (i.e., 1 inch equals 10 feet or an even multiple of 10 feet). An architect's scale is acceptable only for floor plans, elevations, and landscaping plans.	X	X	X
6. North arrow	X	X	X
7. Title of Exhibit (e.g., "Plot Plan", "Tract Map", etc.)	X	X	X
8. If the PAR is for a tentative map indicate the proposed improvement schedule (i.e., Schedule "A," "B," "C," etc.)		X	X
9. Overall dimensions and approximate total net and gross acreage of property.	X	X	X
10. Project boundary lines	X	X	X
11. Existing and proposed zoning and land use of property.	X	X	X
12. Existing zoning and land use of surrounding property.	X	X	X
13. Show the location and dimensions of existing and proposed ingress and egress, and methods of vehicular circulation; and indicate any off-site rights-of-way that may be required for access to or from the project site as may be required by County Ordinance No. 460, Section 3.2.		X	X
14. Waste disposal system proposed	X	X	X
15. Location and dimensions of existing dwellings, buildings, or other structures, labeled as existing, and indicating if they are to remain, or be removed.	X	X	X
16. Setback dimensions of existing structures, and paved areas that are to remain.	X	X	X
17. Uniform Building Code occupancy group and construction type for all existing and proposed structures.	X	X	X
18. Vicinity map showing the site's relationship to major highways, access roads, and cities. Paved roads both existing and proposed must be labeled or shown by heavy dark lines. Streets, alleys, and rights-of-way proving legal access to the property must be indicated.	X	X	X

EXHIBIT REQUIREMENTS	CATEGORY		
	1	2	3
A north arrow for the vicinity map is also required.			
19. Contour lines showing the existing topography of the property, with the source(s) of the contour lines identified. Contour lines shall extend beyond boundaries of subject parcel. Maximum contour interval should be five (5) feet with no less than two (2) contour lines provided on any application.		X	X
20. FEMA mapped floodplains and floodways including zone designations.		X	X
21. The above and below ground location(s) and amount(s) of flammable or combustible liquids and waste oil.		X	X
22. For land divisions: a. Proposed lot lines and approximate lot dimensions. b. Proposed boundary lines and approximate dimensions for each lot for Mobile Home or Recreational Vehicle parks.		X	X
23. For projects within a Specific Plan, the Specific Plan Planning Area number, and the land use designation on the subject property and all surrounding property.		X	X
24. For condominiums, mobile home, or recreational vehicle parks: a. Number each space and indicate the total number of each type of unit, lot, or space. b. Delineate common areas, open space, and recreational areas. Give dimensions, acreage, proposed uses, and name of owner(s) or entity or entities who will maintain it.		X	X
25. As required by County Ordinance No. 460, a Restricted Single Family Residential Subdivision (i.e., R-2 Zone), shall provide: building footprints, floor plan assignments, proposed setbacks, pad elevations, street grades, and all cut and fill slopes in excess of one (1) foot in vertical height.		X	X
26. To show compliance with the County's Water Quality Management Plan, water quality features or a note describing the site's water quality features shall be shown.		X	X

PROCEDURE:

Once the Planning Department has determined the PAR application is complete, the exhibits shall be transmitted to affected County departments and agencies, and affected special districts.

A PAR session will be held at least two weeks after the transmittal of the exhibits. The session will be attended by the applicant and a representative from each affected department, agency, and special district.

Within 3 weeks after the PAR session, the Planning Department will assemble the requirements, responses, and comments from the affected departments, agencies and special districts, and forward them to the applicant in a PAR letter, summarizing the requirements and recommendations.

The PAR letter shall contain the requirements, responses, and comments regarding the applicant's development proposal; **but, it shall not constitute or be considered approval of the development project.** A PAR letter will generally provide the applicant with the following types of information:

1. Any applications that must be filed to process the proposal, as well as any timing requirements associated with filing such applications. Applications that may be required include, but are not limited to, the following: general plan amendments; specific plans; changes of zone; tract maps; parcel maps; plot plans; and conditional use permits.

2. Any special studies that must be filed to process the proposal, as well as any timing requirements associated with filing such special studies. Special studies that may be required include, but are not limited to, the following: fiscal impact; service and infrastructure impact; private debt burden; biological; archeological; paleontological; geological; geotechnical; flood; traffic; slope stability; air quality; and noise studies.
3. Any special plans that must be filed to process the proposal. Special plans that may be required include, but are not limited to, the following: conceptual grading plans; detailed grading plans; storm water pollution prevention plans; dust control plans; and area development plans.

4. Current fees, including but not limited, to the following: application fees; mitigation fees (e.g., signal mitigation fees or area drainage fees); and special district fees administered by the County (e.g., road and bridge benefit district fees).

5. Any major environmental issues associated with the proposal, including the possible need for an EIR subject to the anticipated environmental assessment.

6. Any major design considerations associated with the proposal (e.g., internal drainage design, limitations on density, compatibility with the General Plan and/or Multiple Species Habitat Conservation Plan).

7. The availability of water, sewer, and fire flow rate.

8. The concerns remaining for the proposal, if any.

9. The changes that staff will require before making an approval recommendation, or a statement that an approval recommendation will not be made given the proposal's present configuration.

10. Findings required for the necessary permit or approval.

Please refer to County Ordinance No. 752 for a complete explanation of the PAR procedure.

COUNTY OF RIVERSIDE
TRANSPORTATION AND LAND MANAGEMENT AGENCY

Juan C. Perez
Agency Director

Carolyn Syms Luna	Juan C. Perez	Mike Lara	Code
Director,	Director,	Director,	Enforcement
Planning Department	Transportation Department	Building & Safety Department	Department

LAND USE and PERMIT APPLICATION PROCESSING AGREEMENT

Agreement for Payment of Costs of Application Processing

TO BE COMPLETED BY APPLICANT:

This agreement is by and between the County of Riverside, hereafter "County of Riverside",

and_____ hereafter "Applicant" and _____" Property Owner".

Description of application/permit use:

_____

_____

If your application is subject to Deposit–based Fee, the following applies

Section 1. Deposit-based Fees

Purpose: The Riverside County Board of Supervisors has adopted ordinances to collect "Deposit-based Fees" for the costs of reviewing certain applications for land use review and permits. The Applicant is required to deposit funds to initiate staff review of an application. The initial deposit may be supplemented by additional fees, based upon actual and projected labor costs for the permit. County departments draw against these deposited funds at the staff hourly rates adopted by the Board of Supervisors. The Applicant and Property Owner are responsible for any supplemental fees necessary to cover any costs which were not covered by the initial deposit.

Section 2. Applicant and Property Owner Responsibilities for Deposit-based Fee Applications

A. Applicant agrees to make an initial deposit in the amount as indicated by County ordinance, at the time this Agreement is signed and submitted with a complete application to the County of Riverside.
Applicant acknowledges that this is an initial deposit and additional funds may be needed to complete their case The County of Riverside will not pay interest on deposits. Applicant understands that any delays in making a subsequent deposit from the date of written notice requesting such additional deposit by County of Riverside, may result in the stoppage of work.

B. Within 15 days of the service by mail of the County of Riverside's written notice that the application permit deposit has been reduced to a balance of less than 20% of the initial deposit or that the deposit is otherwise insufficient to cover the expected costs to completion, the Applicant agrees to make an additional payment of an amount as determined by the County of Riverside to replenish the deposit. Please note that the processing of the application or permit may stop if the amount on deposit has been expended. The Applicant agrees to continue making such payments until the County of Riverside is reimbursed for all costs related to this application or permit. The County of Riverside is entitled to recover its costs, including attorney's fees, in collecting unpaid accounts that would have been drawn on the deposit were it not depleted.

C. The Property Owner acknowledges that the Applicant is authorized to submit this agreement and related application(s) for land use review or permit on this property. The Property Owner also acknowledges that should the Applicant not reimburse the County of Riverside for all costs related to this application or permit, the Property Owner shall become immediately liable for these costs which shall be paid within15 days of the service by mail of notice to said property Owner by the County.

D. This Agreement shall only be executed by an authorized representative of the Applicant and the Property Owner. The person(s) executing this Agreement represents that he/she has the express authority to enter into this agreement on behalf of the Applicant and/or Property Owner.

E. This Agreement is not assignable without written consent by the County of Riverside. The County of Riverside will not consent to assignment of this Agreement until all outstanding costs have been paid by Applicant.
F. Deposit statements, requests for deposits or refunds shall be directed to Applicant at the address identified in Section 4.

Section 3. To ensure quality service, Applicant is responsible to provide one-week written notice to the County of Riverside Transportation and Land Management Agency (TLMA) Permit Assistance Centers if any of the information below changes.

Section 4. Applicant and Owner Information

1. PROPERTY INFORMATION:

Assessors Parcel Number(s): _____

Property Location or Address:

_____

2. PROPERTY OWNER INFORMATION:

Property Owner Name: _____ Phone No.: _____

Firm Name: _____ Email: _____

Address: _____

_____

3. **APPLICANT INFORMATION:**

Applicant Name: _____ Phone No.: _____

Firm Name:_____ Email: _____

Address *(if different from property owner)*

_____

_____

4. SIGNATURES:

Signature of Applicant: _____ Date: _____

Print Name and Title: _____

Signature of Property Owner: _____ Date: _____

Print Name and Title: _____

Signature of the County of Riverside, by _____ Date: _____

Print Name and Title: _____

FOR COUNTY OF RIVERSIDE USE ONLY

Application or Permit (s)#:_____

Set #:_____Application Date:_____

RIVERSIDE COUNTY
PLANNING DEPARTMENT

Carolyn Syms Luna
Director

APPLICATION FOR LAND USE PROJECT

CHECK ONE AS APPROPRIATE:

☐ PLOT PLAN ☐ CONDITIONAL USE PERMIT ☐ TEMPORARY USE PERMIT
☐ REVISED PERMIT ☐ PUBLIC USE PERMIT ☐ VARIANCE

PROPOSED LAND USE: _____

ORDINANCE NO. 348 SECTION AUTHORIZING PROPOSED LAND USE: _____

ALL APPLICATIONS MUST INCLUDE THE INFORMATION REQUIRED UNDER ANY SUPPLEMENTAL INFORMATION LIST APPLICABLE TO THE SPECIFIC PROJECT. ADDITIONAL INFORMATION MAY BE REQUIRED AFTER INITIAL RECEIPT AND REVIEW. INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED.

CASE NUMBER: _____ DATE SUBMITTED: _____

APPLICATION INFORMATION

Applicant's Name: _____ E-Mail: _____

Mailing Address: _____
Street

_____
City *State* *ZIP*

Daytime Phone No: (____) _____ Fax No: (____) _____

Engineer/Representative's Name: _____ E-Mail: _____

Mailing Address: _____
Street

_____
City *State* *ZIP*

Daytime Phone No: (____) _____ Fax No: (____) _____

Property Owner's Name: _____ E-Mail: _____

Mailing Address: _____
Street

_____
City *State* *ZIP*

Daytime Phone No: (____) _____ Fax No: (____) _____

If the property is owned by more than one person, attach a separate page that references the application case number and lists the names, mailing addresses, and phone numbers of all persons having an interest in the real property or properties involved in this application.

The Planning Department will primarily direct communications regarding this application to the person identified above as the Applicant. The Applicant may be the property owner, representative, or other assigned agent.

AUTHORIZATION FOR CONCURRENT FEE TRANSFER

The signature below authorizes the Planning Department and TLMA to expedite the refund and billing process by transferring monies among concurrent applications to cover processing costs as necessary. Fees collected in excess of the actual cost of providing specific services will be refunded. If additional funds are needed to complete the processing of your application, you will be billed, and processing of the application will cease until the outstanding balance is paid and sufficient funds are available to continue the processing of the application. The applicant understands the deposit fee process as described above, and that there will be NO refund of fees which have been expended as part of the application review or other related activities or services, even if the application is withdrawn or the application is ultimately denied.

All signatures must be originals ("wet-signed"). Photocopies of signatures are **not** acceptable.

_____	_____
PRINTED NAME OF APPLICANT	*SIGNATURE OF APPLICANT*

AUTHORITY FOR THIS APPLICATION IS HEREBY GIVEN:

I certify that I am/we are the record owner(s) or authorized agent and that the information filed is true and correct to the best of my knowledge. An authorized agent must submit a letter from the owner(s) indicating authority to sign the application on the owner's behalf.

All signatures must be originals ("wet-signed"). Photocopies of signatures are **not** acceptable.

_____	_____
PRINTED NAME OF PROPERTY OWNER(S)	*SIGNATURE OF PROPERTY OWNER(S)*
_____	_____
PRINTED NAME OF PROPERTY OWNER(S)	*SIGNATURE OF PROPERTY OWNER(S)*

If the property is owned by more than one person, attach a separate sheet that references the application case number and lists the printed names and signatures of all persons having an interest in the property.

☐ See attached sheet(s) for other property owners' signatures.

PROPERTY INFORMATION:

Assessor's Parcel Number(s): _____

Section: _____ Township: _____ Range: _____

Approximate Gross Acreage: _____

General location (nearby or cross streets): North of _____, South of _____, East of _____, West of _____.

Thomas Brothers map, edition year, page number, and coordinates: _____

Project Description: (describe the proposed project in detail)

_____

_____

_____

Related cases filed in conjunction with this application:

_____

_____

_____

Is there a previous application filed on the same site: Yes ☐ No ☐

If yes, provide Case No(s). _____ (Parcel Map, Zone Change, etc.)

E.A. No. (if known) _____ E.I.R. No. (if applicable): _____

Have any special studies or reports, such as a traffic study, biological report, archaeological report, geological or geotechnical reports, been prepared for the subject property? Yes ☐ No ☐

If yes, indicate the type of report(s) and provide a copy: _____

Is water service available at the project site: Yes ☐ No ☐

If "No," how far must the water line(s) be extended to provide service? (No. of feet/miles) _____

Will the project eventually require landscaping either on-site or as part of a road improvement or other common area improvements? Yes ☐ No ☐

Is sewer service available at the site? Yes ☐ No ☐

If "No," how far must the sewer line(s) be extended to provide service? (No. of feet/miles) _____

Will the project result in cut or fill slopes steeper than 2:1 or higher than 10 feet? Yes ☐ No ☐

How much grading is proposed for the project site?

Estimated amount of cut = cubic yards: _____

Estimated amount of fill = cubic yards _____

Does the project need to import or export dirt? Yes ☐ No ☐

Import _____ Export _____ Neither _____

What is the anticipated source/destination of the import/export?

_____

What is the anticipated route of travel for transport of the soil material?

_____

How many anticipated truckloads? _____ truck loads.

What is the square footage of usable pad area? (area excluding all slopes) _____ sq. ft.

Is the project located within 8½ miles of March Air Reserve Base? Yes ☐ No ☐

If yes, will any structure exceed fifty-feet (50') in height (above ground level)? Yes ☐ No ☐

Is the project located within 1000 feet of a military installation, beneath a low-level flight path or within special use airspace as defined in Section 21098 of the Public Resources Code, and within an urbanized area as defined by Section 65944 of the Government Code? (See California Office of Planning and Research website: http://cmluca.projects.atlas.ca.gov/) Yes ☐ No ☐

Is the project located within the boundaries of an Airport Land Use Compatibility Plan adopted by the Riverside County Airport Land Use Commission? Yes ☐ No ☐

Does the project area exceed one acre in area? Yes ☐ No ☐

Is the project located within any of the following watersheds (refer to Riverside County Land Information System (RCLIS) (http://www3.tlma.co.riverside.ca.us/pa/rclis/index.html) for watershed location)?

☐ Santa Ana River ☐ Santa Margarita River ☐ Whitewater River

Please note: If your project is within the San Jacinto River as shown on the RCLIS, please check Santa Ana River above and use the Santa Ana River worksheet, **"Checklist for Identifying Projects Requiring a Project-Specific Water Quality Management Plan (WQMP) within the Santa Ana River Region"** on the following pages.

HAZARDOUS WASTE AND SUBSTANCES STATEMENT

Government Code Section 65962.5 requires the applicant for any development project to consult specified state-prepared lists of hazardous waste sites and submit a signed statement to the local agency indicating whether the project and any alternatives are located on an identified site and shall specify any lists. Under the statute, no application shall be accepted as complete without this signed statement.

I (We) certify that I (we) have investigated our project and any alternatives with respect to its location on an identified hazardous waste site contained on all lists compiled pursuant to Government Code Section 65962.5 and that my (our) answers are true and correct. My (Our) investigation has shown that:

☐ The development project and any alternatives proposed in this application are not contained on the lists compiled pursuant to Section 65962.5 of the Government Code.

☐ The development project and any alternatives proposed in this application are contained on the lists compiled pursuant to Section 65962.5 of the Government Code. Accordingly, the following information is provided and incorporated herein. Attach a separate sheet setting forth the following information with respect to each list.

Name of Applicant:
Address:
Phone number:
Address of site (street name and number if available, and ZIP Code):
Local Agency: County of Riverside
Assessor's Book Page, and Parcel Number:
Specify any list pursuant to Section 65962.5 of the Government Code:
Regulatory Identification number:
Date of list:

Applicant (1) _____ Date _____

Applicant (2) _____ Date _____

HAZARDOUS MATERIALS DISCLOSURE STATEMENT

Government Code Section 65850.2 requires the owner or authorized agent for any development project to disclose whether:

1. Compliance will be needed with the applicable requirements of Section 25505 and Article 2 (commencing with Section 25531) of Chapter 6.95 of Division 20 of the Health and Safety Code or the requirements for a permit for construction or modification from the air pollution control district or air quality management district exercising jurisdiction in the area governed by the County.
   Yes ☐ No ☐

2. The proposed project will have more than a threshold quantity of a regulated substance in a process or will contain a source or modified source of hazardous air emissions.
   Yes ☐ No ☐

I (we) certify that my (our) answers are true and correct.

Owner/Authorized Agent (1) _____ Date _____

Owner/Authorized Agent (2) _____ Date _____

Checklist for Identifying Projects Requiring a Project-Specific Water Quality Management Plan (WQMP) within the Santa Ana River Region[1]			
Project File No.			
Project Name:			
Project Location:			
Project Description:			
Applicant Contact Information:			
Proposed Project Consists of, or includes:		**YES**	**NO**
Significant Redevelopment: The addition or replacement of 5,000 square feet or more of impervious surface on an already developed site. Does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of the constructed facility or emergency redevelopment activity required to protect public health and safety.		☐	☐
Residential development that create 10,000 square feet or more of impervious surface (collectively over the entire project site), including residential housing subdivision requiring a Final Map (i.e. detached single family home subdivisions, multi-family attached subdivisions, condominiums, or apartments, etc.).		☐	☐
New Industrial and commercial development where the land area[1] represented by the proposed map or permit is 10,000 square feet or more.		☐	☐
Automotive repair shops (Standard Industrial Classification (SIC) codes[2] 5013, 5014, 5541,7532, 7533, 7534, 7536, 7537, 7538, 7539**)**		☐	☐
Mixed use developments that create 10,000 square feet or more of impervious surface (collectively over the entire project site).		☐	☐
Restaurants (SIC code 5812) where the land area of development is 5,000 square feet or more.		☐	☐
Hillside developments 5,000 square feet or more which are located on areas with known erosive soil conditions or where natural slope is 25 percent or more.		☐	☐
Developments of 2,500 square feet of impervious surface or more adjacent to (within 200 feet) or discharging directly into ESA's "Directly" means situated within 200 feet of the ESA; "discharging directly" 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.		☐	☐
Parking lots of 5,000 square feet or more exposed to stormwater, where "parking lot" is defined as a land area or facility for the temporary storage of motor vehicles.		☐	☐
Retail Gasoline Outlets that are either 5,000 square feet or more of impervious surface with a projected average daily traffic of 100 or more vehicles per day.		☐	☐
Public Projects other than Transportation Projects, that are implemented by a Premittee and similar in nature to the priority projects described above and meets the thresholds described herein.		☐	☐
Other Development Projects whose site conditions or activity pose the potential for significant adverse impacts to water quality.		☐	☐
[1] Land area is based on acreage disturbed. [2] Descriptions of SIC codes can be found at http://www.osha.gov/pls/imis/sicsearch.html.		☐	☐
DETERMINATION: Circle appropriate determination. If **any** question answered "YES" Project requires a project-specific WQMP. If **all** questions answered "NO" Project requires incorporation of Site Design and source control (BMPs) imposed through Conditions of Approval or permit conditions.			

