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RIVERSIDE COUNTY
WATERSHED PROTECTION

RIVERSIDE COUNTY
DRAINAGE AREA MANAGEMENT PLAN

SANTA ANA REGION

JUNE 30, 2017

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P8/161170

1.0 EXECUTIVE SUMMARY

The Drainage Area Management Plan (DAMP) for the Santa Ana Region (SAR) was updated in July 2011 to address the requirements of the 2010 SAR municipal separate storm sewer system (MS4) Permit (Order No. R8-2010-0033, NPDES No. CAS 618033 issued to the Riverside County Permittees by the Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board), and incorporates programs developed since 1993. The DAMP serves as a model to document the SAR MS4 Permit compliance programs and to provide guidance to the Permittees in the development and implementation of their Local Implementation Plans (LIPs) which contain the enforceable elements of the Permittee compliance programs.

During the FY 2012-2013, the DAMP was updated to include a status update on the Watershed Action Plan (WAP), and the Santa Ana Regional Board adoption of Order No. R8-2013-0024 amending Order No. R8-2010-0033, NPDES No. CAS 618033 to add the newly incorporated Cities of Eastvale and Jurupa Valley to the list of Permittees. The Order also removed two Cities, Murrieta and Wildomar, from the list of Permittees, and added all portions of the City of Menifee under the Order, including those portions that are under the jurisdiction of the San Diego Regional Board. In accordance with the San Diego MS4 Permit, Order No. RS-2010-0016, the Cities of Murrieta and Wildomar are required to comply with the applicable provisions of the Santa Ana MS4 Permit, Order RB-2010-0033, to implement the nutrient TMDLs pertaining to Lake Elsinore and Canyon Lake. Similarly, Order RB-2010-0033 requires the City of Menifee to comply with any TMDLs and associated MS4 Permit requirements issued by the San Diego Regional Board. Also added to the DAMP as appendices were the Regional Treatment Control Approval Guidance, approved LIP Template, and the Effectiveness Assessment Guidance.

In January 2014, the DAMP was updated to include a status on the changes made to the Implementation Agreement and the approval of the CNRP by the Santa Ana Regional Board on July 19, 2013. Subsequent to submittal of the revised DAMP to the Santa Ana Regional Board, additional revisions will be made to incorporate compliance elements as they are developed.

In December 2014, the DAMP was updated to include a description about how the Permittees haven taken responsibility for conducting stormwater compliance surveys at targeted commercial and industrial facilities within their respective jurisdictions.

In June 2017, the DAMP was updated to include the approval of the Watershed Action Plan and its supporting documents.

A glossary of terms is provided as Appendix A.

2.0 INTRODUCTION TO THE DRAINAGE AREA MANAGEMENT PLAN

The DAMP is a programmatic document developed by the Permittees and approved by the Executive Officer of the Santa Ana Regional Board. It is the principle document that translates the MS4 Permit requirements into Permittee programs and implementation plans. The DAMP is used by the Permittees in their development of the LIPs[1], individual ordinances, plans, policies and procedures to manage Urban Runoff.

The initial DAMP was prepared in February 1993 (subsequently referred to as 1993 DAMP) in compliance with the requirements of the MS4 Permit issued in 1990 by the Santa Ana Regional Board. This DAMP outlines the major programs and policies that the Permittees individually and/or collectively develop and implement to manage Urban Runoff in compliance with the MS4 Permit issued by the Santa Ana Regional Board in 2010. Additional program elements were also developed to address specific compliance needs. "Supplement A" to the DAMP was developed in April 1996 to provide guidance in the selection and design of stormwater quality controls for development projects. The Municipal Facilities Strategy and Enforcement Compliance Strategy were developed as required by the 1998 MS4 Permit issued by the Santa Ana Regional Board. These program elements have been incorporated into the DAMP.

The District has been designated Principal Permittee in the 2010 SAR MS4 Permit and the remaining 15 municipalities, including the County, are referred to as Co-Permittees. As Principal Permittee, the District manages the overall Urban Runoff compliance program on behalf of the Co-Permittees. The roles of the Principal Permittee and the Co-Permittees are described in the Implementation Agreement developed for the SAR and in the 2010 SAR MS4 Permit.

The area of Riverside County covered by the MS4 Permit issued by the Santa Ana Regional Board is referred to as the Santa Ana Region (SAR). The MS4 Permittees covered by this DAMP are:

Riverside County Flood Control and Water Conservation District (District)
County of Riverside
City of Beaumont
City of Calimesa
City of Canyon Lake
City of Corona
City of Eastvale *
City of Hemet *added in 2010 SAR MS4 Permit Order No. R8-2013-0024 Amendment to Order No. R8-2010-0033, NPDES No. CAS618033
City of Jurupa Valley*
City of Lake Elsinore
City of Menifee
City of Moreno Valley
City of Norco
City of Perris
City of Riverside
City of San Jacinto

[1] Each Permittee in the Santa Ana Region developed a LIP within 12 months of approval of the LIP Template by the Santa Ana Regional Board.

2.1 PROGRAM OVERVIEW

The DAMP serves as the primary compliance document that describes the program elements necessary to comply with the 2010 SAR MS4 Permit. The program elements and associated DAMP sections are identified in Figure 2-1.

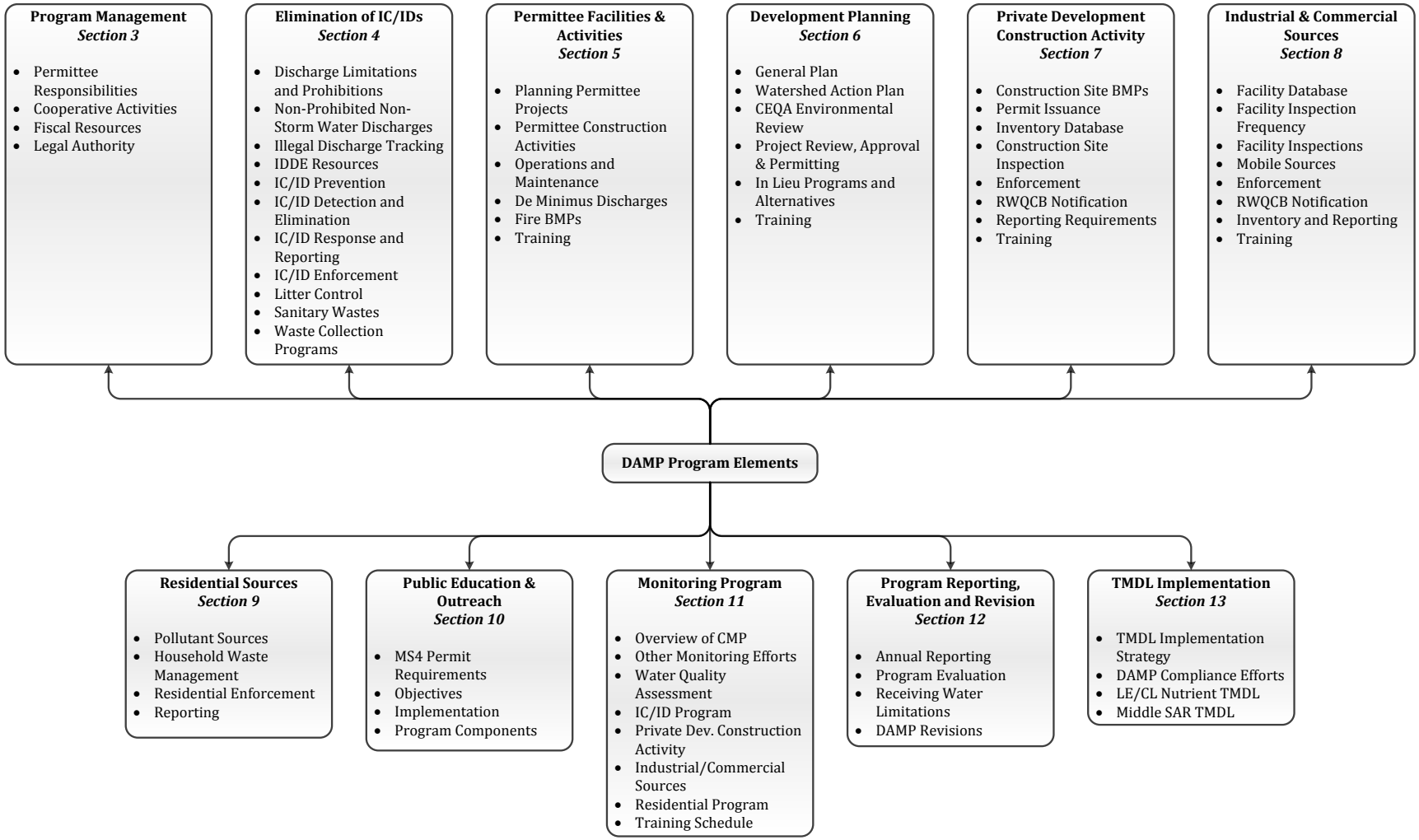
In addition to the descriptions of program elements contained within the DAMP, each Permittee maintains documentation of their internal procedures for implementation of the program elements described in the DAMP. This documentation is consolidated in the LIPs and includes the following information:

- Legal counsel certification of the Permittee's authority to implement the 2010 SAR MS4 Permit requirements.
- Copy of the MS4 Permittee's stormwater ordinance, grading/erosion ordinance and litter/trash control ordinance.
- Illicit Connection/Illegal Discharge enforcement and compliance prioritization and response program.
- Policy and Procedures for planning and design of MS4 Permittee projects subject to the Water Quality Management Plan (WQMP).
- Operation and maintenance schedule for the MS4.
- CEQA project application forms and initial study checklists.
- Procedure for implementing development review, approval and permitting.
- Construction Site inspection program, database and inspection checklist.
- Industrial/Commercial Facility inspection program, database and inspection checklist.
- Residential Program

Each Permittee reviews these documents and updates them as necessary to keep up with changes within the Permittees' jurisdiction and with changing local, state and federal regulations. These programs will remain, however, in compliance with the 2010 SAR MS4 Permit and the programs outlined in this DAMP.

In addition to the descriptions of program elements contained within the DAMP, each Permittee maintains a LIP that documents their internal procedures for implementation of the program elements described in the DAMP. The Permittees may choose to implement programs described in the DAMP or to implement alternative programs. However, the alternate programs must be in conformance with the requirements of the 2010 SAR MS4 Permit.

Figure 2-1. Program Elements of DAMP



2.2 REGULATORY FRAMEWORK

2.2.1 CWA Section 402(p) – NPDES Permitting for Stormwater Discharges

The Urban Runoff Pollution control effort, of which this DAMP is part, is the result of over thirty years of legislative effort beginning with the Federal Water Pollution Control Act, which, as amended in 1972, is now referred to as the Clean Water Act (CWA). The CWA authorized that the discharge of Pollutants to Waters of the United States from a point source is effectively prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In 1987 Congress amended portions of the CWA and included Section 402(p), which set requirements for permitting stormwater discharges. Section 402(p) of the CWA required that the United States Environmental Protection Agency (USEPA) establish regulations setting forth a program of NPDES applications and corresponding permits for stormwater discharges associated with industrial activities and for stormwater discharges from MS4s. Section 402(p) of the CWA also requires that MS4 NPDES permits include:

- A requirement to effectively prohibit non-stormwater discharges into the MS4; and
- Controls to reduce the Pollutants in stormwater discharges to the maximum extent practicable (MEP), including management practices, control techniques and system, design and engineering methods and such other provisions as the Administrator or the State determines appropriate for the control of such Pollutants.

USEPA's Final Rule for NPDES Permit Application Regulations for stormwater discharges became effective December 17, 1990 and is often referred to as the "Phase I stormwater regulations." The Phase I stormwater regulations are administered nationwide through the USEPA's NPDES program. California is authorized to issue NPDES permits under Section 402 of the CWA per agreement with the USEPA. The Phase I stormwater regulations require that the management program for an MS4 include a comprehensive planning process which involves public participation and necessary intergovernmental coordination to reduce the discharge of Pollutants to the MEP using management practices, control techniques and systems, design and engineering methods, and such other provisions which are appropriate. The Phase I stormwater regulations also specify who is covered; prescribes a variety of required information-gathering, planning, and reporting activities; and sets forth a schedule for compliance. The Phase I stormwater regulations also set forth requirements for specific industrial activities, including construction.

2.2.2 CWA Section 303(d) – Impaired Waterbodies

Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop lists of Impaired Waterbodies and to update those lists every other year. These lists of Impaired Waterbodies are typically referred to as the "303(d) List". In developing the 303(d) List "all existing and readily available water quality-related information" must be utilized. The listed waterbodies are considered Impaired because they do not meet Water Quality Standards necessary to maintain designated Beneficial Uses, even after Point Sources of Pollution have installed the minimum required levels of Pollution control technology. The current 303(d) List can be viewed or downloaded from the following website:

http://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/docs/303d/2010_303d.pdf.

A Total Maximum Daily Load (TMDL) specifies the maximum amount of a Pollutant that a water body can receive and still meet Water Quality Standards, and allocates Pollutant loadings among Point and Non-point Pollutant Sources. The CWA requires that priority rankings be established for Impaired waters [Receiving Waters on the 303(d) List] and that TMDLs be developed taking into account the severity of Pollution and the Beneficial Uses of the water (fishing, swimming, municipal water supply, etc.).

2.2.3 Santa Ana Region Program Background

In response to the Phase I stormwater regulations, the Permittees obtained an "Early" MS4 Permit[2] from the Santa Ana Regional Board (NPDES No. CA 8000192, Order No.90-104) on July 13, 1990, for Urban Runoff from areas in Riverside County within the SAR. The SAR MS4 Permit was renewed in 1996 with the following additional requirements:

- Develop an "Enforcement/Compliance Strategy" (E/CS) that addresses compliance with regard to Industrial and Commercial Facilities as well as Construction Sites;
- Assess Permittee activities and facilities for potential impacts to Urban Runoff quality and then develop a "Municipal Facility Strategy" (MFS) based on the assessment;
- Identify post-construction source Pollutant Prevention and treatment measures that could be incorporated into development projects (New Development Guidelines, Supplement A to the 1993 DAMP).

The 1996 MS4 Permit also explicitly recognized that there are areas of Riverside County within the jurisdictional area of the Santa Ana Regional Board that are not:

- Subject to the Phase I stormwater regulations;
- Under the jurisdiction of the State of California; nor
- Under the jurisdiction of the Permittees.

Such areas or entities include:

- Federal and state lands, including, but not limited to, military bases, national forests, hospitals, public schools, colleges and universities, and highways;
- Utilities and special districts;
- Native American tribal lands;
- Non-urbanized areas;
- Point and Non-Point Source discharges otherwise permitted by the Regional Board; and
- Agricultural lands.

[2] Some municipalities applied for and received stormwater discharge permits prior to the USEPA promulgation of the "Final Rule for NPDES Permit Application for Stormwater Discharges." Such permits have been referred to as "Early" permits.

On October 25, 2002, the Santa Ana Regional Board adopted Order No. R8-2002-0011, NPDES No. CAS 618033. On January 29, 2010, the Santa Ana Regional Board adopted Order No. R8-2010-0033, NPDES No. CAS 618033. The areas excluded from coverage under the 1996 SAR MS4 permit were also excluded from coverage under the 2002 and 2010 SAR MS4 Permits. Figure 2-2 shows the SAR. A copy of the 2010 SAR MS4 Permit is included as Appendix B.

As with the prior SAR MS4 permits, the 2010 SAR MS4 Permit regulates discharges of Urban Runoff from MS4s within Riverside County under the jurisdiction of and/or maintenance responsibility of the Permittees. Further, the 2010 SAR MS4 Permit is intended to regulate the discharge of "Pollutants" in Urban Runoff from Anthropogenic sources under the control of the Permittees, and is not intended to address background or naturally occurring Pollutants or flows. The 2010 SAR MS4 Permit required that the Permittees review and update their programs consistent with the current MEP standard as specified in the Permit.

On June 7, 2013, the Santa Ana Regional Board adopted Order No. R8-2013-0024 Amendment to Order No. R8-2010-0033, NPDES No. CAS618033 which defines the Santa Ana and San Diego Regional Boards' agreement to a jurisdictional exchange to reduce the complexity of MS4 Permit administration and compliance. Under this agreement, the Cities of Wildomar and Murrieta, which are primarily under the jurisdiction of the San Diego Regional Board, are required to comply with the 2010 SMR MS4 Permit and the City of Menifee, which is primarily under the jurisdiction of the Santa Ana Regional Board, is required to comply with the 2010 SAR MS4 Permit. Under this agreement, all non-stormwater discharge requirements will be administered by the Santa Ana and San Diego Regional Boards based on Regional Board jurisdiction. The amended Order also includes the recently incorporated Cities of Eastvale and Jurupa Valley as Permittees.

Figure 2-2

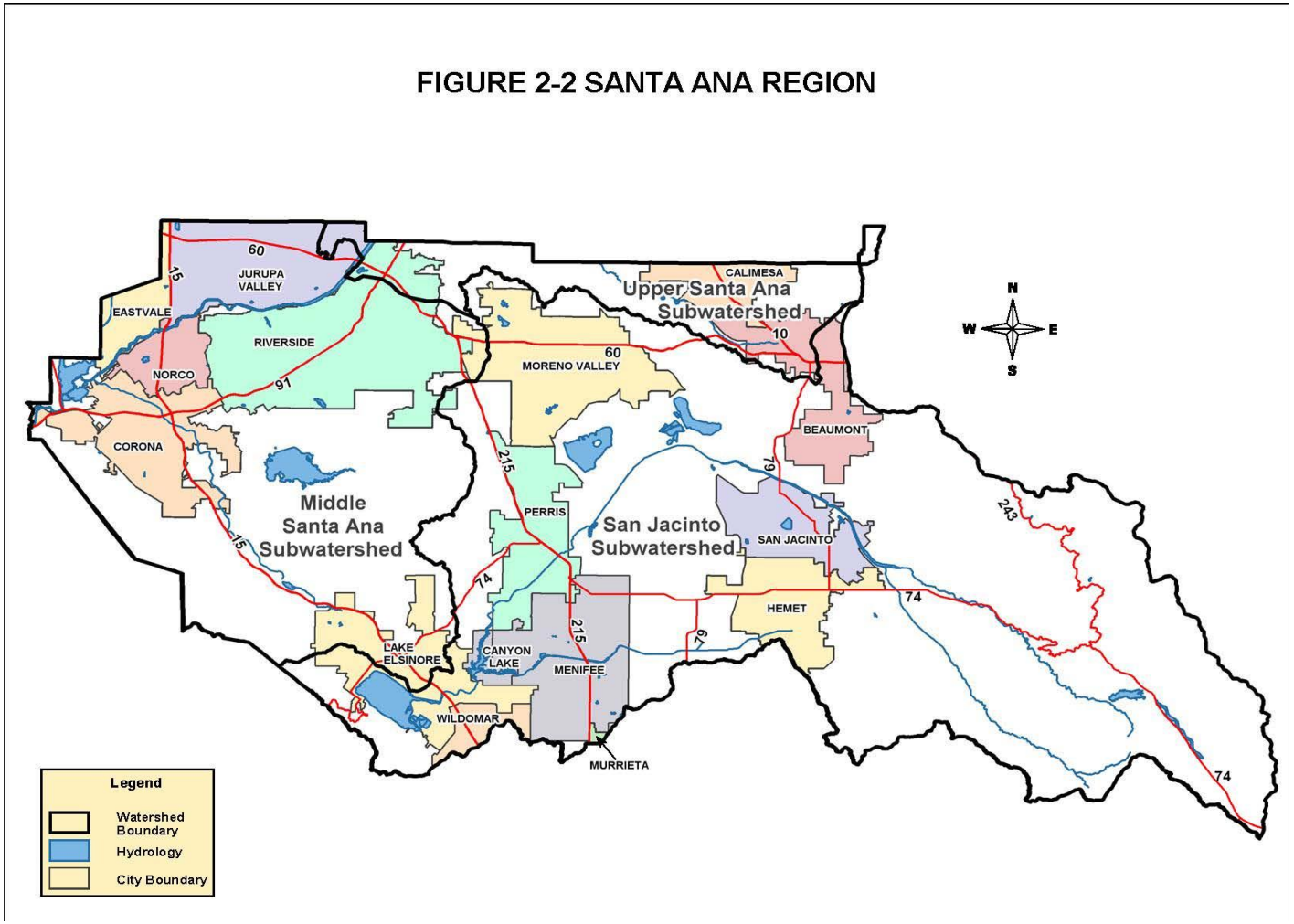


FIGURE 2-2 SANTA ANA REGION
JURUPA VALLEY
EASTVALE
RIVERSIDE
NORCO
CORONA
CALIMESA
Upper Santa Ana Subwatershed
MORENO VALLEY
BEAUMONT
Middle Santa Ana Subwatershed
PERRIS
San Jacinto Subwatershed
SAN JACINTO
HEMET
LAKE ELSINORE
CANYON LAKE
MENIFEE
WILDOMAR
MURRIETA
60
15
91
215
79
10
74
243
N
W
E
S
Legend
Watershed Boundary
Hydrology
City Boundary

2.3 SANTA ANA REGION WATERSHED BACKGROUND

2.3.1 Permit Area Land Use and Population Characteristics

Note: A portion of the fluctuations in land use and population characteristics from previous estimates reflects changes in the available data and tools used for data analysis. The data presented here are intended to represent our best estimates of land use and population.

The SAR is located in the northwestern corner of Riverside County. The SAR is bounded on the south by the Santa Margarita watershed, on the east by the Whitewater watershed, on the southwest by Orange County and on the northwest by San Bernardino County. The SAR subwatershed encompasses 1,603 square miles (22% of the 7,300 square miles within Riverside County). The Riverside County Projections in 2010 estimated that the population of Riverside County was 2,153,186. About 1,256,401 of those persons (58% of the Riverside County population) live within the SAR - approximately 1,020,102 persons residing within the 15 cities[3] and an additional 236,299 persons residing in the unincorporated area. The areas of the most significant projected growth in population and housing units during the term of the 2010 SAR MS4 Permit in the SAR include the Cities of Beaumont, Calimesa, and San Jacinto. This trend is expected to continue between 2015 and 2020.

Table 2-1. Santa Ana Region Population & Housing Projections 2010[a]

	Population / Housing Units		
Jurisdiction	**2010**	**2015**	**2020**
Beaumont	34,483 / 12,884	46,712 / 17,267	56,532 / 20,787
Calimesa	8,019 / 3,641	11,605 / 5,300	14,858 / 6,804
Canyon Lake	11,152 / 4,458	11,380 / 4,549	11,609 / 4,641
Corona	149,622 / 46,179	153,335 / 47,368	155,819 / 48,162
Eastvale	42,000 / 14,000	43,260 / 14,420	47,153 / 15,718
Hemet	78,053 / 38,032	92,442 / 45,313	103,084 / 50,507
Jurupa Valley	89,000 / 24,722	91,670 / 25,464	99,920 / 27,756
Lake Elsinore	53,471 / 17,443	62,724 / 20,833	71,755 / 24,141

[3] Population figures for the Cities of Murrieta and Wildomar have been omitted due to Regional Board jurisdictional agreement.

Menifee	71,012 / 30,787	81,357 / 35,226	93,087 / 40,259
Moreno Valley	188,636 / 55,031	199,703 / 59,797	213,738 / 64,427
Norco	27,565 / 7,358	29,121 / 7,849	30,757 / 8,362
Perris	57,843 / 16,750	70,629 / 20,816	82,029 / 24,468
Riverside	302,567 / 100,517	323,096 / 107,325	338,984 / 113,000
San Jacinto	37,679 / 14,910	55,191 / 21,055	71,395 / 26,422
Unincorporated[b,c,d]	105,299 / 40,044	108,589/ 42,289	118,262 / 44,971
Total	1,256,401 / 426,756	1,380,814 / 473,871	1,508,982 / 520,425

[a]Riverside County Projections 2010, Center for Demographic Research, Riverside County Transportation and Land Management Agency, June 2010

[b]Demographics, Riverside County Transportation and Land Management Agency, August 25, 2010.

[c]Housing unit estimates assuming 3 persons/housing unit

[d]Due to recent incorporation of Eastvale and Jurupa Valley, population and housing data will be accurately reflected in future updates

Based on Riverside County Assessor's Roll as of February 2010, general land uses within the SAR are:

- 49.0 square miles zoned for industrial/commercial purposes (3.1%)
- 127.7 square miles zoned for residential purposes (8.0%)
- 19.1 square miles zoned for parks and recreational facilities (1.2%)
- 79.0 square miles zoned for streets and roads (4.9%)
- 219.5 square miles zoned for rural residential (13.7%)
- 224.1 square miles zoned for preserves or open space (14.0%)
- 53.6 square miles zoned for agricultural purposes (3.3%)
- 476.5 square miles of federal, state, tribal, and other lands that are not under the jurisdiction of the Permittees (29.7%)

Section 3.4.1 of the DAMP describes the limits of the Permittees' authority over discharges from federal, state, and other lands. Although runoff from these areas may be discharged to and may affect the quality of the discharges from the MS4 owned and operated by the Permittees, the Permittees do not have the authority to apply the DAMP to these entities.

The Western Riverside County Multi Species Habitat Conservation Plan (MSHCP) states that planned land uses indicate a shift in future use of land within Western Riverside County. At build-out, approximately 491,300 acres of currently vacant and agricultural lands in Riverside County are anticipated to shift to community development/rural uses[4].

2.3.2 Physiography and Geology

The Santa Ana River watershed represents one of nine major California watershed systems between Santa Barbara and the U.S.-Mexico Border at Tijuana. The SAR is located in the Peninsular Ranges and Transverse Ranges Geomorphic Provinces of southern California (California Geological Survey Note 36). The highest elevations (upper reaches) of the Riverside County region of the watershed occur in the San Bernardino Mountains (San Gorgonio Peak with elevation 11,485 feet) and in the San Jacinto Mountains (Peninsular Ranges Province, Mt. San Jacinto with elevation 10,804 feet). The primary slope direction is northeast to southwest, with secondary slopes controlled by local topography.

As is true for much of California, the geology of the SAR is defined and created by seismic activity. The dominant structural feature is the San Andreas Fault zone, which trends in a southeast-northwest direction at the base of the San Bernardino Mountains. The major fault structures in the SAR include the San Jacinto Fault zone and the Elsinore Fault Zone; the San Jacinto Mountains are caused by motion from both the San Andreas and San Jacinto zones. The area between the San Jacinto zone and the Elsinore zone is a down-dropped block that is partly in-filled with sediments from the surrounding mountains.

There are too many geologic units in the SAR to describe separately, but the predominant features are intrusive rocks of the southern California batholith (granitic and andesitic rocks) that have been uplifted/eroded to form the mountain ranges, alluvial/fluvial sediments (materials eroded from the mountains and deposited in the basins), and semi-consolidated sedimentary units.

2.3.3 Climate

The climate of the SAR is Mediterranean with hot, dry summers and cooler, wetter winters. Average annual precipitation ranges from 10-13 inches per year in the inland alluvial valleys, reaching 36 inches or more in the San Bernardino and San Jacinto Mountains. Most of the precipitation in the SAR occurs between November and March in the form of rain with variable amounts of snow in the higher elevations. The climatological cycle of the Region results in high surface water flows in the spring and early summer followed by low flows during the dry season. Winter and spring floods generated by storms are not uncommon in wet years. The types of storms that occur in the SAR include:

General winter storms during the period of December to March. They originate over the Pacific Ocean as a result of the interaction between polar Pacific and tropical Pacific air masses and move eastward over the basin. These storms, which often last for several days, reflect orographic influences and are accompanied by widespread precipitation in the form of snow or rain.

[4] Western Riverside County Multi Species Habitat Conservation Plan, County of Riverside, California. Volume 1, section 2.2.3, June 17, 2003 http://www.rctlma.org/mshcp/volume1/index.html.

General summer storms usually occur during the period from July through September. They are associated with an influx of tropical maritime air originating over the Gulf of Mexico or the South Pacific Ocean and entering the area from a southeast to a southwest direction. Usually the influx of tropical air is caused by circulation around a high-pressure area centered in the southeastern United States, but occasionally it is caused by the remnants of a tropical hurricane. General summer thunderstorms are accompanied by heavy precipitation over large areas for periods up to 24 hours, but showers may continue for as long as three days.

Local thunderstorms can occur at any time of the year, either during general storms or as isolated phenomena. However, they are most common during the period from July through September, when the southern California area may be covered by moist unstable air originating over the Gulf of Mexico. These storms cover comparatively small areas and result in high intensity precipitation of short duration.

2.3.3.1 Surface Water

As the SAR is arid, there is little natural perennial surface water. Surface waters start in the upper erosion zone of the watershed - primarily the San Bernardino, Santa Ana and San Jacinto Mountains. This upper zone has the highest gradient and soils/geology that do not allow large quantities of percolation of surface water into the ground. Flows consist mainly of snowmelt and storm runoff from the lightly developed San Bernardino National Forest.

From the city of San Bernardino to the city of Riverside, the Santa Ana River flows perennially, mostly due to treated discharges from wastewater treatment plants. From the city of Riverside to Prado Dam, the flow in the Santa Ana River consists of highly treated wastewater and groundwater discharges, potable water transfers, irrigation runoff, groundwater forced to the surface by shallow/rising bedrock and minor amounts of Urban Runoff. Urban Runoff provides a proportionately greater contribution to the flow of the River during significant storm events. The Santa Ana Regional Board placed the Middle Santa Ana River, Chino Creek Reaches 1 and 2, Mill Creek (Prado Area), Cucamonga Creek Reach 1, and Prado Park Lake on the 1998 303(d) List of Impaired waterbodies for Bacterial Indicators.