Checklist for Identifying Projects Requiring a Project-Specific Standard Stormwater Mitigation Plan (SSMP) within the Santa Margarita River Region			
Project File No.			
Project Name:			
Project Location:			
Project Description:			
Applicant Contact Information:			
Proposed Project Consists of, or includes:		**YES**	**NO**
Redevelopment. The creation, addition or replacement of at least 5,000 square feet of impervious surfaces on an already developed site and the existing development and/or the redevelopment project falls under the project categories or locations listed below in this table. Where redevelopment results in an increase of less than 50% of the impervious surfaces of previously existing development, and the existing development was not subject to SSMP requirements, the numeric sizing criteria [MS4 Permit requirement F.1.d. (6)] applies only to the addition or replacement, and not to the entire development. [Note: Where redevelopment results in an increase of more than 50% of the impervious surfaces of a previously existing development, the numeric sizing criteria applies to the entire development.]		☐	☐
New Development. The creation of 10,000 square feet or more of impervious surfaces (collectively over the entire project site) including commercial, industrial, residential, mixed-use, and public projects.		☐	☐
Automotive repair shops. A facility that is categorized in any one of the following Standard Industrial Classification (SIC) Codes 5013–Motor vehicle supplies or parts, 5014–Tires & Tubes, 5541–Gasoline Service Stations,7532–Top, Body & Upholstery Repair Shops and Paint Shops, 7533–Automotive Exhaust System Repair Shops, 7534–Tire Retreading and Repair Shops, 7536–Automotive Glass Replacement Shops, 7537–Automotive Transmission Repair Shops, 7538–General Automotive Repair Shops, 7539–Automotive Repair Shops, not elsewhere classified)		☐	☐
Automotive repair shops. A facility that is categorized in any one of the following Standard Industrial Classification (SIC) Codes 5013–Motor vehicle supplies or parts, 5014–Tires & Tubes, 5541–Gasoline Service Stations,7532–Top, Body & Upholstery Repair Shops and Paint Shops, 7533–Automotive Exhaust System Repair Shops, 7534–Tire Retreading and Repair Shops, 7536–Automotive Glass Replacement Shops, 7537–Automotive Transmission Repair Shops, 7538–General Automotive Repair Shops, 7539–Automotive Repair Shops, not elsewhere classified)		☐	☐
Restaurants. (Standard Industrial Classification (SIC) Code 5812: Establishments primarily engaged in the retail sale of prepared food and drinks for on-premise or immediate consumption, including, but not limited to: Automats (eating places), Beaneries, Box lunch stands, Buffets (eating places), Cafes, Cafeterias, Carry-out restaurants, Caterers, Coffee shops, Commissary restaurants, Concession stands, prepared food (e.g., in airports and sports arenas), Contract feeding, Dairy bars, Diners (eating places), Dining rooms, Dinner theaters, Drive-in restaurants, Fast food restaurants, Food bars, Food service (institutional), Frozen custard stands, Grills, (eating places), Hamburger stands, Hot dog (frankfurter) stands, Ice cream stands, Industrial feeding, Lunch bars, Lunch counters, Luncheonettes, Lunchrooms, Oyster bars, Pizza parlors, Pizzerias, Refreshment stands, Restaurants, Sandwich bars or shops, Snack shops, Soda fountains, Soft drink stands, Submarine sandwich shops, and Tea rooms.) Where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SSMP requirements except for structural treatment control BMPs [MS4 Permit requirement F.2.b(3)] and numeric sizing criteria requirement [MS4 Permit Requirement F.1.d.(6)] and hydromodification requirement [MS4 Permit requirement F.1.h].		☐	☐
All Hillside development greater than 5,000 square feet. Any development that creates greater than 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will include grading on any natural slope that is 25% or greater.		☐	☐
Environmentally Sensitive Areas (ESAs).1 All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "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.		
Impervious parking lots of 5,000 sq. ft. or more. A land area or facility for the temporary parking or storage of motor vehicles used personally for business or commerce.	☐	☐
Streets, roads, highways, and freeways. Includes any paved impervious surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.	☐	☐
Retail Gasoline Outlets (RGOs). Includes RGOs that meet the following criteria: (a) 5,000 square feet or more, or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.	☐	☐

[1]Areas that include but are not limited to all CWA 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); State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Orange; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees.
The Basin Plan for the San Diego Basin WQMPSSMP (also referred to as a WQMP).
www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/docs/update082812/Chpt_2_2012.pdf.
The most recent CWA Section 303(d) list can be found at:
http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/303d_list/index.shtml.

DETERMINATION: Circle appropriate determination.

If **any** question answered "YES" SSMP (also referred to as a WQMP).

If **all** questions answered "NO" Project requires incorporation of Site Design Best Management Practices (BMPs) and Source Control BMPs imposed through Conditions of Approval or permit conditions.

Checklist for Identifying Projects Requiring a Project-Specific Water Quality Management Plan (WQMP) within the Whitewater River Region	
Project File No.	
Project Name:	
Project Location:	
Project Description:	
Applicant Contact Information:	

Proposed Project Consists of New Construction on a Previously Disturbed and Undisturbed Parcel includes:	**YES**	**NO**
Single-family hillside residences that create 10,000 square feet, or more, of impervious are where the natural slope is 25% or greater.	☐	☐
Single-family hillside residences that create 10,000 square feet of impervious area where the natural slope is 10% or greater where erosive soil conditions are known.	☐	☐
Commercial and Industrial developments of 100,000 square feet or more.	☐	☐
Automotive repair shops (Standard Industrial Classification (SIC) Codes 5013–Motor vehicle supplies or parts, 5014–Tires & Tubes, 5541–Gasoline Service Stations,7532–Top, Body & Upholstery Repair Shops and Paint Shops, 7533–Automotive Exhaust System Repair Shops, 7534–Tire Retreading and Repair Shops, 7536–Automotive Glass Replacement Shops, 7537–Automotive Transmission Repair Shops, 7538–General Automotive Repair Shops, 7539–Automotive Repair Shops, not elsewhere classified)	☐	☐
Retail gasoline outlets disturbing greater than 5,000 square feet.	☐	☐
Restaurants disturbing greater than 5,000 square feet. (Standard Industrial Classification (SIC) Code 5812: Establishments primarily engaged in the retail sale of prepared food and drinks for on-premise or immediate consumption, including, but not limited to: Automats (eating places), Beaneries, Box lunch stands, Buffets (eating places), Cafes, Cafeterias, Carry-out restaurants, Caterers, Coffee shops, Commissary restaurants, Concession stands, prepared food (e.g., in airports and sports arenas), Contract feeding, Dairy bars, Diners (eating places), Dining rooms, Dinner theaters, Drive-in restaurants, Fast food restaurants, Food bars, Food service (institutional), Frozen custard stands, Grills, (eating places), Hamburger stands, Hot dog (frankfurter) stands, Ice cream stands, Industrial feeding, Lunch bars, Lunch counters, Luncheonettes, Lunchrooms, Oyster bars, Pizza parlors, Pizzerias, Refreshment stands, Restaurants, Sandwich bars or shops, Snack shops, Soda fountains, Soft drink stands, Submarine sandwich shops, and Tea rooms.)	☐	☐
Home subdivisions with 10 or more housing units.	☐	☐
Parking lots of 5,000 square feet or more, or with 25 or more parking spaces, and potentially exposed to Urban Runoff.	☐	☐

DETERMINATION: Circle appropriate determination.

If **any** question answered "YES" Project requires a project-specific WQMP.

If **all** questions answered "NO" Project requires incorporation of Site Design Best Management Practices (BMPs) and Source Control BMPs imposed through Conditions of Approval or permit conditions.

FILING INSTRUCTIONS FOR LAND USE APPLICATION

The following instructions are intended to provide the necessary information and procedures to facilitate the processing of a Land Use application. Your cooperation with these instructions will insure that your application can be processed in the most expeditious manner possible.

THE LAND USE PROJECT FILING PACKAGE MUST CONSIST OF THE FOLLOWING:

1. One completed and signed application form.

2. One copy of the current legal description for each property involved as recorded in the Office of the County Recorder. A copy of a grant deed of each property involved will suffice.

3. If any of the properties involved do not abut a public street, a copy of appropriate documentation of legal access (e.g. recorded easement) for said property shall be provided.

4. Thirty-five (35) copies (40 if submitted at the Palm Desert Planning Office) of Exhibit "A" (Site Plan). The exhibit must also include the information described in the applicable application type column of the Land Use and Development Matrix. All exhibits must be folded no larger than 8½" x 14."

5. If any buildings or structures exist and are to remain, or are proposed, a minimum of six (6) copies (9 if submitted at the Palm Desert Planning Office) of building floor plans (Exhibit “C”) and elevations (Exhibit “B”). The exhibits shall also include the information described in items 1 through 7 of the Land Use and Development Matrix. All exhibits must be folded no larger than 8½" x 14."

6. One (1) recent (less than one-year old) aerial photograph of the entire Project Site with the boundary of the site delineated.

7. A minimum of three (3) ground-level panoramic photographs (color prints) clearly showing the whole project site. Include a locational map identifying the position from which the photo was taken and the approximate area of coverage of each photograph.

8. Digital images of the aerial photograph, Exhibit A (Site Plan), Exhibit B (Building Elevations) & Exhibit C (Building Floor Plans), the U.S.G.S. Map, and the panoramic photographs of the site in a format acceptable to the Planning Department (e.g. TIFF, GIF, JPEG, PDF)

9. Two (2) completed copies of the Project Specific Preliminary WQMP for the applicable watershed, if required.

10. Deposit-based fees for the applicable application type or types, and Environmental Assessment (EA) deposit-based fee. EA fee required if noted on the Planning Department’s Fee Schedule, unless otherwise determined.

THE FOLLOWING *ADDITIONAL* ITEMS, OR MODIFICATIONS, OR DELETIONS ARE APPLICABLE FOR THE FOLLOWING APPLICATION "TYPES"

VARIANCE

A written statement of the specific provisions of County Ordinance No. 348 for which the variance is requested and the variance that is requested.

TEMPORARY USE PERMIT

If the proposed Temporary Use Permit is not to exceed a 6-month period, an Environmental Assessment Deposit-Based Fee, will not be required.

PLOT PLAN

If the proposed Plot Plan is for a "**Disguised Wireless Communication Facility"** and is located in a non-residential zoning classification, as described in Section 19.404 of County Ordinance No. 348, an Environmental Assessment Deposit-Based Fee, will not be required at the time of case submittal. However, if during the review process, a request for a public hearing were received, the application would be reclassified as a plot plan that is subject to CEQA.

That would necessitate the payment of additional fees (the difference between the filing fees for an "Exempt from CEQA/Agency Review" plot plan and a "Not Exempt from CEQA" plot plan) for the plot plan, a deposit-based fee for an Environmental Assessment, and the collection of fees for CEQA Notification/Fish and Game Fees.

Please identify, within the project description, what type of wireless communication facility is being proposed.

The Site Plan exhibits must be prepared by a California licensed land surveyor or registered civil engineer, and must show all of the required items listed in Section 19.409 of County Ordinance No. 348; as well as those listed items (within the applicable case type column) as identified on the Land Use and Development Matrix.

The following information, as required by the Riverside County Information Technology/ Communications Bureau/Engineering Division's Site Planning Criteria, shall be provided either on the site plan exhibit(s), or under separate attachment:

1. Identify specific Frequencies to be licensed with the Federal Communications Commission (FCC).

2. Identify aggregate sector Effective Radiated Power (ERP) to be licensed.

3. Identify Antenna(s) model/ gain; Height Above Ground (AGL).

4. Identify site Coordinates (Latitude/Longitude) in NAD83; site Above Mean Sea Level (AMSL).

5. Provide the Radio Frequency (RF) field strength intensity in terms of dbm/dbu (standard power parameters), and minimum power level required to achieve desired level of reliability for RF coverage.

6. Provide RF propagation coverage maps with legend depicting field strength intensity specifications in dbm/dbu, coordinates, main thoroughfares/key landmarks. Ensure USER FRIENDLY maps that enhance understanding by the Planning Commission and Planning Department.

7. Provide three sets of RF propagation maps; one which depicts the respective problem area without the proposed new site. Secondly, depict solely the desired coverage area with the new site operational. Finally, depict the composite cell with the new site operational.

8. Certify that alternative sites/antenna structure specifications in the respective cell have been considered and will not satisfy your requirements. Be prepared to provide RF propagation maps to justify your conclusions.

9. Conduct RF intermodulation/interference studies for facilities within 2,500 feet or co-located with County Public Safety radio communications sites. Carriers operating in the 800 MHz Band will acknowledge that their respective applications will be conditioned to require mitigation of any RF interference impacting County Public Safety radio communications.

10. Certify Federal Aviation Administration (FAA) Studies and FCC tower registration completion for sites in close proximity to County airports.

11. Certify that RF Radiation Emission Hazard Safety Studies have been completed to comply with FCC licensing directives.

Additional requirements are as follows:

1. Three (3) copies of propagation diagrams showing the existing network coverage within one (1) mile of the site and the proposed coverage based upon the proposed facility at the proposed height.

2. Three (3) copies of photo simulations showing the proposed facility from all public roads and all residential developments within a ½ mile radius of the site.

3. A letter stating whether Federal Aviation Administration (FAA) clearance is required. If FAA clearance is required, a letter stating the type of lighting necessary and the tower color.

4. A fully executed copy of the lease or other agreement entered into with the owner of the underlying property, in accordance with Section 19.409.a.(7) of County Ordinance No. 348.

5. A list of all towers owned by the applicant located within Riverside County, in accordance with Section 19.409.a.(8) of County Ordinance No. 348.

6. Any proposed wireless communication facility located within an Alquist-Priolo Earthquake Fault Hazard Zone, County Fault Zone, or within one hundred fifty (150) feet of any other active or potentially active fault, shall submit a detailed fault hazard evaluation prepared by a California registered geologist or certified engineering geologist.

7. Any proposed wireless communication towers located within a County Liquefaction Zone shall submit a detailed liquefaction hazard evaluation prepared by a California registered geologist, certified engineering geologist, or qualified professional engineer, as appropriate.

8. The proposed Wireless Communication Facility must be designed to comply with Section 19.410 of County Ordinance No. 348, as it relates to the following applicable development standards:

   A. Area Disturbance
   B. Height Limitations
   C. Community and Biological Impacts
   D. Landscaping
   E. Lighting
   F. Noise
   G. Parking
   H. Paved Access
   I. Power and Communications Lines
   J. Roof-Mounted Facilities
   K. Sensitive Viewshed
   L. Setbacks
   M. Support Facilities
   N. Treatment

9. Current processing deposit-based fee.

Concealed wireless communication facilities are defined as facilities that blend into the environment so as not to be seen at all, or, if seen, not to be recognizable as a wireless communication facility. Such facilities include, but are not limited to, architecturally screened roof-mounted facilities, façade-mounted design features, clock tower facilities and entry statement signage facilities. The Planning Director shall make the final determination as to whether a proposed wireless communication facility constitutes a concealed wireless communication facility.

Concealed Wireless Communication Facilities are allowed in any zoning classification with an approved plot plan that is not subject to the California Environmental Quality Act (CEQA) and that is not transmitted to any governmental agency other than the County Planning Department (as known as a Minor Plot Plan.) No public hearing will be required for applications of this type, unless the action is appealed.

An application for a wireless communication facility shall not be approved unless: 1) the facility is designed so that it is not visible at all, or, if visible, it is not recognizable as a wireless communication facility, 2) supporting equipment is located entirely within an equipment enclosure that is architecturally compatible with the surrounding area or is screened from view, 3) the application has met the processing requirements, as well as the location and development standards, set forth in Article XIXg (Wireless Communication Facilities) of County Ordinance No. 348; and, 4) the application has met the Requirements for Approval set forth in Section 18.30 of County Ordinance No. 348.

The following is the minimum information required on the site plan exhibit. The information below consists of detailed descriptions of information required on primary exhibits, as indicated on the Land Use and Development Matrix.

SPOT ELEVATIONS

Spot elevations (proposed finished elevations) sufficient to demonstrate that streets, driveways, parking lots, and drainage grades meet minimum requirements. Spot elevations may be necessary at street intersections, ends, and cul-de-sacs; beginning and end of all driveways, parking lot outer limits, entrance and end points, and at all grade breaks.

CONSTRAINED AREA

Constrained areas may include, but are not limited to, the following resources and hazards: Slopes in excess of 25%, biologically sensitive areas, archaeologically sensitive areas, flood hazard areas, ridgelines, hilltops, and geologically hazardous areas. Within constrained areas, proposed pad locations and driveways must be shown.

SITE GRADING, SUBSURFACE DISPOSAL REQUIREMENTS

When subsurface disposal is proposed, include and identify the primary sewage disposal system and its 100% expansion area. Identify any proposed cuts and/or fills in the areas of the sewage disposal systems, the elevation of the individual building pads such that there will be gravity feed to the sewage disposal system, and statement signed and with seal, as to the appropriateness of the grading plan with regard to the soils percolation engineer's report. Said statement may be attached to the grading plan or placed upon a blue line copy of the grading plan.

DRAINAGE PLAN

The Primary Exhibit shall include a conceptual drainage plan showing how all on-site and off-site stormwater will be conveyed through the property. The exhibit shall clearly label points of concentration where flows enter or exit the site and indicate the amount of runoff (cubic feet per second - CFS) and the tributary drainage area (acres) at these points. The drainage plan shall acknowledge offsite construction required to collect flows and to discharge them to an adequate outlet. The exhibit shall also clearly label all watercourses, channels, culverts, brow ditches, or other flood control facilities passing through the site and indicate whether they are proposed or existing. Additionally, all facilities shall be labeled with name, owner, maintenance entity, capacity, grades, and dimensions. All easements or rights of way shall be shown and their widths indicated. Where calculated flow rates or hydraulic capacities are supplied or where flood control facilities are proposed, the exhibit shall be signed and sealed by a registered civil engineer.

In cases where it is not feasible to show the required detail on the exhibit or where offsite improvements or analysis are required, the applicant may submit two (2) copies of a drainage report as a supplement to the exhibit.

WATER QUALITY MANAGEMENT PLAN (WQMP) & STANDARD STORMWATER MITIGATION PLAN (SSMP)

The Santa Ana, San Diego, and Colorado River Regional Water Quality Control Boards have adopted Board Orders R8-2010-0033, R9-2010-0016, and R7-2013-0011, respectively, in compliance with the federal National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Clean Water Act requirements. These Board Orders regulate the discharge of pollutants from the County's MS4 permit, and require the County to implement measures to mitigate the water quality impacts of new developments within its jurisdiction. In compliance with these Board Orders, projects submitted within the certain portions of the unincorporated area of Riverside County for discretionary approval will be required to comply with the Water Quality Management Plan for Urban Runoff (WQMP) or with the Standard Stormwater Mitigation Plan (SSMP). The WQMP/SSMP addresses post-development water quality impacts from new development and redevelopment projects. The WQMP/SSMP requirements will vary depending on the project's geographic location (Santa Ana River, Santa Margarita River or Whitewater River watersheds). The WQMP/SSMP provides detailed guidelines and templates to assist the developer in completing the necessary studies. These documents are available on-line at: http://rcflood.org/NPDES/.