Lake Elsinore is the only natural freshwater lake of any size in the SAR. A variety of water storage reservoirs (e.g., Lake Perris, Canyon Lake, and Lake Mathews) and flood control areas (Prado Dam area) have been created to hold surface water in Riverside County.

The San Jacinto watershed is part of the southernmost portion of the Santa Ana watershed. The San Jacinto River is tributary to the Santa Ana River through Lake Elsinore and Temescal Wash. The 780 square mile watershed includes 18.1 square miles regulated by Lake Perris and Pigeon Pass Dam. Major tributaries include Bautista Creek, Poppet Creek, Potrero Creek, Perris Valley Drain and Salt Creek.

The San Jacinto watershed is bounded by two strike-slip fault zones: the San Jacinto Fault zone to the northeast and the Elsinore Fault zone to the southwest. The San Jacinto Valley is among the most seismically active of the major strike-slip fault zones in southern California, and also the site of rapid subsidence (20 mm per year) due to tectonic activity and groundwater withdrawal (Morton, 1999). The rapid rate of subsidence has resulted in the formation of a strike-slip "pull-apart basin" or graben that has developed along parallel fault strands in the fault zone. The Elsinore Fault zone is also a strike-slip

fault zone and the subsidence along the fault formed Lake Elsinore. Due to the large amount of flood storage available in Lake Elsinore, flows from the San Jacinto River rarely reach the Santa Ana River.

Lake Elsinore and Canyon Lake are located at the terminus of the San Jacinto River watershed in southwestern Riverside County. Lake Elsinore is one of the few natural lakes in southern California. It was formed in a geologically active graben area and has been in existence for over thousands of years. Due to the Mediterranean climate and watershed hydrology, lake level fluctuations in Lake Elsinore have been extreme, with alternate periods of a dry lakebed and extreme flooding. These drought/flood cycles have a great impact on lake water quality. Fish kills and excessive algal blooms have been reported in Lake Elsinore since the early 20th century. As a result, in 1994, the Santa Ana Regional Board placed Lake Elsinore on the 303(d) List of Impaired waters due to excessive levels of nutrients.

Canyon Lake, located approximately five miles upstream of Lake Elsinore, was formed by the construction of Railroad Canyon Dam in 1928. Approximately 735 square miles of the 780 square mile San Jacinto River watershed drains to Canyon Lake. Only during wet or moderately wet years does Canyon Lake overflow to Lake Elsinore; during most years, runoff from the watershed terminates at Canyon Lake without reaching Lake Elsinore, resulting in the buildup of nutrients in Canyon Lake. While Canyon Lake does not have as severe an Eutrophication problem as Lake Elsinore, there have been periods of algal blooms. In 1998, the Regional Board added Canyon Lake to the 303(d) List of Impaired waters due to Eutrophication.

The high subsidence rate of the San Jacinto Valley along the fault zone has resulted in a closed depression that periodically fills with water to form the ephemeral Mystic Lake. In very wet years, the surface area of Mystic Lake can expand up to 4,000 acres. The San Jacinto River makes a 90-degree turn and flows southwest at Mystic Lake. The very low river gradient westward from Mystic Lake forms a broad fluvial plain. The San Jacinto River then flows through the narrow Railroad Canyon, Canyon Lake, and exits the Perris Block into the lower Elsinore basin created by the Elsinore Fault zone.

2.3.4 Drainage Area Description

2.3.4.1 Surface Waterbodies

Less than one-fifth (1/5) of the entire acreage within Riverside County drains into waterbodies within the SAR. Those surface waterbodies (or portions thereof) are:

Rivers and Streams

Santa Ana River, Reaches 3 and 4

Tributaries to the south bank of the Santa Ana River

- Temescal Creek, Reaches 1, 2, 3, 4, 5 and 6
- Coldwater Canyon Creek and its tributary drainages
- Bedford Canyon Creek and its tributary drainages
- Tequesquite Arroyo (Sycamore Creek) and its tributary drainages

Tributaries to the north bank of the Santa Ana River

- Day Creek
- San Sevaine Creek

San Jacinto River Basin

San Jacinto River, Reaches 1, 2, 3, 4, 5, 6 and 7
San Jacinto River, North Fork
Bautista Creek, headwaters to debris dam
Fuller Mill Creek
Salt Creek
Strawberry Creek
Stone Creek
Other tributaries: Indian, Hurkey, Poppet, and Potrero

San Timoteo Creek Basin

San Timoteo Creek, Reaches 3 and 4 and tributaries
Little San Gorgonio Creek and its tributaries

Lakes and Reservoirs

- Canyon Lake
- Lake Elsinore
- Lake Evans
- Lake Fulmor
- Lake Hemet
- Lake Mathews
- Lake Perris
- Lee Lake
- Mockingbird Reservoir

The Beneficial Uses of these surface waterbodies include: municipal and domestic supply, agricultural supply, industrial service supply, industrial process supply, groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, and preservation of rare and endangered species. The ultimate goal of the DAMP is to protect the Beneficial Uses of the Receiving Waters from Impairments related to Urban Runoff.

2.3.4.2 Municipal Separate Storm Sewer System Facilities

The MS4 facilities operated by the District in the SAR consist of an estimated 282 miles of underground storm drain and 172 miles of open channel. The Co-Permittees operate approximately 441 miles of MS4 facilities. Each year, the Co-Permittees identify additions to their respective MS4 facilities to the District. These new facilities are then added to the updated MS4 maps that are included in the Annual Report to the Santa Ana Regional Board. Within the SAR, additional MS4 facilities may be present that are not owned or operated by the Permittees that drain into the Permittees' MS4. These may include MS4s owned/operated by federal (Department of Defense) and state agencies (Caltrans, University of California), special districts (school districts), and Native American tribes. The Permittees have no jurisdictional authority over these MS4s.

2.3.5 Current Water Quality Concerns and Issues

Urban Runoff discharged to MS4s in Riverside County ultimately flows to various surface waterbodies (inland streams, lakes and reservoirs) and may convey Pollutants originating from numerous dispersed and uncontrolled sources. Examples of Pollutants that may be present in Urban Runoff are fertilizer, heavy metals, nutrients, petroleum products, sediment, bacteria, chemicals, and litter.

Because the SAR is large and has many land uses, the water quality concerns in subwatersheds vary; however, each land use can potentially contribute Pollutants to nearby streams, rivers, and lakes. The infrastructure that supports people's activities (e.g., roads, parks, and wastewater collection and treatment facilities) may contribute to water quality concerns if not properly managed. Other sources

of stormwater runoff, including agricultural areas, are exempt from the requirements of the NPDES permitting program established under the CWA. In addition, some Pollutants, such as total suspended solids, may be found at elevated levels due to natural erosional processes and in runoff from non-urban land uses. Further, certain activities that generate Pollutants present in Urban Runoff are beyond the ability of the Permittees to eliminate. Examples of these include internal combustion engines, atmospheric deposition, bacteria and wildlife (including feral cats and dogs), brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography.

Some Receiving Waters in the SAR (for example, Reaches 3 and 4 of the Santa Ana River, Cucamonga Creek, Mill Creek) are identified as Impaired due to causes such as nutrients (nitrogen and/or phosphorus), Bacterial Indicators (including coliform), sediment, and unknown Toxicity. The 2010 303(d) List for the area under the jurisdiction of the Santa Ana Regional Board can be viewed or downloaded from the following website:

http://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/docs/303d/2010_303d.pdf

The prior listing of Lake Elsinore as Impaired by sediment does not appear in the 2010 303(d) List. A summary of the 2010 303(d) List for the SAR is presented in Table 2-2.

Table 2-2. 2010 303(d) SAR List of Water Quality Limited Segments

Waterbody	Pollutants	Potential Sources
Canyon Lake (Railroad Canyon Reservoir)	Nutrients Pathogens	Non-point Source Non-point source
Chino Creek Reach 1A (Santa Ana River R5 cnfl to just downstream of confl with Mill Creek)	Nutrients Pathogens	Agriculture; Dairies Agriculture; Dairies; Urban Runoff/Storm Sewers
Cucamonga Creek Reach 1 (Valley Reach)	Cadmium Coliform Bacteria Copper Lead Zinc	Source Unknown Unknown Point Source Source Unknown Source Unknown Source Unknown
Lake Elsinore	Nutrients Organic Enrichment/Low Dissolved Oxygen PCBs Sediment Toxicity Unknown Toxicity	Unknown Non-point Source Unknown Non-point Source Source Unknown Source Unknown Unknown Non-point Source
Lake Fulmor	Pathogens	Unknown Non-point Source
Mill Creek (Prado Area)	Nutrients Pathogens Total Suspended Solids (TSS)	Agriculture; Dairies Dairies Dairies
Santa Ana River, Reach 3	Copper Lead Pathogens	Source Unknown Source Unknown Dairies
Santa Ana River, Reach 4	Pathogens	Non-point Source

Additionally, the Santa Ana Regional Board has identified Receiving Waters that require additional monitoring to improve the quantity and/or quality of data used to develop the 303(d) List. Currently, some Receiving Waters within the SAR have been designated as needing additional monitoring data for parameters such as metals (aluminum, copper, silver, and zinc), salinity, chlorides, or total dissolved solids.

2.3.6 TMDLs

The following TMDLs are addressed more fully in Section 13 of the DAMP:

2.3.6.1 Lake Elsinore

Lake Elsinore and Canyon Lake are located at the terminus of the San Jacinto River watershed in southwestern Riverside County. The entire San Jacinto River watershed encompasses 780 square miles. Lake Elsinore is one of the few natural lakes in southern California. It was formed in a geologically active graben area and has been in existence over thousands of years. Due to the Mediterranean climate and watershed hydrology, lake level fluctuations in Lake Elsinore have been extreme with periods of dry lake bed during some drought cycles. These drought cycles have a great impact on lake water quality.

Fish kills and excessive algal blooms have been reported in Lake Elsinore since the early 20th century. As a result, the Regional Board placed Lake Elsinore on the 1994 303(d) List of Impaired Waterbodies due to excessive levels of nutrients. In December 2004 a nutrient TMDL[5] was established for Lake Elsinore and Canyon Lake. Stormwater and non-stormwater discharges from septic systems, agriculture, dairy, urban, forested and open space lands, as well as in-lake sediments, have been identified as potential sources of Impairment. More information on this TMDL is available in Section 13 of the DAMP.

2.3.6.2 Canyon Lake

Canyon Lake, located approximately five miles upstream of Lake Elsinore, was formed by the construction of Railroad Canyon dam in 1928. Approximately 735 square miles of the 780 square mile San Jacinto River watershed drains to Canyon Lake. Only in wet years does Canyon Lake overflow to Lake Elsinore; during most years, runoff from the San Jacinto River watershed terminates at Canyon Lake without reaching Lake Elsinore, resulting in the buildup of nutrients in Canyon Lake.

While Canyon Lake does not have as severe an Eutrophication problem as does Lake Elsinore, the Regional Board believes there have been periods of algal blooms and occasional fish kills (anecdotal evidence, no written documentation). The Regional Board added Canyon Lake to the 1998 303(d) List of Impaired waters due to Eutrophication. Stormwater and non-stormwater discharges from septic systems, agriculture, dairy, urban, forested and open space lands have been identified as potential sources of nutrients contributing to the Impairment. In December 2004 a nutrient TMDL[6] was

[5] This TMDL can be viewed or downloaded from website: http://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/elsinore_tmdl.shtml.

[6] This TMDL can be viewed or downloaded from website: http://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/elsinore_tmdl.shtml.

established for Lake Elsinore and Canyon Lake. More information on this TMDL is contained in Section 13 of the DAMP.

2.3.6.3 Santa Ana River, Reach 3 (Middle Santa Ana River)

According to Santa Ana Regional Board Resolution R8-2005-001, the Santa Ana River Reach 3 watershed covers approximately 488 square miles and lies largely in the southwest corner of San Bernardino County, and the northwestern corner of Riverside County. A small part of Los Angeles County (Pomona/Claremont area) is also included in the Santa Ana River Reach 3 watershed.

Several waterbodies within, and including the Middle Santa Ana River, have been listed for Bacterial Indicator Impairments. These waterbodies include Middle Santa Ana River, Chino Creek Reaches 1 and 2, Mill Creek (Prado Area), Cucamonga Creek Reach 1, and Prado Park Lake. The Santa Ana Regional Board placed these waterbodies on the 1998 303(d) List of Impaired Waterbodies for Bacterial Indicators. In 2005, the Regional Board adopted a Bacterial Indicator TMDL for these same waterbodies. Potential sources of the Impairment include stormwater and non-stormwater discharges from agricultural lands, dairy lands, urban lands, failed septic systems, open space areas, forested lands, and natural background sources. More information on this TMDL is contained in Section 13 of the DAMP.

3.0 PROGRAM MANAGEMENT

3.1 PRINCIPAL PERMITTEE AND PERMITTEE RESPONSIBILITIES

Riverside County is located within the jurisdictions of the Colorado River Basin, San Diego and Santa Ana Regional Boards, each of which has issued an MS4 Permit for the areas within their jurisdiction. Although each MS4 Permit is unique, they address the same program elements as required by the Federal Phase I MS4 regulations. The overall organization of the Riverside County Urban Runoff Management Program is described in Figure 3-1 and described further in the remainder of this subsection.

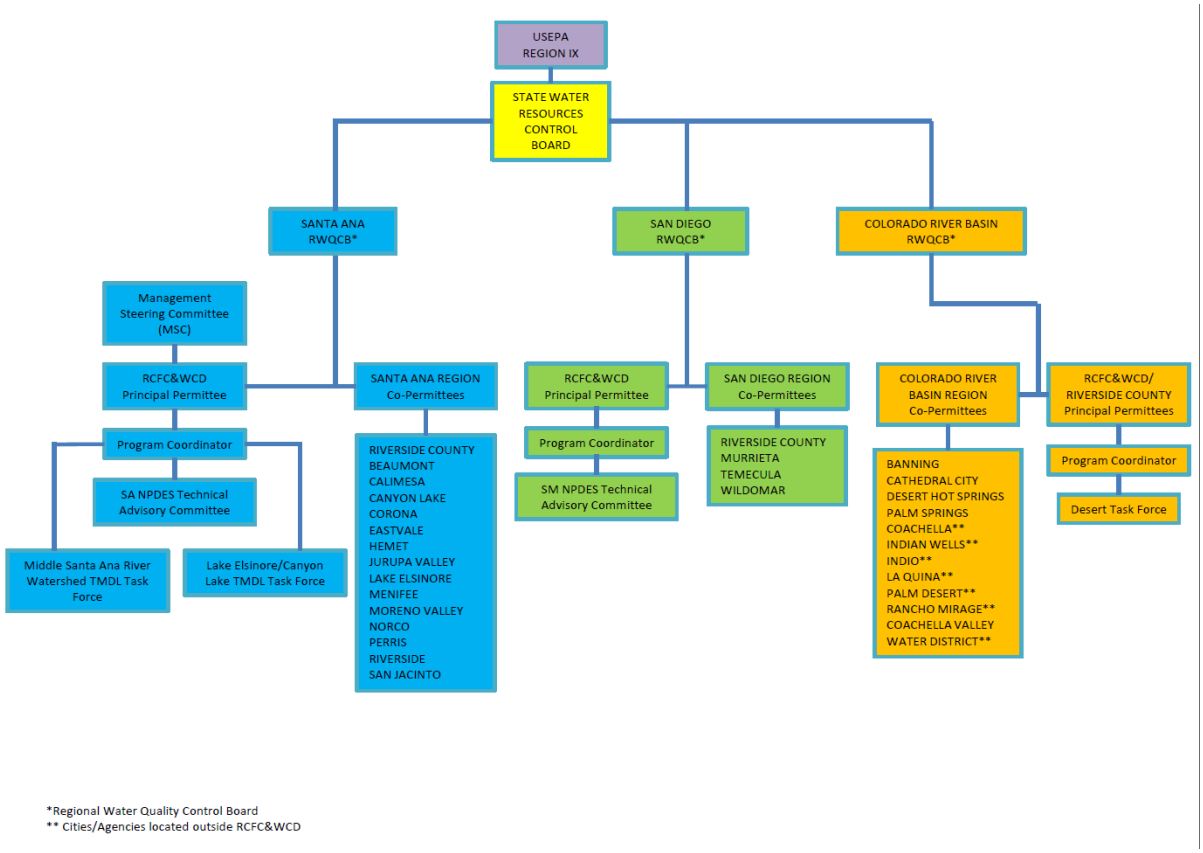


Figure 3-1. Organizational Chart Riverside County Municipal Stormwater NPDES Permits

3.1.1 Implementation Agreement

In November 1991 the District, Riverside County, and the Cities of Beaumont, Corona, Hemet, Lake Elsinore, Moreno Valley, Norco, Perris, Riverside, and San Jacinto entered into a formal NPDES Stormwater Discharge Permit Implementation Agreement for the SAR. The purpose of the Implementation Agreement was to establish the responsibilities of the Principal Permittee and the Co-Permittees and to provide for funding for program elements implemented regionally. The regional programs provide for more cost effective and consistent implementation of programs and messages communicated to the public. The Implementation Agreement was subsequently amended to add the

Cities of Canyon Lake, Calimesa, Eastvale, Menifee, Murrieta, and Wildomar, to address additional requirements of the 2010 SAR MS4 Permit and establish the responsibilities of the Permittees as defined in the 2010 SAR MS4 Permit. The Implementation Agreement was again amended in 2013 to include the City of Jurupa Valley as a Permittee and to describe the designation agreement of the Cities of Menifee, Murrieta, and Wildomar between the Santa Ana Regional Board and the San Diego Regional Board. The Santa Ana Regional Board and San Diego Regional Board signed designation agreements providing the San Diego Regional Board the authority to regulate municipal stormwater runoff from the Cities of Murrieta and Wildomar, including those portions of the cities that fall within the Santa Ana Regional Board geographic jurisdiction. The agreement also provides the Santa Ana Regional Board the authority to regulate municipal stormwater runoff from all portions of the City of Menifee, including those portions that are within the San Diego Regional Board geographic jurisdiction. In accordance with the San Diego MS4 Permit, Order No. R9-2010-0016, the Cities of Murrieta and Wildomar are required to comply with the applicable provisions of the Santa Ana MS4 Permit, Order R8-2010-0033, pertaining to implementation of the nutrient total maximum daily loads of Lake Elsinore and Canyon Lake. Similarly, Order 2010-0033 requires the City of Menifee to comply with any TMDLs and associated MS4 permit requirements issued by the San Diego Regional Board.

The 2010 SAR MS4 Permit requires the Permittees to evaluate the Implementation Agreement by November 30th of each year to determine the need, if any, for revision. The Annual Report must include the findings of this review and a schedule for any necessary revision(s).

Under the terms of the 2011 SAR Implementation Agreement (included as Appendix C) the Principal Permittee is required to:

- Comply with Section III.A (Responsibilities of the Principal Permittee) of the 2010 SAR MS4 Permit.
- Comply with Sections IV (Local Implementation Plan), V (Discharge Prohibitions), VI (Effluent Limitations, Discharge Specifications, and other TMDL Related Requirements), VII (Receiving Water Limitations), VIII (Legal Authority/Enforcement), IX (Illicit Connections/Illegal Discharges; Litter, Debris and Trash Control), X (Sewage Spills, Infiltration into MS4s from Leaking Sanitary Sewer Lines, Septic System Failures, and Portable Toilet Discharges), XII (New Development (Including Significant Redevelopment)), XIII (Public Education and Outreach), XIV (Permittee Facilities and Activities), XV (Training Program for Stormwater Managers, Planners, Inspectors and Municipal Contractors), XVI (Notification Requirements), XVII (Program Management Assessment/DAMP Review), XVIII (Fiscal Resources), XIX (Monitoring and Reporting Program), XX (Provisions), XXI (Permit Modification) and XXII (Permit Expiration and Renewal) of the 2010 SAR MS4 Permit as they pertain to District facilities and operations.
- Perform all the joint sampling data collections and assessment requirements described in the Monitoring and Reporting Program of the 2010 SAR MS4 Permit. Specifically, the District prepares the required narrative for all reports and provides the SAR Co-Permittees an opportunity to review and comment on any such narrative.
- Perform the joint reporting requirements described in the Monitoring and Reporting Program of the 2010 SAR MS4 Permit. With respect to such reporting requirements, the District:

- Prepares the required narrative for such reports; and
- Provides the Co-Permittees an opportunity to review and comment on such narrative.

Also under the terms of the 2011 SAR Implementation Agreement, each Permittee is required to:

- Comply with Section III.B (Responsibilities of the Co-Permittees) of the 2010 SAR MS4 Permit.
- Comply with Sections IV (Local Implementation Plan), V (Discharge Prohibitions), VI (Effluent Limitations, Discharge Specifications, and Other TMDL Related Requirements), VII (Receiving Water Limitations), VIII (Legal Authority/Enforcement), IX (Illicit Connections/Illegal Discharges; Litter, Debris and Trash Control), X (Sewage Spills, Infiltration into MS4s from Leaking Sanitary Sewer Lines, Septic System Failures, and Portable Toilet Discharges), XI (Co-Permittee Inspection Programs), XII (New Development (Including Significant Redevelopment)), XIII (Public Education and Outreach), XIV (Permittee Facilities and Activities), XV (Training Program for Stormwater Managers, Planners, Inspectors, and Municipal Contractors), XVI (Notification Requirements), XVII (Program Management Assessment/DAMP Review), XVIII (Fiscal Resources), XIX (Monitoring and Reporting Program), XX (Provisions), XXI (Permit Modification), and XXII (Permit Expiration and Renewal) of the 2010 SAR MS4 Permit as they pertain to each Permittee's facilities and operations.
- Demonstrate compliance with all requirements of the 2010 SAR MS4 Permit through timely implementation of the approved DAMP and any approved modifications, revisions, or amendments.
- Provide the District all information needed to satisfy the reporting requirements described in the Monitoring and Reporting Program of the 2010 SAR MS4 Permit. Specifically, the Co-Permittees provide information on stormwater facilities and/or other data when requested by the District; submit the requested individual information to the District no later than November 30th of each year, and provide the required information on District-approved forms.

In accordance with the 2010 SAR Implementation Agreement, in the event that the District requires the services of a consultant (or consultants) to prepare manuals, develop program components, or perform studies relevant to the SAR, the cost of the consultant services are shared by the District and the Co-Permittees. The shared costs are allocated as a 50% contribution from the District and a 50% contribution from the Co-Permittees. The percentage contribution from each of the Co-Permittees is a function of population. The 2010 SAR Implementation Agreement is updated as necessary to reflect evolving DAMP implementation needs.

3.1.2 Management Steering Committee

The Permittees established the Management Steering Committee to address Urban Runoff management policies for the SAR and to review and approve revisions to the DAMP and the SAR Implementation Agreement. In addition, the Management Steering Committee facilitates coordination with related water quality management programs and monitoring, and establishes positions relative to legislative and regulatory initiatives. The Management Steering Committee consists of city managers or designated representatives from each of the Co-Permittees and an executive-level representative from the County. The General Manager-Chief Engineer of the District or his designee participates on the

Management Steering Committee as Chair. The District also provides staff support to the Management Steering Committee. The Management Steering Committee meets bi-annually or as determined by the Chair. The 2010 SAR MS4 Permit requires the designated representatives to attend one out of two Management Steering Committee meetings each year.

3.1.2.1 Finance Subcommittee

In 2003, the Management Steering Committee recognized the need to evaluate long term funding solutions of Urban Runoff management programs and regional facilities and established the Finance Subcommittee. The Finance Subcommittee is appointed by the Management Steering Committee and consists of Permittee staff with expertise in public finance. The Finance Committee reviews financial issues and develops findings and provides recommendations to the Management Steering Committee. The finance subcommittee meets on an as-needed basis.

The 2010 SAR MS4 Permit did not require establishment of the Finance Subcommittee. In support of the subcommittee the District tracks proposed legislation, coordinates with CASQA efforts to develop and identify funding options for programs and tracks local efforts to identify additional sources of funding for NPDES program implementation. In addition, the District and Permittees have been coordinating with the other stakeholders on several grant opportunities that will assist with addressing TMDL implementation.

3.1.2.2 Technical Committee and Work Groups

A Technical Advisory Committee (TAC) has been established consisting of representatives formally appointed by the city manager or equivalent of each of the Permittees in the SAR. The purpose of the TAC is to direct the development of the DAMP and to coordinate the implementation of the overall MS4 Permit compliance program. The TAC members also provide technical assistance and support to facilitate coordination with related water quality management programs and monitoring, and to respond to legislative and regulatory initiatives. The District chairs and provides staff support to the TAC. The 2010 SAR MS4 Permit requires designated members to attend eight out of ten TAC meetings each year.

Work Groups have been established by the TAC to oversee the development and implementation of the DAMP program components. The Work Groups include Permittee representatives and may also include industry representatives, representatives of environmental special interest groups, and other stakeholders as appropriate. Work Groups have been established to guide the following program components and meet on an ad-hoc basis:

- Permit Renewal
- Program Implementation/Public Education
- New Development/Redevelopment
- Construction
- Industrial and Commercial Facility Compliance
- Municipal Facilities and Activities

- Monitoring and IC/ID
- Finance
- TMDL Compliance

3.2 INTERAGENCY AGREEMENTS AND COOPERATIVE ACTIVITIES

The District, in its role as Principal Permittee, administers or participates in several interagency programs in consultation with the SAR Co-Permittees. These programs generally at least benefit the SAR, but may also look at broader issues. Copies of the interagency agreements supporting these area-wide programs are provided in Appendix D. These efforts may be expanded, reduced or abandoned over time based on budget, changing regulations, program needs, program effectiveness consideration, or other factors.

Those interagency programs under agreement as of July 2011 include:

- CASQA efforts to support true source control initiatives
- Stormwater Quality Standards Task Force
- Southern California Stormwater Monitoring Coalition (SMC)
- Hazardous Materials Emergency Response
- HHW Collection/ABOP Program
- Various public education and outreach programs
- Middle Santa Ana River TMDL Task Force
- Lake Elsinore/Canyon Lake TMDL Task Force
- Southern California Water Committee Stormwater Task Force
- San Jacinto River Watershed Council

In addition, the District, in consultation with the Permittees, participates in several cooperative activities through informal or formal regional stakeholder workgroups. Stakeholders often include other public and private entities within the SAR. These efforts can broadly be categorized as watershed management efforts to address stormwater quality issues within the SAR. These efforts may be expanded, reduced or abandoned over time based on budget, changing regulations, program needs, program effectiveness consideration, or other factors.

As of July 2011, the District and Permittees are participating in the following regional stakeholder efforts:

- Lake Elsinore/San Jacinto Watershed Authority
- Santa Ana Watershed Project Authority One Water One Watershed Planning Efforts

3.3 FISCAL RESOURCES

The costs incurred by the Permittees in implementing the DAMP fall into two broad categories:

- **Shared Costs**. These are costs that fund activities performed mostly by the District under the Implementation Agreements. These activities include overall stormwater program coordination; interagency agreements; representation at CASQA, meetings of the Regional Boards or State Water Resources Control Board (State Board) and other public forums; preparation and submittal of compliance reports (including the DAMP) and other reports required under the 2010 SAR MS4 Permit, Urban Runoff monitoring, Water Code Section 13267 requests, public education, budget and other program documentation; coordination of consultant studies, Permittee meetings, and training seminars.
- **Individual Permittee Costs for DAMP Implementation**. These are costs incurred by each Permittee for implementing within its jurisdiction the BMPs (drainage facility inspections for Illicit Connections, drainage facility maintenance, drain inlet/catch basin stenciling, emergency spill response, street sweeping, litter control, public education, construction activity inspection, development of implementation plans, etc.) comprising the DAMP.

Historically, the Permittees have employed a combination of funding methods to finance their individual and shared MS4 Permit compliance activities. Typical funding mechanisms include:

- **Santa Ana Watershed Benefit Assessment Area**. In 1991, the District established the Santa Ana Watershed Benefit Assessment Area to fund its MS4 NPDES permit activities in the SAR. Currently, the Benefit Assessment revenues fund portions of the area-wide MS4 NPDES permit program activities and the District's compliance activities as a Permittee. In 2009/2010 the Santa Ana Benefit Assessment generated approximately $2.25 million in revenue. Although Regional NPDES Program compliance budgets are now exceeding $3 million, the District cannot raise Benefit Assessment rates without a Proposition 218 vote.
- **County Service Area (CSA) 152**. In December 1991, the County of Riverside formed CSA 152 to provide funding for compliance activities associated with the SAR MS4 Permit, among other programs. Under the laws that govern CSAs, sub-areas may be established within the overall CSA area with different assessment rates set within each sub-area. The Cities of Corona, Lake Elsinore, Moreno Valley, Norco, Riverside, Murrieta and San Jacinto participate in CSA 152. However, these rates were set prior to Proposition 218 and future adjustment of these rates would require a Proposition 218 vote.
- **Utility Charge**. The City of Hemet funds a portion of its MS4 Permit compliance program activities through a utility charge
- **General Fund**. Permittees also utilize general fund revenue to finance their MS4 Permit compliance activities when dedicated revenue streams are insufficient to cover program expenses.
- **Fees**. Several Permittees charge fees for services such as inspections, plan check, and other recoverable costs relative to the 2010 SAR MS4 Permit.
- **Other Revenues.** Several Permittees may also have other permanent or one-time revenue sources that can be used to fund specific portions of NPDES compliance programs. These sources could include grants, utilization of gas tax increments for NPDES compliance related to capital road projects, and loans such as the State revolving funds.