To comply with the WQMP/SSMP, a developer must submit a "Project Specific" WQMP/SSMP. This report is intended to, a) identify potential post-project pollutants and hydrologic impacts associated with the development; b) identify proposed mitigation measures (Best Management Practices - BMPs) for identified impacts including site design, source control and treatment control post-development BMPs; and c) identify sustainable funding and maintenance mechanisms for the aforementioned BMPs. A template for this report is included as an appendix to the WQMP/SSMP.

Projects requiring Project Specific WQMPs or Project Specific SSMPs will need to include a PRELIMINARY Project Specific WQMP/SSMP along with the subdivision application package. The format of the PRELIMINARY report would mimic the format/template of the final report but would be at a much lesser level of detail. For example, points a, b & c above would be covered, rough calculations supporting sizing would be included, and footprint/locations for the BMPs would be identified on the tentative exhibit. Detailed drawings will not be required.

FLOOR PLANS AND ELEVATIONS

All floor plans and elevation exhibits shall include the information listed as indicated for items 1 through 7 of the Primary Exhibit Requirements (page15) folded no larger than 8½" x 14". In addition, architectural elevations shall include scaled drawings of all sides of all buildings with dimensions indicating proposed height, and any wall signs, air conditioning equipment, solar equipment or other equipment mounted on exterior walls or roof. Conceptual sign program will be presented on the building architectural elevations or as a separate exhibit. No landscaping, figures, or other presentation decorations shall be illustrated on the building elevations.

If you have any questions concerning your application, please contact the Planning Department at the appropriate office listed on the front of this application.

The following table lists the minimum information required on the site plan exhibit. IF ANY REQUIRED INFORMATION IS NOT APPLICABLE TO A SPECIFIC PROJECT, AN EXPLANATORY NOTE MUST BE PLACED ON THE EXHIBIT NEXT TO THE AMENDMENT BLOCK, EXPLAINING WHY THE INFORMATION IS NOT NECESSARY. All exhibits must be clearly drawn and legible. NOTE: Additional information **may** be required during review of the proposed land use application, including information not specifically required by this checklist.

LAND USE AND DEVELOPMENT MATRIX						
CUP	**CUMHRV**	**PP**	**PUP**	**TUP**	**VAR**	**CUP** = Conditional Use Permit **CUMHRV** = Conditional-Use Mobile Home/RV **PP** = Plot Plan **PUP** = Public Use Permit **TUP** = Temporary Use Permit **VAR** = Variance
X	**X**	**X**	**X**	**X**	**X**	1. Name, Address, and telephone number of applicant.
X	**X**	**X**	**X**	**X**	**X**	2. Name, address, and telephone number of land owner.
X	**X**	**X**	**X**	**X**	**X**	3. Name, address, and telephone number of exhibit preparer.
X	**X**	**X**	**X**	**X**	**X**	4. Assessor's Parcel Numbers and, if available, address of the property.
X	**X**	**X**	**X**	**X**	**X**	5. Scale (number of feet per inch) Use Engineer's Scale for all maps/exhibits. Architect's scale is only acceptable for floor plans, elevations, and landscape plans.
x	**X**	**x**	**x**	**x**	**x**	6. North arrow.

LAND USE AND DEVELOPMENT MATRIX						
CUP	**CUMHRV**	**PP**	**PUP**	**TUP**	**VAR**	**CUP** = Conditional Use Permit **CUMHRV** = Conditional-Use Mobile Home/RV **PP** = Plot Plan **PUP** = Public Use Permit **TUP** = Temporary Use Permit **VAR** = Variance
x	X	x	x	x	x	7. Date Exhibit Prepared.
x	x	x	x	x	x	8. Title of Exhibit (i.e. “Change of Zone”, “Plot Plan for landscaping”, etc.).
x	x	x	x	x	x	9. A detailed project description, including proposed and existing buildings, structures and uses.
x	x	x	x	x	x	10. Complete legal description of property.
x	x		x	x	x	11. Overall dimensions and total net and gross acreage of property.
x	x	x	x	x	x	12. Vicinity map, showing site relationship to major highways and cities, and two access roads. (Proposed and existing paved roads will be indicated by heavy lines or noted as paved.)
x	x	x	x	x	x	13. Exhibit Amendment block
x	x	x	x	x	x	14. Thomas Brothers map page and coordinates. (Identify edition year used)
	x					15. Proposed boundary lines and approximate dimensions for each space or site.
	x					16. Net size, for each space or site.
x	x					17. Numbered mobilehome or recreational vehicle spaces, dwelling units, or lots, and the total number of each type or space, unit, or lot.
x	x	x	x	x	x	18. Location of adjoining property and lot lines.
x	x	x	x	x	x	19. Existing and proposed zoning and land use of property.
x	x	x	x	x	x	20. Existing use and zoning of property immediately surrounding subject property.
x	x	x	x	x	x	21. If project is within a Specific Plan, indicate the Specific Plan Planning Area number and the land use designation of subject property and all surrounding property.
x	x	x	x	x	x	22. Names of utility purveyors and school district(s) including providers of water, sewer, gas, electricity, telephone, and cable television.
x	x	x	x	x	x	23. Location, widths, and improvements of existing and proposed public utility, easements, transmission lines, power and telephone poles, and underground utilities on or abutting the property.
x	x	x	x	x	x	24. Names, locations, rights-of-way widths, and improvements of adjacent existing and proposed streets and the approximate grades of proposed and existing streets and approximate street centerline radii of curbs. If private streets are proposed, they shall be so noted on the tentative map.
x	x	x	x	x	x	25. List and accurately show all easements of record (by map or instrument number).
x	x		x	x	x	26. Streets, alleys, and rights-of-way providing legal access to the property.
x	x		x	x	x	27. If project is within a Community Services District, identify the district.
x	x		x			28. Typical street improvement cross-sections.
x	x	x	x	x	x	29. Label and describe any land or rights-of-way to be dedicated to public or other uses.

LAND USE AND DEVELOPMENT MATRIX						
CUP	**CUMHRV**	**PP**	**PUP**	**TUP**	**VAR**	**CUP** = Conditional Use Permit **CUMHRV** = Conditional-Use Mobile Home/RV **PP** = Plot Plan **PUP** = Public Use Permit **TUP** = Temporary Use Permit **VAR** = Variance
x	x	x	x	x		30. Existing topography of the property, with the source(s) of the contour lines identified. The contour lines shall extent 300 feet beyond the exterior boundaries of the subject property when adjacent property is unimproved or vacant. When adjacent property is improved or not vacant, contour lines shall extend beyond the exterior boundaries of the subject property a distance sufficient to determine compatibility with adjacent property. Maximum contour interval should be five feet. Flood Control District and Transportation Department base maps are acceptable sources of information. Topography from U.S.G.S. maps may be used only when more detailed information is not available. Additional topography may be required If deemed necessary.
x	x	x	x	x		31. Preliminary grading including all cut/fill, slopes to scale with setbacks from structures and property lines, the elevations of all individual building pads, the elevations at the perimeter of the subject property, conceptual drainage facilities (including the location of terraces, terrace drains, down drains, brow ditches, V-ditches, and lot to lot drainage facilities), existing topography, and the relationship to adjoining land and development, and any existing grading.
x	x	x	x	x	x	32. Spot elevations. (See detailed description on Page 14)
x	x	x	x	x	x	33. When subsurface septic sewage disposal is intended, include the information described on Page 15 under “Site Grading, Subsurface Disposal”.
x	x	x	x	x	x	34. Note whether or not land is subject to liquefaction or other geologic hazard, or is within a Special Studies Zone.
x	x	x	x	x	x	35. Note whether or not land is subject to overflow, inundation, or flood hazard.
x	x	x	x	x	x	36. FEMA mapped floodplains and floodways including zone designation.
x	x	x	x	x	x	37. Drainage plan. (See description on Page 15.)
x	x	x	x		x	38. Centerline curve radii and typical sections of all open channels
x	x	x	x			39. Table indicating area and density calculations with percentage breakdowns, including total area involved, total building area divided by uses, (if applicable), total parking or paved area, total landscaped area, total recreation, and/or open space area. Identify proposed parking spaces.
x	x	x				40. Labeled common areas, open space, and recreational areas, with location, dimensions, acreage, any known proposed uses, and name of proposed owner(s) or entity(ies) who will maintain these areas.
x	x	x	x	x	x	41. Location, dimensions, setbacks, and nature of proposed and existing, fences, gates, walls, free standing signs, driveways, turnout and/or turnarounds and curbs, drainage structures, and above and below ground structures, including septic subsurface sewage disposal systems.
x	x	x	x	x		42. Location, dimensions, arrangement, and numbering of parking spaces for existing and/or proposed parking, loading and unloading facilities, identifying handicapped and compact parking spaces.
x	x	x	x	x	x	43. Location and dimensions of existing and proposed ingress and egress, and methods of vehicular circulation.
x	x	x	x	x	x	44. Location and dimensions of existing dwellings, buildings or other structures, labeled as existing and indicating whether they are to remain or be removed.
x	x	x	x	x	x	45. Location, dimensions, and height of proposed dwellings, buildings, or other structures, labeled as proposed.

LAND USE AND DEVELOPMENT MATRIX						
CUP	**CUMHRV**	**PP**	**PUP**	**TUP**	**VAR**	**CUP** = Conditional Use Permit **CUMHRV** = Conditional-Use Mobile Home/RV **PP** = Plot Plan **PUP** = Public Use Permit **TUP** = Temporary Use Permit **VAR** = Variance
x	x	x	x	x	x	46. Setback dimensions of existing structures and paved areas.
x	x	x	x	x	x	47. Setback dimensions of proposed structures and paved areas.
x	x	x	x			48. Labeled landscaped areas with dimensions and spacing of proposed planters.
x		x	x			49. Dimensioned elevations, including details of proposed materials for elevations, type of construction and occupancy classification per the current County adopted Uniform Building Code and floor plans for each building. (Attach to site plan). See Page 16 for detailed floor plans.
x		x	x			50. Square footage calculations per floor and total for each building shown, and per dwelling unit, as applicable.
x	x	x	x	x	x	51. Conceptual Planting Plan prepared pursuant to Ord. No. 859 and the County of Riverside Guide to California Friendly Landscaping which may be found at http://www.rctlma.org/planning/content/devproc/landscpe/landscape.html. 52. Projects that include off-street parking shall also conform to Ord. No. 348, Section 18.12 and provide shading plans in conjunction with the Conceptual Planting Plan.
x	x	x	x			53. To show compliance with the County's Water Quality Management Plan, water quality features or a note describing the site's water quality features shall be shown.

Is this an application for a development permit? Yes ☐ No ☐

Barriers to Low Impact Development

Prepared by the Local Government Commission for the
Southern California Stormwater Monitoring Coalition

September 2012

Author
Laura Podolsky
Local Government Commision

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Acknowledgements:
The Local Government Commission (LGC) would like to thank Jeff Loux and Darla Ingles with the Center for Water and Land Use at University of California, Davis Extension for their contributions and guidance throughout the process of developing this document. LGC would also like to thank all those that contributed to this document by providing their insights, perspective, and experience in implementing Low Impact Development (LID), specifically members of the Southern California Stormwater Monitoring Coalition (SMC). Funding for this effort was provided by the following SMC members: San Bernardino County Flood Control District; Ventura County Watershed Protection District; Orange County Watersheds Division; Riverside County Flood Control and Water Conservation District; San Diego County Watershed Protection Program.

About the Southern California Stormwater Monitoring Coalition
The Southern California Stormwater Monitoring Coalition (SMC) was formed in 2001 by cooperative agreement of the Phase I municipal stormwater National Pollutant Discharge Elimination System (NPDES) lead permittees, the NPDES regulatory agencies in Southern California and the Southern California Coastal Water Research Project. The goal of the SMC is to develop the technical information necessary to better understand stormwater mechanisms and impacts, and then develop the tools that will effectively and efficiently improve stormwater decision-making.

www.socalsmc.org

About the Local Government Commission
The Local Government Commission is a nonprofit, nonpartisan, membership organization that provides inspiration, technical assistance, and networking to local elected officials and other dedicated community leaders who are working to create healthy, walkable and resource-efficient communities.

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(916) 448-1198 / www.lgc.org

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Executive Summary

While many communities understand the benefits of Low Impact Development (LID), getting LID projects built has been difficult. In an effort to address this issue, the Southern California Stormwater Monitoring Coalition (SMC) commissioned the Local Government Commission (LGC) in partnership with the Center for Water and Land Use at University of California, Davis Extension (UCDE) to assist with identifying barriers SMC members and other practitioners have faced and in prioritizing strategies to remove those barriers.

Broad categories of barriers to LID have been largely identified. Therefore, the purpose of this project is to dig deeper into these barriers by investigating the more complex web of codes, processes and perceptions surrounding LID implementation. LGC performed an extensive literature review and engaged SMC members as well as representatives from local and regional public agencies, environmental organizations, and the private development community to gain further clarity on key barriers facing LID implementation. Top barriers identified as part of this process are as follows:

- Technical Infeasibility
- Lack of Acceptable Performance Data for Manufactured LID Products
- Lack of Municipal Design Guidelines and Plans
- Conflicts with LID in the Public Right-of-Way
- Conflicts with Broader Sustainable Planning Goals
- Lack of Interdepartmental Coordination and Leadership at Top Levels of Local Government
- Challenges with Operations and Maintenance
- Inconsistent Interpretation of Permit Requirements
- Lack of a Definition, Guidance, and Examples of Off-site and Regional LID Solutions
- Specific Permit Requirements but Vague Guidance

As next steps for addressing these barriers, the Local Government Commission recommends the following actions be taken by the SMC:

1. **Support the development of municipal LID design guidelines and plans recognized by the State and Regional Water Boards.** Specifically, discuss and reach consensus among SMC municipal members regarding the need and importance for a standard LID definition and technical guidance manual that is recognized by the State and Regional Water Boards. Once the priority is established, explore opportunity to work with a third-party organization with a statewide presence and authority on LID to explore to develop the manual.

2. **Support the development of a clear definition and guidance of off-site and regional LID solutions.** SMC members should discuss and clarify the need and importance for flexibility within stormwater permits to allow priority water quality issues in the watershed to be addressed at the appropriate scale without giving permit priority to on-site options alone. Local and regional public agency members of SMC can draft recommendations for how this can be accomplished within the current framework of stormwater permits and submit to the State and Regional Water Boards for consideration. There are a handful of municipalities throughout California that are attempting to or have developed stormwater management solutions at a neighborhood or community-wide scale. The SMC can highlight these efforts and help create opportunity for peer-to-peer learning by organizing trainings, workshops, and/or webinars.

3. **Support interdepartmental coordination and leadership at top levels of local government.** Local elected officials have the final say when it comes to land use. Therefore, mayors, city council members and county supervisors have a leadership role to play in advancing solutions to LID implementation. The SMC could sponsor educational dinner forums for elected officials and top administrative staff that feature experts in the field and promising LID implementation case studies from other

communities. Also, much of the research and educational materials demonstrating the benefits of LID and green infrastructure techniques are not suitable for the elected official audience. Therefore, the SMC could draft a one-page factsheet suitable for a busy local elected official that provides a high-level overview of LID; key data points demonstrating economic, social, and environmental benefits of LID; links to additional information; and key questions elected officials can ask of their staff to learn more about their city's LID program and how they can help in overcoming challenges.

Project Background and Process

While many communities understand the benefits of Low Impact Development (LID), getting LID projects built has been difficult. In an effort to address this issue, the Southern California Stormwater Monitoring Coalition (SMC) commissioned the Local Government Commission (LGC) to assist with identifying barriers SMC members and other practitioners have faced and in prioritizing strategies to remove those barriers. The Center for Water and Land Use at University of California, Davis Extension (UCDE) also provided support to this effort.

Broad categories of barriers to LID have been largely identified. Therefore, the purpose of this project is to dig deeper into these barriers by investigating the more complex web of codes, processes and perceptions surrounding LID implementation. LGC conducted a literature review of existing studies and reports on barriers to LID. From this review, a comprehensive list of barriers to LID was compiled and organized into three tiers based on scale - site/project scale, municipal/regional scale, and state/national scale. Some barriers fall across all three tiers, such as educational training for those in the public and private sector.

The comprehensive list of barriers was then further refined, developed, and prioritized using input received from public agency staff and the broader development community. The first round of input was received via two online surveys developed and distributed by LGC. One survey was developed specifically for staff representing local and regional public agencies and the other targeted representatives from the development community. Respondents were asked to rank a list of barriers based on level of relevance in obstructing LID implementation in their work, jurisdiction and/or region. The survey also provided an opportunity for respondents to share additional barriers to LID not captured in the survey. Further, they were also asked to share their experiences as a local jurisdiction, agency or organization in overcoming the barriers and implementing a successful LID project.

LGC distributed the surveys through the following networks: Southern California Stormwater Monitoring Coalition, California Stormwater Quality Association (CASQA), the Nonpoint

Education for Municipal Officials (NEMO) list serve, the Southern California Chapter of the Building Industry Association (BIA), Southern California Chapter of American Society of Landscape Architects, Orange County/Inland Empire Chapter of the Urban Land Institute (ULI), and the Southern California Chapter of the American Society of Civil Engineers. A list of literature reviewed is included in Appendix A.

The LGC received 115 responses to the survey from local and state public agency staff with 67 of these representing cities, counties, and regional agencies (e.g., Caltrans) from the Southern California area. The titles and positions of those that responded from public agencies include stormwater manager/NPDES coordinator, community development director, public works director, sustainability coordinator, planner, engineer, environmental inspector, parks department, and hydrologist. Almost half of these respondents reported having 0 – 4 years of experience working with LID. The LGC received twenty-six responses from the development community. All respondents were from the Southern California region and represented private land developers and private design and engineering consultants. Over 60% of respondents to the survey reported having 0 – 9 years of experience working with LID. Copies of both surveys are included in Appendix B.

As a follow up to the online survey, two focus groups were organized in Southern California in November 2011. A public agency focus group was held in Riverside, California, with participants representing nine different local public agencies. The other focus group brought together those representing the private sector development community and included six participants representing land developers and private sector engineers. A list of those who participated in the two focus groups and the agendas for both focus groups are included in Appendix C. Phone interviews were also conducted and a list of those who participated in these interviews is included in Appendix D.

Key Barriers to LID Implementation

Based on feedback received through the process described above, LGC was able to identify key barriers facing LID implementation. These key barriers are further described below and are listed starting with site/project scale barriers and moving to regional barriers. These key barriers do not capture all the input received; therefore, a short list is provided at the end of this section to capture additional barriers worth reporting.

Technical Infeasibility

Respondents from the development community and local public agencies both ranked technical infeasibility as one of the top barriers to LID implementation. Most commonly mentioned were challenges with water infiltration on hillsides, poorly draining soils, high groundwater tables, arid climates, and space constraints – especially in urbanized areas of a community. Additionally, public agency staff shared that they struggle with adequately addressing the multitude of challenging conditions and sites within their municipality. Both the public and private sectors agree that when soils are well draining, accommodating LID is relatively straightforward. However, in the case of soils with poor infiltration, the cost and complexity of solutions increases.

Many respondents provided feedback on what they felt were promising and not-so-promising LID treatment solutions. For example, infiltration is by far the preferred LID treatment but it only works on sites with well draining soils. Given the variance of soil types, the development community expressed interest in guidelines or alternatives when dealing with poorly draining soils so as to avoid more expensive LID treatments.

Flow-through planters are viewed as the next best solution when infiltration does not work, however there are drawbacks to the use of this approach. Respondents reported that flow-through planters are often not well maintained, thus leading to inundation and the resulting loss of vegetation, which compromises performance. There was also concern about water

quality benefits given these LID treatments are located on private property and usually only treat stormwater collected from a development's roof. It should be noted, that the performance of flow-through planters to meet hydromodification requirements was not explicitly mentioned by respondents given the focus of this study is on barriers to Low Impact Development implementation.

Other LID treatments that received support as promising solutions were reuse, retention, and drywells. Respondents pointed out that there are limited uses for the reuse of runoff water. Reuse could be more economically feasible if collected water could be used for building functions (e.g. toilet flushing or industrial cooling.)

There was a concern about the long–term maintenance of drywells located on private property. Drywells can be designed in various way but are commonly trenches, basins, or manholes that collect runoff and allow it to slowly infiltrate into the ground. Particular concern was expressed for drywells located in retention basins. Drywells in this condition can become clogged, leaving the drywell submerged under stagnant water and unable to be cleaned out. One local jurisdiction shared that they address this challenge by attempting to keep all drywells outside of retention basins so they are accessible by vacuum trucks.

LID treatments the respondents did not favor included permeable asphalt and concrete; stormwater planters integrated with the structure; cisterns; and green roofs. In the case of permeable asphalt and concrete, there were many concerns expressed, including the inability of contractors to install them correctly, and installation costs – which respondents reported as double that of conventional paving materials. Additionally, there were concerns about the durability of the materials over time; ability of maintenance crews to correctly maintain permeable pavement correctly; and that permeable asphalt would clog over time and might need to be completely repaved rather than resurfaced. Finally, concerns were shared about fire departments pushing back on permeable asphalt and concrete fearing that these materials will not hold up under the weight of fire trucks.

As for stormwater planters integrated with the structure, respondents pointed out there is very limited experience with this technology. They noted that water entering the planters from downspouts is at high velocity and needs special design considerations.

In general, green roofs are viewed as not economically feasible. Respondents noted that public agencies might pursue green roofs as part of a public demonstration project but green roofs do not make sense for the private sector due to higher construction and maintenance costs. In addition, local fire departments have shared concerns that green roofs may violate fire brush requirements.

There were several concerns about the use of cisterns. Respondents pointed out that cisterns can require a large amount of space, thus making it both expensive and challenging to accommodate, particularly on a small site. They also pointed out there is little data available about the size of reoccurring storms at a sub-region scale, making it difficult to appropriately size a cistern. Further, there are not many options for the reuse of collected water and even if there were, then there would need to be a better understanding of the nexus between indoor water demands and volume of runoff that could be collected by the cistern. In addition, stored water used for landscaping must comply with vector control issues thus requiring additional treatment. There was a perception that the additional treatment increases the cost of the water thus making it uneconomical for the owner to reuse for irrigation or other purposes.

Lack of Acceptable Performance Data for Manufactured LID Products

When soils do not drain well, bio-filtration becomes one of the next best LID treatment options. Respondents representing the development community expressed strong support for using manufactured bio-filtration systems. Companies creating these systems are perceived by the development community as leading the charge in developing the engineering and design solutions to overcome many of the technical barriers. The development consultants expressed they often look to manufacturers as resources for learning about effective LID products.

Local jurisdictions push back on manufactured systems, stating that these systems do not adequately manage volume on site. Other jurisdictions do not accept manufactured solutions based on lack of acceptable data proving these solutions work. Local jurisdictions further expressed concern that manufacturers are advertising their products as LID compliant, which can be very misleading to the development community. As a counter, the development community expressed the need for local agencies to increase their knowledge of available tools and products on the market before passing judgment on all manufactured solutions.

In summary, using manufactured bio-filtration systems will continue to be a challenge until there is agreement by key stakeholders (i.e., local agencies, regional water boards, and the private development community) that these systems satisfy the goals and definition of LID. Concern has been raised that there is not a generally accepted definition of LID, thus defining an appropriate LID solution, such as bio-filtration, may be futile until this larger issue is addressed.

Lack of Municipal Design Guidelines and Plans

A public agency staff person recognized that "cities have to make it easy for those designing projects to do the right thing", but most cities do not have design guidelines or standard construction plans for LID treatments nor do they have any funding to create them. Municipalities are creating LID standards slowly, one-by-one or using guidelines and plans from other cities that have already developed them. With no design guidelines and plans in place, costs are increased on the design side of a project and the city has less control over the integrity and aesthetic quality of the final LID design. Support was expressed for a standard design template that is recognized by regional water boards so that cities could provide predictable guidance to developers for designing and constructing quality LID features.

Conflicts with LID in the Public Right-of-Way

Locating LID in the public right-of-way (ROW) has the potential to be a win-win solution for both the private and public sectors, however challenges remain. The development community supports locating LID features in the public ROW because they can maximize the build out of the site, which is increasingly important for infill and redevelopment sites where land is limited and profit margins thin. The public sector and the watershed are positioned to benefit because LID in the public ROW can be designed to capture and treat the runoff generated by streets, which carry some of the pollutants that pose the greatest threat to water quality.

Questions regarding ongoing maintenance of LID located in the public ROW will need further exploration. Among the solutions suggested were maintenance agreements between the local public agency and developer where the developer assumes the responsibility. As a new approach, the City of Los Angeles will allow developers to locate LID in the public ROW as long as developers prove they have exhausted all other opportunities. One other condition of this agreement is that the developer must design the LID treatment to also accept water from the street. Another idea presented was to include maintenance of LID in the Declaration of Covenants, Conditions, and Restrictions (CC&Rs), which outlines the rules and regulations residents must abide by in Home Owners Association (HOA) communities.

Questions also remained regarding the compatibility of infiltrating water with other “dry” and “wet” utilities already located in the public ROW. Some emphasized an attitude shift will need to occur on the part of local public agencies to consider LID as yet another utility to be included among the many other utilities located in the public ROW. It was noted more research would have to be conducted to better understand how LID (and infiltrating water) can co-exist with other uses in the public ROW.

Another argument made for including LID in the public ROW was to allow development to be more compact. As one respondent put it, “every other sustainability factor - energy, transportation, air quality, etc. - calls for more dense development except for storm water management, which tends to limit density.” The issue of LID discouraging compact

development and Smart Growth Principles came up multiple times, therefore, this issue is discussed in detail as a separate key barrier to LID implementation below.

Local agency staff did not demonstrate strong support for the use of permeable concrete or asphalt in public streets for several reasons. Streets are constantly taken apart and put back together. Pervious asphalt and concrete must be poured thicker than conventional asphalt and concrete. This means an increased amount of asphalt or concrete to cut through and repair when accessing utilities in the street. Another concern of pervious asphalt used on public streets was the ability of maintenance crews to recognize it and understand how to maintain it. Local public agency staff felt parking lots are better suited for pervious pavement rather than the public ROW. Local agency staff were also supportive of LID located in alley ways as opposed to streets given alley ways have less constraints. Several cities in Southern California are already pursuing "green alleys", such as Los Angeles and Anaheim.

Conflicts with Broader Sustainable Planning Goals

Many respondents shared the view that the current approach to stormwater management is working against many of the other sustainable planning principles communities are trying to implement including building more compactly and promoting infill development. One respondent expressed that "LID should be used to help create better design but it should also be recognized that there are other larger planning concepts that will actually reduce the need for LID (i.e., Smart Growth principles and/or infill developments eliminates the creation of additional pavement and thus runoff)." Concern was also expressed that LID is "simply unhelpful" in the face of climate change where infill will be one of the key solutions to reducing greenhouse gas emissions. There is a general perception that the current approach to LID encourages suburban style development by forcing building separation and lower density development.

Respondents argued that permit requirements should not be applied equally, but that leniency be allowed in addressing challenging sites (such as infill sites) that are consistent with broader

goals to grow and develop more sustainably. It was noted, “more LID opportunities exist with greenfield projects but greenfield projects come with new roads that increase impervious area.” Another respondent shared, “In this economy, development and especially infill project profit margins are very small. It may be technically feasible to implement LID (green roofs, etc.) but the increased costs may wipe out any profit and therefore the project may not be viable.” Some cities expressed that infill development is one of the only options in their community, thus the costs associated with implementing LID could have a devastating impact on the local economy.

Lack of Interdepartmental Coordination and Leadership at Top Levels of Local Government

Stormwater management is no longer under the sole discretion of public works and is forcing cross-departmental conversations and coordination. Given that stormwater management is bleeding into other departments, there is confusion over how LID complies with each department’s codes and ordinances. Some public agency engineers express frustration of bearing the burden of pushing LID from the bottom up without the support of higher-level administrators. The success of a municipality in implementing LID can often be traced back to the person responsible for implementation and their capacity and authority to take on this task. As expressed by one respondent, “Find out who is in charge of the NPDES program and evaluate what authority they have to effect change. Some staff attempt to direct other departments with limited success.” To facilitate cross-departmental coordination and collaboration will require those at the high organizational level (e.g., city managers, county administrative officers, elected officials) to understand LID and each department’s role in a successful LID program.

There are many benefits and desirable outcomes of LID that go beyond stormwater management. Communicating these benefits to local elected officials (i.e., mayor, city council member, county supervisor) and having these benefits be a part of public discourse will help garner more support for LID. It was also pointed out that management priorities change; and with the downturn in the economy, local government management is more concerned about

developer support rather than introducing new development requirements, such as LID. Having elected official support is also key to ensure policies in support of LID are advanced, especially developed and adopted at the General Plan level.

Challenges with Operations and Maintenance

Respondents expressed many issues with operations and maintenance. Three main themes were: 1) difficulties with managing a highly dispersed LID system that is mostly located on private property; 2) capacity of operations and maintenance crews recognizing, understanding, and knowing how to maintain LID features; and 3) private sector versus public sector responsibility for long term maintenance of LID features. Local public agencies also expressed concern over the cost of new technologies that may be needed for maintenance, something many local governments cannot afford.

Local jurisdictions have limited staff and resources to take on additional operations and maintenance, which is exacerbated by having highly dispersed LID features each with a unique maintenance regime. Because of staff and resource constraints, local jurisdictions have explored maintenance agreements with the developer but have concerns that private property owners may not be properly maintaining LID features. Local government agencies also expressed concern over the operation and maintenance of “hidden” LID features (e.g., cisterns, perforated pipes, etc.) located underground.

The Riverside County Flood Control District offers one example of a local jurisdiction addressing the challenge of operations and maintenance. The District provides developers the option of being included in a maintenance district if the developer follows the concepts in the District’s LID manual. In other municipalities, there has been discussion about using Community Development Block Grant funding to assist property owners to install and maintain their own rain gardens. With this approach, each property owner would be able to receive funding for long term maintenance based on performance of the rain garden.

Another issue brought up by respondents is that many LID features have not been maintained long enough to gain an understanding of what works and what does not. For example, the build up of metals over time stemming from deferred maintenance is a concern. Many expressed need for post-construction monitoring of LID features so as to gain a better understanding of their effectiveness and maintenance needs.

Inconsistent Interpretation of Permit Requirements

There is recognition that regional water board standards and county stormwater permits are becoming increasingly similar, but each permittee interprets these requirements very differently. Consistency also came up as an issue in regards to the variations between technical reports and methodologies for calculating runoff in different counties and sub-regions in Southern California. One respondent pointed to the variation between local jurisdictions based on "diversity in risk management strategies at the top level of local government." One county shared that it strives for consistency with all city partners but are subject to two separate NPDES Permits. This creates a lot of conflict within the county because the requirements with respect to LID and hydro-modification are different depending on where a project may be located.

There is also disparity between regions and permittees regarding the resources available for implementing LID. Uniformity is needed between regions and cities to provide consistency and predictability for developers. Regional Caltrans offices also have different standards and approaches to LID and coordination is needed here as well.

Lack of a Definition, Guidance, and Examples of Off-site and Regional LID Solutions

Both the development community and local government staff seem to agree that regional solutions can help with the looming question of how LID is maintained over the long term. The implementation of LID on a site-by-site basis has resulted in a dispersed LID system with most treatments located on private property. There are inherent difficulties in providing ongoing

maintenance, monitoring, and ensuring effective operation with this type of dispersed system. Many believe obtaining water quality benefits through LID is more feasible and cost effective if there is a designated organization or agency responsible for maintaining LID.

It is perceived by local municipalities that regional water boards are generally supportive of regional solutions but pressure from environmental groups inhibits regional water boards from pursuing this approach. There is a perception that environmental groups feel source control is better than treatment and feel regional approaches allow projects to escape water quality requirements. From the viewpoint of regional water boards, little progress has been made on regional or sub-regional solutions due to lack of input received from local municipalities on this issue. Regional water board staff also pointed to difficulties (in general) for local jurisdictions to demonstrate that regional solutions provide water quality benefits (e.g., flow reduction and pollutant removal) that equal or exceed on-site LID solutions. In addition, it is argued that to make regional solutions work, there must be plans developed identifying projects and sites that can be used to substitute for on-site control. Many cities have not yet taken this step.

Another hurdle in pursuing regional solutions is the term itself. Currently, the term "regional" does not have a set definition that is recognized by key stakeholders (i.e., regional water boards, local public agencies, environmental groups, development community, etc.). Because of this, a regional solution can mean anything from collecting and treating stormwater from multiple-sites, a single neighborhood, multiple cities, to an entire watershed. It is argued there cannot be a valuable conversation on pursuing regional solutions if there is not a common definition used by all stakeholders.

Specific Permit Requirements but Vague Guidance

Water quality standards are pollutant specific but guidance on how to reach standards is vague. Engineers expressed appreciation for codes becoming more scientific and measurable but also advocated for flexibility and the allowance for creative solutions, which is often required with LID projects. In addition, coming up with "creative solutions" is often outside the comfort zone

of the engineering culture. The use of Maximum Extent Practical standard was also mentioned as being extremely vague and not sufficient for establishing predictable project requirements at the initial planning stage. Public agencies felt more detailed technical guidance within each region would be incredibly beneficial for designing and implementing LID.

Further, regional water boards have the power to fine, which leads to local governments being overly cautious in trying new and/or different LID treatments. Respondents felt that if regional water boards provided an opinion or approval of LID treatments before construction, it would help boost the confidence of local governments in trying new things. Since regional water boards cannot promote a certain technology, there would need to be a third party (such as the California Stormwater Quality Association (CASQA)) that could provide LID guidelines, which would then be recognized or endorsed by the regional water boards. This type of approach could be modeled after the Leadership in Energy and Environmental Design (LEED) system, where the U.S. Green Building Council has developed standards for green building that are now being recognized and endorsed by local governments.

Additional Barriers

The barriers listed above rose to the top as key concerns from both the private and public sectors though there are additional barriers worth mentioning. For example, many respondents stressed the importance of educating all levels and departments within local government as well as the development community, regional water boards, and private property owners. Implementation within local government often falls to engineers who (as one respondent expressed it) “are not adequately trained to understand the complexities associated with geomorphology, meteorological science as it relates to infiltration and runoff response, geotechnical engineering, subsurface hydrology, etc.” Providing trainings is not a solution unto itself since many local governments are under-staffed and do not have time to attend educational sessions.

More subtle barriers are the conflicting codes and attitudes towards LID. Private and public sector respondents expressed it is perceived that regulatory agencies view water quality standards as primary, no matter what the associated cost and/or consequence. For example, it was shared that for road construction projects safety should be a priority above all else including water quality. A common code conflict noted was building regulations move water away from buildings but at the same time water quality regulations want water to be infiltrated on site and often near buildings. Many developers back away from infiltration near buildings for fear of structural damage.

Lack of life-cycle cost-benefit data was also an expressed concern of respondents. It was expressed that municipalities are generally very risk-adverse and are unwilling to try new concepts (such as innovate LID solutions) if there is an opportunity for failure. Some respondents pointed to the opportunity of testing out innovative LID projects by incorporating them into Capital Improvement Projects (CIP).

Recommended Actions for Removing Barriers to LID

As for next steps, the Local Government Commission recommends the SMC consider advancing the following solutions:

Support the Development of Municipal LID Design Guidelines and Plans Recognized by the State and Regional Water Boards

There is a pressing need for an improved definition of LID as well as municipal design guidelines and plans that are endorsed by the state and regional water boards. Having this guidance in place will provide clarity to both the public and private sectors regarding appropriate LID techniques and technologies that can be used to satisfy permit requirements. As an underlying assumption, statewide LID guidance material must be drafted in such a way as to address the variability in climate, geography, development context, and other conditions from region to region throughout the State.

One of the most promising strategies for moving forward would be a third party organization, such as the SMC, CASQA, or university partner, to lead a work group in developing a statewide LID technical guidance manual to include template design guidelines and plans (including construction specifications and details) that a municipality can easily adopt and provide to developers. Preparing the statewide manual would provide an opportunity to draft a more detailed definition of what constitutes LID as well as identify and pull together the best design approaches to various LID measures. A third-party approach to developing a State-endorsed guidance manual could be modeled after recent legislation on water-efficient landscaping (i.e., AB 1881 and AB 2717) requesting the California Department of Water Resources to update the local water efficient landscape model ordinance based on recommendations from the stakeholder workgroup led by the California Urban Water Conservation Council (CUWCC). As a part of this legislation, the State's local water efficient landscape model ordinance became the default ordinance of local municipalities unless the local municipality adopted their own ordinance of greater or equal effectiveness. This last stipulation (if applied to a state-wide LID

manual) would allow early adopter communities, regions, or agencies that have already invested in manuals to continue using their own ordinances and policies.

Many other states have already produced guidance materials to assist local public agencies and the private sector in implementing LID and meeting stormwater permit requirements. In 2005, the State of Washington produced the *Stormwater Management Manual for Western Washington: Volume I -- Minimum Technical Requirements and Site Planning* that provides technical guidance on stormwater control measures that comply with water quality standards for new development and redevelopment. Similarly, the Massachusetts Department of Environmental Protection revised their *Stormwater Handbook* in 2008, which provides a robust chapter (over 133 pages) on structural BMP specifications and plans covering everything from rain gardens, to tree box filters, to dry wells, and more. There are also many examples of guidance materials produced at the regional or local level in California, such as the *Low Impact Development Manual for Southern California: Technical Guidance and Site Planning Strategies* prepared for SMC by the Low Impact Development Center and the *Riverside County Design Handbook for Low Impact Development Best Management Practices.*

Massachusetts has also established the Massachusetts Stormwater Technology Evaluation Project (MASTEP) administered by UMass Amherst to address the challenge of verifying the performance and effectiveness of new, innovative stormwater treatment technologies being introduced into the marketplace. The goal of MASTEP is to provide clarity to communities about whether or not new technologies comply with permit requirements and to help users make informed decisions when approving or using proprietary stormwater technologies. The Project gives manufacturers of stormwater technologies the opportunity to upload detailed product information (including performance testing) that is then carefully analyzed and screened by MASTEP staff. Reviews of the technologies are posted on a publicly accessible and searchable database.

Fortunately, a statewide effort in California to develop a LID technical guidance manual would not have to start from scratch. Local municipalities, flood control districts, regions, and even state agencies such as Caltrans have already made considerable investments in drafting LID guidance materials. CASQA alone has produced four handbooks to address the various life cycles and contexts of stormwater BMPs – Construction, Industrial, Municipal, and New Development and Redevelopment. CASQA recently updated the Construction Handbook and is planning to update the New Development and Redevelopment BMP Handbook.

While the abundance of information and guidance materials on LID is a blessing, it can also be a curse. Multiple (and sometimes conflicting) standards, construction plans, details, and specifications are in circulation on a wide variety of LID features, all of varying quality. These resources and information are also highly dispersed, leaving public agencies and the private sector with the task of patching together solutions appropriate to their own circumstances or project. This situation has created a confusing environment for public and private sector stakeholders in seeking assistance in implementing LID. Therefore, the State and Regional Water Boards have a key role to play in helping to establish consistency for LID implementation by facilitating a process of gathering and evaluating existing technical guidance, standards, and specifications for LID; and then creating one comprehensive document that all California communities and regions can use. As stated above, it is recommended that a third party organization help lead this process, such as CASQA, the SMC, or university partner.

Based on the above assertions, LGC recommends the following actions to be taken by the SMC to help advance solutions that address the need for a standard LID definition and technical guidance manual endorsed by the State and Regional Water Boards.

1. Discuss and reach consensus among the SMC municipal members regarding the need and importance for a standard LID definition and technical guidance manual that is endorsed by the State Water Board and Regional Water Boards. Advocate for this to be a priority issue addressed by the State Water Board.