New funding sources or alternative combinations of funding sources may be required to ensure perpetual funding of 2010 SAR MS4 Permit requirements. The Permittees continually review and modify their funding sources based on changing regulatory requirements, changing state and federal law, local municipal priorities and other considerations as necessary.

3.4 LEGAL AUTHORITY AND ENFORCEMENT

3.4.1 Legal Authority

Although other state and federal agencies, including the Regional Boards, may have overlapping legal authority over some discharges to and from MS4s (i.e., through the State's General Permits for stormwater discharges associated with Industrial Facilities or construction activities), the Permittees must still independently establish, maintain and enforce adequate legal authority to control discharges to the MS4 (40 CFR §122.26(d)(2)(i)(A-F)). Conversely, the other state and federal agencies are independently responsible for enforcing their own legal authorities. Permittee legal authority can take the form of ordinances, statutes, permits, contracts or similar means, as necessary. At minimum, the Permittee's legal authority must:

- Prohibit Illegal Discharges (spills, dumping or disposal of materials other than stormwater) to the MS4. Examples of Illegal Discharges include discharges of:
  - Sewage, where a Co-Permittee operates the sewage collection system (also prohibited under the Statewide SSO Order);
  - Wash water from hosing or cleaning of municipal, industrial or commercial areas including wash water from the hosing or cleaning of gas stations, auto repair garages, and other types of automobile service stations;
  - Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility, including motor vehicles, concrete mixing equipment, portable toilet servicing, etc;
  - Wash water from mobile auto detailing and washing, steam and pressure cleaning, carpet/upholstery cleaning, pool cleaning, and other such mobile commercial and industrial activities;
  - Water from cleaning of municipal, industrial and commercial sites, including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc;
  - Runoff from material storage areas or uncovered receptacles that contain chemicals, fuels, grease, oil or other Hazardous Materials;
  - Discharges of runoff from the washing of Hazardous Materials from paved or unpaved areas;
  - Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water containing debris or chlorine;
  - Pet waste, yard waste, litter, debris, sediment, etc.; and

- Restaurant or food processing Wastes such as grease, floor mat and trash bin wash water, food Waste, etc.).

It should be noted that some non-stormwater discharges need not be prohibited. Section 4 of the DAMP provides additional information regarding these discharges.

- Prohibit and eliminate Illicit Connections to the MS4 as described in Section 4 of this DAMP;
- Control the contribution of Pollutants to the MS4 through Urban Runoff associated with Development Projects[7], construction, industrial, residential and municipal activities within their jurisdiction as described in Sections 5, 6, 7, 8, and 9 of this DAMP;
- Require compliance with Stormwater Ordinances, permits, contracts or orders;
- Authorize the Permittee to conduct the inspections, surveillance and monitoring necessary to determine compliance and non-compliance with local Stormwater Ordinances, permits and the DAMP;
- Utilize enforcement mechanisms to require compliance with Permittee Stormwater Ordinances, permits, contracts, or orders; and
- Control the contribution of Pollutants associated with Urban Runoff through interagency agreements among Permittees.

Adequate legal authority is a prerequisite for Permittees to effectively implement compliance programs to reduce Pollutants in discharges of Urban Runoff to the MEP. The legal authority necessary to implement compliance programs and pursue enforcement is provided to the Permittees through local stormwater and erosion control ordinances. All Permittees (excluding the District[8]) have adopted a comprehensive Stormwater Ordinance based on a model developed and adopted by the County of Riverside. The ordinances provide the Permittees with the legal authority to implement the requirements of the 2010 SAR MS4 Permit.

The ordinances provide the Permittees with the legal authority to implement the requirements of the 2010 SAR MS4 Permit. Each Permittee has submitted a certification prior to January 29, 2012, signed by its legal counsel, that the Permittee has obtained all necessary legal authority in accordance with 40 CFR 122.26(d)(2)(i) (A-F) and to comply with the 2010 SAR MS4 Permit through adoption of ordinances and/or municipal code modifications. Copies of these certifications will also be maintained in the LIPs. In addition, Co-Permittee ordinances must promote green infrastructure/LID techniques (XII.E.4).

The Permittees do not have legal authority over stormwater discharges into their respective MS4 facilities from agricultural activities, state and federal facilities, utilities and special districts, Native American tribal lands, wastewater management agencies and other Point and Non-Point source discharges otherwise permitted by, or under the jurisdiction of, the Santa Ana Regional Board. Where appropriate, the Permittees will enter into interagency agreements with owners of other MS4s, such as Caltrans, school and college

[7] "Development Projects" refers to "Priority Projects" as defined in "New Development and Significant Redevelopment" as defined in Section XII.D.2 of the SAR MS4 Permit.

[8] The District already had the authority needed to implement the requirements of the enforcement/compliance programs and as such did not need to adopt the model Stormwater Ordinance.

districts, universities, Department of Defense, Native American Tribes, etc., to control the contribution of Pollutants into their MS4 from the non-Permittee MS4s.

Examples of Non-Point Sources of Pollutants not under the control of the Permittees include materials from operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography. In the 2010 SAR MS4 Permit, the Santa Ana Regional Board recognizes that the Permittees should not be held responsible for such facilities and/or discharges. Similarly, certain activities that generate Pollutants present in Urban Runoff are beyond the ability of the Permittees to eliminate. Nevertheless, the Permittees work through CASQA and other avenues to encourage federal and state initiatives and activities to address these sources.

Also, Permittees do not have the authority to enforce the provisions of California's General Permit for Stormwater Discharges Associated with Industrial Activities (Industrial General Permit) or California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The State Board issues these NPDES permits, and neither the State Board nor the Santa Ana Regional Board has the authority under the CWA to delegate responsibility for administering these NPDES permit programs to the Permittees. However, local stormwater and erosion control ordinances may address items similar to those identified in these statewide permits.

If the Permittee's Illicit Connection/Illegal Discharge (IC/ID) Detection and Elimination Program or Receiving Water Monitoring Program identifies a non-jurisdictional discharge causing, or threatening to cause, a condition of Pollution, Contamination or Nuisance (as defined in CWC Section 13050), in waters of the State, the following minimum guidelines will be followed:

- The non-jurisdictional discharge will be documented.
- When appropriate, samples of the non-jurisdictional discharge will be collected.
- In emergency situations, the Hazardous Materials Emergency Response Team will be utilized and the Permittees will coordinate with the Office of Emergency Services and the applicable Regional Board to control the impact of the non-jurisdictional discharge on MS4s and Receiving Waters.
- Notify the discharger verbally, at minimum, of their Illegal Discharge and the impact on MS4s and Receiving Waters and provide appropriate educational materials.
- If necessary, notify the appropriate enforcement agency and/or the applicable Regional Board of the non-jurisdictional discharge causing, or threatening to cause, a condition of Pollution, Contamination or Nuisance, in MS4s or Receiving Waters.

3.4.2 Enforcement/Compliance Strategy

As was required under the 1996 SAR MS4 Permit, the Permittees developed an Enforcement/Compliance Strategy for ensuring that Construction Sites, Commercial Facilities, and Industrial Facilities operate in compliance with the local Stormwater Ordinances, Urban Runoff ordinances, and local erosion control ordinances. The goal of the Enforcement/Compliance Strategy was to document the enforcement of Stormwater Ordinances fairly and consistently throughout the SAR. It is recognized that there is no clear,

standard approach to handling all of the enforcement situations that may be encountered and that the judgment of each jurisdiction's staff will guide the appropriate level of response.

The Enforcement/Compliance Strategy has been integrated into the appropriate elements of this DAMP and those sections provide guidelines for Permittees in implementing enforcement actions appropriate for a given violation. The Permittees' individual LIP contains information regarding which Permittee departments are responsible for implementing the various aspects of the enforcement/compliance programs within its jurisdiction.

The Permittees have obtained all necessary legal authority to comply with the 2010 SAR MS4 Permit through adoption of ordinances and/or municipal code modifications. As required by the 2010 SAR MS4 Permit, the Permittees have reviewed their ordinances to verify that they include sanctions to ensure compliance. In addition, the Permittees have reviewed their litter/trash control ordinances to determine the need for revision to improve the effectiveness of these ordinances and their grading/erosion control ordinances in order to reduce erosion. Where needed, these ordinances have been revised.

3.4.2.1 Prioritize Violations

The Permittee's Stormwater Ordinances and erosion control 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 Ordinances 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 local resources on those violations that may have the greatest potential impact on the quality of Receiving Waters.

It is not feasible to quantify the magnitude of violations of the Stormwater Ordinances and erosion control ordinances. Instead, prioritizing violations is based on many factors, including the experience and professional judgment of the jurisdiction's staff. The factors that should be considered in prioritizing violations of local Stormwater Ordinances and erosion control ordinances are presented in Table 3-1.

Table 3-1. 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 3-2 has been developed to facilitate consistency in enforcement actions by the Permittees in the SAR. Table 3-2 provides general guidance for categorizing the severity of violations based upon the factors and/or circumstances associated with a violation. Table 3-2 also describes criteria for characterizing the severity of a violation as "high", "medium", or "low". For example, using Table 3-2, the accidental dumping of 20 gallons of trash several hundred yards away from an ephemeral stream would be considered a "low" priority violation. However, the intentional discharge of 2,000 gallons of pesticide directly into aquatic wildlife habitat would be a "high" priority violation.

In some cases, based on Permittee evaluation of circumstances, an individual violation may be categorized higher or lower than is indicated in Table 3-2. Violations may also not clearly fall into any single severity priority level described in Table 3-2. It is more likely that a violation would be characterized by factors representing more than one of the priority levels described in Table 3-2. In this case, a subjective evaluation of the violation would be required to select the priority level most representative of the characteristics and circumstances surrounding the violation.

Table 3-2. 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 of gallons	100's of gallons	10's of 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

3.4.2.2 Enforcement and Compliance Responses

The enforcement/compliance response should be based on the severity of the violation. The types of enforcement/compliance responses available, in typical order of increasing severity, are:

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

Administrative Remedies

Notice of Non-compliance. The Notice of Non-compliance constitutes a basic request that the property owner or facility operator rectify the condition causing or threatening to cause non-compliance with the Stormwater Ordinance or erosion control ordinance. The Notice of Non-compliance 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.

Administrative Compliance Order. The Administrative Compliance Order is generally an appropriate enforcement tool in the following circumstances:

- An actual condition of non-compliance 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 Permittee may need to be demonstrated before remedial action is forthcoming.
- Prior Notices of Non-compliance have not obtained a favorable response.

Prior to issuance of any Administrative Compliance Order, Cease and Desist Order or commencement of other civil or criminal enforcement action against any person, the Permittee should deliver to the person a written Notice of Non-compliance, which states the act or acts constituting the violation and directs that the violation be corrected. The Notice of Non-compliance 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 Non-compliance should not be the first enforcement method used if egregious or unusual circumstances indicate that a stronger enforcement method is appropriate.

Criminal Enforcement

Misdemeanors. Criminal enforcement is appropriate when evidence of non-compliance 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 Permittees' 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.
- 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 Co-Permittee's police 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.

Appropriate Enforcement/Compliance Responses

Permittees will emphasize and encourage voluntary compliance with Stormwater Ordinances and erosion control ordinances to the MEP. However, if routine inspections or dry weather monitoring indicate Illicit Connections or Illegal Discharges, they will be investigated and eliminated or permitted[9] as soon as possible, but no later than sixty (60) calendar days of receipt of notice by its staff or from a third party.

[9] Unauthorized non-stormwater discharges to surface waters and a MS4 must be permitted through the Santa Ana Regional Board.

Illicit Discharges that are a serious threat to public health or the environment will be eliminated immediately.

Table 3-3 provides an example of appropriate enforcement responses that correspond to the severity priority level of a violation of a Permittee's ordinances or other stormwater laws, regulations or contracts as determined from Table 3-2. Permittees and the Regional Board should work cooperatively in implementing enforcement/compliance responses according to their respective authorities. State law limits the authority of Permittees to assess 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.

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

Incident Severity Priority Level	Appropriate Enforcement Responses[1]	Lead Enforcement Agency	
		Permittee	Regional Board Support
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	
	Administrative compliance order	X	
	Notice of non-compliance	X	
Low	Administrative compliance order	X	
	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.

Table 3-3 also provides an example of how coordinated responses in areas of overlapping authority should occur, unless there is justification for implementing alternate actions. In general, the Regional Board may be asked to provide support in enforcement actions related to incidents that are or escalate to a high-priority status. The Permittees take the lead in initiating enforcement actions related to medium and low priority incidents. Finally, the Santa Ana Regional Board will take all enforcement actions related to compliance with the State General Permits.

Coordination of Enforcement/Compliance Activities with Other Permittees

Coordination with other Permittees and government agencies including the Santa Ana Regional Board is essential for successful implementation of an enforcement/compliance program. The entire MS4 is not controlled by a single Permittee, nor does any single Permittee 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. Each Permittee coordinates its enforcement activities, as practicable, with the appropriate Permittees and agencies in accordance with the following guidelines:

- 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 Santa Ana Regional Board may be asked to be the lead enforcement agency for higher priority Illegal Discharges in areas of overlapping authority and will be lead enforcement agency for all enforcement actions related to compliance with the State General Permits.
- Investigation and other relevant information will be shared between the participating agencies in a timely fashion.

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; and
- Ensuring that follow-up actions are implemented.

Enforcement Activities Directory. A list of contact names identifying who should be contacted to coordinate enforcement activities for each Permittee, as well as the Santa Ana Regional Board and other potentially interested agencies is maintained by the District and distributed to the Permittees and others as appropriate to facilitate coordination of enforcement activities.

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 Permittees. With this authority, the Santa Ana Regional Board may be more effective in obtaining the cooperation and compliance from those who violate stormwater regulations. The Santa Ana Regional Board is notified by the Permittees when findings of potential non-compliance with the State's General Stormwater Permits have been identified or when Permittees have been unable to obtain the compliance of a party responsible for violating Co-Permittee stormwater or erosion control ordinances. The list of contact names maintained by the District identifies the appropriate Santa Ana 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 Permittee's stormwater compliance coordinator.

Coordination with Other Agencies

In addition to the Santa Ana Regional Board, Permittees 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.

3.4.2.3 Recordkeeping and Reporting

Minimum Guidelines for Recordkeeping

Information to be retained by the Permittees 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, Permittees, or other agencies; and
- Copies of notifications of potential non-compliance.

Annual Evaluation of Ordinances and Enforcement Procedures

Each Permittee in the SAR submits the findings of an evaluation of the implementation and enforcement response procedures along with recommended corrective actions, where appropriate, as part of the Annual Report (VIII.H).

Annual Summary of Enforcement Actions

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 each Co-Permittee's LIP. Each Permittee completes an annual summary of enforcement actions to document implementation of their enforcement and compliance programs. The summaries document the responsible party, address, type of facility, description of violation, date of initial violation, and enforcement/compliance actions implemented for violations identified by a Permittee. The 2010 SAR MS4 Permit requires the Permittees to maintain records of all data used to complete the Report of Waste Discharge and Annual Reports, for a minimum of five years. This is interpreted to include the annual summaries of enforcement actions and the data used to prepare the annual summaries.

3.4.3 Training for Enforcement

Training is necessary for successfully implementing the Permittee's enforcement/compliance programs so that staff can continue to recognize and respond to violations in an appropriate manner. Therefore, staff involved in implementing a Permittee's enforcement/compliance program are made aware of the local, state, and federal stormwater regulations and the procedures developed to enforce these regulations.

Permittees provide stormwater training to staff that are involved in inspections of Industrial Facilities, Commercial Facilities, and Construction Sites, enforcement of Stormwater Ordinances and erosion control ordinances, administration of the enforcement/compliance program, and other staff as appropriate.

Staff training addresses the following areas:

- Requirements of the federal, state, and Co-Permittee stormwater and erosion control ordinances;
- Requirements of the 2010 SAR MS4 Permit and latest version of the DAMP, including the requirements of the Enforcement/Compliance Strategy; and
- Requirements of the Industrial General Permit and Construction General Permit.
- Industrial Facility, Commercial Facility and Construction Site inspectors also receive training regarding stormwater pollution prevention plans (SWPPPs) for Construction Sites, and selection of appropriate BMPs for Industrial Facilities, Commercial Facilities and Construction Sites. Knowledge of the applicable requirements and the overall stormwater program helps inspectors and other staff to recognize potential violations, respond with appropriate levels of enforcement, and effectively coordinate with other agencies. The Permittees individually maintain a log of trained staff and report training, and this information is summarized in the Annual Reports.

4.0 ELIMINATION OF ILLICIT CONNECTIONS AND ILLEGAL DISCHARGES

4.1 DISCHARGE LIMITATIONS AND PROHIBITIONS

The 2010 SAR MS4 Permit requires the Permittees to comply with the following in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted there under, and the provisions of the CWA, as amended and the regulations and guidelines adopted there under:

- In accordance with the requirements of 40 CFR 122.26(d)(2)(i)(B) and 40 CFR 122.26(d)(2)(i)(F), the Permittees must continue to prohibit Illicit Connections and Illegal Discharges from entering the MS4.
- The discharge of Urban Runoff, from the MS4 to Receiving Waters containing Pollutants, ***including trash and debris*** that have not been reduced consistent with the MEP standard is prohibited.
- Non-stormwater discharges from Permittee activities into Waters of the U.S. are prohibited unless the Non-stormwater discharges are permitted by a NPDES permit, granted a waiver, or as otherwise specified in Section VI of the 2010 SAR MS4 Permit.
- Discharges from the MS4 must be in compliance with the discharge prohibitions contained in Chapter 5 of the Santa Ana Region Basin Plan.
- Discharges ***from*** the MS4 must not cause or contribute to a condition of Pollution, Contamination, or Nuisance (as defined in CWC Section 13050), in Waters of the State.
- The discharge of any substances in concentrations toxic to animal or plant life is prohibited.

4.2 NON-PROHIBITED NON-STORMWATER DISCHARGES

The Permittees must continue to effectively prohibit the discharge of non-stormwater into their respective MS4 facilities and to the Waters of the U.S. unless such discharge is authorized by a separate NPDES permit or specifically allowed by the following provisions. The Permittees are not required to prohibit the discharges identified below. If, however, any of the following allowable non-stormwater discharges are identified by either a Permittee or the Executive Officer as a significant source of Pollutants, coverage under Santa Ana Regional Board Order No. R8-2003-0061, NPDES No. CAG998001[10] (General Permit-De Minimis Discharges) as amended by Order Nos. R8-2009-0003, R8-2006-0004, and R8-2005-0041, or other NPDES Permit or Waste Discharge Requirements, may be required.

- Discharges composed entirely of stormwater;
- Air conditioning condensate;
- Irrigation water from agricultural sources;
- Discharges covered by a NPDES permit, Waste Discharge Requirements, or waivers issued by the Regional Board or State Board.

[10] General Waste Discharge Requirements for Discharges to Surface Waters Which Pose an Insignificant (De Minimis) Threat to Water Quality Order No. R8-2003-0061, NPDES No. CAG998001.

- Discharges from landscape irrigation, lawn/garden watering and other irrigation waters. These discharges must be minimized through public education and water conservation efforts as prescribed under Section XI.E of the 2010 SAR MS4 Permit;
- Passive foundation drains[11];
- Passive footing drains[12];
- Water from crawl space pumps[13];
- Non-commercial vehicle washing (e.g., residential car washing (excluding engine degreasing) and car washing fundraisers by non-profit organization);
- Dechlorinated swimming pool discharges (cleaning wastewater and filter backwash shall not be discharged into the MS4 or to Waters of the U.S.);
- Diverted stream flows[14];
- Rising ground waters[15] and natural springs;
- Uncontaminated groundwater infiltration (as defined in 40 CFR 35.2005 (20)) and uncontaminated pumped groundwater (as defined in R8-2010-0003, Appendix 4, Glossary);
- Flows from riparian habitats and wetlands;
- Emergency firefighting flows (i.e., flows necessary for the protection of life and property do not require BMPs and need not be prohibited. However, appropriate BMPs to reduce the discharge of Pollutants to the MEP must be implemented when they do not interfere with health and safety issues (see also Appendix G of the DAMP);
- Waters not otherwise containing Wastes as defined in California Water Code Section 13050 (d); and
- Other types of discharges identified and recommended by the Permittees and approved by the Regional Board.

Discharge specifications for de minimis discharges from Permittee owned and /or operated facilities and activities are discussed in Section 5.4 of this DAMP.

When allowable non-Urban Runoff discharges are identified as a significant source of Pollutants to the Waters of the U.S., a Permittee must either: prohibit the discharge category from entering its MS4 facilities

[11] Allowed discharges only if the source water drained from the foundation is stormwater or uncontaminated groundwater. Discharges from contaminated groundwater may require coverage under the De Minimis Permit (Order No. R8-2009-0003, NPDES No. CAG998001) or General Groundwater Cleanup Permit (Order No. R8-2007-0008, NPDES Permit No CAG918001) or its latest version.

[12] See footnote 29.

[13] Allowed discharges only if the discharge is uncontaminated, otherwise permit coverage under the De Minimis Permit or Order No. 2006-0008-DWQ (NPDES No. CAG990002), General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Waters (General Permit-Utility Vaults).

[14] Diversion of stream flows that encroach into Waters of the US requires a 404 permit from the U.S. Army Corps of Engineers and a 401 Water Quality Certification from the Regional Board. Stream diversion that requires active pumping also requires coverage under the De minimis Permit, Order No. R8-2009-0003.

[15] Discharge of rising ground water and natural springs into surface water is only allowed if groundwater is uncontaminated. Otherwise, coverage under the General Groundwater Cleanup Permit, Order No. R8-2007-0008 may be required.

or ensure that Structural BMPs and Source Control BMPs are implemented to reduce or eliminate Pollutants resulting from the discharge. The Permittees must evaluate the allowed non-Urban Runoff discharges, as listed above, and notify the Executive Officer if any are a significant source of Pollutants to their MS4s.

MS4 discharges in the SAR must also be in compliance with the discharge prohibitions contained in Chapter 5 of the Santa Ana Region Basin Plan.

4.3 PROCEDURES TO TRACK ILLEGAL DISCHARGES TO THEIR SOURCES

If the Permittees determine a persistent exceedance of Water Quality Objectives due to Urban Runoff discharges, notwithstanding the implementation of the DAMP and other requirements of the 2010 SAR MS4 Permit, the Permittees will:

Implement the procedure described in Section VII.D of the 2010 SAR MS4 Permit.

4.4 IDDE RESOURCES

4.4.1 Staffing

The District maintains staff dedicated to monitoring, including screening of Major Outfalls owned and operated by the District, and identification and elimination of IC/IDs to District facilities. Where needed, the District staff also assists Co-Permittee staff in obtaining laboratory characterization of samples of suspected IC/IDs for Permittee facilities and jurisdictional areas.

Each Permittee also has identified departments and staff with responsibilities for inspecting its MS4 facilities and responding to IC/IDs related to their MS4 and jurisdictions. The departments and staff are identified in each Permittee's LIP.

4.4.2 Legal Authority

As described in Section 3.4, each Co-Permittee maintains a Stormwater Ordinance prohibiting IC/IDs.

4.4.3 Mapping

An inventory and map of the Permittee MS4 facilities and Major Outfalls to Receiving Waters is maintained by the District. A global positioning device is used to field locate and verify locations of MS4 facilities and Major Outfalls.

4.4.4 Databases

Each Permittee maintains a database of its MS4 facilities and each Co-Permittee has a Stormwater Ordinance. A master GIS database is maintained by the District and includes information on channel construction, size and location of Major Outfalls. Each Permittee also maintains a database that summarizes IC/ID incident response. The Permittees also maintain databases listing Industrial and Commercial Facilities and Construction Sites that may be useful in identifying generating sites.

4.4.5 Public Education and Hotline

As described in Section 10, the 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

Permittees, a centralized 24-hour hotline (1-800-506-2555) 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 Permittee departments or contacts.

4.5 IC/ID PREVENTION

As described in Section 3.4 herein, the Permittees have established the legal authority to prevent IC/IDs into its MS4. The various programs described in Sections 5 through 9 of this DAMP are intended to prevent IC/IDs from occurring. Additionally, Section 10 of this DAMP describes the public education efforts implemented to ensure that the public is informed of these requirements.

4.6 IC/ID DETECTION AND ELIMINATION

Since the early 1990's, the Permittees have implemented a proactive IDDE program. The objective of this mature program is to prevent IC/IDs and eliminate new IC/IDs as they develop and to reduce Pollutant loads during dry weather flows to meet TMDLs established for Receiving Waters.

Since the Santa Ana Region of Riverside County is semi-arid, there is little natural perennial runoff. Non-storm runoff primarily consists of wastewater treatment plant discharges, water transfers, landscape runoff, and discharges permitted by the Regional Board. Drainages exhibiting ephemeral flows generally have limited vegetation. As a result, IC/IDs are more easily identifiable in Riverside County than in other areas of the country with predominately perennial flows. Also, the sanitary sewer systems in Riverside County have always been separate from the MS4s and are newer relative to sanitary sewer systems in other states. The sanitary sewer systems are also inspected and maintained by the owners/operators of those systems in compliance with State requirements to prevent sanitary sewer overflows. Given these conditions, it was determined that a desktop assessment of Illegal Discharge potential was not necessary in Riverside County at that time.

In the mid-1990s, the Permittees conducted reconnaissance surveys to identify IC/IDs to the MS4. The reconnaissance surveys were limited to underground storm drains of 36-inch diameter or larger and open channels and most Permittees utilized videotaping. Each undocumented connection to the MS4 was traced to its origin. Although 200 undocumented connections to the underground MS4 facilities were found, 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 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, Permittee inspections of open channel facilities to identify Illicit Connections are conducted 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 MS4 Permit requirements.

In implementing the IDDE program the Permittees actively seek to eliminate and prohibit IC/IDs to the MS4. In addition, the Permittees implement and improve routine inspection and monitoring and reporting programs for their MS4.

In addition to the Regional IDDE program implemented by the District, the Permittees implement individual programs to actively seek and eliminate IC/IDs to their respective MS4 facilities as described in their LIPs. Each Permittee maintains a labeled map of their entire MS4 and the associated drainage areas. The Permittees review their MS4 map on an annual basis and update their maps, as needed. Each Permittee implements an Illegal Discharge Monitoring Program, which is described in their LIP. The Illegal Discharge Monitoring Programs include numeric criteria that are used to determine when laboratory analytical results indicate that a follow-up investigation is warranted.

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

4.6.1 MS4 Facility Inspections

The Permittees maintain inventories and maps of their MS4 facilities and outfalls to the Receiving Waters. Each Co-Permittee also identifies responsibilities and procedures for identifying and eliminating IC/IDs in its LIP for its MS4. The Permittees also maintain and implement a schedule for conducting systematic investigations of Permittee MS4 open channels and Major Outfalls. During the regular maintenance of MS4s, the MS4 facilities are inspected to identify Illicit Connections, and evidence is noted of any Illegal Discharges. This is the most direct method to detect IC/IDs, and enables the Permittees to look for discharges that appear unusual or may produce a foul odor or coloring. Appropriate Permittee field personnel are trained to identify potential IC/IDs during the course of their normal duties. The Permittee staff is familiar with the existing MS4 and the drainage patterns within the region and can take steps to identify the source of what appears to be an IC/ID.

The District's Watershed Protection Division implements a program to inspect District operated facilities for IC/IDs. These facilities represent the vast majority of the regional MS4 channels and storm drains that discharge to Receiving Waters. In addition to inspecting Major Outfalls and open channels, field indicators are used to identify potential Illegal Discharges where applicable. The procedures implemented by the District to identify IC/IDs are described in the Consolidated Monitoring Program.

4.6.2 Third-party IC/ID Reports

Predominantly, Illegal Discharges are reported by the public or by Permittee field personnel. Third-party notifications are a direct source of IC/ID information. Residents are encouraged to call the Police/Sheriff Department/Code Enforcement to report observed spills or Illegal Discharges. The Permittees also participate in the regional stormwater hotline number operational within Riverside County at 800-506-2555, which may be used to report IC/IDs. These calls can be received in English or Spanish and are routed to the appropriate Permittee departments or contacts. Upon receiving notification from staff or a third party, the Permittees follow the procedures identified in Section 4.7 below.

4.6.3 IC/ID: Construction Site Inspections

As described in Section 7 herein, the Co-Permittees implement programs to track and verify that construction sites are complying with their ordinances. As part of that program, the Permittees supplement the IC/ID 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 storm drain lines (XI.B.3.c). Illegal Connections are prohibited by the Co-Permittees and are initially verified during the plan check process. The Permittees verify conformance with the approved plans and conduct inspections at construction sites. A Stop Work Order is issued if an IC/ID is observed during an inspection, and where applicable will follow the relevant procedures described below. The Stop Work Order will cease after the IC/ID has been removed or eliminated (XI.A.11).

4.6.4 IC/ID: Industrial/Commercial Facility Inspections

As described in Section 8 herein, the Permittees implement programs to track and verify that Industrial and Commercial Facilities are complying with the Permittee ordinances. The Permittee's industrial/commercial survey program assists the Permittees' IC/ID elimination efforts through the Stormwater Compliance Surveys. These surveys list non-compliance issues that require additional attention, including IC/IDs. If IC/IDs are encountered, the Permittees will investigate as described below.