The SMC should begin by facilitating a conversation with its members on how current definitions for LID can be improved. Next, the SMC should identify the specific technical needs of various municipalities. For example, while there is an abundance of guidance materials on how to select, size, design, construct, and maintain LID BMPs, municipalities struggle with finding the time and resources to draft construction plans, details, and specifications for various LID features for inclusion in their library of construction documents. Municipalities in this position express a need for a set of "live" Auto CADD files of construction plans, details, and specifications for various LID features they could use and adapt to their own communities.

The next step will be for non-State SMC members to communicate to the State Water Board, CASQA, and the State Legislature, the pressing need for a standard LID definition and technical guidance manual (along with specific recommendations for what should be included in the manual.) The SMC should draft and submit letters to Board Members of the State Water Board and their representatives in the State Legislature. Further, SMC municipal members should testify at a State Water Board meeting, and/or work with CASQA to engage other regions of the state to develop a more influential, state-wide educational and advocacy effort.

2. Work with a third-party organization with a statewide presence and authority on LID to explore opportunities for developing a statewide LID technical guidance manual.

It is understood there is limited capacity at the State Water Board to lead the development of a statewide LID technical guidance manual. Fortunately, there are highly competent third-party organizations in California that have the knowledge and capacity to lead this effort. We suggest the SMC take the lead or propose CASQA or a university partner, such as UC Davis. The SMC should also commit to actively participate in, contribute to, and/or provide financial support to CASQA's efforts to update the *New Development and*

Redevelopment BMP Handbook and assist with other related activities including converting CASQA's *Municipal Handbook* to a stormwater program manager's webportal.

Support the Development of a Clear Definition and Guidance of Off-site and Regional LID Solutions

Stormwater permits in California clearly prioritize managing stormwater at the site level, which has proven to be a hurdle when trying to solve issues at a neighborhood, community, or regional scale. Off-site and regional LID projects are discussed primarily as a means of alternative compliance that may be pursued once on-site LID solutions are demonstrated to be technically infeasible. Because they are perceived as second tier options, off-site and regional LID projects fail to receive equal attention or guidance in stormwater permits. There is no clear definition for off-site mitigation and regional projects, no straightforward guidance, and generally no approval process. In some cases where there is an approval process, it is usually the Executive Officer of the regional board who must sign-off on the proposed project.

By prioritizing site level stormwater management and making it difficult to gain approval for other solutions, developers and local governments are discouraged from planning and developing off-site projects that are capable of addressing multiple community goals. Larger scale projects could also enjoy the economic savings associated with more efficient operations, maintenance, and monitoring costs. These projects could also address broader water quality issues such as pollution, flooding, and groundwater recharge and sustainable development and growth goals (i.e., building complete, walkable, compact communities that reduce auto dependency). Further, public and private sector stakeholders involved in LID implementation have pointed out that current stormwater permits funnel private development dollars to on-site LID projects, which do not always treat the pollutants that pose the greatest threat to water quality and watershed health.

Communities are facing severe budget and staffing constraints. The ability to address multiple objectives at once, including water quality goals, housing a growing population, urban revitalization, and more has become increasingly crucial. It is more important than ever that scarce private and public dollars be spent wisely so as to achieve the greatest economic, environmental and social return on investment. The pressure for multi-objective projects funded by multiple sources will only intensify as competition for diminishing financial resources increases.

Many regional water boards have tried to address the issue of how to resolve larger watershed issues through the NPDES permit. Most have developed some variation of a watershed planning requirement where permittees are asked to map out water management activities and water quality processes in the watershed alongside plans for future urban growth and development.

As a part of these planning efforts, permittees are required to identify the highest water quality priorities in the watershed and then develop strategies to address these priorities through control measures and BMPs, including the use of regional or sub-regional projects and retrofit projects (i.e., converting existing streets to green streets, etc.). In most cases, the off-site or regional projects can only be pursued as a means of alternative compliance, which means that each individual proposed development project has to demonstrate the infeasibility of on-site urban runoff control measures before regional or district-wide solutions can be pursued. This means every new development or redevelopment project must go through an additional, time-consuming procedural layer. This process also interferes with the ability of a city or county to efficiently plan a district or regional solution for stormwater control and collect an in-lieu fee to finance implementation of the plan.

Some NPDES permits have tried different approaches to removing the additional procedural layer for communities interested in pursuing neighborhood, district or regional LID solutions. Ventura County's permit (adopted in 2009) allows permittees to develop a Redevelopment Project Area Master Plan (RPAMP) for urbanized areas that demonstrate exceptional

constraints. As of 2012, not a single RPAMP has been submitted to the Los Angeles Regional Water Board for review. Projects included within the RPAMP are required to go through a detailed review process by the Regional Water Board Executive Officer, which is not required for other on-site LID projects. The Plan must also be constructed within the time frame of the 5-year NPDES permit. The economic downturn and decline in development put construction projects on hold and unable to be completed within the required time frame. The City of Ventura did explore developing a RPAMP as part of the City's redevelopment plans for the Westside District but instead decided to develop a green streets retrofit master plan that will serve as off-site mitigation for future development projects.

The Santa Ana Regional Water Board also tried to address the need for streamlined approaches for communities pursuing off-site or regional solutions in Orange County's Model Water Quality Management Plan (WQMP) released May 2011. Permittees can develop WQMPs at various scales (i.e., site, sub-regional, or regional) for the purpose of minimizing pollutant loads from new or redevelopment projects.

While language in the Model WQMP states that implementing LID at the project level is the preferred approach, it recognizes that it may be more appropriate to implement LID at a broader scale in order to achieve multiple community benefits (i.e., groundwater recharge, implement smart growth, etc.) and/or avoid significant constraining factors. In these situations, the WQMP allows permittees to pursue regional or sub-regional LID projects outright without requiring development projects to first maximize the use of LID on-site. The WQMP notes that a watershed-wide feasibility analysis must be completed that demonstrates that a regional or sub-regional LID project is preferred and is consistent with other permit requirements.

As demonstrated, the regional water boards are addressing off-site and regional LID solutions, but there is a lot of catching up to do to make it just as easy to pursue larger scale projects as it is to implement LID on-site.

As noted earlier, there is no clear definition of what is considered a "regional" solution and there are very few examples to point to. Many regional water boards do include reference to off-site, sub-regional, or regional solutions in the permits but do not provide sufficient detail regarding what types of projects would be acceptable, at what scale these projects should be planned (i.e., watershed, city-wide, neighborhood, street, multiple sites, etc.), and how the projects should relate to new development or redevelopment (e.g., can regional projects be located in the same watershed as new development or do regional projects need to serve the stormwater needs of the new development?).

The current stormwater permits developed by the Santa Ana Regional Water Board for Riverside, Orange, and San Bernardino Counties do provide one example of an approval of a sub-regional LID project, which is "a 100 unit high density housing unit with a small strip mall and a school." The Board would require that the project, "connect all roof drains to vegetated areas (if there are any vegetated areas, otherwise storm water storage and use may be considered or else divert to the local storm water conveyance system, to be conveyed to the local treatment system), construct a storm water infiltration gallery below the school playground to infiltrate and/or harvest and re-use the design capture volume." This example for a regional project has less detail and is defined as "projects that address storm water from multiple developments."

Permittees in Orange County developed language defining regional projects to be included in the Model WQMP and submitted the language to the Santa Ana Regional Water Board for approval. As a result, the Orange County's Model WQMP defines regional as "several developments within the same watershed" with examples of permitted projects being a "regional infiltration basin, regional wetland, or groundwater injection and/or recharge facility." The definition provided for a sub-regional project is "multiple adjacent developments within the same watershed" with examples of a permitted project being "a neighborhood wet pond BMP for harvest and use" or as another example "a high density housing unit

development with a small strip mall and a school could connect all roof drains to vegetated areas, and construct a stormwater infiltration gallery below the school playground".

As demonstrated by the examples above, local governments cannot confidently develop and implement LID solutions beyond the site-level without additional information on the types of projects that would be acceptable, at what scale these should be planned, and how the projects relate to future new development and redevelopment projects. There is also a need to streamline the process for communities interested in pursuing off-site and/or regional solutions so they can pursue these solutions outright without additional procedural hoops to jump through, particularly in the instance where solutions were identified through a watershed analysis approved by a Regional Water Board.

LGC recommends the following actions be taken by the SMC to help advance solutions that address the need for additional clarity and guidance for implementing LID solutions beyond the site level.

1. Discuss and reach consensus among SMC members regarding the need and importance for flexibility within stormwater permits to allow priority water quality issues in the watershed to be addressed at the appropriate scale without giving permit priority to on-site options alone. Municipal members of SMC can work together to draft recommendations for how this can be accomplished within the current framework of stormwater permits and submit to the State and Regional Water Boards for consideration.

   The NPDES permits SMC municipal members to operate under all refer to off-site and regional solutions but there are glaring inconsistencies in how each stormwater permit addresses these solutions as well as the information provided in each of the permits. Addressing these inconsistencies and informational gaps is a first step toward gaining a better understanding of how off-site, regional and sub-regional solutions can be pursued.

SMC municipal members should request that off-site and regional LID solutions given equal status to on-site solutions, especially where the solutions are identified as a part of a watershed-based planning effort required by the State and/or Regional Boards.

SMC members should prioritize the support and resources needed to confidently pursue off-site and regional solutions. For example, one of the underlying difficulties in setting up an off-site mitigation program or pursuing regional solutions is establishing a reasonable in-lieu fee program. The SMC could seek funding to develop a model in lieu fee ordinance template based on a hypothetical watershed and water quality plan.

2. Create opportunity for peer-to-peer learning on developing LID solutions at various scales within a community and/or watershed.

There are a handful of municipalities throughout California that are attempting to develop more holistic approaches to stormwater management that integrate multiple community priorities and are, at the same time, in compliance with current stormwater regulations. However, these exploratory efforts are not well known by the greater stormwater community. The SMC could play a role in convening peer-to-peer learning sessions (i.e., conferences, workshops, webinars) that will help build collective knowledge on how to develop off-site mitigation strategies and/or sub-regional or regional solutions.

For example, the City of Ventura has developed the Westside District Green Streets Retrofit Plan and would be able to share the process they went through to prepare this plan as well as the challenges, successes, and lessons learned. It would also be useful to learn about the experiences of the cities of Ontario and Chino as they move forward with a regional wetland that will serve as alternative compliance for a new development project in their region.

Another learning session might highlight how municipalities can and have successfully integrated LID considerations into future growth plans, such as General Plans and Specific Plans. These long-range planning efforts provide the best opportunity for aligning land use

and broader stormwater management goals, but success requires intentional conversations between the planning and public works departments. The learning sessions would bring planning and public works staff together to explore how to best integrate land use planning with stormwater management so as to comply with new permit requirements while creating resource efficient, walkable communities.

These learning sessions could be provided at the annual CASQA Conference or organized separately to specifically serve SMC members. The events could also be organized in coordination with the State and Regional Water Boards as a co-training for local government and regional water board staff.

Funding for training is available at the State Water Board and could be pursued by the SMC. The Local Government Commission and UC Extension are willing to organize and facilitate these sessions, upon request.

Support Interdepartmental Coordination and Leadership at Top Levels of Local Government

Local elected officials have the final say when it comes to land use. Therefore, mayors, city council members and county supervisors have a leadership role to play in advancing solutions to LID implementation. As a membership organization of local elected officials, the Local Government Commission has over 30 years of experience in reaching out to this group of leaders and has a proud record of success in setting the table for new local government policy initiatives. Building from our experience, LGC recommends the following actions be taken by the SMC in an effort to build capacity at the top levels of government to advance LID implementation:

1. ### Sponsor Educational Dinner Forums for Elected Officials and Top Administrative Staff.

   For over a decade, the LGC has organized regional dinner forums for local elected officials and top administrative staff throughout the State to highlight innovative ideas and solutions

on a range of sustainable growth and development issues. LGC has found these forums to be an effective model for building leadership at the local level by providing a casual setting for elected officials to learn about cutting-edge strategies, ask questions, find support from their peers, and feel a part of a larger movement.

The regional dinner forum model can be utilized by the SMC to introduce, educate, and inspire local elected officials and top administrative staff to take action on implementing LID in their own community. Typically, LGC dinner forums serve 25 – 35 elected officials with the average base cost being $4,000 - $5,000 per forum. The cost per forum can increase if additional value-added tasks are included as a part of the scope, such as additional time spent on providing follow up assistance to forum participants

As a general rule of thumb, the forum should balance informative and inspiring presentations with time for facilitated group discussion. LGC recommends identifying a knowledgeable and inspiring speaker to kick-off the forum with a high level introduction to what it takes to create and build resilient, livable communities with an emphasis on the role of green infrastructure and LID principles. The broad introduction should be followed by one or two speakers (preferably local elected officials) that could share an example of implementing an LID-related project, policy, or program in their own community. The following are potential examples of projects, policies, and programs local governments have used to advance LID that could be highlighted at a forum on LID implementation:

City of Ventura - In 2008, City of Ventura City Council directed staff to dedicate up to 20% of the Pavement Maintenance Plan (PMP) construction budget to incorporate green street elements into street paving projects with the goal of improving stormwater quality; creating safe, attractive, and pedestrian-friendly streets; reducing flooding; and reducing greenhouse gas impacts. The current funding for the 5-year PMP is $16 million, with up to $3.2 million of these funds to be spent on green street improvements. As a part of the Council's directive, a multidisciplinary and interdepartmental Green Streets Committee was

formed to develop a Green Street Improvement Plan for existing streets. It includes: 1) a matrix of various green street design interventions including information on cost, benefits, and complexity; 2) a comparison of green design interventions relative to cost and effectiveness, and 3) cost estimates for various green street elements that could be incorporated in typical street resurfacing projects.

The City Council also earmarked $500,000 for a green street demonstration project. Katherine and Hartman Streets in Ventura's mid-town area have been selected for this pilot project. The retrofit project will also provide opportunity for off-site stormwater mitigation for future development that cannot include LID on-site. This approach will allow the initial investment of $500,000 by the Council to be paid back by future development projects, with those funds dedicated to a revolving fund for future green street projects.

City of Los Angeles – In November 2004, Los Angeles voters passed Proposition O, which provides a much-needed funding mechanism to tackle an array of water-related issues in the City, including stormwater management. The City is able to issue general obligation bonds for up to $500 million to support projects that will clean local waterways; protect drinking water; stop polluted runoff; clean and reuse stormwater; and conserve water. The driving force behind Proposition O was Los Angeles Councilmember Jan Perry who helped draft the language for the initiative. Overarching goals of the initiative are to support compliance with the Federal Clean Water Act, stormwater permit requirements and total maximum daily loads as well as address public health and environmental impacts. An interdepartmental team including the City's Departments of Public Works, Engineering, and Sanitation was formed to lead the development of multi-benefit and multi-objective projects that respond to the goals set forth in Proposition O. To date, over half of the projects installed with Proposition O funding are types of infiltration planters, including a bio-swale at the Westminister dog Park in Venice and tree wells on Grant Boulevard, also in Venice. The City's first green street project on Oros Street was also funded through Proposition O funding.

County of Sacramento – Staff in Sacramento County's Stormwater Quality Program knew designing, constructing, and maintaining green streets in their jurisdiction would require unprecedented collaboration of multiple County departments. They also knew that green streets and LID were relatively new concepts to other departments that are unfamiliar with stormwater management trends and permit requirements. To overcome these challenges, the Stormwater Quality Program hosted and organized a half-day design charrette for County staff that brought together representatives from the Departments of Transportation, Water Resources, and Community Development. The event featured educational presentations from LID and green street experts and hands-on experience working together on a conceptual design for a green street in the County. The charrette helped set the foundation for a multi-department collaboration on designing and constructing the County of Sacramento's first green street project.

2. Draft Educational Materials Suitable for an Elected Official Audience.

While there is a plethora of available research and educational materials demonstrating the benefits of LID and green infrastructure techniques, most are not suitable for the elected official audience. Busy, time-constrained elected officials need information that is concise and to the point. Therefore, to fill this gap, the SMC could sponsor the creation of a one-page summary document that provides a high-level overview of LID; key data points demonstrating economic, social, and environmental benefits of LID; links to additional information; and key questions elected officials can ask of their staff to learn more about their city's LID program and how they can help in overcoming challenges. As an added bonus, the SMC could have this one-page document produced in coordination with the regional dinner forums, therefore, providing elected officials take home material to pass along to staff and/or to use in taking action themselves.

References

Regional Water Quality Control Board Los Angeles Region. Order 09-0057. NPDES Permit No. CAS004002 Waste Discharge Requirements for Storm Water (Wet Weather) and Non-storm water (Dry Weather) Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Projection District, County of Ventura and the Incorporated Cities therein. May 7, 2009.

California Regional Water Quality Control Board San Diego Region. Order No. R9-2012-011. NPDES Permit No. CAS0109266. Administrative Draft 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. 2012.

State of California Regional Water Quality Control Board Santa Ana Region. Order No. R8-2010-0062. NPDES Permit No. CAS 618030. Waste Discharge Requirements for the County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County within the Santa Ana Region. Area Urban Storm Water Runoff Orange County. Amended 2010.

State of California Regional Water Quality Control Board Santa Ana Region. Order No. R8-2010-0033. NPDES Permit No. CAS 618033. National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside County within the Santa Ana Region. January 29, 2010.

State of California Regional Water Quality Control Board Santa Ana Region. Order No. R8-2010-0036. NPDES Permit No. CAS 618036. National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County within the Santa Ana Region. January 29, 2010.

State Water Resources Control Board. Draft National Pollutant Discharge Elimination System (NPDES) General Permit. Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Sewer Systems (MS4s) (General Permit). May 18, 2012.

Low Impact Development Center. *Low Impact Development Manual for Southern California: Technical Guidance and Site Planning Strategies.* State Water Resources Control Board Stormwater Program and the Southern California Stormwater Monitoring Coalition. April 2010.

Appendix A.

Literature Review

Earles, Andrew, Derek Rapp, Jane Clary, and Janice Lopitz. *Breaking Down the Barriers to Low Impact Development in Colorado*. White Paper. 2008.

Godwin, Derek, Betsy Parry, Frank Burris, Sam Chan, and Amanda Punton. *Barriers and Opportunities for Low Impact Development: Case Studies from Three Oregon Communities*. Sea Grant Extension and Oregon Department of Land Conservation and Development. Oregon State University. 2008.

LID Feasibility Barriers and Recommended Solutions. Meeting notes prepared by Herrera Environmental Consultants for American Public Works Association bi-monthly meeting March 15, 2009.

Low Impact Development Center. *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption*. State Water Resources Control Board Stormwater Program and The Water Board Academy. Beltsville, Maryland. 2007.

Miccio, Claire Elisabeth. *Barriers to Implementing LID Approaches in Washington State Roadways*. Washington State Department of Transportation. June 2010.

Nowacek, David. *Social and Institutional Barriers to Stormwater Infiltration*. Report concludes research under the EPA/NSF/USDA 1999 Water and Watershed Research Grant. 2003.

Stockwell, Abbey. *Analysis of Barriers to LID in the North Coast Redwood Region, California*. Humboldt State University. December 2009.

Appendix B.

Online Surveys

Barriers to LID Implementation - Development Community Survey

1. Introduction

Thank you for participating in this online survey. We appreciate your assistance in better understanding the barriers to Low Impact Development (LID) from the private sector (specifically those involved with the design, development, and construction of projects). A similar survey was sent to local, regional, and state government agencies.

LID is a stormwater management approach that mimics natural hydrology through the use of decentralized landscape and engineering features that detain and treat runoff as close to the source as possible. Broader definitions of LID can include infill and redevelopment as well as narrow streets since this reduces the increase of impervious pavement from new development and thus runoff.

There are a variety of barriers that prevent optimal LID implementation. Some are easier to spot than others. For example, building codes that do not allow curb cuts is an obvious barrier to LID implementation while vague regulatory language can cause confusion and add time to permit approval which in the end impedes LID implementation.