4.6.5 IC/ID: Monitoring Activities

The Permittees implement programs to conduct proactive investigations of the MS4 Major Outfalls that they own/operate. The program to conduct these Major Outfall investigations is described in the Consolidated Monitoring Program (CMP), and response activities are described in Section 4.7.

4.6.6 Non-Jurisdictional IC/IDs

Where non-jurisdictional IC/IDs are identified within a Permittee's jurisdiction, the responsible party is notified of the Regional Board requirements and the Executive Officer is notified of the non-jurisdictional IC/ID (IX.K).

The Permittees also implement Wet and Dry Weather monitoring programs that may indicate the presence of IC/IDs.

4.7 IC/ID Response and Reporting

If routine inspections or dry weather monitoring indicate IC/IDs, they are investigated and eliminated or permitted as soon as possible, but no later than sixty (60) calendar days of receipt of notice by Permittee staff or from a third party. However, Illegal Discharges that are a serious threat to public health or the environment are eliminated immediately. Where Illicit Connections are discovered, Permittee staff is notified to coordinate investigations and either permitting or elimination of the connection. When evidence of an active Illegal Discharge is discovered, appropriate staff is notified to coordinate an investigation and response as described below.

When put on notice by staff or a third party of a potential IC/ID that is not being responded to by another responsible agency (e.g., other Permittee, sewer agency, fire department, etc.), the Permittee must immediately (within 24 hours of receipt of notice by its staff or from a third party) investigate all spills, leaks, and/or other illegal discharges to the MS4 and determine if it constitutes an Emergency Situation or

is a threat to human health or the environment. Based on the Permittee's initial assessment, the Permittee with jurisdiction over the affected MS4 facility will take the following actions:

Illicit Connections and Illegal Discharges that are Threats to Human Health and the Environment (Emergency Situation)

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 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.

- Follow reporting procedures specified below.
- Immediately investigate the situation, including tracking to the source, and remediate the situation and/or coordinate with the appropriate response agencies to remediate the situation.
- Lead or coordinate with other agencies regarding appropriate enforcement against the discharger per the guidelines of Section 3.4.

Non-Threatening Illicit Connections and Illegal Discharges (Non-Emergency Situation)

Permittees meet the following minimum guidelines when responding to reports of Illegal Discharges that do not constitute an Emergency Situation:

- If the reported incident is outside of a Permittee's jurisdiction, referral to the appropriate agency and/or the Regional Board will be made within two (2) business days;
- Permittees respond to reports of IC/IDs within their jurisdiction within ten (10) business days;
- Inspections performed in response to a report are documented appropriately; and
- When appropriate, samples of Illegal Discharges are collected.

Regional Response

To assist in response to complaint calls, and as part of the area-wide program on behalf of the Permittees, the District continues to utilize funds received through Implementation Agreements with the Permittees and from the Benefit Assessment Areas to provide financial support to the County's Hazardous Materials Emergency Response Team to ensure that Hazardous Materials from spills or Illegal Discharges have minimal impact on MS4s and Receiving Waters. In addition, as a proactive deterrent to potential Illegal Discharges, the District, on behalf of the Permittees, also utilizes funding received from the Permittees through Implementation Agreements and from the Benefit Assessment Areas to support the County Department of Environmental Health's HHW collection program. This facilitates the proper management and disposal of used oil, toxic materials and other household Hazardous Wastes.

Reporting

The Permittees with jurisdiction over the portion of the MS4 affected by the Illegal Discharge, upon being notified, must immediately (within 24 hours of receipt of notice by its staff or from a third Party) investigate the circumstances of potential IC/IDs to their MS4 facilities to determine if the potential discharge is an

Emergency Situation as defined above. Based upon their assessment and as specified below, the Permittees report all discharges that endanger human health or the environment:

- By phone to the Cal-EMA at 1-800-852-7550 and to the Executive Officer of the Santa Ana Regional Board by telephone: 951-782-4130. Alternatively, the report to the Executive Officer may be provided by e-mail at region8info@waterboards.ca.gov.
- At a minimum, any sewage spill above 1,000 gallons or that could impact water contact recreation, any oil spill that could impact wildlife, any Hazardous Material spill where residents are evacuated, any spill of reportable quantities of Hazardous Waste (as defined in 40CFR 117 and 40CFR 302), or any other spill or discharge that is reportable to the Cal-EMA (collectively, an "Emergency Situation") is reported within twenty-four (24) hours of the Permittee(s) becoming aware of the circumstances. Following oral notification, a written report must be submitted within 10 days of receipt of notice of the Emergency Situation, detailing the nature of the non-compliance, any corrective action taken by the site/facility owner, other relevant information (e.g., past history of the Emergency Situation, site/facility owner responsiveness) and type of enforcement that will be carried out by the Permittee. Further, incidences of non-compliance must be recorded along with the information noted in the written report and the final outcome/enforcement for the incident in the databases for Construction Sites and Industrial or Commercial Facility inspections, as appropriate.
- If a Co-Permittee receives notice by its staff or from a third party of a Non-Emergency Situation representing a possible violation of a General Stormwater Permit or other permit issued by the State or Santa Ana Regional Board to an Industrial Facility or Construction Site, the Co-Permittee must, within two (2) working days, provide oral or email notice to Regional Board staff of the location within its jurisdiction where the incident occurred and describe the nature of the incident. After notifying the Regional Board, no further action is necessary regarding the General Stormwater Permits.
- All other spill incidents, including any unauthorized discharges that are not reportable to Cal-EMA are reported to the Santa Ana Regional Board via each Permittees' Annual Report.
- Where non-jurisdictional IC/IDs within a Permittee's jurisdiction in the SAR are identified, the Permittees will notify the responsible party and the Executive Officer of the discharge.

  The Permittees also maintain a database summarizing IC/ID incident response (including IC/IDs detected as part of field monitoring activities). This information is updated on an ongoing basis and submitted to the Santa Ana Regional Board with the Annual Report.

  The IC/ID program, including litter/trash BMPs implemented in the SAR, is reviewed and evaluated annually to determine if the program needs to be adjusted. Findings of the annual review and evaluation must be submitted to the Santa Ana Regional Board with the Annual Report.

4.8 ENFORCEMENT FOR ILLICIT CONNECTIONS AND ILLEGAL DISCHARGES

Investigations are performed by each Permittee in response to reports of IC/IDs received from the public, Permittee staff or other agencies within their jurisdictions. The sources of these discharges may include residential, commercial, industrial and construction activities and other sources. As described in Section 3.4, the Co-Permittees have adopted ordinances prohibiting such discharges and established programs to enforce them.

Construction Site inspectors, Industrial and Commercial Facility inspectors, and other Permittee departments, including fire and wastewater inspectors, will report potential IC/IDs discovered during the course of existing routine inspections to the Regional Board if they are perceived to be in violation of the General Stormwater Permits. In addition, although Construction Site and Industrial and Commercial Facility violations may be enforced initially through Co-Permittee Stormwater Ordinances and erosion control ordinances, referrals are made to the Regional Board if compliance is not achieved. In all cases, the notification of potential non-compliance should be routed through the Permittee's stormwater compliance coordinator before notifying Regional Board staff.

4.9 LITTER CONTROL

The Permittees implement control measures to reduce and/or to eliminate the discharge of Pollutants, including trash and debris, to and from the MS4 to the Receiving Waters. These control measures are reported in the Annual Report. Typical litter control activities may include public education, street sweeping, code enforcement activities targeted at Illegal Discharges, watershed cleanup events and/or other activities implemented by the Permittees collectively or individually.

4.10 SANITARY WASTES

Sanitary Sewer Overflows and Private Laterals

The Executive Officer of the Santa Ana Regional Board requested the local sewer agencies take the lead in the development of a unified response to sewage spills that may have an impact on Receiving Water quality. This procedure includes notification of all sewage spills from private laterals and failing septic systems into the MS4 and coordination of sewage spill prevention, containment and response activities though appropriate departments, programs and agencies. The District collaborated with the local sewer agencies in the development of this procedure, a copy of which is included as Appendix E. The Permittees provide local sanitation districts 24-hour access to the MS4s to address sewage spills. The Permittees work cooperatively with the local sewer agencies to determine and control the impact of infiltration from leaking sanitary sewer systems on Urban Runoff quality.

Failing Septic Systems

The Department of Environmental Health (DEH) regulates septic tanks and portable toilets under Ordinance No. 712. This ordinance requires sanitary waste haulers to inform residential septic tank pumping customers in writing of:

- The number of compartments within the system to be pumped;
- An assessment of tank condition as to necessity for pumping chambers, in addition to the primary chamber. For routine maintenance, all compartments of a septic tank should be made available for pumping of liquid and solids;
- The number of compartments actually pumped;
- The number of gallons removed;
- The pH value of the load.

In cooperation with the DEH, the Permittees have identified procedures to control septic system failures to prevent impacts on Urban Runoff quality and continue to follow procedures established by the State Health Department to address such failures. The County also implements regulations adopted by the State Board pursuant to California Water Code Sections 13290-13291.7 through a Memorandum of Understanding with the Regional Board. The design review of septic systems is performed by a Memorandum of Understanding with the Santa Ana Regional Board. Statewide standards for construction were developed by the State Board, in conjunction with other stakeholders, under the provisions of AB 885. Water Quality Control Policy for Siting, Design, operation, and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy) was adopted by the State Water Resources Control Board on June 19, 2012, approved by the Office of Administrative Law on November 13, 2012 and became effective on May 13, 2013. It is expected that the Co-Permittees will incorporate the final regulations into their compliance programs to assist with addressing nutrient and bacteria related TMDLs as well as minimize illicit discharges from septic systems.

In addition, County Ordinance No. 650 establishes the construction requirements for septic systems. In conjunction with the California Health and Safety Code Sections 5411 and 5461, County Ordinance No. 650 establishes the authority and responsibility of the DEH to investigate system failures. Primarily a complaint driven process, the DEH investigates all suspected incidents of improper discharge. The DEH uses a variety of enforcement tools including citation, criminal prosecution and summary abatement to mitigate discharges from septic system failures.

The overwhelming majority of septic system failures are confined to the property and are effectively abated, providing minimal impact to the MS4. In cases where there are clustered failures or violations indicating a previously unknown or deteriorating geological condition, the DEH has and will continue to provide additional investigations to identify the geological condition and its extent. Where necessary for the ongoing control of onsite waste generation the DEH provides support to efforts to bring sewers to the community.

The above process is being applied to Quail Valley, from which septic failures are implicated in Bacterial Indicator, nitrogen and phosphorus contamination to Canyon Lake. The DEH has conducted a sanitary survey of the Quail Valley area and is working with the local sewer agencies and the Santa Ana Regional Board to evaluate the provision of sewers. The DEH also revised County Ordinance No. 650 to provide additional controls to mitigate these failures.

Portable Toilets

Further, the Permittees have 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. Enforcement against ordinance violations associated with improper use or deployment of portable toilets is performed by the Co-Permittees as necessary, in accordance with the enforcement procedures described above.

Permittees with septic systems in their jurisdiction must maintain the inventory of septic systems within its jurisdiction completed in 2008. Updates to the inventory are maintained by the DEH via a database of new septic systems approved since 2008.

4.11 WASTE COLLECTION PROGRAMS

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

The Permittees participate in the HHW and ABOP collection programs in conjunction with the Riverside County Waste Management Department. The Waste Management Department took over the collections of HHW and ABOP materials from the DEH in 2006 to discourage illegal disposal of HHW and to assist residents in properly disposing potentially Hazardous Materials or Toxic Substances.

Mobile HHW collection events are held at sites in the SAR and at additional sites County-wide. Collection events are scheduled periodically on weekends from 9:00 a.m. until 2:00 p.m. The District also supports two permanent HHW/ABOP collection sites in the SAR. The sites are 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 on the DEH website or by calling 1-888-722-4234 or 951-358-5055.

Examples of Wastes that are accepted at HHW collection events include the following items:

- Kitchen – Aerosol cans, aluminum cleaners, ammonia, chlorinated cleansers, drain cleaner, floor care products, furniture polish, oven cleaner.
- Bathroom – Chlorine bleach, deodorizer/air freshener, disinfectant, hair dye, mercury devices, nail polish remover, shoe dye, toilet/tub/tile cleaner.
- Garage – Antifreeze, auto batteries, brake fluid, carburetor cleaner, chrome polish, engine degreaser, fluorescent tubes/bulbs, gasoline, diesel fuel, motor oil, oil filters, old televisions and computers, rodent poison.
- Gardening – Aerosol insecticides, bbq propane tanks, fertilizer, fungicide, insecticides, pesticides, rodent bait/poison, weed killer/herbicides.
- Workshop & Hobby – Caulking, fiberglass and epoxy resins, glue, gun cleaners, hobby chemicals, paint latex/oil based, paint stripper, paint thinner/turpentine, photographic chemicals, roof coating, varnish, WD-40 or other lubricants. Miscellaneous – Batteries (all types), artist's paints, camp propane tanks, electronic devices, flea powder, kerosene/lamp oil, lighter fluid, moth balls/flakes, pool/spa chemicals, rug cleaner, sharps/needles, spot remover with solvent.

No Wastes from businesses, non-profit, or out of county facilities or activities are accepted. Examples of Wastes that are not accepted at HHW collection events include the following items:

- Explosives/ammunition;
- 30 or 55 gallon drums;
- Radioactive or remediation materials;
- Asbestos;
- Appliances;
- Tires;

- Compressed gas cylinders greater than 40 pounds; and
- Medical waste except syringes and hypodermic needles (sharps) in an acceptable container.

Along with materials collected at HHW and ABOP sites, CRTs 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.

4.11.2 Conditionally Exempt Small Quantity Generator (CESQG)

The CESQG Program is a Hazardous Waste pickup 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.

5.0 PERMITTEE FACILITIES AND ACTIVITIES

5.1 PLANNING PERMITTEE PROJECTS

The requirement for managing the quality and quantity of stormwater runoff applies to Permittee projects meeting the definition of New Development or Significant Redevelopment[16] in the SAR. Although the Permittees do not plan, design, or construct most of the project categories defined as New Development or Priority Development per se, some Permittee projects may have similar functions or characteristics, or may conduct similar activities after construction is completed. For example, a corporation yard may include a vehicle and equipment maintenance facility, which is very similar to an automotive repair shop. Other examples are a civic center or library that is very similar in its characteristics to that of a commercial office building, and a senior citizens center or a jail may have a cafeteria, which is similar to a restaurant.

The process for planning, design, approval, and construction oversight of Permittee projects differs from the process of planning and permitting for private sector development projects. For example, typically private sector Development Projects are regulated through a process of a discretionary development plan approval (i.e., conditions of approval), building or grading permit applications, and permit conditions. In comparison, while Permittee projects may undergo design review by the Permittee's contracting agency, and be issued administrative authorizations there aren't typically any formal "discretionary approvals".

Each Permittee incorporated the development of a project-specific WQMP or an equivalent approach into the process of planning, designing, and preparing construction plans and specifications for their public Development Projects. While the requirement for a WQMP applies to private Development Projects before the first discretionary approval (see Section 6.5.1), since public development projects do not typically have defined "discretionary approvals", the WQMP requirement is typically applied to public Development Projects before CEQA approval.

Any Permittee public works projects that do not have CEQA approval within 45 days of the Regional Board approval of the revised WQMP for the 2010 SAR MS4 Permit, shall be subject to the LID and HCOC requirements of the revised WQMP for the 2010 SAR MS4 Permit, to the MEP. Permittee public works projects that have not obtained CEQA approval within six (6) months after the Regional Board Executive Officer's approval of the WQMP are subject to the revised WQMP for the 2010 SAR MS4 Permit. Such Permittee public works projects will not be allowed to continue though the development process until all of the applicable items in the WQMP have been addressed. The procedures to ensure that a project-specific WQMP is prepared for Permittee Public Works New Development and Significant Redevelopment Projects are:

- A "WQMP Applicability Checklist" for Identifying Projects Requiring a Project-Specific WQMP within the Santa Ana Region will be completed to determine if a WQMP is required.
- If the project meets the definition of New Development or Significant Redevelopment as defined in Section XII.D.2 of the 2010 SAR MS4 Permit, a WQMP will be prepared for the project, consistent with the requirements of the WQMP and the provisions noted above.

[16] As defined in Section XII.D.2 of the 2010 SAR MS4 Permit.

- If the project is a Public Works road project, normally, the Permittee Transportation Department will comply with the LID Guidance and Standards for Transportation Projects in the WQMP.

Other public projects comply with Section 6.5.4 of the DAMP. Typically, the Permittee's design/engineering department or the design architect/engineer contractor would prepare a project-specific WQMP for a Permittee project. However, a discussion of funding will not be required in a Permittee's project-specific WQMP, as funding of the long-term operation and maintenance will be the responsibility of the Permittee owning and operating the public project once construction is completed. Also, where applicable, the operation and maintenance procedures for the Treatment Control BMPs included in a Permittee's project-specific WQMP will be incorporated into a municipal Facility Pollution Prevention Plan (see DAMP Section 5.3.2 and Appendix F). For Permittee 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 Permittee department and become part of the Permittee Facilities and Activities Program (DAMP Section 5.3).

Each Permittee has developed and implemented policies and procedures to ensure that the planning and design of its projects reflect these requirements.

5.1.1 Transportation Projects

The WQMP approved by the Regional Board on October 22, 2012 includes an appendix, the LID Guidance and Standards for Transportation Projects, delineating standard design and post-development BMP guidance to be incorporated into projects for streets, roads, highways, and freeway improvements, under their jurisdiction of the Permittees to reduce the discharge of Pollutants from the projects to the MEP (XII.F). After the approval of the Transportation Project Guidance, Co-Permittees listed responsible staff, and described procedures for the review and approval process of Transportation Projects in their LIP.

5.2 PERMITTEE CONSTRUCTION ACTIVITIES

The Permittees conduct construction projects in compliance with their Ordinances and, if applicable, the latest version of the Construction General Permit. Permittee construction projects one acre or larger or which are part of a construction project one acre or larger must comply with the Construction General Permit. However, they are conducted under authority of the 2010 SAR MS4 Permit. Prior to commencement of construction activities in the SAR, the Permittees must file Permit Registration Documents (PRDs) by using the State Board SMARTS system. The Notice of Intent (NOI) submittal fee is waived for the Permittee construction activities. The Permittees update the SMARTS system of planned changes in the construction activity that may result in non-compliance with the latest version of the Construction General Permit, as applicable. Upon completion of the construction project, the Permittees file a Notice of Termination (NOT) and other project close-out documentation via the State Board SMARTS system.

During construction closeout the Permittees will assure satisfactory completion of the requirements in a project-specific WQMP by (XII.I):

- Verifying that LID and Treatment Control BMPs, and Structural Source Control 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, Operational Source Control 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 (XI.A.3).

Where applicable, the operation and maintenance procedures for the LID and Treatment Control BMPs included in the project-specific WQMP will be incorporated into a municipal Facility Pollution Prevention Plan (see DAMP Appendix F). For Permittee 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 Permittee's program for operation and maintenance of Permittee Facilities, described in Section 5.3 below.

5.3 OPERATION AND MAINTENANCE OF PERMITTEE FACILITIES

5.3.1 MS4 Maintenance

The Permittees developed maintenance schedules for the Structural and Treatment Control BMPs and the MS4 and are implementing those maintenance schedules and report on the BMP and MS4 maintenance activities annually. These maintenance schedules address clean-out schedules and frequencies for the Permittees' open channels, catch basins, retention/detention basins, and wetlands created for Urban Runoff treatment. Wastes and materials removed are disposed of per applicable laws and appropriate BMPs, as described in Section 5.3.2, and are deployed to minimize impacts to the Receiving Waters to the MEP.

Catch Basin and MS4 Facility Maintenance

At a minimum, 80% of each Permittee's open channels, catch basins retention/detention basins, and wetlands created for Urban Runoff treatment are inspected, cleaned, and maintained annually, with 100% of the facilities maintained in a two-year period (XIV.E). Repairs and stenciling ("Only Rain Down the Storm Drain" or similar message) of the catch basins are performed throughout the year based on the observations documented during the cleaning (XIII.H). Each Permittee performs maintenance on its catch basins and MS4 facilities, and verifies, to the MEP, that its MS4 facilities are appropriately maintained. Each Permittee annually reviews, updates, and implements a clean out schedule and frequency for its MS4 facilities including open channels, catch basins, retention/detention facilities and wetlands created for Urban Runoff treatment during the Wet and Dry Seasons to protect Receiving Water quality to the MEP (XIV.D). The MS4 facility clean out schedule and frequency is as follows:

Table 5-1 MS4 Clean out Schedule and Frequency

Facility	Annually	Every Two Years
Open Channels	80%	100%
Catch Basins	80%	100%
Retention / Detention Basins	80%	100%
Created Wetlands (if applicable)	80%	100%

During the annual inspection and maintenance of the above listed MS4 facilities, the Permittees first inspect their facilities for visual evidence of illegal discharges, litter and/or debris accumulation, and other maintenance issues. Specifically, each Permittee cleans those retention/detention basins and MS4 facilities where the storage volume is 25% full or if accumulated sediment or debris impairs the hydraulic capacity of the facility (XIV.D). The Permittees also examine opportunities to retrofit existing MS4 facilities with water quality protection measures, where necessary and feasible (XIV.F).

On January 10, 2013, the Permittees developed a retrofit study (XII.B.3.b). The study identifies candidate areas for possible retrofits within existing MS4s, parks, and recreational areas that may incorporate opportunities for addressing TMDL implementation plans, hydromodification from Urban Runoff, LID implementation, and pollutant discharge reduction where evidence finds that such a project is necessary.

Landscape Maintenance

The Permittees promote the use of native vegetation into facility landscaping as described in the AB 1881 compliance report submitted to the Department of Water Resources. In addition, schedules for irrigation and chemical application are included in landscape designs to the extent feasible (XIV.C.3 & 4).

Pesticide Application

The Permittees utilize integrated pest management measures that rely on non-chemical solutions to the extent practicable (XIV.C.2). Unused pesticides, herbicides and fertilizers are collected and properly disposed of (XIV.C.5). The Permittees' pesticide applicators (including contractors) maintain appropriate training, permits, and certifications (XIV.C.1). Responsible staff and departments are provided in the Permittees' individual LIP.

Encroachment Permits

There may be New Development and Significant Redevelopment Projects that are not regulated under the 2010 SAR MS4 Permit. For runoff from such projects that require encroachment permits for connections to its MS4 facilities, within the limits of their legal authorities, the Permittees require applicants to design their projects consistent with the MEP standard and implement the applicable requirements of the 2010 SAR MS4 Permit, including the WQMP (III.B.2.f).

Trash BMPs

In the 2004-2005 Annual Report, the Permittees characterized trash that was removed from their MS4 facilities, determined its main source(s) and developed and implemented appropriate BMPs to reduce and/or to eliminate the discharge of trash and debris to Waters of the U.S. to the MEP. The Permittees continue to implement BMPs to prevent discharges of trash, and annually reviews and evaluates the effectiveness of its litter/trash BMPs by assessing the volume and character of trash removed during annual catch basin and MS4 Facility maintenance described in Section 5.3.1 above. The findings of the reviews are reported in the Annual Report (IX.G & J).

5.3.2 Other Permittee Facilities and Activities

The 1996 SAR MS4 Permit required the Permittees to develop a Municipal Facilities Strategy to identify BMPs for activities conducted at Permittee facilities. The 1996 SAR MS4 Permit also identified the activities for which the Permittees were required to select BMPs to reduce the potential for stormwater Pollution. These facilities and activities included street sweeping, catch basin cleaning, maintenance yards, vehicle and equipment maintenance areas, waste transfer stations, corporation and storage yards, parks and recreational facilities, landscape and swimming pool maintenance activities, MS4 maintenance activities, and the application of pesticides. The Municipal Facilities Strategy is incorporated into this section of the DAMP.

As part of the development of the Municipal Facilities Strategy, the Permittees identified the types of facilities they operate. During this process, the types of facilities and the activities conducted at those facilities were identified as having the potential to contribute Pollutants to Urban Runoff as shown in Table 5-2. Table 5-3 lists the types and numbers of facilities operated by the Permittees in the SAR. ABOP collection centers were not identified as facilities of concern in the SAR as they are otherwise regulated under the Resource Conservation and Recovery Act (RCRA). Permittee facilities such as wastewater treatment plants, airports, and landfills have coverage under the Industrial General Permit or under an individual NPDES permit.

No waste transfer stations were identified as being operated by the Permittees and facilities that consisted of only administrative buildings and parking areas were not identified to be of concern regarding Urban Runoff Pollution. Identification of the potential Pollutants at each Permittee's facilities was necessary in order to select appropriate candidate BMPs to reduce Pollutants in Urban Runoff to the MEP. In addition, the Permittees were surveyed to identify the potential Pollutants of Concern typically associated with the activities performed at or based from the identified facilities of concern. Table 5-4 identifies Pollutants of Concern that may be associated with activities conducted at or based from Permittees' facilities.

During the development of the facility specific strategies, the Permittees identified existing non-stormwater discharges and characterized the discharges with respect to frequency, volume, flow, and duration. The Permittees eliminated or permitted such discharges. A template facility Pollution Prevention Plan for Permittee facilities, including an annual inspection form, was developed and is provided in Appendix F. Facility-specific Pollution Prevention Plans based on this template, or similar templates, have been prepared for each of the facilities and activities listed in Table 5-3. These Pollution Prevention Plans are maintained and updated by the Permittees annually. Re-inspections and corrective actions are taken where deficiencies

are found. The inspection reports, and documentation of resulting corrective actions, are kept for five years and are incorporated into the Pollution Prevention Plans.

Based on the facilities, associated activities and the Pollutants of Concern identified, a list of potential Source Control BMPs was developed by the Permittees. This list utilizes the BMP designations used in the 2003 California Stormwater Best Management Practice Handbooks[17] (Industrial and Municipal Handbooks). The list of potential Source Control BMPs includes:

Industrial Handbook References

- SC-10 Non-Stormwater Discharges
- SC-11 Spill Prevention, Control and Cleanup
- SC-20 Vehicle and Equipment Fueling
- SC-21 Vehicle and Equipment Cleaning
- SC-22 Vehicle and Equipment Repair
- SC-30 Outdoor Loading /Unloading of Materials
- SC-31 Outdoor Liquid Container Storage
- SC-33 Outdoor Storage of Raw Materials
- SC-34 Waste Handling and Disposal
- SC-35 Safer Alternative Products
- SC-40 Contaminated or Erodible Areas
- SC-41 Building & Grounds Maintenance
- SC-42 Building Repair and Construction
- SC-43 Parking/Storage Area Maintenance
- SC-44 Drainage System Maintenance

Municipal Handbook References

- SC-10 Non-Stormwater Discharges
- SC-11 Spill Prevention, Control and Cleanup
- SC-20 Vehicle and Equipment Fueling
- SC-21 Vehicle and Equipment Cleaning
- SC-22 Vehicle and Equipment Repair
- SC-30 Outdoor Loading/Unloading
- SC-31 Outdoor Container Storage

[17] California Stormwater Quality Association. January 2003. http://www.cabmphandbooks.com/ or CASQA, P.O. Box 2105, Menlo Park, California, 94026-2105.

- SC-32 Outdoor Equipment Maintenance
- SC-33 Outdoor Storage of Raw Materials
- SC-34 Waste Handling and Disposal
- SC-41 Building and Grounds Maintenance
- SC-43 Parking/Storage Area Maintenance
- SC-60 Housekeeping Practices
- SC-61 Safer Alternative Products
- SC-70 Road and Street Maintenance (includes unpaved road BMPs)
- SC-71 Plaza and Sidewalk Cleaning
- SC-72 Fountains & Pools Maintenance
- SC-73 Landscape Maintenance
- SC-74 Drainage System Maintenance
- SC-75 Waste Handling and Disposal
- SC-76 Water and Sewer Utility Maintenance

This list is not intended to be all-inclusive. However, the BMPs listed are both effective and widely accepted. Permittees are encouraged to consult other sources of BMP information and consider implementation of additional methods and measures as appropriate. These BMPs are incorporated into the facility-specific Pollution Prevention Plans, as appropriate. 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 Annual Inspections

Beginning in July 29, 2011, all Permittee-owned Structural Post-Construction BMPs installed after January 29, 2010 will be inspected annually prior to the Rainy Season. Inspections are also made as needed in response to complaint calls. Where vector problems are observed, the Permittees will contact the local vector control agency to remedy the problems. The Permittee's inspectors utilize the Structural Post-Construction BMP Inspection Form provided in Appendix L in conducting these inspections. The completed inspection forms are maintained for a period of three years. The Permittees also accept inspection reports conducted and certified by State licensed professional engineers in lieu of inspections by Permittee staff.