We have organized the potential barriers to LID implementation into three "tiers" representing different levels of influence - site scale, city/regional scale, and state/national scale. As you will see, some barriers fall across all three tiers.

The survey should take you 10 - 15 minutes to complete.

Responses from this survey as well as follow up phone calls and focus groups will be used to inform the Stormwater Monitoring Coalition on the main impediments to LID implementation. Recommendations for overcoming main impediments will be prepared by LGC and the Center for Water and Land Use at UC Davis Extension.

Thank you again!

Laura Podolsky, LGC
Jeff Loux, UC Davis Extension
Darla Inglis, UC Davis Extension

2. General Information

1. Please let us know who you are.

Name:
Employer:
Address:
Address 2:
City/Town:
State:
ZIP:
Email Address:
Phone Number:

2. What is your title/position?

Barriers to LID Implementation - Development Community Survey

3. Do the municipalities you work with typically require or encourage LID?

- Yes
- No

4. Are you based in California?

- Yes
- No

5. Do you and/or your company/firm have experience with integrating LID in development projects?

- Yes
- No

6. How many years of experience do you have working with LID?

- No Experience
- 0 - 4 years
- 5 - 9 years
- 10 - 14 years
- 15 - 19 years
- 20 - 24 years
- 24+ years

7. What types of development projects have you been involved with that include LID design and what LID technologies did you use?

We are trying to determine if LID is been achieved in some development types but not others. For example, using LID techniques such as rain gardens in a low density housing project might be easier to achieve than accommodating bioswales in a high density downtown infill project.

3. Tier I - Site Scale Barriers to LID Implementation

Barriers to LID Implementation - Development Community Survey

1. The following barriers to LID were identified at the site or project scale. We understand many MS4 permits are now requiring LID, though barriers still remain during this transition between conventional stormwater management methods and LID. Therefore, please rank the following barriers based on level of relevance they have in implementing LID based on your experience.

	not relevant	relevant	very relevant	N/A
Lack of technical specifications (e.g. plant selection, soil type, etc.)	○	○	○	○
Lack of technical feasibility (e.g. sizing requirements, poorly draining soils, etc.)	○	○	○	○
Lack of performance criteria for LID structural BMPs	○	○	○	○
Operations and maintenance (e.g., lack of protocols, proper equipment and/or budget)	○	○	○	○
Lack of life cycle cost-benefit analysis for design, construction, and/or maintenance	○	○	○	○
No clear economic incentive to use LID	○	○	○	○
City/County staff knowledge/capacity to assist with implementation	○	○	○	○
Developer or developer design team's knowledge/capacity to implement	○	○	○	○
Compatibility with existing or adjacent development that does not use LID	○	○	○	○
Liability concerns	○	○	○	○
Vector concerns (i.e. ponding, draw-down time, mosquito, etc.)	○	○	○	○

Other (please specify)

Barriers to LID Implementation - Development Community Survey

2. Please use this space to elaborate on any of the constraints above. For example, if technical feasibility is an issue then list the exact constraint (e.g. poorly drained soils, high groundwater, potential to mobilize pollutants in soil, slope stability, etc.) below. Also, please share any ways in which you and/or your company/firm has encountered and successfully overcome any of the above mentioned barriers.

4. Tier II - City and regional scale barriers to LID implementation

Barriers to LID Implementation - Development Community Survey

1. The following barriers to LID were identified at the city/county-wide scale or regional scale. Please rate the following barriers based on level of relevance they have in obstructing LID implementation based on your experience.

	not relevant	relevant	very relevant	N/A
Conflicts with city or county codes (e.g. set-backs, water conservation directives, curb and gutter, county health, etc.)	○	○	○	○
Conflicts with city or county road or sidewalk standards	○	○	○	○
Unclear or vague regulatory language	○	○	○	○
Unclear "crediting" of LID design for stormwater compliance (e.g. conventional storm water management may still be required even with LID)	○	○	○	○
Increased operation and maintenance costs	○	○	○	○
Lack of early integration of LID in project development process	○	○	○	○
Challenges with city/county inter-departmental coordination	○	○	○	○
Regional transportation planning requirements or funding	○	○	○	○
Public acceptance (a.k.a., public pushback)	○	○	○	○
Liability concerns	○	○	○	○
LID is "recommended" rather than "required"	○	○	○	○
Long-term ownership of LID (i.e. public vs. privately maintained)	○	○	○	○

Other (please specify)

Barriers to LID Implementation - Development Community Survey

2. Please use this space to elaborate on any of the constraints above that you have direct experience with and/or insight to share. For example, please share any ways in which you and/or your company/firm has encountered and successfully overcome any of the above mentioned barriers.

5. Tier III - State and national scale barriers to LID Implementation

1. State and national regulations, plans or other directives may create barriers to optimal LID implementation at the site level. Please rank the following barriers based on level of relevance they have in obstructing LID implementation based on your experience. Please note that we recognize that some of the programs we listed below may pose a host of obstacles such as lengthy review/approval timelines, policies that conflict with LID goals, and/or legal constraints. Feel free to elaborate on specific obstacles within these programs in the space provided at the end of the list.

	not relevant	relevant	very relevant	N/A
Set-backs or restrictions on sensitive ecological areas, special status species habitat, etc.	○	○	○	○
Special permit requirements (e.g. Army Corps 404 discharge permits, CA Fish and Game 1600 permits, U.S. Fish and Wildlife permitsetc.	○	○	○	○
CEQA/NEPA review	○	○	○	○
National Pollutant Discharge Elimination System (NPDES)	○	○	○	○
Total Maximum Daily Loads (TMDL) requirements	○	○	○	○
Public Health considerations	○	○	○	○
American Disabilities Act considerations	○	○	○	○
LEED/LEED ND does not credit LID	○	○	○	○
Standards that treat all sites equally (e.g. infill vs. greenfield)	○	○	○	○

Other (please specify)

Barriers to LID Implementation - Development Community Survey

2. Please use this space to elaborate on any of the constraints above that you have direct experience with and/or insight to share. For example, please share any ways in which you and/or your company/firm has encountered and successfully overcome any of the above mentioned barriers.

6. General Barriers

1. Some barriers span all three tiers. These barriers are listed below. Please rate the following barriers based on level of relevance they have in obstructing LID implementation based on your experience.

	not relevant	relevant	very relevant	N/A
Different or conflicting LID guidance or criteria from different agencies and groups	○	○	○	○
Lack of successful demonstration projects	○	○	○	○
Alternatives to LID are "easier" to design, construct, and maintain	○	○	○	○
Conflicting or confusing definitions of LID (e.g. source control BMPs, treatment control BMPs, LID, and hydromodification BMPs)	○	○	○	○

Other (please specify)

2. Please use this space to elaborate on any of the constraints above that you have direct experience with and/or insight to share. For example, please share any ways in which you and/or your company/firm has encountered and successfully overcome any of the above mentioned barriers.

7. Additional Barriers

Barriers to LID Implementation - Development Community Survey

1. Please share any additional information relevant to your work and implementing LID.

8. Follow up

1. Would you be willing to participate in a phone call conversation or focus group that will allow us to better understand barriers to LID implementation? If so, please check which activity or activities below. Volunteers are greatly appreciated!

- ☐ Phone Call
- ☐ Focus Group

9. Thank You!

Congratulations! You are finished.

We appreciate your help with this effort. For more information regarding this effort, please contact:

Laura Podolsky
Local Government Commission
lpodolsky@lgc.org
(916) 448-1198 x311
www.lgc.org

Barriers to LID Implementation - Public Agency Survey

1. Introduction

Thank you for participating in this online survey. We appreciate your assistance in better understanding the barriers to Low Impact Development (LID) implementation most relevant to your jurisdiction and region.

LID is a stormwater management approach that mimics natural hydrology through the use of decentralized landscape and engineering features that detain and treat runoff as close to the source as possible. Broader definitions of LID can include infill and redevelopment as well as narrow streets since this reduces the increase of impervious pavement from new development and thus runoff.

There are a variety of barriers that prevent optimal LID implementation. Some are easier to spot that others. For example, building codes that do not allow curb cuts is an obvious barrier to LID implementation while vague regulatory language can cause confusion and add time to permit approval which in the end impedes LID implementation.

We have organized the potential barriers to LID implementation into three "tiers" representing different levels of influence - site scale, city/regional scale, and state/national scale. As you will see, some barriers fall across all three tiers.

The survey should take you 10 - 15 minutes to complete.

Thank you again!

Laura Podolsky, LGC
Jeff Loux, UC Davis Extension
Darla Inglis, UC Davis Extension

2. General Information

1. Please let us know who you are.

Name:
Employer:
Address:
Address 2:
City/Town:
State:
ZIP:
Email Address:
Phone Number:

2. Please check what sector you represent from the choices below:

- Public sector
- private sector

3. What is your title?

Barriers to LID Implementation - Public Agency Survey

4. How many years have you been with your current employer/municipality?

- 0 - 4 years
- 5 - 9 years
- 10 - 14 years
- 15 - 19 years
- 20 - 24 years
- 24+ years

5. Does your municipality typically require or encourage LID?

- Yes
- No

6. Does your municipality have any direct experience with requiring or implementing LID for development projects?

- Yes
- No

7. How many years of experience do you have working with LID-related projects?

- No Experience
- 0 - 4 years
- 5 - 9 years
- 10 - 14 years
- 15 - 19 years
- 20 - 24 years
- 24+ years

8. What types of development projects have you been involved with that include or could include LID design? What LID technologies or approaches have been required or implemented?

We are trying to determine if LID is been achieved in some development types but not others. For example, using LID techniques such as rain gardens in a low density housing project might be easier to achieve in your municipality than accommodating bioswales in a high density downtown infill project.

Barriers to LID Implementation - Public Agency Survey

3. Tier I - Site Scale Barriers to LID Implementation

1. The following barriers to LID were identified in the literature at the site or project scale. Please rank the following barriers based on level of relevance they have in obstructing LID implementation in your jurisdiction.

	Not relevant	relevant	very relevant	N/A
Lack of technical specifications (e.g. plant selection, soil type, etc.)	○	○	○	○
Lack of technical feasibility (sizing requirements, poorly draining soils, etc.)	○	○	○	○
Lack of data on how pollutants affects groundwater quality	○	○	○	○
Lack of performance criteria for LID structural BMPs	○	○	○	○
Operations and maintenance (e.g., lack of protocols, proper equipment and/or budget)	○	○	○	○
Lack of life cycle cost-benefit analysis for design, construction, and/or maintenance	○	○	○	○
No clear economic incentive for applicant to use LID	○	○	○	○
Staff knowledge/capacity to assist with implementation	○	○	○	○
Developer or developer design team's knowledge/capacity to implement	○	○	○	○
Poorly drained soils/low infiltration capacity	○	○	○	○
Compatibility with existing or adjacent development that does not use LID	○	○	○	○
Liability concerns	○	○	○	○
Vector concerns (i.e. ponding, draw-down time, mosquito, etc.)	○	○	○	○

Other (please specify)

Barriers to LID Implementation - Public Agency Survey

2. Please use this space to elaborate on any of the constraints above. For example, if technical feasibility is an issue then list the exact constraint (e.g. poorly drained soils, high groundwater, potential to mobilize pollutants in soil, slope stability, etc.) below.

3. Could you identify any ways in which your jurisdiction has encountered and successfully overcome any of the above mentioned barriers? Have you heard of creative solutions adopted by other municipalities for addressing these barriers?

4. Tier II - City and regional scale barriers to LID implementation

Barriers to LID Implementation - Public Agency Survey

1. The following barriers to LID were identified in the literature at the municipal or regional scale. Please rate the following city and regional level barriers based on level of relevance they have in obstructing LID implementation in your jurisdiction and/or region.

	Not relevant	relevant	very relevant	N/A
Conflicts with municipal or county codes (e.g. set-backs, water conservation directives, curb and gutter, county health, etc.)	○	○	○	○
Conflicts with city or county road or sidewalk standards	○	○	○	○
General plan or specific plan compliance and consistency	○	○	○	○
Inconsistency with smart growth principles	○	○	○	○
Unclear or vague regulatory language	○	○	○	○
Unclear "crediting" of LID design for stormwater compliance (e.g. conventional storm water management may still be required even with LID)	○	○	○	○
Lack of street standards that integrate LID	○	○	○	○
Increased operation and maintenance costs	○	○	○	○
Lack of early integration of LID in project development process	○	○	○	○
Challenges with inter-departmental coordination	○	○	○	○
Regional transportation planning requirements or funding	○	○	○	○
Public acceptance	○	○	○	○
Staff knowledge/capacity to assist with implementation	○	○	○	○
Developer or design team knowledge/capacity to implement	○	○	○	○
LID is not included in watershed management or comprehensive drainage master plans	○	○	○	○
Liability concerns	○	○	○	○
Fragmented watershed and	○	○	○	○

Barriers to LID Implementation - Public Agency Survey

water quality planning				
Poor monitoring and oversight of regulatory compliance	○	○	○	○
Homeowner Association restrictions	○	○	○	○
LID is "recommended" rather than "required"	○	○	○	○
Long-term ownership of LID (i.e. public vs. privately maintained)	○	○	○	○
Insufficient evidence of program effectiveness	○	○	○	○

Other (please specify)

2. Could you identify any ways in which your jurisdiction has encountered and successfully overcome any of the above mentioned barriers? Have you heard of creative solutions adopted by other municipalities for addressing these barriers?

5. Tier III - State and national scale barriers to LID Implementation

Barriers to LID Implementation - Public Agency Survey

1. State and national regulations, plans or other directives may create barriers to optimal LID implementation. Please rank the following barriers based on level of relevance they have in obstructing LID implementation in your jurisdiction and/or region. Note specific programs are listed below and we recognize each program may pose a host of obstacles such as lengthy review/approval timelines, policies that conflict with LID goals, and/or legal constraints. Feel free to elaborate on specific obstacles within these programs in the space provided at the end of the list.

	Not relevant	relevant	very relevant	N/A
Set-backs or restrictions on sensitive ecological areas, special status species habitat, etc.	○	○	○	○
Special permit requirements (e.g. Army Corps 404 discharge permits, CA Fish and Game 1600 permits, U.S. Fish and Wildlife permitsetc.	○	○	○	○
AB 32 objectives (e.g. reducing climate change or greenhouse gas (GHG) emissions)	○	○	○	○
State or federal funding constraints or limitations	○	○	○	○
CEQA/NEPA review	○	○	○	○
National Pollutant Discharge Elimination System (NPDES)	○	○	○	○
Total Maximum Daily Loads (TMDL) requirements	○	○	○	○
Public Health considerations	○	○	○	○
American Disabilities Act considerations	○	○	○	○
Water right considerations	○	○	○	○
LEED/LEED ND does not credit LID	○	○	○	○
Standards that treat all sites equally (e.g. infill vs. greenfield)	○	○	○	○

Other (please specify)

Barriers to LID Implementation - Public Agency Survey

2. Could you identify any ways in which your jurisdiction has encountered and successfully overcome any of the above mentioned barriers? Have you heard of creative solutions adopted by other municipalities for addressing these barriers?

6. General Barriers

1. Some barriers span all three tiers. These barriers are listed below. Please rate the following barriers based on level of relevance to your jurisdiction.

	Not relevant	relevant	very relevant	N/A
Different or conflicting LID guidance or criteria from different agencies and groups	○	○	○	○
Lack of successful demonstration projects	○	○	○	○
Alternatives to LID are "easier" to design, construct, and maintain	○	○	○	○
Education and training for developers and their design teams	○	○	○	○
Education and training for public agencies and staff	○	○	○	○
Conflicting or confusing definitions (e.g. source control BMPs, treatment control BMPs, LID, and hydromodification BMPs)	○	○	○	○

Other (please specify)

2. Could you identify any ways in which your jurisdiction has encountered and successfully overcome any of the above mentioned barriers? Have you heard of creative solutions adopted by other municipalities for addressing these barriers?

7. Additional Barriers

Barriers to LID Implementation - Public Agency Survey

1. Please share any additional information relevant to your jurisdiction that was not mentioned in this survey.

8. Follow up

1. Would you be willing to participate in a phone call conversation or focus group that will allow us to better understand barriers to LID implementation? If so, please check which activity or activities below. Volunteers are greatly appreciated!

- ☐ Phone Call
- ☐ Focus Group

2. Do you know of key stakeholder(s) (i.e. developer, stormwater engineer, planner, watershed conservation group, regulating agency, etc.) for us to follow up with to better understand barriers to LID implementation? If so, please provide their information below.

9. Thank You!

Congratulations! You are finished.

We appreciate your help with this effort. For more information regarding this effort, please contact:

Laura Podolsky
Local Government Commission
lpodolsky@lgc.org
(916) 448-1198 x311
www.lgc.org

Appendix C.

Focus Group Agendas and Participant List

Public Agency Focus Group Participants
November 3, 2011
Location: Riverside County Flood Control and Water Conservation District Office

Name	Title	Affiliation
Trung Chanh Phan	Stormwater/Wastewater Compliance Specialist	City of Fullerton
Matt Bennett	Senior Civil Engineer/ NPDES Coordinator	City of Yorba Linda
Richard Boon	Chief	Orange County Stormwater Program
Terry Fritz	NPDES Coordinator	City of Redlands
Ammar Eltawil	Civil Engineering Associate IV	City of Los Angeles, Public Works
Keith Linker	Principal Civil Engineer	City of Anaheim
Michael Shetler	Stormwater Program Administrator	County of Riverside
Mindy Davis	Planner	County of San Bernardino, Public Works

Community Development Focus Group
November 2, 2011
Location: Los Angeles County Department of Public Works Headquarters

Name	Title	Affiliation
Ian Adam	Principal / Stormwater Manager	Fusco Engineering, Inc.
Omar Dandashi	VP Engineering	Lewis Operating Corp.
Vik Bapna	Principal	California Watershed Engineering
Tricia Johns	Principal	KPFF Consulting Engineers
Andrew Nickerson	Associate / Senior Project Manager	PSOMAS
Jason Marechal	Practice Builder	Kimley-Horn and Associates, Inc.

Barriers to Low Impact Development

Community Development Focus Group

November 2, 2011 ■ 1:00 – 3:30 pm
Los Angeles County Department of Public Works Headquarters
900 S. Fremont Ave., Alhambra, CA 91803

Meeting Purpose: To gain a better understanding of barriers to LID implementation from the perspective of the development community.

Meeting Agenda

1:00 **Welcome and Introductions**
Meeting Facilitators:
Laura Podolsky – Project Manager, Local Government Commission
Jeff Loux - Director, Land Use and Natural Resource Program, UC Davis Extension

1:15 **Group Discussion**

Overview Question: Please share an experience with a LID project that was successfully implemented and what made it successful. Also share when processes have been challenging and why.

Municipal Policies and Standards

- What are specific policy and/or design standard barriers you have experienced with LID projects?
- Do you find there are times in which competing needs for space (i.e., not related to stormwater) can make an LID technique not feasible?
- Do municipal policies and standards adequately address LID in more challenging development contexts, such as infill, redevelopment, and higher density projects?

Regional, State, and Federal Policies and Procedures

- Which environmental permits and/or agencies are the most challenging to work with on projects that include LID and why?
- Do you run into challenges working in a region transected by multiple regional water boards and/or local jurisdictions each with different permits and processes?

Site Level Challenges

- What is the number one site-level constraint to LID (e.g., space, soil, slope, high groundwater, etc.)? Can this constraint be addressed through new technologies; additional education on the part of staff or consultant design team; more detailed design standards, or other? Are certain projects (e.g., infill, greenfield development, roadways, etc.) more affected by this constraint than others?
- Are there a handful of LID techniques you tend to use and why?
- Are there LID treatments being promoted/encouraged that do not make sense (i.e., expensive to build, hard to maintain, technically not feasible, etc.) on the ground?
- Which LID treatments show promise and could use additional support (i.e. additional research, pilot projects, etc.) to advance their use?