Each Permittee conducts annual inspections of its fixed facilities and field operations identified in Table 5-3 to ensure that they do not contribute Pollutants to Receiving Waters. The Permittees record the findings in the inspection form provided in Appendix C of the Facility Pollution Prevention Plan (Appendix F). Each Permittee implements BMPs to manage the application, storage, and disposal of pesticides, herbicides, and fertilizers associated with their facilities and activities. At a minimum, the Facility Pollution Prevention

Plans for these facilities and activities shall:

- Ensure that Permittee applicators (including contractors) and distributors have appropriate training, permits, and certifications;
- Utilize integrated pest management measures that rely on non-chemical solutions, to the extent practicable;
- Promote the use of native vegetation into facility landscaping;
- Include schedules for irrigation and chemical application to the extent feasible; and
- Collect and properly dispose of unused pesticides, herbicides, and fertilizers.
- The following BMP fact sheets are identified as minimum BMPs:
    a. SC-35/SC-61, Safer Alternative Products
    b. SC-41, Building & Grounds Maintenance
    c. SC-60, Housekeeping Practices
    d. SC-73, Landscape Maintenance

5.4 DE MINIMIS DISCHARGES

The 2010 SAR MS4 Permit authorizes the Permittees to discharge de minimis types of discharges listed under the latest adopted version of the Regional Board's General De Minimis Discharge Permit, currently Order No. R8-2009-0003. The de minimis discharges from Permittee owned and/or operated facilities and/or activities must be in compliance with Order No. R8-2009-0003 except that the Permittees need not pay the filing fee. The following types of discharges from Permittee owned and/or operated facilities and activities are authorized under the 2010 SAR MS4 Permit:

- *Discharges from potable water sources, including waterline flushing, super chlorinated waterline flushing, fire hydrant system flushing, and hydrostatic test water from pipelines, tanks and vessels:* These discharges must be dechlorinated to a concentration of 0.1 ppm[18] or less, pH adjusted if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments.
- *Discharges from lawn, greenbelt and median watering and other irrigation runoff[19] from non-agricultural operations*: These discharges must be minimized through requirements consistent with Section 5.3 of the DAMP and Section XIV of the 2010 SAR MS4 Permit.
- *Dechlorinated swimming pool discharges*; Dechlorinated to a concentration of 0.1 ppm[20] or less, pH adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments. Swimming pool cleaning wastewater and filter backwash must not be discharged to the MS4.

[18] Total residual chlorine = 0.1 mg/l r parts per million (ppm) or less; compliance determination shall be at a point before the discharge mixes with any Receiving Water.

[19] Non-agricultural irrigation using recycled water must comply with the statewide permit for Landscape Irrigation Using Recycled Water and the State Department of Health guidelines.

[20] See footnote 41.

- *Discharges from facilities that extract, treat, and discharge water diverted from Waters of the US*: These discharges must meet the following conditions:
    a. The discharges to Waters of the U.S. must not contain Pollutants added by the treatment process or Pollutants in greater concentration than the influent;
    b. The discharge must not cause or contribute to a condition of erosion;
    c. Be in compliance with Section 401 of the CWA; and
    d. Conduct monitoring in accordance with Section XIX of the 2010 SAR MS4 Permit.
- *Construction dewatering wastes:* The maximum daily concentration limit for Total Suspended Solids (TSS) must not exceed 75 mg/L; sulfides must not exceed 0.4 mg/L; total petroleum hydrocarbons must not exceed 0.1 mg/L; and oil and grease must not exceed 15 mg/L.
- *For all de minumus types of discharges*: The pH of the discharge must be within 6.5 to 8.5 pH units and there shall be no visible oil and grease in the discharge.
- Table 4-1 of the Basin Plan incorporates TDS/TIN objectives for groundwater and surface waters within the SAR. Permittees discharging to those Receiving Waters must ensure compliance with the following for Dry Season conditions:
    a. For discharges to surface waters where groundwater will not be affected by the discharge, the maximum daily concentration (mg/L) of TDS and/or TIN of the effluent must not exceed the Water Quality Objectives for the Receiving Water where the effluent is discharged, as specified in Table 4-1 of the Basin Plan[21].
    b. For discharges to surface waters where the groundwater will be affected by the discharge, the TDS and/or TIN concentrations of the effluent shall not exceed the Water Quality Objectives for the surface water where the effluent is discharged and the affected groundwater management zone, as specified in Table 4-1 of the Basin Plan. The more restrictive Water Quality Objectives will govern. However, treated effluent exceeding the groundwater management zone Water Quality Objectives may be returned to the same management zone from which it was extracted without reduction of the TDS or TIN concentrations so long as the concentrations of those constituents are no greater than when the groundwater was first extracted. Incidental increases in the TDS or TIN concentrations so long as the concentrations of those constituents are no greater than when the groundwater was first extracted. Incidental increases in the TDS and TIN concentrations (such as may occur during air stripping) of treated effluent will not be considered increases for the purposes of determining compliance with this discharge specification.
- The Regional Board may add categories of non-stormwater discharges that are not significant sources of Pollutants or remove categories of non-stormwater discharges listed above based on a finding that the discharges are a significant source of Pollutants.

[21] Resolution No. R8-2004-0001.

In addition:

- The Permittees must notify the Executive Officer of the proposed discharge at least 15 days prior to start of the discharge, by submitting a NOI and supporting documents, as provided in Attachment 7 to the 2010 SAR MS4 Permit.
- For those Permittee Dischargers (authorized to discharge under Order No. R8-2009-0003 prior to the adoption date of the 2010 SAR MS4 Permit), discharges continue to be regulated under the terms and conditions of Order No. R8-2009-0003 until a new discharge authorization is issued, provided that the Discharger submitted, by June 10, 2010, an updated NOI, a copy of the current Monitoring & Reporting Program previously issued to the Discharger, and proposed treatment modifications (if any). If no application for continued discharges was submitted by that date, the Discharger is responsible to do one of the following:
    1. Cease discharge and submit a letter informing the Regional Board that coverage under Order R8-2009-0003 is no longer needed; or
    2. Apply for new discharge authorization as a new de minimis discharge, under the 2010 SAR MS4 Permit.

5.5 FIRE BMPS

In coordination with the Riverside County Fire Agencies, the Permittees developed a list of appropriate BMPs to be implemented to reduce Pollutants from fire training activities, fire hydrant/sprinkler 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 G. Additionally, some types of non-emergency firefighting flows are required by the 2010 SAR MS4 Permit (XIV.G.2) to comply with the requirements of the General De Minimis Permit (Order No. R8-2009-0003).

5.6 TRAINING FOR MUNICIPAL MAINTENANCE EMPLOYEES

Staff that is involved in implementing a Permittee's municipal maintenance program receive bi-annual training on the following topics:

- Requirements of the Permittee's Stormwater Ordinances;
- Requirements of the 2010 SAR MS4 Permit and DAMP;
- Municipal BMPs as described in Section 5.3.2 of the DAMP;
- Fertilizer and pesticide management;
- Municipal Facilities Pollution Prevention Plan;
- Other applicable Pollution control measures; and
- Requirements of USEPA approved TMDLs.

In addition, staff responsible for restricted use pesticide application is trained and certified under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA) requirements and the California Food and Agriculture Code. The Permittees sponsor training twice a year for Permittee maintenance staff. Permittee staff may also attend training sponsored by third parties (for example, California Stormwater Quality Association) in lieu of Permittee-sponsored training. The Permittees individually maintain a log of trained staff and report training in the Annual Reports.

Table 5-2. Permittee Facilities and Activities

Type of Municipal Facility	Activities of Concern Conducted
Corporate Yards[1]	Loading, unloading, handling, and storage of animal Wastes, anti-freeze, asphalt, batteries, chemicals, concrete, diesel Wastes, emulsions, fertilizer, fuel, green Wastes, Hazardous Materials, new and used oil, paint products, pesticides, scrap metal, solvents, trash and debris, and wash water
	Filling of aboveground and underground storage tanks (ASTs and USTs) with fuels
	Dispensing of fuels to vehicles, equipment, and portable fuel containers
	Vehicle and equipment parking and storage
	Vehicle, equipment, and material washing and steam cleaning
	Leak and spill cleanup
	Landscape, garden, and general maintenance and cleaning
Warehouses	Loading, unloading, handling, and storage of materials
	Landscape, garden, and general maintenance and cleaning
Fire and Police Stations, including Fire Training Facilities	Loading, unloading, handling, and storage of antifreeze, chemicals, new and used oil, scrap metal, and trash and debris
	Filling of ASTs and USTs with fuels
	Dispensing fuel
	Vehicle and equipment maintenance
	Vehicle and equipment parking and storage
	Vehicle washing and steam cleaning
	Leak and spill cleanup
	Landscape, garden and general maintenance and cleaning
	Fire retardant use/cleanup
Hazardous Materials Storage Facilities[2]	Loading, unloading, handling, and storage of potentially Hazardous Materials
	Leak and spill cleanup
Animal Shelters	Loading, unloading, handling, and storage of animal Wastes for offsite recycling, chemicals, and fuel
	Vehicle, equipment, and material washing
	Leak and spill cleanup
	Landscape, garden, and general maintenance and cleaning
Swimming Pools	Storage and use of chemicals, including chlorine
	Filter maintenance and backwashing
	Landscape, garden, and general maintenance and cleaning
Water Treatment Facilities	Loading, unloading, handling, and storage of materials
	Filling of ASTs and USTs with fuels
	Vehicle washing and steam cleaning
	Leak and spill cleanup
	Landscape, garden, and general maintenance and cleaning

1 Corporation yards include equipment, transit maintenance, public works, fleet maintenance, civic centers, and parks and recreation equipment yards.

2 Includes household Hazardous Waste collection facilities

Table 5-3. Santa Ana Region Permittees Facilities Matrix[1]

Permittee	Corporate Yards	Parks & Recreation Facilities	Warehouses	Fire Stations	Police Stations	Hazardous Materials Storage Facilities	Animal Shelters	Swimming Pools	Potable Water Treatment Facilities
District	1								
Riverside County	19		1	60		5	3		
Beaumont	2				1			1	
Calimesa	1								
Canyon Lake[2]									
Corona	1	2	1	7	1	1	1	2	3
Eastvale									
Hemet	2			3	1				
Jurupa Valley									
Lake Elsinore	1								
Menifee	1	8							
Moreno Valley	1						1		
Norco	1			2			1	1	
Perris	1								
Riverside	1			14	2			7	
San Jacinto	1				1			1	

1 This matrix does not include Permittee facilities having coverage under individual NPDES permits or the General Permit for Stormwater discharges Associated with Industrial Activity.

2 The City of Canyon Lake does not own nor operate any municipal facilities.

Table 5-4. Potential Pollutants of Concern

Potential Pollutants	Material Loading, Unloading, Handling, or Storage	Filling of ASTs & USTs	Dispensing Fuel	Vehicle & Equipment Maintenance	Vehicle & Equipment Parking and Storage	Vehicle & Equipment Material Washing & Steam Cleaning	Leak & Spill Cleanup	Landscape, Garden, and General Maintenance & Cleaning
Animal Wastes	X							
Anti-freeze	X			X	X		X	
Asphalt	X							
Acid	X			X				
Chemicals	X			X	X		X	
Concrete	X						X	
Diesel Wastes	X			X			X	
Emulsions	X						X	
Fertilizer	X						X	
Fuel		X	X	X			X	
Green Wastes	X							X
Hazardous Materials	X			X	X		X	X
Herbicides	X						X	X
New/Used Oil	X			X			X	
Oil and Grease Spills	X			X	X	X	X	
Paint Products	X						X	X
Pesticides	X						X	X
Scrap Metal	X			X				
Solvents	X			X			X	
Trash and Debris	X							X
Wash Waters						X		

Table 5-5. Potential Source Control BMPs for Permittee Facilities and Activities

Activities	BMP References from Industrial Handbook[1]															BMP References from Municipal Handbook[2]																				
	SC-10	SC-11	SC-20	SC-21	SC-22	SC-30	SC-31	SC-32	SC-33	SC-34	SC-35[3]	SC-40	SC-41[3]	SC-42	SC-43	SC-44	SC-10	SC-11	SC-20	SC-21	SC-22	SC-30	SC-31	SC-32	SC-33	SC-34	SC-41	SC-43	SC-60[3]	SC-61[3]	SC-70	SC-71	SC-72	SC-73[3]	SC-74	SC-75	SC-76
Material Loading/Unloading/Handling/ Storage						X	X	X	X									X				X	X		X											
Waste Handling and Disposal	X							X		X							X									X			X						X	
Filling of ASTs/USTs			X															X	X																	
Dispensing Fuel			X															X	X																	
Vehicle/Equipment Maintenance/Repair					X						X							X			X			X												
Vehicle/Equipment Parking and Storage																																					
Vehicle and Equipment Cleaning	X			X				X			X						X			X									X							
Leak and Spill Cleanup	X	X					X	X									X	X										X								
Construction													X																								
Landscaping, Garden, and General Maintenance and Cleaning	X										X	X	X	X	X	X	X										X	X	X	X	X	X	X	X		X

Notes: (1) California Stormwater Quality Association. January 2003. California Stormwater Best Management Practice Handbook – Industrial and Commercial. http://www.cabmphandbooks.com/ or CASQA, P.O. Box 2105, Menlo Park, California, 94026-2105.

(2) California Stormwater Quality Association. January 2003. California Stormwater Best Management Practice Handbook – Municipal. http://www.cabmphandbooks.com/ or CASQA, P.O. Box 2105, Menlo Park, California, 94026-2105.

(3) These are minimum BMPs per Section XIV.C.6 of the 2010 SAR MS4 Permit. Note not all of the minimum BMPs are applicable to all of the activities.

6.0 DEVELOPMENT PLANNING

6.1 INTRODUCTION

The 2010 SAR MS4 Permit includes requirements related to the planning and permitting of Priority Development Projects[22] within the Permittee's jurisdictions to ensure that Pollutant loads from development projects have been reduced to the MEP. This program element links a Co-Permittee's General Plan, environmental review process, and 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. These three "front-end" planning processes must be coordinated and linked to the later phases of design, construction and operation for development projects to ensure Urban Runoff quality protection features are planned, designed and evaluated in accordance with the Permittees' goals for protection of Receiving Waters. 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.

6.2 GENERAL PLAN

6.2.1 Background

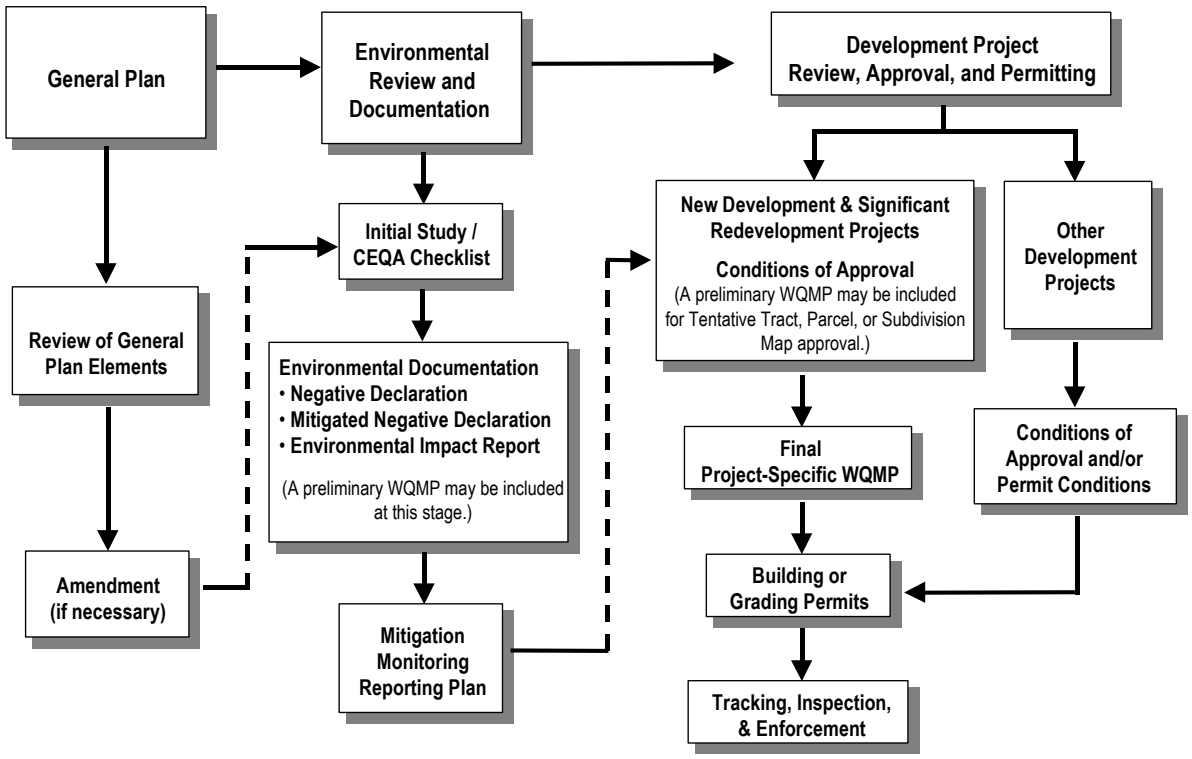
The General Plan consists of seven mandatory elements and any optional element that a city or county chooses to adopt. The mandatory elements include:

- Land Use
- Open Space
- Circulation and Infrastructure
- Conservation
- Housing
- Safety
- Noise

Any optional elements that are adopted by a City or the County, such as Public Facilities, have equal authority as the mandatory elements. Each city council and the County Board of Supervisors adopt zoning, subdivision and other ordinances to regulate land uses and to carry out the policies in the General Plan. The General Plan is also used to guide decision-makers in determining whether or not land use proposals are consistent with the applicable goals, objectives, and policies.

[22] "Priority Development Projects" refers to "New Development and Significant Redevelopment" projects as defined in Section XII.D.2 of the 2010 SAR MS4 Permit.

Figure 6-1. Relationship between General Plan, Environmental Review Process and Development Permit Process



A General Plan Amendment is a request to revise some component of a city's or the County's General Plan. This can include addition, deletion or modification of goals and policies; modifications to the land use map or other diagrams; or other changes. A General Plan Amendment is a legislative act. Under State law, General Plan Amendments are allowed four times per year (California Government Code §65358(b)). Most General Plan Amendments are carried out in conjunction with a specific development proposal, although a city, the County, or any other agency or party can request an amendment without a specific development proposal in mind. A General Plan Amendment must be approved by the planning commission and city council or at the County level by the Board of Supervisors at public hearings. In approving a General Plan Amendment, the approving body must assess the policy implications of the proposed General Plan Amendment and the impact and compatibility of the proposed General Plan Amendment on the long-term goals and desires of a city or the County and its citizens. In evaluating a proposed General Plan Amendment, the approving body must look at the "global" impacts of the proposed amendment. Although a General Plan Amendment may be proposed in conjunction with a specific development proposal, the amendment proposed might have policy and/or land use impacts far beyond any given project or property.

Various elements of a city's or the County's General Plan may contain existing goals and policies that can be related to watershed protection and the management of Urban Runoff. For example, the quantity and quality of Urban Runoff may be controlled by the type, location, and density of development. Such controls may be established through policies commonly found in the Land Use and Open Space Elements of the General Plan (e.g., development policies, development location guidelines, landscaping guidelines, open space policies, policies on preservation of and integration with natural features).

Development of local streets and roads (regulated under the policies of the Circulation and Infrastructure Element and to some extent, the Safety Element) results in increased impervious surfaces and accumulation of Pollutants from vehicles. The Public Facilities Element provides management policies for construction, operation and maintenance of various public facilities including flood control channels and storm drains, which convey Urban Runoff. The Conservation Element contains policies on water conservation that can be linked to water quality protection through efficient use of irrigation systems to prevent runoff.

6.2.2 General Plan Review and Amendment

The Permittees recognize the importance of addressing watershed protection and the management of Urban Runoff in the land development process. Therefore, watershed protection principles and objectives for managing Urban Runoff for land development are reflected in the appropriate policies, goals, and objectives of each Co-Permittee's General Plan. The Permittees have reviewed their General Plans to ensure that the following principles and policies are properly considered:

- The Permittees have reviewed their General Plan and related documents including, but not limited to its development standards, zoning codes, conditions of approval and development project guidance to eliminate any barriers to implementation of the LID principles and HCOC. The results of this review along with any proposed action plans and schedules were reported in the Annual Report submitted in 2012. Any changes to the project approval process or procedures have been subsequently reflected in the LIP (XII.C.1). Additionally, if applicable, the Permittees provided the Regional Board with any draft General Plan amendments or revisions that are noticed for comment in accordance with Govt. Code § 65350 et seq.;
- Limit disturbance of natural waterbodies and drainage systems; conserve natural areas; protect slopes and channels; minimize significant adverse impacts from Urban Runoff on the biological integrity of natural drainage systems and waterbodies;
- Minimize changes in hydrology and Pollutant loading; require incorporation of controls including Source Control and Treatment Control BMPs to mitigate any projected increases in Pollutant loads and flows; ensure that post-development runoff rates and velocities from a site do not adversely impact downstream erosion and stream habitat; minimize the quantity of Urban Runoff directed to impermeable surfaces and the MS4; and maximize the percentage of permeable surfaces to allow more percolation of Urban Runoff into the ground;
- Preserve wetlands, riparian corridors, and buffer zones that provide important water quality benefits; establish reasonable limits on the clearing of vegetation from the project site;
- Encourage the use of BMPs to manage Urban Runoff quality and quantity, consistent with XII.C.1 of the 2010 SAR MS4 Permit;
- Provide for appropriate permanent measures to reduce Pollutant loads in Urban Runoff from the development site; and
- Establish development guidelines for areas particularly susceptible to erosion and sediment loss.

It should be noted that in some cases, these concepts are better addressed in other areas of Development Planning such as in the CEQA process or through the conditioning of a project in the development review process. Further, many Permittees within the SAR have incorporated the MSHCP into their general plan.

The MSHCP addresses many of the concepts identified in the 2010 SAR MS4 Permit. The MSHCP requires the conservation of over 500,000 acres of new land within the County, including significant lands adjacent to or encompassing Receiving Waters such as the San Jacinto River and Santa Ana River, including tributaries. The plan transfers approximately 1,000,000 acres of existing conservation lands to a specified land conservancy. The MSHCP also finds that participating Permittee's existing General Plans, zoning ordinances and polices include measures capable of implementing the following planning concepts consistent with the 2010 SAR MS4 Permit considerations identified above:

- 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 stormwater systems 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.

When reviewing the General Plan in the future, special attention will be given to how the elements address the potential impacts of Urban Runoff on Receiving Waters. The Co-Permittees will keep in mind the following questions during this review, which may trigger the need for specific Urban Runoff Pollution Prevention policies in various elements of their General Plan either as new policies and objectives or amended text to existing policies and objectives:

- Are there sensitive Receiving Waters in or downstream of the jurisdiction?
- Are there existing or proposed TMDLs or other such regulations pertaining to Receiving Waters within the jurisdiction?
- Are major Development Projects expected?
- Are major new infrastructure projects anticipated (e.g., roads, sewer, flood control, storm drains)?
- Is Urban Runoff affecting recreational use of waterbodies within the jurisdiction?

If a Co-Permittee initially determines that elements of their General Plan do not adequately consider watershed protection principles and objectives for managing Urban Runoff, the need for and the extent of revisions to the General Plan should be coordinated with its legal counsel. If a Co-Permittee, in consultation with its legal counsel, determines that it needs to amend elements of its General Plan to incorporate watershed and Urban Runoff management policies, goals or objectives, the Co-Permittee will develop a work plan and schedule for the General Plan amendment(s). In revising elements of the General Plan, associated maps will be revised, as necessary, to reflect location-specific watershed protection/Urban Runoff quality management policies, and eliminate conflicts among land use districts, permitted land uses, and Urban Runoff-specific goals and policies. For further reference, the Co-Permittees may review the sample general plan amendment text and sample Urban Runoff water quality general plan element outlined in Model Urban Runoff Program, "A How to Guide for Developing Urban Runoff Programs for Small Municipalities" (City of Monterey, et al, July 1998). This document can be viewed or downloaded at http://www.waterboards.ca.gov/water_issues/programs/stormwater/murp.shtml.

Should a Co-Permittee amend elements of its General Plan, the Co-Permittee will provide the draft General Plan amendments to the Regional Board for comment.

6.3 WATERSHED ACTION PLAN

The Watershed Action Plan (WAP), required by Provision XII.B of the 2010 SAR MS4 Permit, describes and implements the Permittees' approach to coordinated watershed management. The objective of the WAP is to address watershed scale water quality impacts of urbanization associated with urban TMDL Waste Load Allocations (WLAs), stream system vulnerability to hydromodification from urban runoff, cumulative impacts of development on vulnerable streams, preservation of beneficial uses of streams, and protection of water resources, including groundwater recharge areas. The WAP document includes the following:

- **Hydromodification Susceptibility Documentation and Mapping Report -** delineation of existing unarmored or soft-armored stream channels in the Permit Area that are vulnerable to Hydromodification from New Development and Significant Redevelopment projects.
- **Regional Geodatabase -** an integrated, World Wide Web available Geodatabase and web interface. The web interface is designed to allow for the input of a project location/area, and then output a report of design related constraints and information specific to that project, such as watershed and hydrologic subarea(s), downstream Receiving Waters including hydromodification susceptibility and 303(d) listed pollutants, soil types, MSHCP areas, flood zones, land use designations, District Master/Area Drainage Plans, MS4 facilities, etc.
- **Hydromodification Management Plan -** a plan to help manage increases in runoff volumes and decreases in times of concentration that may result from New Development and Significant Redevelopment projects over one acre. The HMP will help the user identify whether the project is subject to Hydrologic Conditions of Concern (HCOC) requirements and when required, meet the HCOC requirements.
- **Causes of Degradation and Aggradation in the Santa Ana Region Report -** identifies potential causes of stream degradation and aggradation in the SAR. Subwatersheds analyzed include the Upper San Jacinto River, Middle and Lower San Jacinto River, Temescal Wash, and San Timoteo Wash. The Middle Santa Ana River (MSAR) subwatershed is not investigated in the report.
- **Hydromodification Management Plan Evaluation Program -** defines a protocol as required by 2010 SAR MS4 Permit that will be implemented by the Permittees to evaluate potential impacts to specific channel segments deemed most susceptible to hydromodification. This plan identifies sites to be monitored, includes an assessment methodology, and required follow-up actions based on monitoring results.
- **Subwatershed Fact Sheets -** provides land uses, waterbodies, habitat areas, groundwater basins, beneficial uses, and facts for the Middle Santa Ana River Watershed and the San Jacinto River Watershed
- **Santa Ana Watershed BMP Retrofit Assessment -** recommendations to identify candidate areas for retrofits within existing public and private MS4s, parks and recreational areas that may incorporate opportunities for addressing TMDL implementation plans, hydromodification from urban runoff, LID implementation, and pollutant discharge reduction.

Per 2010 MS4 Permit requirements, a draft WAP was submitted by the Permittees for Regional Board approval on January 29, 2013. Since then, the District, on behalf of the Permittees, continued to meet with the Regional Board to finalize the WAP and supporting hydromodification documents. The WAP and supporting documents were approved by the Regional Board on April 20, 2017. Within six (6) months of

approval by the Regional Board, the Permittees implemented the applicable provisions of the approved WAP into the DAMP and LIP for watershed-wide coordination (XII.B.3 and XII.B.8).

6.4 CEQA Environmental Review Process

6.4.1 CEQA Initial Study Process

The 2010 SAR MS4 Permit requires the Permittees to review their CEQA processes to ensure that Urban Runoff issues are properly considered and addressed. Where necessary, the processes were revised to consider and mitigate impacts to Urban Runoff quality and Receiving Waters.

The 2010 SAR MS4 Permit (XII.C.4) identifies the following potential impacts to be considered during the CEQA process:

- Potential impact of project's construction on Urban Runoff.
- Potential impact of project's post-construction activity on Urban Runoff.
- Potential for discharge of Pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, Hazardous Materials handling or storage, delivery areas or loading docks, or other outdoor work areas.
- Potential for discharge of Urban Runoff to affect Beneficial Uses of the Receiving Waters.
- Potential for significant changes in the flow velocity and/or volume of Urban Runoff from a project site that could cause environmental harm.
- Potential for significant increases in erosion of the project site or surrounding areas.

A preliminary WQMP supports the CEQA process and provides documentation to support a checklist for an Initial Study and Negative Declaration or Mitigated Negative Declaration, or serves as the basis for the water quality section of an EIR. It should also serve as the basis for the Lead Agency and Responsible Agency to conclude that the MEP standard is being met by serving as the basis that selected BMPs will not have the potential to cause significant effects and/or that the effects have been mitigated, and "are not significant with mitigation".

6.4.1.1 Project Application Form

The current project application form (CEQA Guidelines, State of California Office of Planning and Research, March 2010) can be found at http://www.califaep.org/docs/CEQA/CEQAHandbook2011.pdf) and is used by nearly all the Permittees in their environmental review process. The CEQA Guidelines identify specific questions about the project to help environmental planners assess the potential for significant environmental impacts. However, there are no specific project description questions that help characterize the potential for impacts associated with Urban Runoff. For this reason, each Permittee has reviewed their existing project application forms and, as necessary, has revised their application form to include line items for:

- Expected percent change in pervious surface area of the site; and

- Submittal of preliminary project-specific WQMP, if applicable, (along with required submittal of other development plans).

6.4.1.2 Initial Study Checklist

The current Initial Study Checklist (CEQA Guidelines, State of California Office of Planning and Research, January 2012) can be found at http://ceres.ca.gov/ceqa/docs/CEQA_Handbook_2012_wo_covers.pdf and is also used by nearly all Permittees in their environmental review process. This Initial Study Checklist contains the following considerations under the environmental impact category "Hydrology and Water Quality (Section IX)":

Would the project:

- Violate any Water Quality Standards or Waste Discharge Requirements?
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite?
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of Polluted runoff?
- Otherwise substantially degrade water quality?
- Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- Place structures within a 100-year flood hazard area that would impede or redirect flood flows?
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
- Inundation by seiche, tsunami, or mudflow?

The Permittees have concluded that considerations of potential impacts associated with Urban Runoff are generally covered in questions a) through f) of the Initial Study Checklist, but with less specificity than the questions provided in the 2010 SAR MS4 Permit.

Further, to promote the consideration of the various impacts related to Urban Runoff, the Permittees may provide the list of considerations specified in the 2010 SAR MS4 Permit (Section XII.C.4) to:

- Environmental planning staff for use in preparing and reviewing CEQA documents for internal city/county projects and when reviewing CEQA documents prepared by the private sector

- Consultants and other members of the private sector for use in preparing CEQA documents
- Project applicants during the CEQA preliminary review process
- Participants attending training related to the requirements of the 2010 SAR MS4 Permit, the DAMP, or the WQMP.

6.4.2 Environmental Review Guidance for CEQA Initial Studies and CEQA Document Preparation and Review

In evaluating the questions in Section VIII, Hydrology and Water Quality, of the CEQA Initial Study Checklist, the Permittees may use the guidance provided in Appendix H of this DAMP. CEQA guidance may also be used for the preparation or review of CEQA documents including Negative Declarations, Mitigated Negative Declarations and EIRs.

6.5 DEVELOPMENT PROJECT REVIEW, APPROVAL, AND PERMITTING

6.5.1 Project Review, Approval, and Permitting Process Overview

Priority Development Projects[23] submitted to the Co-Permittees after December 31, 2004 are conditioned to require the preparation, review, and approval of a project-specific WQMP. Additionally, Development Projects that have a Co-Permittee approved preliminary project-specific WQMP and have received discretionary approvals, prior to 45 days from the date of approval of the revised WQMP (XII.L.), will be grandfathered into compliance with the 2010 SAR MS4 Permit based on their already-approved project-specific WQMP. All Development Projects for which a map or permit for discretionary approval is sought after that date, are required to meet the provisions for LID and HCOC for the 2010 SAR MS4 Permit to the MEP starting 45 days from the date of approval of the revised WQMP (XII.L.). The WQMP was approved October 22, 2012. Beginning six (6) months after the date of Regional Board approval of the revised WQMP, all Priority Development Projects will be required to prepare a project-specific WQMP that fully meets the requirements of the revised WQMP. Other Development Projects are required to incorporate LID Principles (Site Design), Source Control, and/or LID/Treatment Control BMPs through Co-Permittee conditions of approval or permit conditions. This section describes the processes for incorporating post-construction (permanent) BMPs into the development project review, approval, and permitting process. This section also describes modifications to conditions of approval and plan check processes to assure consistency with the requirements of the 2010 SAR MS4 Permit.

6.5.2 Identifying Development Projects Requiring a Project-Specific WQMP

To ensure that Development Projects are identified as early in the planning process as possible, the Permittees utilize a checklist to document the determination as to whether a project requires a project-specific WQMP or not. An example checklist that may be used by the Co-Permittees for this purpose is found in Appendix I.

6.5.3 Development Projects

Development Projects[24] submitted to the SAR Co-Permittees after December 31, 2004 are conditioned to prepare a project-specific WQMP that is in conformance with the Riverside County Water Quality

[23] "Priority Development Projects" refers to "New Development and Significant Redevelopment" projects as defined in Section XII.D.2 of the 2010 SAR MS4 Permit.

[24] Ibid.

Management Plan for Urban Runoff (a copy of which is included as Appendix I), prior to issuance of the first permit. At its discretion, a Co-Permittee may require a project-specific WQMP for projects submitted prior to this implementation date. The primary objective of the WQMP, through application of LID Principles (Site Design), Source Control, and LID/Treatment Control BMPs on a project-specific and/or sub-regional or regional basis, is to ensure that the land use approval and permitting process of each Co-Permittee will minimize the impact of Urban Runoff.

Since some Development Projects are subject to discretionary approval during the planning phase (land use entitlement) and ministerial approval for subsequent grading or building permits, project applicants may be required to submit a preliminary project-specific WQMP for discretionary project approval (land use entitlement). The level of detail in a preliminary project-specific WQMP submitted during the land use entitlement process depends upon the level of detail known about the overall project design at the time project approval is sought. Project applicants are required to submit for Co-Permittee review and approval, a final project-specific WQMP that is in substantial conformance with the preliminary project-specific WQMP prior to the issuance of any building or grading permit.

6.5.4 Other Development Projects

The Co-Permittees require Other Development projects (projects that are not subject to the WQMP) to incorporate LID Principles (Site Design) and Source Control BMPs, as applicable and feasible, into project plans through conditions of approval or building/grading permit conditions. For Other Development projects that directly discharge Urban Runoff to Receiving Waters listed as Impaired on the current version of California's Clean Water Act Section 303(d) List of Water Quality Limited Segments, project-specific and/or sub-regional or regional LID/Treatment Control BMPs may be required on a case-by-case basis. A summary of the BMP requirements for Other Development projects is shown in Table 6-1. Brief descriptions of LID Principles (Site Design) and Source Control BMPs are provided in Appendix I, WQMP.

Table 6-1. Summary of BMPs for Other Development Projects

BMP Category		Applicable Projects
LID Principles (Site Design) BMPs (See Appendix I)		Required for all Other Development projects, to the extent applicable and feasible.
Source Control BMPs	**Operational BMPs** (See Appendix I)	Required for all Other Development projects. Education/Training for Property Owners, Operators, Tenants, Occupants, or Employees Activity Restrictions Irrigation System and Landscape Maintenance Common Area Litter Control Street Sweeping Private Streets and Parking Lots Drainage Facility Inspection and Maintenance
	Structural BMPs (See Appendix I)	Required for all Other Development projects that incorporate the target project features. MS4 Stenciling and Signage Landscape and Irrigation System Design Protection of Slopes and Channels Provide: ♦ Community Car Wash Racks ♦ Wash Water Controls for Food Preparation Areas Properly Design and Maintain: ♦ Fueling Areas ♦ Air/Water Supply Area Drainage ♦ Trash Storage Areas ♦ Loading Docks ♦ Maintenance Bays ♦ Vehicle and Equipment Wash Areas ♦ Outdoor Material Storage Areas ♦ Outdoor Work Areas or Processing Areas
LID/Treatment Control BMPs: Project-Specific, Regional, or Sub-Regional (See Appendix I)		May be required on a case-by-case basis for Other Development projects that discharge Urban Runoff to Receiving Waters listed as Impaired on the State Board's 303(d) List.

6.5.5 Conditions of Approval

The Permittees have reviewed and revised their standard conditions of approval to ensure that the standard conditions are not in conflict with any provisions of the 2010 SAR MS4 Permit, the DAMP, the Construction General Permit, the Industrial General Permit, and adopted TMDL allocations within their jurisdiction. For example, a condition requiring "sweeping or washing public access points within 30 minutes of dirt deposition" should be revised to specify that "washing" must include capture and proper disposal of all wash water.

To minimize the short-term and long-term impacts of Urban Runoff on Receiving Water quality from Development Projects and Other Development projects, Permittees have reviewed and will revise, or supplement their standard conditions of approval or building/grading permit conditions that may be used

for projects to include the following conditions or the equivalent, as deemed appropriate and identified in their LIP:

- Prior to the issuance of any grading or building permits for projects that will result in soil disturbance of one or more acres of land, the applicant shall demonstrate that coverage has been obtained under the Construction General Permit by providing a copy of the NOI with associated Waste Discharge Identification (WDID) number or other proof of filing submitted via the State Board SMARTS system.
- Projects that must comply with the Construction General Permit must prepare and implement a SWPPP. A copy of the current SWPPP shall be kept at the project site and be available for review upon request.
- Prior to grading or building permit close-out and/or the issuance of a certificate of use or a certificate of occupancy, the applicant shall:
- Demonstrate that all Structural BMPs have been constructed and installed in conformance with approved plans and specifications; and
- Demonstrate that applicant is prepared to implement all non-Structural BMPs included in the conditions of approval or building/grading permit conditions.
- For Industrial Facilities subject to the Industrial General Permit as defined by Standard Industrial Classification (SIC) code, prior to grading or building permit close-out and/or the issuance of a certificate of use or a certificate of occupancy, the applicant must demonstrate that coverage has been obtained by providing a copy of the NOI with associated WDID number or other proof of filing submitted via the State Board SMARTS system.

6.5.6 Review and Approval of Project-Specific WQMPs

Project-specific WQMPs may be submitted as "preliminary" during the discretionary or land use entitlement phase depending upon the level of detail known about the overall project design at the time project approval is sought. However, prior to recordation of the final parcel map or issuance of grading or building permit, the project applicant must submit the final project-specific WQMP for review and approval by the Co-Permittee. The review and approval of a final project-specific WQMP is one of the last critical points at which a Permittee can impose conditions or standards that will minimize the impacts of Urban Runoff. To assist the Co-Permittees in conducting thorough and consistent reviews of project-specific WQMPs, the Co-Permittees utilize a WQMP Review Checklist. An example WQMP Review Checklist is included in Appendix I.

The Co-Permittees examine the identified BMPs, as a whole, to ensure that they address the Pollutants and Hydrologic Conditions of Concern identified within the project-specific WQMP. The project-specific WQMP is a project planning level document and as such is not expected to contain final BMP design drawings and details (these will be in the construction plans). However, the project-specific WQMP must identify and denote the location of selected Post-Construction BMPs, provide design parameters including hydraulic sizing of Post-Construction BMPs and convey final design concepts. BMP fact sheets can be used in conjunction with project-specific design parameters and sizing to convey design intent. BMP fact sheets typically contain detailed descriptions of each BMP, applications, advantages/disadvantages, design criteria, design procedure, and inspection and maintenance requirements to ensure optimal performance of the BMPs.

6.5.7 Plan Check: Issuance of Grading or Building Permits

6.5.7.1 Standard Notes for Plans

Prior to the issuance of a grading or building permit, Permittees require the applicant to include on the plans the following notes (or notes of substantially similar intent) that address Pollution Prevention to the MEP during the construction phase of a project on a year-round basis:

- 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 local storm drain system.
- All construction contractor and subcontractor personnel are to be made aware of the required best management practices 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 disposed 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 State-wide 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, and 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 onsite, 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 a NPDES permit issued by the Santa Ana 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.

6.5.7.2 Plan Check for Development Projects

Construction plans submitted by the applicant for plan check must incorporate the Structural Source Control and LID/Treatment Control BMPs identified in the approved final project-specific WQMP. Once a Priority Development Project[25] reaches the plan check phase, the project applicant should have an approved final project-specific WQMP in accordance with the WQMP (Appendix I).

To gain an understanding of the water quality issues and Post-Construction BMPs required, Co-Permittees review the relevant CEQA documentation (including the Mitigation Monitoring and Reporting Program) if applicable, the conditions of approval, and the project-specific WQMP as part of the plan check process. Construction plans are reviewed for consistency with the project-specific WQMP. If the selected BMPs were approved in concept during the land use entitlement process, the applicant is required to submit detailed construction plans showing locations and design details of all BMPs that are in substantial conformance with the preliminary approvals. The construction plans are reviewed to assure that the plans are consistent with the BMP design criteria and guidance provided in the WQMP (Appendix I).

6.5.7.3 Plan Check for Other Development Projects

For Other Development Projects (projects that are not subject to the WQMP), applicants will typically submit a grading or building permit application with construction plans that incorporate the BMPs (Site Design and Source Control) required by the conditions of approval. See also Section 6.5.4 herein.

6.5.7.4 Structural Post-Construction BMP Database

Each Co-Permittee maintains a database to track the operation and maintenance of the structural LID BMPs and Treatment Control BMPs installed after January 29, 2010. These databases include: type of BMP; watershed where the BMP is located; date of certification; party responsible for maintenance and any problems identified during inspection including any vector or nuisance problems.

6.5.8 Permit Closeout, Certificates of Use, and Certificates of Occupancy

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 Co-Permittees use this juncture to assure satisfactory completion of all requirements in a project-specific WQMP or the conditions of approval for Other Development projects by requiring the applicant to comply with the requirements in the WQMP (Appendix I) and as described in the their LIP.

[25] "Priority Development Projects" refers to "New Development and Significant Redevelopment" projects as defined in Section XII.D.2 of the 2010 SAR MS4 Permit.

6.5.9 Operation and Maintenance of Post-Construction BMPs

6.5.9.1 Inspections

The Permittees inspect all LID/Treatment Control BMPs on Priority Development Projects that were installed after January 29, 2010 to verify that they are operating and maintained properly and are effective in removing Pollutants in runoff from the site. Where vector problems are observed, the Permittees contact the local vector control agency to remedy the problems. LID/Treatment Control BMPs implemented on Industrial Facilities and projects implementing Treatment Control BMPs are inspected once every three years. LID/Treatment Control BMPs implemented on Commercial Facilities and Residential projects are inspected once every five years. All Priority Development Project LID/Treatment Control BMPs will be inspected at least once within a five-year period. Inspections are also made as needed in response to complaint calls.

The Permittees inspect all Permittee-owned LID/Treatment Control BMPs as described in Section 5.3.3.

The Permittees' inspectors utilize the LID/Treatment Control BMP Inspection Form such as the one provided in Appendix L in conducting these inspections. The completed inspection forms are maintained for a period of three years. The Permittees also accept inspection reports conducted and certified by State licensed professional engineers in lieu of inspections by Permittee staff.

Update

By January 29, 2012 the Permittees developed a procedure for streamlining regulatory agency approval of Regional Treatment Control BMPs. The Regional Treatment Control BMP Guidance will be included in the Annual Report (XII.D.5) and is included in this revised DAMP as Appendix M.

6.5.10 Change of Ownership and Recordation

Prior to occupancy, the Permittees identify the parties responsible for the maintenance and operation of the LID/Treatment Control BMPs, and a funding mechanism for operation and maintenance of Structural Post-Construction BMPs for the life of the project (XII.A.3). By verifying that appropriate easements and ownerships and maintenance responsibilities have been recorded with the County Recorder or through an equivalent mechanism described in their LIPs, the Permittees are assured that the ownership and responsibility for maintenance of the LID/Treatment Control BMPs implemented on Priority Development Projects will be conveyed and transferred to appropriate parties when there is a change in project or site ownership (XII.J).

6.6 IN LIEU PROGRAMS AND ALTERNATIVES

The SAR Permittees may collectively or individually propose to establish an Urban Runoff fund to be used for urban water quality improvement projects (XII.G.2). The WQMP includes a description of a water quality credit system available to project proponents that are unable to meet the LID requirements of the Permit.

6.7 TRAINING

6.7.1 Educational Program for Developers and Contractors

The WQMP contains the legal, administrative, and technical information needed to acquaint developers and contractors with the requirements for post construction BMPs in Development Projects. It also provides

information relevant and useful to Other Development projects. The Co-Permittees make the approved WQMP available as part of the review process for project planning and permitting. The Permittees may also coordinate with the University Extension and other groups to provide training to the property owners, developers, builders, architectural and engineering firms, planning firms, etc.

6.7.2 Training Programs for Municipal Development Planning Staff

Co-Permittee staff that are responsible for implementing development planning requirements receive training at least once during the 2010 SAR MS4 Permit term that addresses the following topics:

- The potential effects that the Permittee's activities related to their job duties can have on water quality;
- The principal applicable federal, state, and local water quality laws and regulations applicable to Development Projects;
- The provisions of the DAMP that relate to Development Projects including, but not limited to;
- The requirements of the DAMP regarding Stormwater Ordinances, resolutions, codes, and standards affecting Development Projects that relate to the duties of the target audience;
- Overview of CEQA requirements contained in Section XII.C of the 2010 SAR MS4 Permit;
- Implementation and assessment of SWPPPs and FPPPs that relate to the target audience;
- Selection, implementation, and maintenance of appropriate BMPs relative to Development Projects and the duties of the target audience; and
- Tools, checklists and procedures included in the DAMP to assist in implementing the Development Project requirements of the 2010 SAR MS4 Permit relative to the duties of the target audience.

The Permittees individually maintain a log of trained staff and type of training, and then include this information in the Annual Reports.

7.0 PRIVATE DEVELOPMENT CONSTRUCTION ACTIVITY

The initial Construction Site inspection program element was described in the Enforcement/Compliance Strategy (E/CS) as required by the 1996 SAR MS4 Permit. The Construction Site inspection program has been an effective element of the DAMP. However, this program element has been revised to address the requirements of the 2010 SAR MS4 Permit.

7.1 CONSTRUCTION SITE BMPS

The erosion control BMPs appropriate for use during construction are listed in Table 7-1 with cross references to the BMP designations used in the *Stormwater Best Management Practice Handbook Portal: Construction*[26] and the Caltrans *Construction Site BMP Manual* (March 2003)[27]. Since BMP technology is constantly changing, the jurisdictional Permittee may consider other BMPs of equivalent or better performance on a case-by-case basis.

[26] California Stormwater Quality Association. 2011. http://www.casqa.org.or CASQA, P.O. Box 2105, Menlo Park, California, 94026-2105.

[27] California Department of Transportation. March 2003. http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf

Table 7-1. Construction Site BMPs

BMP Name	Stormwater BMP Handbook Portal : Construction	Caltrans Construction Site BMP Manual	Included in USEPA Construction Site Menu of BMPs
Stabilize Exposed Soils			
Chemical Stabilization (Soil Binders)	EC-5	SS-5	X
Polyacrylamide	SE-11		
Mulching			
Hydraulic Mulch	EC-3	SS-3	X
Straw Mulch	EC-6	SS-6	X
Wood Mulching	EC-8	SS-8	X
Permanent Seeding			X
Sodding			X
Soil Roughening			X
Temporary Seeding/Hydroseeding	EC-4	SS-4	
Protect Steep Slopes			
Earth Dikes/Drainage Swales/Lined Ditches	EC-9	SS-9	
Fiber Roll	SE-5	SC-5	
Geotextiles	EC-7	SS-7	X
Gradient Terraces			X
Soil Retention			X
Straw Bale Barrier	SE-9	SC-9	
Temporary Slope Drain	EC-11	SS-11	X
Protect Waterways			
Check Dams	SE-4	SC-4	X
Outlet Protection/Velocity Dissipation Devices	EC-10	SS-10	
Streambank Stabilization	EC-12	SS-12	
Temporary Stream Crossings	NS-4	NS-4	X
Vegetated Buffer			X
Phase Construction			
Construction Sequencing (Scheduling)	EC-1	SS-1	X
Dust Control (Wind Erosion Control)	WE-1	WE-1	X
Preserve Site Condition			
Entrance/Outlet Tire Wash	TC-3	TC-3	
Preservation of Existing Vegetation	EC-2	SS-2	
Stabilized Construction Entrance/Exit	TC-1	TC-1	
Stabilized Construction Roadway	TC-2	TC-2	

7.2 PERMIT ISSUANCE

Prior to the issuance of grading or construction permits, the Co-Permittees:

- Require the applicants to obtain coverage under the Construction General Permit, where applicable (XI.A.5). Where coverage under the Construction General Permit appears to apply, the Permittees verify coverage on the State Water Resources Control Board's web page at:

  http://www.swrcb.ca.gov/water_issues/programs/stormwater/databases.shtml#const_db

- Requires implementation of the BMPs identified in Table 7-1 of the DAMP in construction site erosion and sediment control plans, as appropriate and applicable, and

- Ensures that the erosion and sediment control plans it approves include appropriate erosion and sediment control BMPs (i.e., erosion measures for slopes greater than a certain length or hillside developments, ingress/egress controls, perimeter controls, run-on diversion, if significant) such that a distinct and effective combination of BMPs consistent with the site risk is implemented through all phases of construction.

- Categorizes the project as a high, medium, or low threat to water quality. The factors for prioritization include soil erosion potential, project size, proximity and sensitivity of Receiving Waters. At minimum, high priority Construction Sites include: sites disturbing 50 acres and greater; sites disturbing over one acre with Direct Discharge to Receiving Waters with CWA Section 303(d) listed waters for sediment or turbidity impairments; site specific characteristics; and any other relevant factor. At a minimum, medium priority Construction Sites include: sites disturbing between ten to less than 50 acres of disturbed soil (XI.B.2).

7.3 INVENTORY DATABASE

In conformance with Section XI.A.1 2010 SAR MS4 Permit, each SAR Co-Permittee maintains an inventory database (or databases) of Construction Sites for which they have issued a building or grading permit and activities on the site include: soil movement; uncovered storage of materials or Wastes, such as dirt, sand, or fertilizer; or exterior mixing of cementitious products such as concrete, mortar, or stucco. Construction Sites are included in the inventory regardless of whether the Construction Site is subject to the Construction General Permit or other individual construction stormwater NPDES permits. These databases are 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. At a minimum, the Co-Permittees' databases include the following project information:

- Facility/Project name;
- Facility/Project address;
- Tract number(s) or Assessor Parcel Number (APN);
- Watershed;
- Project type;
- Project priority;

- Number of inspections performed;
- Site size;
- WDID #;
- Grading Permit #;
- Other permits;
- Developer's information;
- Site contact information; and
- Enforcement status.

7.4 CONSTRUCTION SITE INSPECTION

Each Construction Site/project included in a Co-Permittee's inventory database is assigned a priority of High, Medium, or Low to reflect the potential for Impairing Receiving Water quality. In order to standardize prioritization the Permittees developed a matrix for the relationship between priority ratings and Receiving Water Pollution threat. This Construction Site Prioritization Matrix is presented in Table 7-2.

After each inspection, the priority assigned to the Construction Site/project is re-assessed based upon the prioritization matrix shown in Table 7-2 and the inspection frequency is determined. This information is used to update the Construction Site/project database. As shown in Table 7-2, the minimal inspection frequency is:

- Once every month during the Wet Season (October 1 through May 31) for Construction Sites designated as High priority.
- At least twice during the Wet Season for Construction Sites designated as Medium priority.
- Once during the Wet Season for Construction Sites designated as Low priority.
- Construction Sites that disturb less than one acre may be inspected on an as-needed basis.
- An inspection frequency of at least once per week related to non-compliance with the SAR Co-Permittee's Stormwater Ordinance until brought into compliance.
- During the Dry Season (June 1 through September 30 of each year), all Construction Sites must be inspected at a frequency sufficient to ensure that sediment and other Pollutants are properly controlled and that unauthorized, non-stormwater discharges are prevented.

However, the 2010 SAR MS4 Permit does not require the Co-Permittees to inspect Construction Sites already inspected by Regional Board staff. To facilitate this, Regional Board staff will post a list of Construction Sites or projects inspected on their website or make this information available to the Co-Permittees by other pre-arranged means.

Table 7-2. SAR Construction Site Prioritization Matrix

Priority	Supporting Criteria [a]	Wet Season[b] Inspection Frequency
High	Project Size Sites that disturb an area greater than 50 acres (initial inventory) Proximity and Sensitivity of Receiving Waters Sites disturbing an area greater than one (1) acre with Direct Discharge to Receiving Waters with CWA Section 303(d) listed waters for sediment or turbidity Impairments and site specific characteristics [d]. Soil Erosion Potential Hillside sites that disturb an area greater than five acres History of Compliance Sites that disturb an area greater than one (1) acre with a low-range (0-50%) compliance with respective city/County NPDES site inspection/verification checklists	Once monthly
Medium	Project Size Sites disturbing an area between 10 to less than 50 acres. History of Compliance Sites that received repeated verbal notification of non-compliance with respective city/County NPDES site inspection/verification checklists	Twice
Low	Project Size Sites disturbing 1 to less than 10 acres. History of Compliance Sites that are in compliance with respective city/County NPDES site inspection/verification checklists Sites that disturb an area of one (1) acre or greater	Once

Notes:

[a] Prioritization factors listed in 2010 SAR MS4 Permit §XI.B.2 include soil erosion potential, project size, proximity and sensitivity to Receiving Waters, and history of compliance. §XI.B.3 of the 2010 SAR MS4 Permit describes the minimum inspection requirements, which are reflected in inspection checklists.

[b] Wet season: October 1st to May 31st

[c] Dry season: June 1st to September 30th

[d] The Construction General Permit Order No. 2009-0009-DWQ includes risk-based characterization of construction sites based on site-specific conditions.

Conducting Inspections

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

- For projects of one acre or more, verify that an NOI has been submitted via the State Board SMARTS system. Verification is typically made by reviewing a printed copy of the NOI showing the WDID Number issued for the site. As Permittees become aware of changes in ownership, Permittees will notify Regional Board staff.
- For projects of one acre or more, verify that a SWPPP is onsite.

- Verification that the BMPs implemented onsite are effective for the appropriate phase of construction (preliminary stage, mass grading stage, streets and utilities stage, etc.). Confirm compliance with the Co-Permittee's Stormwater Ordinance.
- Check for poorly managed authorized non-stormwater discharges or evidence of unauthorized non-stormwater discharges that may be potential IC/IDs to a MS4.

Some Co-Permittees have chosen to document this Construction Site inspection information on a separate form, while other Co-Permittees have chosen to incorporate this information into existing inspection forms. An example Construction Site inspection form is shown in Figure 7-1. Based on the inspection findings, the Permittees implement follow-up actions as necessary to comply with the requirements of the 2010 SAR MS4 Permit.

7.5 ENFORCEMENT

If determined during a routine inspection or an inspection in response to a complaint that a site/project is non-compliant with the Co-Permittee's Stormwater Ordinance or erosion control ordinance, the Co-Permittee begins enforcement procedures as described in Section 3.4.2 of the DAMP. As described in Section 3.4 (Legal Authority and Enforcement), the severity of the violation is based on various factors. After considering the various factors, the Co-Permittee determines the level of enforcement required consistent with the enforcement levels described in Table 3-3.

7.6 REGIONAL BOARD NOTIFICATION REQUIREMENTS

The Co-Permittees notify the respective Regional Board when Construction Site inspectors, other Co-Permittee staff, or third parties report observing potential non-compliance with the Construction Activity Permits of a non-Emergency Situation nature. Such notifications are made by telephone or email within two (2) working days of receiving notice from its staff or a third party. Examples of non-compliance of a non-Emergency Situation nature are a site that cannot demonstrate coverage under the applicable Construction Activity Permit, a site that does not have a SWPPP available, or a site with BMPs that are not properly maintained. The Regional Board staff will then determine if an inspection and enforcement action for the Construction Activity Permit is appropriate. Upon providing notification to the Regional Board, no further action is taken by Co-Permittee staff with respect to enforcement of the Construction Activity Permits. However, the Co-Permittee continues with progressive enforcement of its ordinances and permits at the site as described in Section 3.4.2 of the DAMP. Notifications regarding Emergency Situations are described in Section 4.7.

Figure 7-1. Example Construction Site Inspection Form

Insert Co-Permittee logo here

Construction Activity Compliance Inspection Notice

Public Works Department and/or Division
Insert Co-Permittee address here, CA

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:

7.7 REPORTING REQUIREMENTS

For purposes of annual reporting, the Permittees developed the standardized spreadsheet shown in Figure 7-2 for listing Construction Sites within their jurisdiction and the associated inspection and enforcement information.

7.8 TRAINING REQUIREMENTS

Co-Permittee staff responsible for conducting Construction Site inspections receive annual training regarding the following topics:

- A summary of federal, state, and local regulations (including the Construction General Permit, 2010 SAR MS4 Permit, the DAMP and the WQMP) that impact construction activities;
- The potential impacts of construction activities on water quality;
- Proper selection and maintenance of BMPs necessary to meet requirements of Co-Permittee Stormwater Ordinances and other local ordinances, resolutions and codes related to the protection of water quality;
- Local enforcement and compliance strategy/policy for Construction Sites;
- How to identify Construction Sites subject to the Construction General Permit and what actions to take if coverage has not been obtained by the Construction Site owner; and
- How to provide guidance to contractors on proper selection, implementation and maintenance of construction BMPs and compliance with the requirements of the Co-Permittee's Stormwater Ordinance during site inspections.
- TMDL requirements and appropriate BMPs to mitigate the impacts of construction activities.

This annual training for Construction Site inspectors is conducted prior to October 1, the start of the Rainy Season. The Co-Permittees individually maintain a log of trained staff and report training in their Annual Reports.

The Co-Permittees ensure that newly hired or transferred staff receive informal training within 6 months of beginning their inspection duties and formal training within one year. When planning formal classroom training related to Construction Site inspectors, the Co-Permittees will notify Regional Board staff. Co-Permittee staff responsible for conducting Construction Site inspections may also attend training sponsored by industry associations (e.g., Building Industry Association, International Erosion Control Association, American Society of Civil Engineers, etc.), the California Stormwater Quality Association, or other entities in lieu of Permittee sponsored training.

Figure 7-2. Standardized Spreadsheet for Co-Permittee Construction Site Inspections

PROJECT GENERAL INFORMATION												MUNICIPAL PERMITS See Note C.		DEVELOPER INFORMATION						SITE CONTACT INFORMATION		ENFORCEMENT STATUS See Note D.					
	Project Location															Mailing Address											
Facility Name (dba) See Note A.	Street Address	Cross Street	City	Zip	Tract Nos. or Assessor Parcel Nos. See Note B.	Watershed	Project Type	Project Priority	No. of Stormwater Inspections	Site Size	WDID No. (General Permit)	Grading Permit No.(s)	Other Permits Specify: Building, Encroachment, Right-of-Way, etc.	Name	Contact Name	Street Address	City	Zip	Phone Number	Name (24 Hour)	Phone Number (24 Hour)	Satisfactory	Verbal Warning	Written Warning	Notice of Violation	Stop Work Order	Referred to RWQCB

Notes:
A. Name of project, developer, or planning area. The facility name as used by Regional Boards can be obtained from the State Water Resources Control Board Construction General Permit database (Column titled "Facility_SiteName") or from a copy of the applicant's Notice of Intent.
B. Provide Tract Numbers or Assessor Parcel Nos. as appropriate to identify Facility (Project).
C. Enter the Municipal Permit Nos. as appropriate to identify Facility (Project).
D. Enter the number of each type of enforcement action for each Facility (Project).