Costs Associated with Designing, Building, and Maintaining LID

- Are there specific LID techniques that are especially cost prohibitive?
- Are there extra costs associated with LID versus conventional stormwater management? If so, are the extra costs mostly from the design/planning stage, cost to build (including labor and/or materials), cost to maintain or other?
- What incentives would help promote the use of LID? Do different development types (i.e., infill, redevelopment, higher density projects, etc) need additional support and/or incentives to make project feasible?

Capacity to Implement

- Who do you consult with on projects that include LID?
- Have you included new types of expertise on consultant teams for projects that include LID?
- What has your experience been like working with city/county staff and/or other regional, state, or federal agency staff?
- Are there stakeholders that could greatly influence or advance LID adoption with additional education, such as local policy makers, public health officials, city managers, etc.?

Perception of LID

- What is the perception of LID by the general public? Are there LID techniques that are more favorable to the public than others?

3:15 **Summary and Next Steps**
Laura Podolsky – Project Manager, Local Government Commission

3:30 **Adjourn**

Barriers to Low Impact Development

City and County Agency Focus Group

November 3, 2011 ■ 8:30 – 10:45 am

Finance Conference Room
Riverside County Flood Control and Water Conservation District
1995 Market Street, Riverside, CA 92501

Meeting Purpose: To gain a better understanding of barriers to LID implementation from the perspective of city and county staff.

Meeting Agenda

8:30 **Welcome and Introductions**
Meeting Facilitators:
Laura Podolsky – Project Manager, Local Government Commission
Jeff Loux - Director, Land Use and Natural Resource Program, UC Davis Extension

8:45 **Group Discussion**

Overview Question: Please share an experience with a LID project that was successfully implemented and what made it successful. Please share an experience when processes have been challenging and why.

Municipal Policies and Standards

- What are policy and/or design standard barriers you have experienced with LID projects? How has your city/county addressed these barriers?
- Do you find there are times in which competing needs for space (i.e., not related to stormwater) can make an LID technique not feasible?
- Does your city's/county's policies and standards address LID in more challenging development contexts, such as infill, redevelopment, and higher density projects?

Regional, State, and Federal Policies and Procedures

- Which environmental permits and/or agencies are the most challenging to work with on projects that include LID and why?

Site Level Challenges

- What is the number one site-level constraint to LID (e.g., space, soil, slope, high groundwater, etc.)? Can this constraint be addressed through new technologies; additional education on the part of local government staff or consultant design team; more detailed design standards, or other? Are certain projects (e.g., infill, greenfield development, roadways, etc.) more affected by this constraint than others?
- Are there a handful of LID techniques used more often than others?
- Are there LID techniques being promoted/encouraged that do not make sense (i.e., expensive to build, hard to maintain, technically not feasible, etc.) on the ground?
- Which LID treatments show promise and could use additional support (i.e. additional research, pilot projects, etc) to advance their use?

Costs Associated with Designing, Building, and Maintaining LID

- Are there specific LID techniques that are especially cost prohibitive?
- Are there extra costs associated with LID versus conventional stormwater management? If so, are the extra costs mostly associated with the design/planning stage, cost to build (including labor and/or materials), cost to maintain and operate or other?
- What incentives would help promote the use of LID among the development community? Do different development types (i.e., infill, redevelopment, etc) need additional support and/or incentives to make project feasible?

Capacity to Implement

- Have you consulted with other city/county departments on projects that include LID? Does your city/county have the expertise in-house to implement LID?
- What has your experience been like working with private sector consultants and/or other representatives from the development community?
- Are there stakeholders that have the potential to greatly influence or advance LID implementation if they received additional education or exposure, such as local policy makers, public health officials, city managers, etc.?

Perception of LID

- What is the perception of LID by the general public? Are there LID techniques more favorable to the public than others?

10:30 **Summary and Next Steps**
Laura Podolsky – Project Manager, Local Government Commission

10:45 **Adjourn**

Appendix D.

Phone Interview Participants

Name	Title	Affiliation
John Kemmerer	Associate Director, Water Division	U.S. EPA Region 9
Eric Becker	Water Resource Control Engineer	San Diego Regional Water Quality Control Board
Wayne Chiu	Water Resource Control Engineer	San Diego Regional Water Quality Control Board
Christina Arias	Water Resource Control Engineer	San Diego Regional Water Quality Control Board
Ejigu Solomon	Unit Chief, Storm *Water* Compliance & Enforcement Unit	Los Angeles Regional Water Quality Control Board
Ivar Ridgeway	Environmental Scientist	Los Angeles Regional Water Quality Control Board
Michael Roth	Water Resources Control Engineer	Santa Ana Regional Water Quality Control Board
Adam Fischer	Orange County NPDES Permit Liaison	Santa Ana Regional Water Quality Control Board
Kathleen Fong	Water Resources Control Engineer	Santa Ana Regional Water Quality Control Board
Mark Grey	Director of Environmental Affairs	Building Industry Association of Southern California
Carmel Brown	Founder	CKB Environmental Consulting, Inc.
Mike Borst	Chemical Engineer	U.S. EPA, Green Infrastructure Performance
Xavier Swamikannu	Consultant	
Paul Crabtree	Founder	Crabtree Group Inc.
Jennifer Krebs	Principal Environmental Planner	San Francisco Estuary Partnership
Greg Gearheart	Stormwater Section Supervisor	California State Water Resources Control Board
Eric Bernsten	Stormwater Section	California State Water Resources Control Board
Anna Lantin	Vice President	RBF Consulting
Scott Taylor	Senior Vice President	RBF Consulting
Dalia Fadl	Assistant Engineer	Dpt. of Water Resources, Sacramento County
Ray Olson	Director	City of Ventura Environmental Services Office
Arne Aslem	Water Quality Manager	Ventura County Watershed Protection District
Chris Crompton	Manager, Environmental Resources	OC Watershed, Orange County Public Works
Jonathan Bishop	Chief Deputy Director	CA State Water Resources Control Board
Mike Antos	Research Manager	Council for Watershed Health
Eric Stein	Principal Scientist	Southern CA Coastal Water Research Project
Bob Collacot	Consultant	Riverside County Flood Control District
Daniel Apt	Senior Associate	RBF Consulting

Standard Conditions of Approval

Prior to the issuance of a grading or building permit, the Building & Safety Department requires standard notes to be added to the plan set to address Pollution Prevention during the construction phase of a project. Erosion control BMPs shall be implemented and maintained to minimize and/or prevent the entrainment of soil in Runoff from disturbed soil areas on Construction Sites.

- Sediment control BMPs shall be implemented and maintained to prevent and/or minimize the transport of soil from the Construction Site.
- Stockpiles of soil shall be properly contained to eliminate or reduce sediment transport from the site to streets, drainage facilities or adjacent properties via Runoff, vehicle tracking, or wind.
- Appropriate BMPs for construction-related materials, Wastes, spills or residues shall be implemented to eliminate or reduce transport from the site to streets, drainage facilities, or adjoining properties by wind or Runoff.
- Runoff from equipment and vehicle washing shall be contained at Construction Sites and must not be discharged to Receiving Waters or the MS4.
- All construction contractor and subcontractor personnel are to be made aware of the required BMPs and good housekeeping measures for the project site and any associated construction staging areas.
- At the end of each day of construction activity all construction debris and Waste materials shall be collected and properly contained in trash or recycle bins.
- Construction Sites shall be maintained in such a condition that a storm does not carry Wastes or Pollutants off the site. Discharges other than Stormwater (Non-Stormwater discharges) are prohibited, except as authorized by an individual NPDES permit or the Construction General Permit. Potential Pollutants include but are not limited to: solid or liquid chemical spills; Wastes from paints, stains, sealants, solvents, detergents, glues, lime, pesticides, herbicides, fertilizers, wood preservatives, asbestos fibers, paint flakes or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator or battery fluids; concrete and related cutting or curing residues; floatable Wastes; Wastes from engine/equipment steam cleaning or chemical degreasing; Wastes from street cleaning; and super-chlorinated potable water from line flushing and testing. During construction, disposal of such materials should occur in a specified and controlled temporary area on-site physically separated from potential Stormwater Runoff, with ultimate disposal in accordance with local, state and federal requirements.
- Discharging contaminated groundwater produced by dewatering groundwater that has infiltrated into the Construction Site is prohibited. Discharging of contaminated soils via surface erosion is also prohibited. Discharging non-contaminated groundwater produced by dewatering activities may require an NPDES permit issued by the San Diego Regional Board.
- Construction Sites shall be managed to minimize the exposure time of disturbed soil areas through phasing and scheduling of grading to the extent feasible and the use of temporary and permanent soil stabilization.

- BMPs shall be maintained at all times. In addition, BMPs shall be inspected prior to predicted storm events and following storm events.

Release of Conditions of Approval

The end of the construction phase is typically accompanied by the close out of permits and issuance of certificates of use and/or occupancy. The Building & Safety Department uses this juncture to assure satisfactory completion of all requirements in a Project-Specific WQMP and/or the conditions of approval by verifying that the following items, as applicable, have been completed - prior to granting occupancy:

- All Site Design, LID, structural Source Control, and Treatment Control BMPs have been constructed and installed in conformance with approved plans and specifications and functional in accordance with the approved Project-Specific WQMP (if applicable); and that they include control measures to effectively minimize the creation of Nuisance or Pollution associated with vectors, such as mosquitoes, rodents, flies, etc.;
- A mechanism or agreement acceptable to the mshetler has been executed for the long-term funding, implementation, operation, maintenance, repair, and where necessary, the replacement of BMPs;
- The owner/operator is prepared to implement all Non-Structural BMPs, and to implement, operate, and maintain all Site Design, LID, structural Source Control, and Treatment Control BMPs;
- An adequate number of copies of the Project-Specific WQMP, if applicable, are available onsite; and
- An Industrial Facility subject to the Industrial General Permit as defined by Standard Industrial Classification (SIC) code has obtained coverage by providing a copy of the NOI with associated WDID number or other proof of filing submitted via the SMARTS to the State Board. Where such an Industrial Facility is identified but coverage cannot be verified, the mshetler notifies the San Diego Regional Board and the owner/operator that the facility may be required to obtain coverage under the Industrial General Permit.

Appendix E – Private Development Construction Activities

E.1 Construction Site Inspection Form
E.2 Post-construction BMP Inspection Form

Construction Activity Compliance Inspection Notice

Building and Safety Department
4080 Lemon Street, Riverside, CA 92501 2nd Floor

			Date:
TRACT/PARCEL #:	WDID#:	WEATHER:	SITE INSPECTION PRIORITY LEVEL: ☐ HIGH ☐ MEDIUM ☐ LOW
APN:	GRADING PERMIT #:	SIZE/DISTURBED ACREAGE:	OFFICE USE: ☐--PAID ☐--INVOICE

SITE NAME AND ADDRESS:	PROPERTY OWNER AND MAILING ADDRESS (IF DIFFERENT):

CROSS STREETS:	INSPECTED BY:	PHONE #:	DATE FOR REINSPECTION:

FUTURE SITE USAGE: ☐ RESIDENTIAL ☐ INDUSTRIAL ☐ COMMERCIAL ☐ MIXED-USE	POST-CONSTRUCTION BMPs ON-SITE: ☐ YES ☐ NO NOTES-

NOTICE: The [Insert Co-Permittee Name] performs a construction site inspection to determine if the site is in compliance or not in compliance with the [Insert Co-Permittee Name] Stormwater Ordinance, local permits, regulations, and codes.

1. **PERMITS: (MS4 Permit Ref: Section IX.A.3.a)**
   - ☐ Copy of NOI located at the project site?
   - ☐ Copy of WDID located at the project site?
   - ☐ Copy of [Insert Co-Permittee Name] permit at project site?

2. STORM WATER POLLUTION PREVENTION PLAN (SWPPP): (MS4 Permit Ref: Section IX.A.3.b)
   - ☐ Copy of SWPPP located at the project site? If not, Regional Board must be notified.

3. BEST MANAGEMENT PRACTICES (BMPS):
   - ☐ BMPs installed in conformance with local permits and [Insert Co-Permittee Name] Stormwater Ordinance, i.e. perimeter controls, storm drain inlet protection, etc?
   - ☐ BMPs in place for the various subcontractor trades, i.e. PCC cleanout, material storage, waste storage, etc?
   - ☐ Project site BMPs effective?
   - ☐ Effective combination of erosion and sediment controls on site?

4. EROSION CONTROL:
   - ☐ No evidence of erosion present on manufactured and/or denuded slopes?
   - ☐ No evidence of rill or gully erosion present?
   - ☐ Erosion control BMPs installed in conformance with local permits and [Insert Co-Permittee Name] Stormwater Ordinance?

5. SEDIMENT CONTROL:
   - ☐ No evidence of sediment outside the permit area or present on the site in an area that requires protection?
   - ☐ No evidence of construction site sediment on City-maintained streets, downstream storm drains and/or drainage ways?
   - ☐ No evidence of "Track-out" observed on surface streets adjoining the project site?
   - ☐ Sediment controls installed and maintained in conformance with local permits and [Insert Co-Permittee Name] Stormwater Ordinance?

6. ILLEGAL/ILLICIT DISCHARGES:
   - ☐ No evidence that structural controls are breached or failed under storm events of minor intensity?
   - ☐ No evidence that active non-storm water discharges or potential illicit connections or illegal discharges to the streets or storm drains?

VIOLATIONS:	
☐ Verbal warning:	☐ Written warning: (attach copy)
☐ NOV: (attach copy)	☐ Stop Work: (attach copy)
☐ Other:	

ADDITIONAL:

RECEIVED BY:	NAME/SITE CONTACT (PRINT):	24-HOUR PHONE:
DATE:	VIOLATIONS: ☐ CORRECTED ☐ NOT CORRECTED	PAGE _____ OF _____
REGIONAL BOARD NOTFICIATION: ☐ YES ☐ NO	DATE: TIME:	CONTACT:

County of Riverside
Environmental Compliance Division
NPDES Post Construction WQMP Inspection Form
4080 Lemon Street, 8th Floor, Riverside, CA 92501

Inspection Type:	**Blank**	**Inspection Status: Blank**
Project Name:		**Inspection Date:**
Physical Address (BMP Location): **City:**		**ECI: J.Wagner**
Thomas Bros No.:		**Inspection Area: Blank**
APN Number:		**Longitude/Latitude No.:**
Date Constructed:		**Priority Type: Blank**
Owner/Developer: **(Responsible Party)**		**Owner/Developer Address:** ,
Owner Name:		**Owner Phone Number:**
Funding Source: **(O & M)**		**Funding Source Address:** ,
Contact Name:		**Phone Number:**
E-Mail Address:		**WQMP Recorded with County: Blank**
Weather:	**Blank**	**Watershed (Note 7, 8, or 9): Blank**
Vector Conditions:	**Blank**	**Receiving Water: Blank**

Vector Conditions: Control measures necessary to effectively minimize the creation of Nuisance or Pollution associated with vectors, such as mosquitoes, rodents, flies, etc.

TREATMENT CONTROL BMPs

Treatment Control BMPs Checklist: (the site contains these Treatment Controls):

☐ Infiltration Basin ☐ Trenches/Porous Pavement) ☐ Vegetated Swale/Filter Strips ☐ Water Quality Inlets

☐ Detention Basins ☐ Wet Ponds or Wetlands ☐ Sand Filter or Filtration

☐ Hydrodynamic Separator Systems ☐ Manufactured/Proprietary Devices

☐ Other (Ex. Rain Garden, Green Roofs, Cisterns)

Inspection Frequency: Infiltration Basin: Semi-annually, before and after rain season
Vegetated Swale: Semi-annually during dry seasons and prior to and following an expected storm event
Manufactured/Proprietary Devices: Per the Manufacturers Inspection frequency

Maintenance Frequency: Manufactured/Proprietary Devices: Per the Manufacturers Maintenance frequency

Observations, Effectiveness, Correction(s) and/or Comment(s):

Information provided in inspection notes are field notes and are subject to change upon quality review. Any questions or comments please contact us at NPDES@RCTLMA.ORG.

QC By/Date:

County of Riverside
Environmental Compliance Division
NPDES Post Construction WQMP Inspection Form

4080 Lemon Street, 8th Floor, Riverside, CA 92501

SOURCE CONTROL BMPs

Non-Structural Source Control BMPs

Is there a Property Owners, Tenants, Occupants, or Employees Training Log? ☐ **Yes** ☐ **No** ☐ **N/A**
(*If No, then provide a Tenant Education Log Sheet or an Employee Training Log)*
Inspection Frequency: Annually in September, before rainy season
Maintenance Frequency: N/A

Observations, Effectiveness, Correction(s) and/or Comment(s):

Are there activity restrictions? If yes, then list. ☐ **Yes** ☐ **No** ☐ **N/A**
Inspection Frequency: Annually in September, before rainy season
Maintenance Frequency: N/A

Observations, Effectiveness, Correction(s) and/or Comment(s):

Are there Irrigation System and Landscape Maintenance BMPs in place? ☐ **Yes** ☐ **No** ☐ **N/A**
Inspection Frequency: Monthly
Maintenance Frequency: As needed based on Maintenance Indicators

Observations, Effectiveness, Correction(s) and/or Comment(s):

Are there Common Area Litter Control BMPs in place? ☐ **Yes** ☐ **No** ☐ **N/A**
Inspection Frequency: Daily or As Needed
Maintenance Frequency: Routine Litter Pick-Up

Observations, Effectiveness, Correction(s) and/or Comment(s):

Are Street Sweeping Private Streets and Parking Lot BMPs in place? ☐ **Yes** ☐ **No** ☐ **N/A**
Inspection Frequency: N/A
Maintenance Frequency: Bi-Monthly

Observations, Effectiveness, Correction(s) and/or Comment(s):

Are there Drainage Facility Inspection and Maintenance BMPs in place? ☐ **Yes** ☐ **No** ☐ **N/A**
Inspection Frequency: Before and after the rainy season, Bi-Weekly during Dry Months
Maintenance Frequency: As needed based on Maintenance Indicators

Observations, Effectiveness, Correction(s) and/or Comment(s):

Information provided in inspection notes are field notes and are subject to change upon quality review. Any questions or comments please contact us at NPDES@RCTLMA.ORG.

QC By/Date:

County of Riverside
Environmental Compliance Division
NPDES Post Construction WQMP Inspection Form
4080 Lemon Street, 8th Floor, Riverside, CA 92501

Structural Source Control BMPs

MS4 Stenciling and Signage.
Does this BMP need to be repaired or have other maintenance performed? ☐ **Yes** ☐ **No** ☐ **N/A**
Inspection Frequency: Annually in September, before rainy season
Maintenance Frequency: As needed based on Maintenance Indicators

Observations, Effectiveness, Correction(s) and/or Comment(s):

Landscape and Irrigation System Design.
Does this BMP need to be repaired or have other maintenance performed? ☐ **Yes** ☐ **No** ☐ **N/A**
Inspection Frequency: Monthly
Maintenance Frequency: As needed based on Maintenance Indicators

Observations, Effectiveness, Correction(s) and/or Comment(s):

Protect Slopes and Channels.
Does this BMP need to be repaired or have other maintenance performed? ☐ **Yes** ☐ **No** ☐ **N/A**
Inspection Frequency: Annually in September, before rainy season
Maintenance Frequency: As needed, planting of vegetation in eroded areas

Observations, Effectiveness, Correction(s) and/or Comment(s):

Trash Storage Areas.
Does this BMP need to be repaired or have other maintenance performed? ☐ **Yes** ☐ **No** ☐ **N/A**
Inspection Frequency: Weekly or As Needed
Maintenance Frequency: As needed based on Maintenance Indicators

Observations, Effectiveness, Correction(s) and/or Comment(s):

Property Design:
Do these BMPs need to be repaired or have other maintenance performed? ☐ **Yes** ☐ **No** ☐ **N/A**

☐ Fueling Areas ☐ Air/Water Supply Area Drainage ☐ Loading Docks ☐ Maintenance Bay

☐ Vehicle/ Equipment Wash Areas ☐ Outdoor Material Storage Areas ☐ Outdoor Work Areas or Processing Areas

Observations, Effectiveness, Correction(s) and/or Comment(s):

Information provided in inspection notes are field notes and are subject to change upon quality review. Any questions or comments please contact us at NPDES@RCTLMA.ORG.