8.0 INDUSTRIAL AND COMMERCIAL SOURCES

The initial industrial and commercial sources program element was described in the Enforcement/Compliance Strategy as required by the 1996 SAR MS4 Permit. The program included implementation of the Compliance Assistance Program (CAP), which made use of existing County Department of Environmental Health inspections. As the responsible Certified Unified Program Agency (CUPA) in Riverside County, the County Department of Environmental Health was responsible for regularly inspecting all sites within the County that handle Hazardous Waste. There are approximately 8,900 facilities with Hazardous Materials permits, of which 4,800 are inspected annually. The remaining facilities are inspected at least every other year. The County Department of Environmental Health also inspects all food services restaurants (approximately 8,500 facilities) within the County at least annually. The Cities of Corona and Riverside also implemented a separate stormwater inspection program as part of their Municipal Wastewater Pre-Treatment Inspection Program.

Under the CAP, County Department of Environmental Health inspectors added a stormwater compliance survey to their regular inspection process. Completed surveys were forwarded to the appropriate Permittees for their records, for review and for further action, if necessary. The CAP and Municipal Wastewater Pre-Treatment industrial and commercial sources program has been an effective element of the DAMP.

This program element was revised to address the requirements of the 2010 SAR MS4 Permit, including an expansion of the Commercial Facilities not covered by the CAP and Municipal Wastewater Pre-Treatment inspection programs. The expansion has required some Permittees to hire inspectors to address those facilities not currently covered by the CAP or the Municipal Wastewater Pre-Treatment Program. In addition, the 2010 SAR MS4 Permit require inventories/databases of facilities, prioritization of industrial and commercial facilities relative to the potential to impact water quality, and specified inspection frequencies based upon facility priority.

Effective January 1, 2015, Permittees have taken responsibility for conducting stormwater compliance surveys at targeted industrial and commercial facilities within their respective jurisdictions; some Permittees utilize existing inspection programs (e.g., pretreatment/source control inspection, public works inspection, code enforcement, etc.) to achieve compliance with this requirement, others have elected to bring on additional staff or consultants. The Permittee" programs continue to survey at facilities and frequencies established in Section XI.C and XI.D: All high priority Industrial Facilities are to be inspected at least once a year; all medium priority industrial facilities are to be inspected at least once every two years; and all low priority Industrial Facilities are to be inspected at least once during the term of the 2010 MS4 Permit. All high priority commercial facilities shall be inspected at least once per year; all medium priority Commercial Facilities shall be inspected at least every two years; and all low priority Commercial Facilities shall be inspected at least once during the term of the 2010 MS4 Permit. Each Permittee conducts follow-up inspections to ensure compliance with their respective Stormwater Ordinances at facilities for which an initial survey was noted as "requires follow-up" or "needs improvement". Where necessary, enforcement action may be implemented as described in Section 8.5 of the DAMP. Completed facility surveys are kept for a period of at least three years from the date of inspection.

The revised industrial and commercial sources program continues to have both regional and local jurisdiction components. However, the Permittees will review the effectiveness of these programs annually and make additional program modifications as necessary.

8.1 INDUSTRIAL/COMMERCIAL FACILITY DATABASE

Each Co-Permittee has developed and maintains an inventory database (or databases) of Industrial and Commercial Facilities within their respective jurisdictions. Facilities are included in these inventories regardless of whether the facility is subject to the Industrial General Permit, or other individual NPDES permits issued by the State or Regional Boards.

Co-Permittee maintenance of the Industrial and Commercial Facility inventory/database includes regularly updating the inventory/database for 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, and as compliance surveys and inspections are completed and Industrial Facilities are identified. Each Industrial Facility is listed in the Co-Permittee's databases within 15 days from the initial date of discovery.

Supporting paper (or electronic) files are also maintained and made available to the Regional Board upon request. Supporting files include records of inspection dates, results of each inspection, photographs (if any), video (if any) and a summary of any enforcement actions taken. The inventory/database is updated annually and an electronic copy provided with each Annual Report.

The Permittees' existing inventory/database of Industrial and Commercial Facilities were updated to include the following categories:

- Mobile automobile or other vehicle washing/detailing (base of operations);
- Mobile equipment washing/cleaning (base of operations);
- Mobile carpet, drape, or furniture cleaning (base of operations);
- Nurseries and greenhouses;
- Landscape and hardscape installation (base of operations);
- Other Commercial Facilities that the SAR Co-Permittee determines may contribute a significant Pollutant load to the MS4;
- Mobile high pressure or steam cleaning (base of operations);
- Facilities that transport, store, or transfer pre-production plastic pellets;
- Managed turf facilities (e.g., private golf courses, athletic fields, cemeteries, and private parks); and
- Industrial Facilities defined in Attachment 1 of the Industrial General Permit.

At a minimum, the Co-Permittees' databases include the following information:

- Facility name
- Facility street address
- City
- Zip code
- SIC Code
- Mailing address (if different)
- Location reference (such as, geographic coordinates, cross streets, etc.)
- Facility contact
- Facility contact phone number
- WDID number associated with the Industrial General Permit (if any)
- Other NPDES permit or Waste Discharge Requirements
- Assessor's parcel number
- Site size

8.2 INDUSTRIAL/COMMERCIAL FACILITY PRIORITIZATION AND INSPECTION FREQUENCY

For each facility included in a Permittee's Industrial and Commercial Facility inventory, the Permittees have assigned a priority of High, Medium, or Low to reflect the facility's/business' potential for contributing to the Impairment of Receiving Water quality. In order to develop a consistent prioritization standard, the Permittees developed a matrix for the relationship between priority ratings (High, Medium, and Low) and Receiving Water Pollution threat. This Industrial and Commercial Facility/Business Prioritization Matrix is presented in Table 8-1.

Table 8-1. Industrial and Commercial Facility/Business Prioritization Matrix

Priority	Inspection Frequency
High	Once a year
Medium	Once every two years
Low	Once during the Permit term

Criteria considered in developing the prioritization standard include: types of industrial and commercial activities (SIC codes), materials or Wastes used or stored outdoors, types of activities conducted outdoors, Pollutant discharge potential, compliance history, facility size, proximity and sensitivity of Receiving Waters, history of unauthorized non-stormwater discharges, whether facility is subject to the Industrial General Permit, available facility-specific monitoring data, frequency of existing inspections based upon other California statutes or regulations, or local regulations, ordinances, or codes, and any relevant factors. At a minimum, a high priority is assigned to: Industrial Facilities subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA); Industrial Facilities that handle or generate Pollutants for which the Receiving Water is Impaired, facilities that have a significant potential to

release pre-production plastics or nurdles into the environment, and Industrial Facilities with a high potential for or history of unauthorized, non-stormwater discharges.

The initial priority assigned to a Facility by the Permittees was based upon (1) completed survey forms from inspections conducted as part of the CAP, or (2) information provided in inspection reports completed as part of the Municipal Wastewater Pre-Treatment Inspection Programs (Cities of Corona and Riverside).

8.3 INDUSTRIAL AND COMMERCIAL FACILITY INSPECTIONS

Each Co-Permittee that has an existing local industrial facilities inspection program (the Cities of Corona and Riverside as to their respective publicly owned treatment works (POTW) pre-treatment inspections) includes in their respective inventory, information derived from existing compliance survey and inspection programs.

The Co-Permittees have developed a mechanism to identify compliance of Industrial and Commercial Facilities with the Co-Permittee's Stormwater Ordinances and, where applicable, potential non-compliance with the Industrial General Permit. There are two main components of this existing program: the Permittee's commercial/industrial survey program and the local POTW inspection programs. When conducting facility/business inspections, at a minimum, the following are addressed:

- Verification of the type (or types) of industrial and/or commercial activities and facility SIC codes;
- Submittal of a NOI to comply with the Industrial General Permit, if applicable based upon the facility's SIC code;
- Compliance with the Co-Permittee's Stormwater Ordinance;
- Observation for non-stormwater discharges, potential IC/IDs to the MS4;
- Potential discharge of Pollutants in Urban Runoff from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), Waste handling, Hazardous Materials handling or storage, delivery areas or loading docks, or other outdoor work areas;
- Implementation and maintenance of appropriate or minimum BMPs;
- Qualitative assessment of the effectiveness of the BMPs implemented; and
- Education regarding stormwater Pollution Prevention.

Inspections for Commercial Facilities with restaurants address, at minimum:

- Oil and grease disposal to verify that these wastes are not poured onto parking lots, streets, or adjacent catch basins;
- Trash bin areas to verify that these areas are clean, the bin lids are closed, the bins are not used for liquid waste disposal and wash water from the bins is not disposed into the MS4;
- Parking lot, alley, sidewalk and street areas to verify that floor mats, filters, and garbage containers are not washed in those areas and that no wash water is disposed of in those areas;

- Parking lot areas to verify that they are cleaned by sweeping, not by hosing down, and that the facility operator uses dry methods for spill cleanup; and
- Violations of the Stormwater Ordinance are enforced by the Co-Permittee.

If an inspection of an Industrial Facility indicates the need for follow-up, Co-Permittee follow-up inspections include a review of the Industrial Facility's material and waste handling and storage practices, written documentation of Pollutant control BMP implementation and maintenance procedures, digital photographic documentation of water quality violations as well as evidence of past or present unauthorized, non-stormwater discharges and enforcement actions issued at the time of the Co-Permittee inspection.

If an inspection of a Commercial Facility indicates the need for follow-up, Co-Permittee follow up inspections include a review of BMPs implemented, their effectiveness and maintenance; written and photographic documentation of materials and waste handling and storage practices; evidence of past or present unauthorized, non-stormwater discharges; and an assessment of management/employees awareness of stormwater pollution prevention measures.

In the SAR the Co-Permittees need not inspect facilities inspected by Regional Board staff if the inspection was conducted within the specified time period. Regional Board staff inspection information is available at: http://www.swrcb.ca.gov/ciwqs/.

8.3.1 Municipal Wastewater Pre-Treatment Inspection Programs

The Cities of Corona and Riverside, which operate POTWs, in combination conduct annually on average, approximately 3,800 wastewater pre-treatment inspections on a variety of industrial and commercial facilities, including, but not limited to, retail food establishments, car washes, and carpet, drape & furniture cleaning establishments. When conditions are observed during these wastewater pre-treatment inspections that appear to be a violation of either the Industrial General Permit or other permit issued by the Regional Board (for example, an individual NPDES permit or Waste Discharge Requirements), the Cities of Corona and Riverside notify Santa Ana Regional Board staff.

During industrial or commercial or facility inspections, the inspectors document whether the facility:

- Appears to be in compliance with Co-Permittee Stormwater Ordinances;
- If applicable, has submitted an NOI to comply with the Industrial General Permit; and
- Appears to have poorly managed authorized non-stormwater discharges or evidence of unauthorized non-stormwater discharges, which may be Illicit Connections or Illegal Discharges to the MS4.

This information is documented on a separate report or included on an inspection form. Inspections resulting in enforcement action are referred to the appropriate jurisdictional entity.

8.3.2 County Business License Inspection Program

Riverside County's Transportation Land Management Agency maintains a standalone business registration/ licensing Stormwater Compliance Inspection and Enforcement Program (CIEP). This program was established to regulate Industrial and Commercial Facilities located in the unincorporated areas of the County. Ordinance 857 (Business Registration and Licensing) was adopted on November 7, 2006 by the

County Board of Supervisors and provides the basis for registering and inspecting all businesses that are within the unincorporated areas of the County. Businesses are registered though the Department of Building and Safety while inspections are performed by Environmental Compliance Inspectors within the Transportation Department. Since its inception in 2006, over 21,000 business licenses have been issued, however, not all of these business are still open today. A total of over 3,000 businesses have been inspected since the program inception. A database has been established to register and prioritize businesses to establish inspection frequencies based on businesses potential threat to water quality standards.

8.4 MOBILE SOURCES

Notifications

Each Co-Permittee notifies all mobile businesses based within or discovered operating within the SAR concerning minimum Source Control and Pollution Prevention BMPs that they must develop and implement (XI.D.6). As specified in the 2010 SAR MS4 Permit, mobile businesses include:

- Mobile auto washing/detailing;
- Equipment washing/cleaning;
- Carpet, drape, and furniture cleaning; and
- Mobile high pressure or steam cleaning activities that are based out of the Permittee's jurisdiction.

Minimum BMPs for Mobile Businesses

Based on the associated activities identified, a list of potential source control BMPs was developed by each of the Permittees and is provided in their respective LIPs. Permittees are encouraged to consult other sources of BMP information and consider implementation of additional methods and measures as appropriate. The Permittees also utilize the BMP Performance Report Library found at http://rcflood.org/NPDES/BMPPerformance.aspx.

Database

The Permittees maintain a list of known mobile businesses and their bases of operation in the Commercial Facility Database, and the database will assist in identifying the information necessary for the Permittees to take enforcement action.

Enforcement Strategy for Violations Originating from Mobile Businesses

Predominantly, violations by mobile businesses are reported by the public or by Permittee field personnel. Appropriate Permittee 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. Often, violations originating from mobile businesses are received by the Permittees in the form of complaint calls from the public. For example, the District currently operates, on behalf of the Permittees, a centralized 24-hour hotline 1-800-506-2556 that may be used by the public to, among other things, report violations into public streets, the MS4 and other waterbodies. These calls can be received in English or Spanish and are routed to the appropriate Permittee departments or contacts. The Permittees also implement 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 originating from a mobile business that is not already being responded to by another responsible agency (e.g., other Permittee), the Permittees investigate and take the following actions, as applicable:

- If the reported incident is outside of the Permittee's jurisdiction, referral to the appropriate agency and/or the respective Regional Board will be made;
- Identify the name and contact information for the mobile business;
- The Permittees respond to reported violations originating from a mobile business within their 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.

Investigations are performed by each Permittee in response to reports of potential violations originating from mobile businesses received from the public, Permittee staff or other agencies within their jurisdictions. The Permittees have adopted ordinances prohibiting such discharges and established programs to enforce them.

Where violations are discovered, the Permittees will take appropriate enforcement action. The typical escalating enforcement protocol includes the following; however steps may be adjusted as appropriate to the nature of the violation:

Initial Violation

- Permittees provide educational materials to the mobile business operator informing them of the minimum source control and pollution prevention BMPs they must implement. This includes a review of BMP fact sheets, and letting the operator know the proper procedures for disposal of pollutants and non-stormwater discharges originating from mobile businesses.
- If applicable, the Permittee will require the business owner to obtain a local business license.
- Permittee will give notice that the 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).
- If discharge is observed at time of inspection, Permittee shall require 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 Permittees follow the enforcement strategy in Section 3.4 which may include, as appropriate, issuing written warnings, Notices of Violation, citations, or referrals to the Regional Board. Specific enforcement procedures shall be outlined in each Permittee's LIP.

In addition, although violations may be enforced initially through Co-Permittee Stormwater Ordinances, referrals are made to the Regional Board if compliance is not achieved despite Permittee enforcement. In all cases, the notification of potential violations should be routed through the Permittee's stormwater compliance coordinator before notifying Regional Board staff.

8.5 ENFORCEMENT

If during a routine inspection or an inspection in response to a complaint, an inspector observes that a business/facility is non-compliant with the Co-Permittee's Stormwater Ordinance (including the prohibition of non-exempt non-stormwater discharges or minimum BMPs); the Co-Permittee begins enforcement procedures. As described in Section 3.4 (Legal Authority and Enforcement), the severity of the violation is based on various factors. After considering the various factors, the Co-Permittee determines the level of enforcement that is required consistent with the enforcement levels described in Table 3-3.

In the event that inappropriate material or Waste handling or storage practices or unauthorized non-stormwater discharges are observed at an Industrial or Commercial Facility, an enforcement order will be issued and a re-inspection frequency adequate to bring the facility into compliance is maintained (at a minimum, once a month or within the compliance schedule prescribed by the Co-Permittee in a written notice to the discharger). Once compliance is achieved, a minimum inspection frequency of once every six months should be maintained for the Annual Reporting period.

8.6 REGIONAL BOARD NOTIFICATION REQUIREMENTS

The Permittees notify the Regional Board when inspectors, other Permittee staff, or third parties report observing potential non-compliance of a non-emergency situation nature with the Industrial General Permit or other permits issued by the State Board or Regional Board. Such notifications are made by telephone or email within two (2) working days of receiving notice from its staff or a third party. Examples of non-compliance of a non-emergency situation nature are a facility that cannot demonstrate coverage under the Industrial General Permit when it is apparent that it should have coverage, a facility that has coverage under the Industrial General Permit but does not have a NOI or SWPPP available onsite, or a facility that is not properly implementing or maintaining BMPs. The Regional Board staff will then determine if an inspection and enforcement action is appropriate. Upon providing notification to the Regional Board, Permittee staff take no further action with respect to enforcement of the Industrial General Permit. However, the Permittee continues with progressive enforcement of its ordinances at the site as described in Section 3.4.2 of the DAMP.

Notifications regarding Emergency Situations are described in Section 4.7.

8.7 INVENTORY AND REPORTING

The Permittees developed a standardized spreadsheet for inventorying Industrial and Commercial Facilities within their jurisdiction and the associated inspection and enforcement information that is included in the Annual Reports. That standardized spreadsheet is shown in Figure 8-1.

8.8 INDUSTRIAL/COMMERCIAL FACILITY INSPECTOR TRAINING

Co-Permittee staff and contractor personnel responsible for conducting Industrial and Commercial Facility inspections or follow-up inspections receive annual training regarding the following topics:

- Selection, implementation, and maintenance of appropriate or minimum BMPs for Industrial or Commercial Facilities;
- The Industrial General Permit and NOI requirements;
- The Co-Permittee's Stormwater Ordinance and other local jurisdiction resolutions and codes related to protection of water quality;
- The local jurisdiction's enforcement and compliance strategy/policy for Industrial and Commercial Facilities;
- The 2010 SAR MS4 Permit and the DAMP;
- How to provide guidance to Industrial and Commercial Facility operators on proper selection, implementation and maintenance of BMPs and compliance with the requirements of the Stormwater Ordinance during site inspections; and
- TMDL requirements and appropriate BMPs to mitigate the impacts of Industrial and Commercial Facilities.

The Co-Permittees ensure that newly hired or transferred inspection staff receive informal training within six (6) months of hire and formal training within one (1) year of hire. Formal or informal refresher training focused on appropriate BMP implementation is provided at least annually prior to the rainy season. Also, when planning formal classroom training related to conducting inspections of Industrial and Commercial Facilities, the Co-Permittees notify and coordinate with Regional Board staff. Co-Permittee staff responsible for conducting Industrial or Commercial Facility inspections may also attend training sponsored by industry associations (e.g., American Society of Civil Engineers, American Public Works Association, etc.), the California Stormwater Quality Association, other area-wide MS4 permittees, or other entities in lieu of Permittee sponsored training. The Permittees individually maintain a log of trained staff and report training in their Annual Reports.

Figure 8-1. Standardized Spreadsheet for Co-Permittee Industrial and Commercial Facility Inventory and Inspections

FACILITY GENERAL INFORMATION									MUNICIPAL PERMITS	FACILITY CONTACT INFORMATION					INSPECTION / ENFORCEMENT STATUS (See Note B.)						
	Facility Location											Mailing Address (if different from street address)									
Facility Name (dba) See Note A.	Street Address	Cross Street	City	Zip	Watershed	Facility SIC Code	Facility Site Size	WDID No. (General Permit)	Business License, Wastewater Permit, etc. (if applicable)	Contact Name	Contact Phone Number	Street Address	City	Zip	Number of Stormwater Inspections	Satisfactory	Verbal Warning	Written Warning	Notice of Violation	Cease & Desist Order	Referred to RWQCB

Notes:
A. Name of facility. If the facility is covered by the General Permit for Stormwater Discharges Associated with Industrial Activity, the facility name as used by Regional Boards can be obtained from the State Water Resources Control Board Industrial General Permit database (Column titled "Facility_SiteName") or from a copy of the applicant's Notice of Intent.
B. Enter the number of inspections and the number of each type of enforcement action for each Facility.

9.0 RESIDENTIAL SOURCES

9.1 POTENTIAL SOURCES OF POLLUTANTS

The 2010 SAR MS4 Permit identifies the following residential activities as potential sources of Pollutants:

- Residential auto washing and maintenance activities;
- Use and disposal of pesticides, herbicides, fertilizers, and household cleaners; and
- Collection and disposal of pet wastes.

The Permittees will identify additional residential activities that are potential sources of Pollutants as appropriate and add them to this list.

The regional 'Only Rain Down the Storm Drain' Public Education program distributes Fact Sheets/BMPs and appropriate information from organizations such as the Riverside-Corona Resource Conservation District and United States Department of Agriculture Backyard Conservation Program to the residents to ensure that discharges from the residential areas are not causing or contributing to a violation of Water Quality Standards in the Receiving Waters (XI.E.2).

In addition, the Co-Permittees have partnered with local water purveyors to develop a comprehensive approach to addressing the requirements of AB1881 to encourage efficient irrigation practices in new developments per the intent of Section XII.E.5 of the 2010 SAR MS4 Permit. The program also promotes use of tiered water rates and irrigation runoff education/outreach by the water districts to promote reductions in runoff from existing developments as well.

9.2 HOUSEHOLD WASTE MANAGEMENT

The Permittees participate in regional activities to facilitate the proper collection and management of used oil, toxic and hazardous materials, and other household wastes. This include assisting in the distribution of information regarding the dates and locations of temporary and permanent HHW and ABOP collection events and facilities, and financial support of HHW and ABOP collection facilities and events or curbside or special collection sites managed by the Co-Permittees or private entities, such as solid waste haulers (XI.E.3).

9.3 RESIDENTIAL ENFORCEMENT

If during an inspection in response to a complaint, a Co-Permittee inspector observes that a residence is non-compliant with the Co-Permittee's Stormwater Ordinance, (including the prohibition of non-exempt non-stormwater discharges), the Co-Permittee will begin enforcement procedures as appropriate. As described in Section 3.4 (Legal Authority and Enforcement) of the DAMP, the severity of the violation is based on consideration of several factors. After considering these factors, the Co-Permittees determine the level of enforcement that is required consistent with the enforcement levels described in Table 3-3 (XI.E.5).

Where possible, the Co-Permittees will enforce the Stormwater Ordinance(s) as appropriate to control the discharge of Pollutants associated with residential activities.

9.4 ANNUAL REPORTING

An evaluation of the Residential Sources component of the LIP will be included in the Annual Report. The measurable goals addressed in this evaluation will include:

- Number of fact sheets distributed;
- Participation in household hazardous waste management activities; and
- Number and type of enforcement actions taken.

In addition, major accomplishments of the Residential Sources component and changes to be implemented in the subsequent year to improve the effectiveness of the program will be included in the evaluation (XI.E.6).

10.0 PUBLIC EDUCATION AND OUTREACH

10.1 INTRODUCTION

Developing programs to increase public awareness and to involve the public can be an effective method for controlling Pollution associated with Urban Runoff. Emphasizing the relevant impact of Urban 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 Permittees have developed a strong area-wide public education and outreach program.

To leverage finite resources, the public education program may partner with other entities including Riverside County's Waste Management Department, Western Riverside Council of Governments, Los Angeles County, and 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 program maintains an Internet website that provides information to residents and businesses about the problem of stormwater Pollution and offers simple stormwater Pollution Prevention activities. The website also provides a materials order form for educational materials. Additionally, the website has a tracking mechanism for the number of queries. The website address is http://www.rcwatershed.org/

10.2 MS4 PERMIT REQUIREMENTS

The 2010 SAR MS4 Permit requires the Permittees to:

- Continue to promote the most effective elements of the comprehensive public and business education strategy. (XIII.A)
- Incorporate public involvement in the program development and implementation process. (Finding R.1)
- Provide a report on the status of the Public Education and Outreach Program in the Annual Reports. (XIII.B)
- To measurably increase the awareness of Urban Runoff issues. (XIII.C)
- When feasible, continue to participate in joint outreach efforts to ensure that a consistent and effective message on Urban Runoff Pollution Prevention is brought to the public. (XIII.D)
- Continue to ensure that appropriate outreach materials are available for construction, industrial, and commercial inspection programs. (XIII.E)
- Maintain and distribute BMP guidance for the control of potentially polluting activities including household use of fertilizers, pesticides, herbicides, and other chemicals, and guidance for mobile vehicle maintenance, carpet cleaners, commercial landscape maintenance, and pavement cutting. (XIII.F)

- Provide appropriate educational materials to new industrial and commercial enterprises at the time business licenses or occupancy permits are issued. (XIII.G)
- To develop targeted BMP guidance for specific Pollutants and residential and business activities, including identification of actions to prevent sewage spills. (XIII.H)
- To promote the 1-800 hotline for reporting clogged storm drains, faded or missing catch basin stencils, illegal dumping from residences, Industrial and Commercial Facilities and Construction Sites into public streets, storm drains and waterbodies, and providing general Urban Runoff and BMP information. (XIII.H)
- To maintain a Public Education Committee to oversee and guide the implementation of the public education program. (XIII.I)
- Continue to sponsor or staff a table or booth at community, regional, and/or County-wide events to distribute Urban Runoff public education materials to the public. (XIII.J)
- Coordinate programs/activities with other potential dischargers to the MS4 listed in Appendix 2 of the 2010 SAR MS4 Permit where feasible. (XIII.K)
- Develop and distribute BMP, spill response, and IC/ID response guidance for Permittee and contract field operations and maintenance staff. (XIII.M)
- Provide public education and outreach activities to minimize controllable allowed discharges. (VI.A)
- Educate property owners to use Pollution Prevention BMPs and to maintain onsite hydrologically functional landscape controls. (XII.E.6)

10.3 OBJECTIVES

The public education program element has established the following guiding objectives:

Outreach Objectives:

- Foster broad public awareness of water Pollution concerns;
- Increase public acceptance of Pollution Prevention activities to curtail everyday human behaviors that contribute to water quality problems;
- Educate/inform the general public, regulators and key local government and State decision makers on Urban Runoff conditions in Riverside County; and
- Promote responsible stewardship of local water resources.

Program Management Objectives:

- Encourage/educate/inform the regulators, Permittee personnel and other key local government and State decision makers on the purpose, use, and requirements of the DAMP;
- Solicit public involvement in the development of local water quality programs;
- Focus on water quality issues specific to each Region;

- Coordinate public education efforts with adjacent stormwater management programs and other related education programs to share resources, coordinate outreach efforts, and avoid costly duplication of effort; and
- Adapt public education programs and objectives, based on feedback surveys, monitoring data, and other methods, to address changing MS4 program needs and objectives.

Program management objectives serve as a management strategy for public education program implementation and development. These objectives are achieved through techniques such as local coordination meetings, participation in regional organizational efforts, advertising and outreach to adjacent programs. Table 10-1 identifies secondary objectives and typical techniques used to implement them.

Table 10-1. Public Management Methods

Category	Potential Outreach Methods
DAMP Education (Section 10.5.3.1)	• Management Steering Committee • Permittee Technical Advisory Committee • Personnel Training Programs • Coordination Meetings with other Departments/Agencies • Comments on CEQA Documents
Public Participation (Section 10.5.3.2)	• Information at Public Permit Counters • Public Workshops • Public Notifications • Posting Notices on Web Sites • Notifying Interested Parties
Program Coordination (Section 10.5.3.3)	• Participation in California Association of Stormwater Quality Agencies • Participation in various Watershed Management Efforts • Direct contact with adjacent or overlapping program managers (stormwater, waste, others)
Adaptive Management (Section 10.5.3.4)	• Surveys of attendants of public fairs and events • Online web surveys • Review of monitoring data • Participation in surveys organized and coordinated by other local/state agencies • Staff Feedback • Incorporation of new state or federal guidelines or information

10.4 IMPLEMENTATION

10.4.1 Public Education Committee

The Permittees established the Public Education Committee to provide oversight and guidance for the implementation of the public education program. The Public Education Committee includes members of the Technical Advisory Committee and is chaired by the Public Education Coordinator. The Committee meets as needed but at least twice per year. (XIII.I)

10.4.2 Program Framework

The Public Education Program is implemented at a county-wide, regional and local level. The following subsections describe how the public education program is implemented at each level.

10.4.2.1 County-wide Level

As Principal Permittee for the County's three NPDES MS4 permits, the District acts as administrator for the Public Education program and is responsible for developing a consistent and effective message on Urban Runoff Pollution Prevention throughout the County. This county-wide element consists of developing a program image and core message, implementing county-wide education programs, and coordinating county-wide events and interagency activities.

10.4.2.2 Regional Level

The public education program is also tailored for each of the three regions in the County. This approach integrates elements of the county-wide program while focusing on the specific geography and water quality issues of the area and allows the program to address the impacts of local activities on local water quality. The District incorporates regional public education requirements established by each region's MS4 permit. Regional public education needs are established through formal and informal public education committees who discuss public education requirements and funding requirements each year. Regional public education programs may include participation in large community fairs, customized public education materials to address regional water quality issues, and participation in other local agencies' regional public education efforts.

10.4.2.3 Local Level

Each Permittee may also undertake individual public education activities to address specific local needs or MS4 Permit requirements. These local activities may include distribution of public education information during Construction Site and Commercial and Industrial Facilities inspections; distribution of public education materials at front counters, local fairs, and other community activities; and/or development of public education programs/materials to address specific local needs.