QC By/Date:

County of Riverside
Environmental Compliance Division
NPDES Post Construction WQMP Inspection Form

4080 Lemon Street, 8th Floor, Riverside, CA 92501

Are all BMPs constructed and are operating in compliance with all specifications, plans, permits, ordinances, and MS4 Permits? ☐ **Yes** ☐ **No** ☐ **N/A**

Observations, Effectiveness, Correction(s) and/or Comment(s):

Compliance Status

☐ In Compliance ☐ Non-Compliance ☐ Gross Non-Compliance

☐ Verbal ☐ Written ☐ NOV ☐ Stop Work Order ☐ RWQCB Notified

☐ Vector Control Agency Notified Follow-Up Date (if needed): _____

☐ Inspection Report left at Facility

**This inspection is based solely upon the observations made by the inspector at the time of the inspection.*

Additional Comments*: If Follow-Frequency box checked note follow-up date.*

Information provided in inspection notes are field notes and are subject to change upon quality review. Any questions or comments please contact us at NPDES@RCTLMA.ORG.

QC By/Date:

Appendix F – Industrial and Commercial Sources

F.1 Industrial and Commercial Source Inspection Form

County of Riverside
Environmental Compliance Division
NPDES Industrial / Commercial Inspection Form
4080 Lemon Street, 2nd Floor, Riverside, CA 92501

☐ Initial	☒ Routine	☒ Follow-Up	☒ Complaint

Facility Name:		**Date:**	
Site Address:		**ECI: Blank**	
Mobile Based Business:	**No**	**SIC Code:**	
Follow up required:	**Blank Blank**	**Revised SIC Code:**	
APN:		**Facility Type: Industrial**	
Business License Number:		**Priority:High**	
WDID Number: N/A		**Priority Re-Assigned:High**	
BIC Number:		**Watershed (Note 7, 8, or 9): 8**	
Contact Person:		**Site Description:**	
Phone Number:		**E-Mail Address:**	
Mailing Address:			

Pollutants of Concern:	**Oil & Grease** ☐	**Heavy Metals** ☐	**Trash/Debris** ☐	**Sediment** ☐
	Bacteria/Virus ☐	**Nutrients** ☐	**Pesticides** ☐	**Organics** ☐

CA General Industrial Permit Requirements: (Based on SIC Code)

Yes	No	N/A	
☒	☐	☐	A) Is the facility subject to CA Statewide General Industrial Permit requirements?
			1) If yes, is the facility: ☐Mandatory or ☒Conditional
			2) If no, does the site have a "No Exposure Certification"? ☐Yes or ☐No
☐	☐	☐	B) Does the facility maintain a SWPPP?
☐	☐	☐	C) Are all BMPs implemented per the SWPPP?
☐	☐	☐	D) Does the facility maintain a Storm Water Monitoring Plan?
			1) Was there a qualifying storm event last rainy season? ☐Yes or ☐No

Best Management Practices Assessment

Are BMPs implemented in outdoor storage area(s) to prevent storm water contamination? ☐**Yes** ☐**No** ☐**N/A**

If "No", list materials stored outdoors and provide corrective actions needed.

Correction(s)/Comment(s):

Are BMPs implemented in outdoor activity process areas? ☐**Yes** ☐**No** ☐**N/A**

If "No", explain types of activities and provide corrective actions needed.

Correction(s)/Comment(s):

Are facility vehicle and equipment operations (washing, maintenance, etc.) BMPs implemented to eliminate exposure of these activities to storm water? ☐**Yes** ☐**No** ☐**N/A**

If "No", list those activities with concerns and provide corrective actions needed.

Correction(s)/Comment(s):

Information provided in inspection notes are field notes and are subject to change upon quality review. Any questions or comments please E-mail us at NPDES@RCTLMA.ORG.

QC By/Date:

County of Riverside
Environmental Compliance Division
NPDES Industrial / Commercial Inspection Form
4080 Lemon Street, 2nd Floor, Riverside, CA 92501

Are the contents of waste receptacles protected from storm water contact? ☐Yes ☐No ☐N/A
If "No", list location(s), concern(s), and corrective action(s) needed.

Correction(s)/Comment(s):

Are facility flow lines/inlets free from evidence of discharges? ☐Yes ☐No ☐N/A
(Soil, landscape waste, stains, etc.)
If "No", list location(s), concern(s), and corrective action(s) needed.

Correction(s)/Comment(s):

Are spill prevention BMPs provided and control measures implemented on site? ☐Yes ☐No ☐N/A
If "No", comment on containment level, location(s), and corrective action(s) needed.

Correction(s)/Comment(s):

Are adequate erosion prevention BMPs implemented on site? ☐Yes ☐No ☐N/A
If "No", list locations(s), concern(s), and corrective action(s) needed.

Correction(s)/Comment(s):

Note additional concerns/corrective actions required?
Assign time frame if corrections are required.

Correction(s)/Comment(s):

Correction(s)/Comment(s): Based on SIC Code , if materials, equipment, and/or activities outdoors are in contact with storm water, the facility is immediately required to obtain coverage under the General Industrial Activities Storm water Permit. Information on the State Water Resources Control Boards General Industrial Activity Storm Water General Permit can be found at http://www.waterboards.ca.gov/water_issues/programs/stormwater/industrial.shtml**.** File a NOI with the State, and develop a Storm Water Pollution Prevention Plan (SWPPP), or the facility may remove all material, equipment, and/or activities from contact with storm water to avoid obtaining coverage under the GIASP. Refer to www.casqa.org (BMP Handbooks – Industrial and Commercial) for appropriate BMPs that need to be implemented at your facility. Please provide your Waste Discharge Identification Number (WDID), or proof , that you have moved all materials, equipment, and/or activities indoors with photographic evidence via E-Mail to NPDES@rctlma.org within 30 days.

Information provided in inspection notes are field notes and are subject to change upon quality review. Any questions or comments please E-mail us at NPDES@RCTLMA.ORG.

QC By/Date:

County of Riverside
Environmental Compliance Division
NPDES Industrial / Commercial Inspection Form

4080 Lemon Street, 2nd Floor, Riverside, CA 92501

Compliance Status

☐ No Violation Observed/ Satisfactory ☐ Correction Issued

☐ Verbal ☐ Written ☐ NOV ☐ Cease and Desist ☐ RWQCB Notified

☐ Inspection report provided at the time of inspection

**This inspection is based solely upon the observations made by the inspector at the time of the inspection.*

Information provided in inspection notes are field notes and are subject to change upon quality review. Any questions or comments please E-mail us at NPDES@RCTLMA.ORG.

QC By/Date:

Appendix G – Retrofit Study

(available at http://www.floodcontrol.co.riverside.ca.us/)

Appendix H - TLMA Addenda and Maps

SANTA MARGARITA RIVER

RCTD MAINTENANCE YARDS & MATERIAL SITES

PERRIS YARD
JUNIPER FLATS
HEMET YARD
LITTLE LAKE
IDYLLWILD YARD
BUNDY CANYON
MURRIETA YARD
EAST BENTON
ANZA YARD
TERWILLIGER

SAN JACINTO RIVER
San Jacinto River
Stone Creek
Logan Creek
Tahquitz Creek
Strawberry Creek
Hurkey Creek
Bautista Wash
Bautista Creek
Salt Creek Channel
Warm Springs Creek
CANYON LAKE
LAKE ELSINORE
HEMET RESERVOIR
Tucalota Creek
Cole Creek
Adobe Creek
Logan Canyon
Empire Creek
Santa Gertrudis Creek
Murrieta Creek
Temecula Creek
Pechanga Creek
Sandia Creek
De Luz Creek
Santa Margarita River
Rainbow Creek

215 74 79 243 371 15

RCTD Facilities
1 Material Sites
2 Maintenance Yards

NPDES Drainage
Receiving Waters Lines
Receiving Waters Lakes

NPDES Watersheds
Santa Ana River
Santa Margarita River
Whitewater River

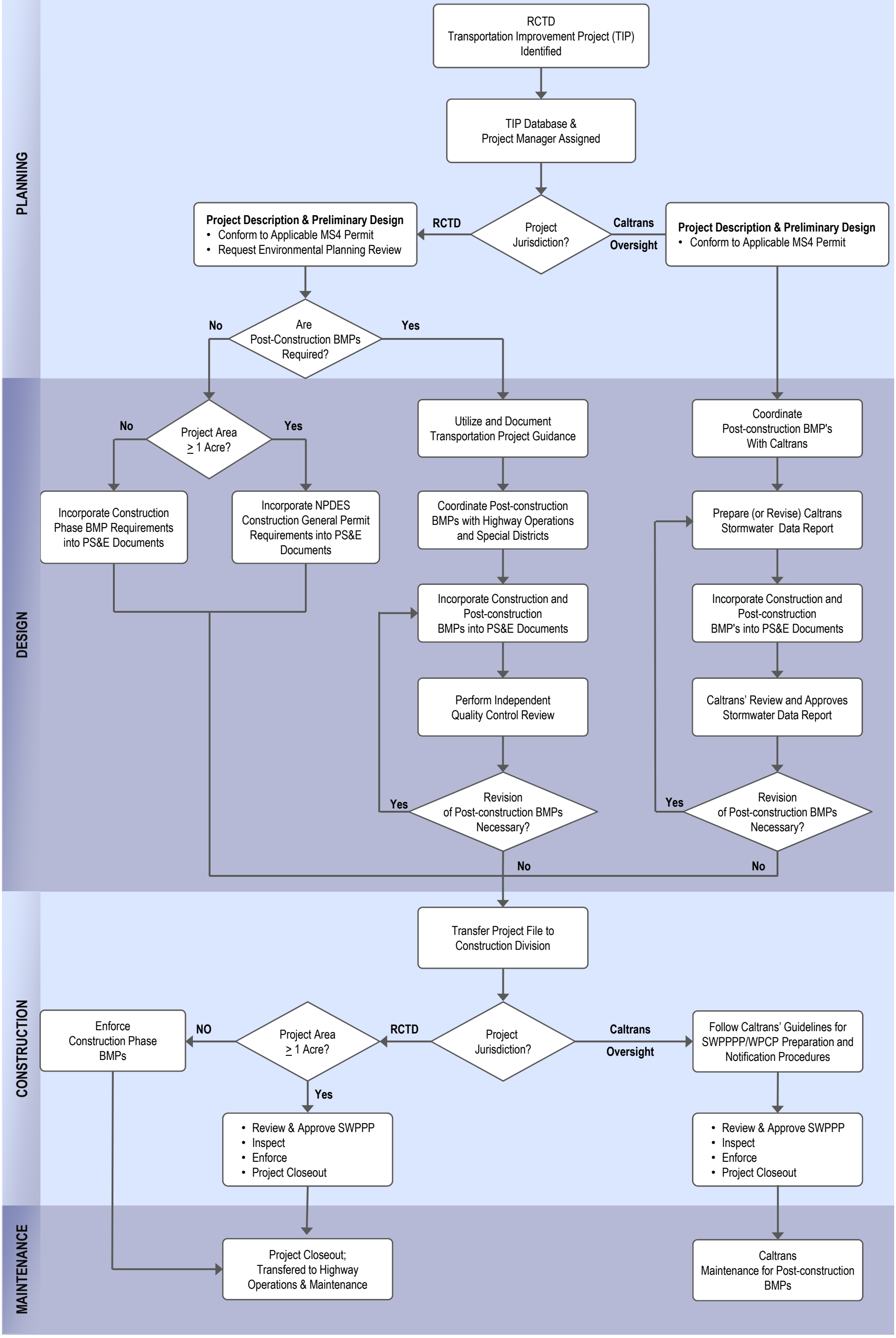
Roads
Cities

0 8,500 17,000 34,000
Feet

N
W E
S

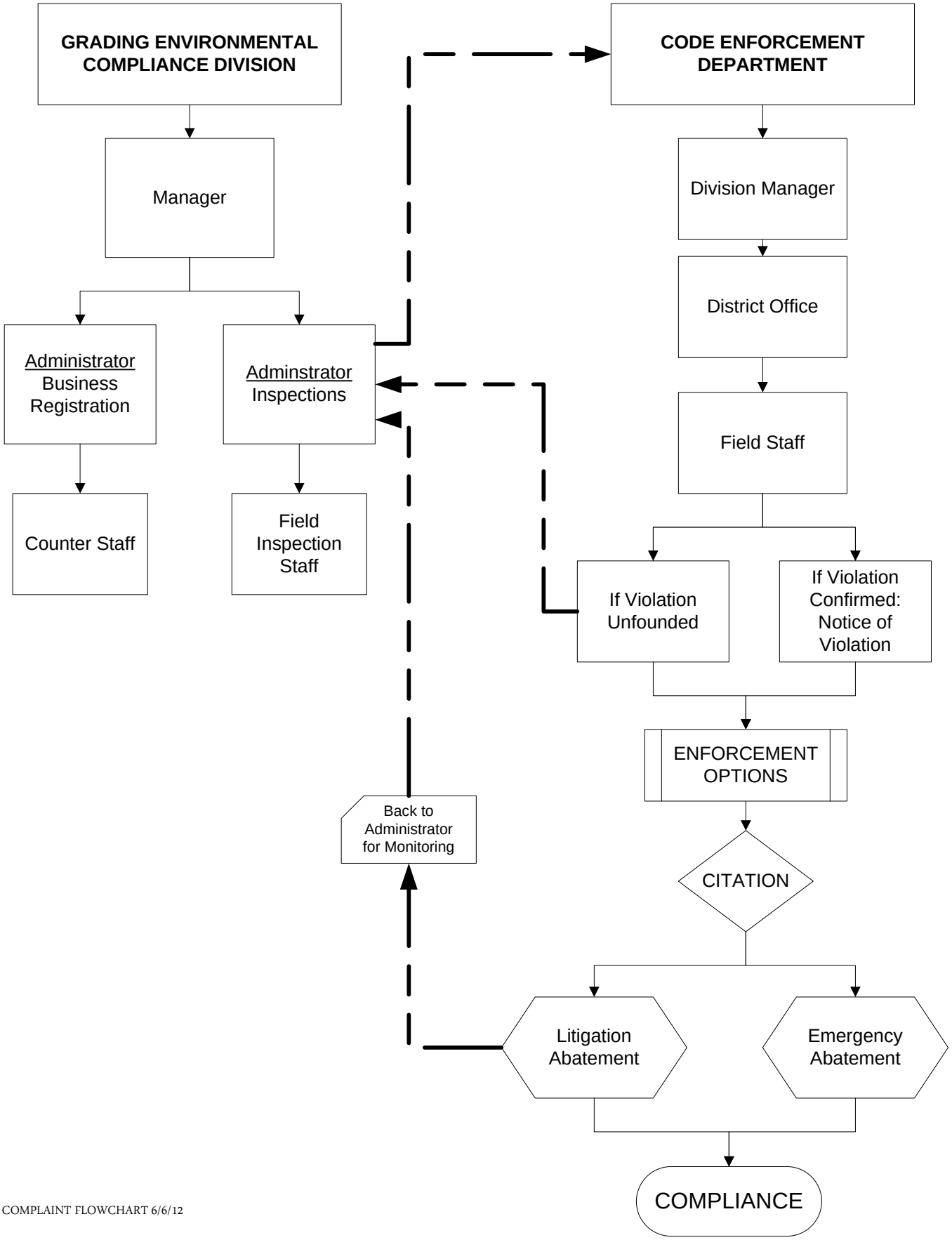
RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT
- NPDES COMPLIANCE PROCESS

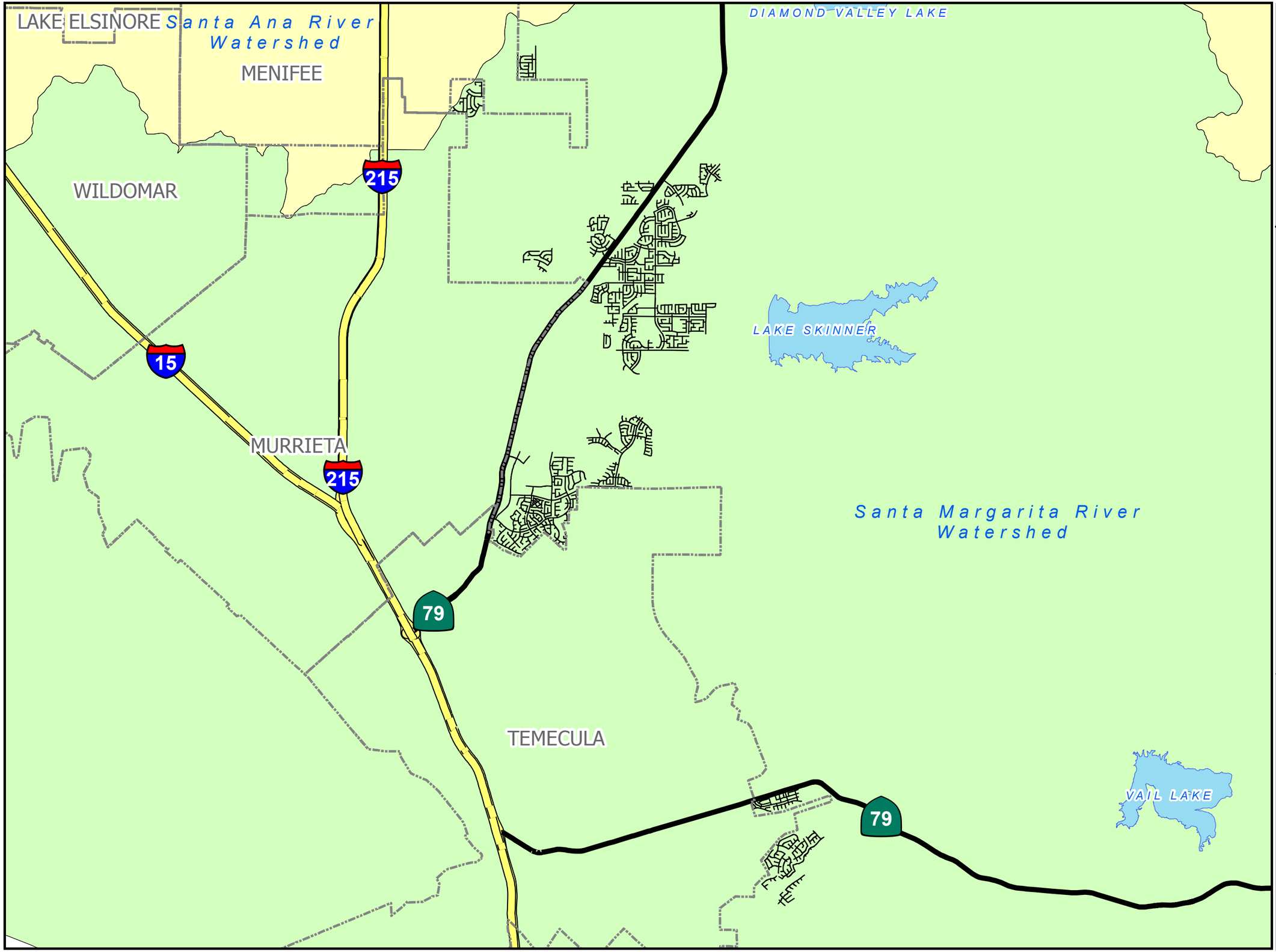
June 2012



NPDES COMPLAINTS

DRAFT





CSA152 ROADS
SANTA MARGARITA RIVER WATERSHED

- CSA 152 Roads Unincorporated Areas
- Santa Ana River Watershed
- Santa Margarita River Watershed
- City Boundary

0 3,400 6,800 13,600

Feet

N
W E
S