10.5 PROGRAM COMPONENTS

The following subsections identify specific programs currently implemented by the Permittees to address program objectives. These programs are adaptively managed by the Permittees to meet the changing needs of the overall MS4 program based on changing regulations, water quality conditions, and feedback surveys.

10.5.1 Outreach Objectives

10.5.1.1 Public Behavior Education Program

The following programs are currently being implemented to foster broad public awareness of water Pollution concerns; increase public acceptance of Pollution Prevention activities to curtail everyday human behaviors that contribute to water quality problems; and to promote stewardship of local water resources:

School Education Outreach. Outreach to school children fosters an environmental ethic that may help prevent stormwater Pollution. Implementation of this element may combine multiple elements – assembly presentations, teacher workshops, and field events. The program is implemented through a contract with S. Groner Associates, Inc., and focuses on 3rd through 5th grade.

Partnerships. As appropriate, the District may partner with other agencies, including:

- Animal Care Services. The County Community Health Services provides pet licensing and patrol services to contracted cities and unincorporated areas of the County and may partner with the Public Education and Outreach program to distribute educational materials that provide guidelines for pet care activities.
- Riverside County Waste Management Department (RCWMD). RCWMD manages the recycling and composting programs. The Public Education and Outreach program may coordinate with RCWMD to promote the proper disposal of unwanted waste in media print as well as at outreach events. For example, the Permittees may contribute funds toward the operation and maintenance of fixed and mobile HHW/ABOP Collection centers. In further support of this activity, the Permittees,

Environmental Health and RCWMD also coordinate on the development of several outreach materials that identify the times and locations of HHW/ABOP recycling activities. These materials may include distribution of an environmental calendar at public events, as well as a brochure regarding HHW/ABOP disposal that describes how and where to properly dispose of HHW/ABOP items.

- Public Outreach Events. Participation in public outreach events that may include southern California Fair, Santa Ana Watershed Clean Up, Keep Riverside Clean and Beautiful, and the Lake Elsinore Clean-up.

10.5.1.2 Business Specific Education Program

The business education program consists of the development and distribution of formal BMP guidance for certain potentially polluting business activities including mobile businesses, automotive service center, and restaurant cleaning operations; and outreach to business associations. The business specific public education program also educates businesses regarding the State Board's Industrial General Permit. The business specific education efforts currently include:

- **Food Services Inspection Program**. This program focuses on the inspection of retail and wholesale food facilities. The Permittees ensure that stormwater issues are discussed during food services inspections. During these inspection food establishments are provided brochures outlining BMP's for various reasons. The materials provide food service employees, managers, and owners with the BMPs that businesses should employ while performing various maintenance activities. In addition, inspectors discuss common Pollution Prevention activities that food services facilities can undertake to prevent stormwater Pollution. The inspectors generally review appropriate methods for cleaning of dumpster and grease bin areas; replacement of leaking or dirty dumpsters; reducing liquid waste in trash and double bagging trash to prevent leaks; encouraging dry sweeping and using dry methods for spill clean-up; disposing of wash water to the sanitary sewer rather than the storm drain system; stopping spills at their source; and proper maintenance of outdoor grease interceptors.
- Industrial **Business Inspection Program**. Permittees have taken responsibility for conducting stormwater compliance surveys at targeted industrial and commercial facilities within their respective jurisdictions; some Permittees utilize existing inspection programs to achieve compliance with this requirement, others have elected to bring on additional staff or consultants. Each Permittee conducts follow-up inspections to ensure compliance with their respective Stormwater Ordinances at facilities for which an initial survey was noted as "requires follow-up" or "needs improvement". Where necessary, enforcement action may be implemented. They also distribute brochures regarding the requirements of the Industrial General Permit. In addition, Inspectors discuss common Pollution Prevention activities that facilities can undertake to prevent stormwater Pollution. Common activities discussed include proper disposal of automotive fluids; working on transmissions, engines, and miscellaneous repairs; preventing and cleaning up leaks and spills/dry method clean up; control of wastewater discharges; vehicle fueling and battery removal and storage; solvent and grease management; metal grinding and finishing; storing and disposal of waste; outdoor parking and wash water management during outdoor cleaning; and steam cleaning practices.
- **Construction Inspection Program**. Construction project inspections ensure compliance with Permittee ordinances and coverage under the Construction General Permit. During these inspections, the inspectors discuss appropriate methods to prevent Pollutants from being mobilized at Construction Sites.

- **Water Quality Management Plan and DAMP Section 6 Review**. The Permittees review development projects for compliance with the WQMP and Section 6 of the DAMP. During this review, the Permittees discuss appropriate BMPs with developers and engineers to ensure that reasonable site design, source control, and treatment control BMPs are incorporated to protect downstream Receiving Waters.

10.5.1.3 Potential Pollutants Education Program

The District has developed a number of brochures and outreach methods to address specific targeted Pollutants such as fertilizers, pesticides, HHW chemicals, antifreeze, oil, batteries, and paint.

Partnerships. The District often partners with other agencies to communicate the program messages:

- Riverside County Waste Management Department (RCWMD). The RCWMD manages the recycling and composting programs and utilizes a variety of educational materials to recommend alternatives for reducing, reusing and the recycling of unwanted hazardous products, food Wastes, paper, and aluminum. The District and RCWMD cooperate in programs to ensure that the Permittees promote the proper disposal of unwanted waste in most forms of media print, as well as at outreach events.
- Public Outreach Events. Participation in several public outreach events including southern California Fair, Santa Ana Watershed Clean Up, Keep Riverside Clean and Beautiful, and the Lake Elsinore Clean-up.

10.5.2 Program Tools

Pollution Prevention based education BMPs is a major focus of the outreach program. Table 10-2 identifies typical audience and outreach programs for the three categories of the outreach program.

Table 10-2. Public Education and Outreach Methods

Category	Audience	Potential Outreach Methods
Public Behavior	Residents; General Public	• Pamphlets • Brochures • Radio • Social Media • Utility Bill Inserts • Advertisements • Community Events • Surveys • Community Presentations
	Students	• Classroom Presentations • Videos • Workbook Materials • Coloring Contests
	Home Gardeners	• Focused Brochures • Posters • Workshops • Social Media
Business Activity	Commercial; Industrial	• Brochures • Posters • Site Inspections
	Mobile Operators (auto maintenance; vehicle washing; mobile carpet, drape and furniture cleaning; mobile steam cleaning)	• Brochures • Information at Public Permit Counters • Site Inspections (base of operations)
	Groundskeepers, landscape installation, nurseries, greenhouses	• Focused Brochures • Posters • Workshops •Site Inspections (base of operations)
	Architects; Developers	• Focused Brochures • Information at Public Permit Counters • WQMP Compliance reviews
	General Contractors; Construction Contractors	• Focused Brochures • Information at Public Permit Counters • New Development Guidelines • Site Inspections
Potential Pollutants	Users or Generators of fertilizers, pesticides, chemicals, and other Pollutants	• Pamphlets • Brochures • Social Media• Utility Bill Inserts • Community Events • Community Presentations • Surveys • Licensing

The potential outreach methods and applications include:

- **Brochures and other Printed Materials**. As appropriate, brochures, posters, pamphlets, and flyers are developed and distributed to address topics including illegal dumping; disposal of HHW and Antifreeze, Batteries, Oil and Paint; car washing; fertilizer, pesticide, and household chemical use; pet care; mobile businesses including outdoor cleaning; pool and spa maintenance; septic tank maintenance; home lawn and garden care; construction site supervision; automotive maintenance and car care; industrial and commercial facilities; and the food service industry. Materials incorporating messages including dust pans, pens, pencils, etc. are also considered and provided free of charge to the public at community events to promote Pollution Prevention activities.
- **1-800 Hot Line**. The District operates a County-wide 1-800 hotline number to encourage the public to report illegal dumping (including discharges from Industrial and Commercial Facilities and Construction Sites), clogged storm drains, and faded or missing catch basin stencils. Schedules for HHW and antifreeze, batteries, oil and paint clean-up locations are also available through the hotline. This hotline is capable of receiving reports in both English and Spanish 24 hours per day seven days per week.
- **Website**. The District operates a website and social media platform that provides information on how to report illegal dumping, clogged storm drains and missing storm drain inlet curb markers. It also provides information on upcoming activities, and general information about Urban Runoff Pollution Prevention. Pollution Prevention information is available for multiple audiences including children, teachers, residents, businesses and developers. The website also provides media library containing Page Display Format (PDF) versions of brochures and posters, as well as other media.

- **Mailing Inserts**. The District may distribute public education materials as mailing inserts when appropriate. Public education materials have been distributed through city utility bills.
- **Media Outreach**. The Permittees may implement social media, radio, television and/or billboard campaigns to deliver Pollution Prevention concepts and information to the public.
- **Community Events**. Information and materials may be delivered to business people during trade shows, trade meetings, or other appropriate community events.

10.5.3 Management Objectives

The general public is provided opportunities to participate in the development of compliance documents, to train Permittee staff on the purpose, requirements and implementation of the programs outlined in the DAMP, to ensure that a consistent and cost effective message is brought to the public by coordinating with other regional education programs, and to ensure that the public education message is adaptively managed to keep up with the most recent regulatory requirements, watershed information, and changing MS4 program needs and objectives.

10.5.3.1 DAMP Education

The Permittees have incorporated methods into their DAMP programs to ensure that regulators, Permittee personnel and other key local government and state decision makers are educated regarding the purpose, use, and requirements of the DAMP. The following paragraphs describe some of the specific practices used:

- **Management Steering Committee –** As Principal Permittee, the District chairs bi-annual meetings with Permittee City Managers or Executive Officers to discuss program requirements, regulatory requirements, upcoming activities, and budgeting issues that impact the operations of their cities/county. These meetings ensure that the top levels of each local government are aware of the changing needs and requirements of the NPDES Program.
- **Permittee Technical Advisory Committee –** Each month the District chairs a meeting of the Permittees for each of the NPDES Permit regions in Riverside County. These meetings are open to the public. Members of regulatory agencies and other local government and state agencies are invited to attend, particularly when issues affecting their operations are addressed. These meetings are used to discuss progress on DAMP development, upcoming activities, changes to the regulatory framework, and to present information on available BMP technologies. Special presentations are also occasionally made by other NPDES permit holders to discuss their programs and how they inter-relate with our programs.
- **Permittee Staff Training Programs –** The District provides staff training at least twice a year for the Permittee groups that follow four broad categories of activities: Construction Inspection, New Development Review, Municipal Activities, and Industrial and Commercial Facility Inspection. These training programs provide a broad overview of the NPDES regulatory framework, discuss other state permits that impact Permittee activities and discuss DAMP and local ordinance requirements and BMPs to be deployed during those activities. These programs are coordinated with Regional Board staff. The Permittees continue to review the adequacy of the existing staff training programs and continue to develop and improve them. The Permittees are also seeking to work with neighboring MS4 programs to cooperate in the development of staff training materials.

- **Coordination Meetings with other Agencies/Departments –** As needed, the Permittees coordinate with other local governments and state agencies to discuss the requirements of the DAMP and the NPDES MS4 programs. These meetings are used to coordinate agency activities.
- **Comment on CEQA Documents –** Each Permittee reviews CEQA documents for public and private projects in their jurisdictions. The CEQA review includes specific questions regarding water quality and compliance with the DAMP and local ordinances. These questions help to ensure that other public and private entities are aware of water quality requirements.

10.5.3.2 Public Participation

In order for the DAMP to be an effective planning tool for reducing Pollutants in stormwater, it is essential to educate both the general public and other agencies on the purpose, requirements and implementation of programs outlined in the DAMP. The public participation process integrates public values into the planning, decision-making and problem-solving process. Under the public participation approach, interested and affected persons are afforded opportunities to influence the planning and decision-making process prior to the identification of a recommended solution. This approach allows solutions to public sector problems to be developed that are much more likely to be acceptable to the public and, therefore, implementable. The following methods may be used to facilitate the public participation process:

- **Open Meetings** – The Permittees participate in Technical Advisory Committee meetings regarding the ongoing development of the DAMP and related programs. These programs are open to the public and they may provide comment on any activity that the Permittees are undertaking in support of the DAMP.
- **Public Notice** – The Permittees post public notices on their websites, social media, and in newspapers, to notify the public of the upcoming development of compliance programs, or of the release of draft compliance documents. These notices identify the period in which public comment will be accepted, where public comments may be submitted, and where copies of draft documents or supporting information may be located.
- **Public Workshop** – The Permittees may use formal or informal public workshops to facilitate an interactive discussion on draft compliance documents. These public workshops are usually publicly noticed at least two weeks prior to their date and are usually held in conjunction with publicly noticed comment periods. Public workshops can also be conducted through organizations such as the Western Riverside Council of Governments.
- **Community Meetings** – The Permittees may use community meetings, such as city council meetings, local agency meetings, or others to solicit comments from the public and other agency staff.

10.5.3.3 Program Coordination

The public education program is coordinated with related programs at the local, state and national level. Such programs include stormwater Pollution programs being developed in counties adjacent to Riverside County and throughout California; environmental education programs at the community level offered through other local agencies, environmental organizations, or schools; and county-wide or municipal efforts to promote ride-sharing, recycling, water conservation, and proper household Hazardous Waste disposal. These programs are coordinated to deliver a consistent message regarding Urban Runoff to the public.

The Permittees currently coordinate activities with the San Bernardino County MS4 Program; CASQA; Riverside County Environmental Health, the Riverside County Fair Housing Network; the Farm Bureau;

the Building Industry Association; Riverside County Waste Management Department; Riverside Public Utilities, the Auditor-Controller's Office; and the Regional Water Quality Control Boards.

10.5.3.4 Adaptive Management

The success of the public education program will depend on its ability to assess its effectiveness and adapt to changing water quality issues within each region of Riverside County. The Public Education Committee meets twice annually to discuss the effectiveness of the county-wide and regional public education programs, county-wide and regional needs, and necessary changes to the public education program to ensure that it adapts to those needs. The following tools may be used by the Permittees to assess the effectiveness of the public education program or to determine changing needs:

- **Monitoring Data** – The Permittees are collecting stormwater monitoring data from each region of Riverside County. This data is analyzed for trends in Pollutant loading and to see if Pollutant problems can be tied to particular activities or land uses. This data may be used to modify the public education program to address potential Pollutant problems or activity problems within specific regions or county-wide.
- **Public Surveys** – The Permittees either conduct surveys or may coordinate with surveys conducted by other agencies, to help assess the effectiveness of Permittee public education outreach activities. The Permittees conduct a stormwater survey of attendants of various community fairs. The Permittees have also coordinated with the Lake Elsinore/San Jacinto Watershed Council on a phone survey of residents of the San Jacinto watershed regarding water quality concerns. As appropriate, results from surveys may be used to adaptively manage the Permittees public education program. In addition, the Permittees Public Education subcommittee continuously conducts a review of the adequacy of our existing survey program and may make recommendations to modify the survey format or scope to better assess public education program effectiveness. Expansion and/or modification of the public survey program may include analysis of results from Construction Site inspection and Industrial and Commercial Facility inspection forms. The Permittees may also develop or coordinate with other agencies on other surveys, such as phone surveys or web based surveys in lieu of, or in addition to, existing surveys in order to assess effectiveness.
- **Staff Feedback** – The Permittees may modify the public education program based on staff feedback or knowledge of water quality issues affecting Riverside County or specific regions of Riverside County.
- **Incorporation of New State or Federal Guidelines** – The Permittees may modify the public education program to address changes to the regulatory framework or regulatory requirements for specific DAMP related programs or activities.

11.0 MONITORING PROGRAM

11.1 OVERVIEW OF THE CONSOLIDATED PROGRAM FOR WATER QUALITY MONITORING

As Riverside County is within the jurisdiction of three Regional Boards, a Consolidated Program for Water Quality Monitoring (Consolidated Monitoring Program or CMP) was developed in 1994 to integrate the requirements of the three area-wide MS4 Permits. The overall goal of the CMP continues to be to develop information that can be used to support effective implementation of the Urban Runoff management programs throughout Riverside County.

The purpose of the MS4 Urban Runoff program is to manage the quality of Urban Runoff to the MEP to prevent impacts to Receiving Waters. The monitoring program goals necessary to support this purpose are:

- Develop and support an effective MS4 management program.
- Identify those Receiving Waters, which, without additional action to control Pollution from Urban Runoff, cannot reasonably be expected to achieve or maintain applicable Water Quality Standards.
- Characterize Pollutants associated with Urban Runoff and assess the influence of urban land uses on Receiving Water quality.
- Analyze and interpret the collected data to identify trends, if any, both to prevent Impairments through the implementation of preventive BMPs and to track improvements based on the MS4 management program.

The Permittees have revised the CMP to address the objectives and requirements specified in the Monitoring and Reporting Program (MRP) of the 2010 SAR MS4 Permit and to more effectively utilize finite monitoring resources. The core part of the CMP is the Introduction and Quality Assurance Project Plan (QAPP) (i.e. Vol. I and II), which identifies general monitoring elements common to the three MS4 permits applicable to Riverside County. The remaining volumes of the CMP address watershed-specific requirements. The Permittees have also revised the CMP, Vol. IV - Santa Ana Region Monitoring Plan, to reflect an integrated watershed monitoring approach consistent with the objectives specified in the 2010 SAR MS4 Permit. Therein the SAR Monitoring Plan includes the following:

- Receiving Water Monitoring Program
- MS4 Outfall and Mass Emissions Monitoring Program
- IC/ID Monitoring Program
- Regional Monitoring Efforts and Special Studies

(Note: other relevant standalone plans are referenced in detail in section 11.2 below)

The CMP provides guidance information and describes the methods for each type of monitoring, including but not limited to:

- Dry weather monitoring
- Wet weather monitoring
- IC/ID monitoring
- Bioassessment monitoring
- Sampling and data collection procedures
- Use of monitoring equipment
- Quality assurance and quality control
- Laboratory analytical methods

The water quality monitoring activities require sampling and analysis from both wet weather and dry weather flows. Wet weather sampling involves weather forecasting, scheduling and mobilization of field crews, collection of representative samples from the runoff hydrograph, compositing samples, laboratory analysis, and maintenance of the laboratory analytical results in a water quality database. Dry weather flow in the MS4 indicates a source not related to a precipitation event, which may reflect an Illicit Connection, an Illegal Discharge, rising groundwater, or other permitted or non-permitted non-stormwater discharges. Therefore, the CMP also addresses mobilization guidance; water quality sampling procedures; quality assurance and quality control (QA/QC) procedures; data collection and analysis guidance; monitoring costs; and health and safety issues.

The CMP monitoring stations primarily consist of sites selected for sampling flows at Receiving Waters and discharges from MS4 Outfalls. Receiving Water sampling locations were selected to provide baseline information of ambient water quality. The Receiving Water sampling stations include creeks and rivers. A summary of the CMP stations is maintained in a sampling database (spreadsheet format) that includes channel type, location information, nearest rain gauge, type of sampling location (MS4 Outfall vs. Receiving Water), sampling methods and equipment, tributary area, and land use mix.

In coordination with the Santa Ana Regional Board staff, the Permittees have identified monitoring locations that focus on areas in the SAR with elevated pollutant concentrations. The intent of these monitoring stations is to characterize Urban Runoff quality from urban land uses.

The CMP is reviewed and updated annually by the District based on program findings and changes in program needs. The CMP is also revised to reflect modifications to procedures or to incorporate new technology, address site safety deficiencies, address updated or revised sampling protocols, and/or make other minor modifications to ensure the ongoing effectiveness of the monitoring programs. Major revisions of the CMP, including addition or deletion of stations, or changes to monitoring constituents, are submitted for approval by the Regional Board. These revisions may be included as part of the Annual Report.

11.2 PARTICIPATION IN ADDITIONAL MONITORING EFFORTS

In addition to the programs described in the CMP (Vol. IV Sections 3.0 – 6.0), four additional monitoring components are required by the MRP. Standalone work plans have been developed and approved for these components independently of this CMP. The four monitoring components are:

- Total Maximum Daily Load (TMDL) Monitoring
- Regional Watershed Monitoring
- Hydromodification Monitoring
- Low Impact Development BMP Monitoring

11.2.1 Total Maximum Daily Load (TMDL) Monitoring

Riverside County NPDES MS4 Permittees within the Middle Santa Ana River Watershed (MSAR Permittees) participate in the MSAR Bacterial Indicator TMDL Task Force (MSAR TMDL Task Force). The purpose of the MSAR TMDL Task Force is to facilitate a coordinated and cost-effective approach to comply with the MSAR bacterial indicator TMDL. As part of MSAR TMDL compliance, the MSAR TMDL Task Force submitted and obtained approval from the Regional Water Quality Control Board (RWQCB) for a watershed wide monitoring program which provides the necessary data to review progress towards meeting the TMDL and/or update the TMDL as necessary. The MSAR permittees continue to implement the RWQCB-approved monitoring program collaboratively through the MSAR TMDL Task Force.

Riverside County NPDES MS4 Permittees within the San Jacinto River (SJR Permittees) Watershed participate in the LE/CL Nutrient TMDL Task Force. The purpose of the LE/CL Nutrient TMDL Task Force is to facilitate a coordinated and cost effective approach to comply with the LE/CL Nutrient TMDL. The LE/CL Nutrient TMDL required the TMDL Stakeholders (including the SJR Permittees) to prepare and implement a nutrient monitoring program. The program was to include a watershed-wide monitoring component as well as an in-lake monitoring component. The Lake Elsinore and Canyon Lake Nutrient TMDL Monitoring Program was approved by the RWQCB in March 2006 and was subsequently implemented by the LE/CL Nutrient TMDL Task Force. The LE/CL Nutrient TMDL Task Force continues to implement the approved monitoring program.

11.2.2 Participation in Regional and Watershed-Based Monitoring Efforts

The Permittees participate in several regional and/or watershed based efforts that either collect monitoring data or utilize existing monitoring data.

As authorized by the 2010 SAR MS4 Permit, the Permittees may participate in state-wide, national, and other monitoring programs in lieu of portions of the Urban Runoff monitoring program. The Permittees also participate in special studies in collaboration with universities, research organizations or other MS4 programs. The purpose of this collaboration is to leverage finite resources to obtain information that will be beneficial on a watershed or region-wide basis. The Permittees coordinate participation in these activities with the Regional Board and summarize such participation in the Annual Report.

11.2.2.1 Southern California Stormwater Monitoring Coalition

The District participates in the southern California Stormwater Monitoring Coalition on behalf of the Permittees. The southern California Stormwater Monitoring Coalition includes representatives from the Los Angeles, San Diego, and Santa Ana Regional Boards and each of the Principal Permittees in southern California (i.e., the Counties of Los Angeles, Orange, San Bernardino, San Diego, and Ventura) and other interested agencies. The overall goal for the Stormwater Monitoring Coalition is to establish a southern California stormwater research and monitoring agenda that would focus on improving stormwater monitoring science, coordinate data collection efforts, and evaluate the effects of stormwater discharges to receiving waters specific to southern California. Updates regarding these efforts may be included in the Annual Reports.

11.2.2.2 Water Quality Standards Task Force

The Water Quality Standards Task Force is made up of the Principal Permittees of the San Bernardino, Orange and Riverside County MS4 programs, the Santa Ana Regional Board and other interested stakeholders. The objective of the group is to review the REC-1 Beneficial Use and its assigned Water Quality Objectives to determine if they are appropriate to the needs of the Santa Ana watershed. The group is particularly focused on the appropriateness of the Water Quality Objective for Bacterial Indicators associated with REC-1.

11.2.3 Hydromodification Monitoring

The Hydromodification Management Plan Evaluation Program was submitted to the Regional Board on January 28, 2014. The HMP evaluation Program identified sites to be monitored, including assessment methodology and required follow-up actions based on monitoring results. Where applicable, monitoring sites may be used to evaluate the effectiveness of BMPs in preventing or reducing impacts from hydromodification (XII.B).

11.2.4 Low Impact Development BMP Monitoring

The District designed and built the LID BMP Testing Facility to demonstrate and determine effective and appropriate LID BMPs for the District's semi-arid environment of southern California. The goals of the monitoring project are to:

- Identify the effectiveness of multiple LID BMPs to reduce the volume of stormwater runoff;
- Characterize BMP effectiveness in removing pollutants from stormwater runoff; and
- Provide data to determine the most effective LID BMPs for areas with a climate similar to that of the semi-arid environment of southern California.

The State Water Board approved the Monitoring Plan and QAPP for this program in February of 2013.

11.3 WATER QUALITY ASSESSMENT

Specific procedures for assessing the water quality of Receiving Waters based on existing water quality data, results from ongoing IC/ID and Monitoring Programs, and data obtained from other sources are incorporated into the CMP. Variations from these procedures will be noted in the Annual Reports. When assessing water quality, the Permittees consider known Impairments for Receiving Waters.

11.4 IC/ID PROGRAM

The CMP contains a general procedure used to identify and eliminate Illegal Discharges. The procedure will be updated as appropriate within the SAR Region.

12.0 PROGRAM EVALUATION, REPORTING AND REVISION

12.1 ANNUAL REPORTING

Each year the Permittees prepare Annual Reports summarizing the implementation of the programs described in the DAMP for submittal to the Regional Board. To support preparation of the Annual Reports, the Permittees submit to the District documentation of their implementation of the DAMP compliance programs utilizing standardized reporting forms. Copies of these standardized reporting forms are included in Appendix K. The reporting forms will be amended by the Permittees as needed to facilitate changes in compliance programs or more accurate reporting of compliance programs.

12.2 PROGRAM EVALUATION

The Permittees regularly assess the component programs of the DAMP to identify improvements that will promote the reduction of Pollutants in Urban Runoff to the MEP while also supporting the responsible management and allocation of the public resources available to implement the DAMP.

The short-term strategy for assessing the effectiveness of the DAMP will focus on an overall program effectiveness using measurable goals, and direct and indirect assessment measurements. The Permittees will track and report the following data that are believed to have a positive influence on Urban Runoff and Receiving Water quality:

- The number of IC/ID reports received.
- Percentage/Number of IC/IDs that were sampled that exceeded criteria and required follow-up.
- Percent/Number of enforcement actions that reached each level of enforcement.
- Estimated volume of anthropogenic trash removed from Permittee MS4 facilities.
- Percent/Number of Permittee facilities with appropriate BMPs identified.
- Percent/Number of annual facility inspections that require follow-up actions.
- Average percent/number of follow-up actions identified in the previous year's Permittee facility inspections that were addressed.
- Number of Permittee facility and MS4 operators and maintenance staff that attended Municipal training.
- Estimated tons of Waste removed by Permittee street sweeping.
- Estimated tons of Waste removed from Permittee Open Channels.
- Estimated tons of Waste removed from Permittee storm drain inlets.
- Number of acres of Significant Redevelopment projects that incorporated LID-based BMPs that are built and completed.
- Number of applicable planning staff that attended WQMP training.
- Number of post construction BMPs properly maintained and operated.

- Number of illegal construction sites that are discovered (i.e., without building/grading permits).
- Percent/Number of active construction sites subject to Construction General Permit that are discovered without coverage.
- Percent/Number of active High/Medium priority sites subjected to enforcement beyond verbal/written warnings.
- Percent/Number of enforcement actions that reached each level of enforcement.
- Number of construction inspection staff that attended Construction training.
- Industrial & Commercial Facilities updated with new/undocumented facilities.
- Percent/Number of active industrial sites subject to Industrial General Permit that are discovered without coverage.
- Percent/Number of active High/Medium priority sites subjected to enforcement beyond verbal/written warnings.
- Percent/Number of enforcement actions that reached each level of enforcement.
- Number of applicable Industrial & Commercial Facility inspection staff that attended Industrial-Commercial training.
- Gallons of used oil collected at collection events.
- Total pounds collected at HHW/ABOP events.
- Total number of participants at HHW/ABOP events.
- Percent/Number of residences in Permittee jurisdiction subjected to enforcement beyond verbal/written warnings.
- Various public education program metrics.

In addition to assessing the effectiveness of the various program elements, the Permittees will conduct an assessment of the effectiveness of their overall programs. The legal authority and program management elements of the Permittee programs will also be considered in this assessment. Major accomplishments and changes to be implemented in the subsequent year to improve the effectiveness of the program will be included in the evaluation.

The long-term strategy for assessing the effectiveness of the DAMP will focus on water quality data obtained as part of the CMP. This is by necessity a long-term strategy since the first step will be to develop and understand baseline data, and then due to the inherent variability of Urban Runoff, years of monitoring data will be necessary to identify statistically significant trends or conclusions. Additionally, because there are numerous program elements being implemented concurrently and because other environmental regulation indirectly impacts Urban Runoff, the ability to identify cause-and-effect relationships between a specific program element and/or BMP and improvement in the quality of Urban Runoff is complicated, if not infeasible.

12.3 RECEIVING WATER LIMITATIONS

The 2010 SAR MS4 Permit requires that discharges of Urban Runoff from the MS4 shall not cause or contribute to exceedances of Receiving Water Quality Standards (VII.A) for surface waters or ground waters. The DAMP and the Permittee LIPs are designed to achieve compliance with the Receiving Water Limitations to the MEP (VII.B). The Permittees comply with the Receiving Water Limitations through timely implementation of control measures and other actions to reduce Pollutants in Urban Runoff as described in this DAMP and the LIPs, and in accordance with the 2010 SAR MS4 Permit. If it is determined that discharges originating from within the SAR are causing or contributing to exceedances of Water Quality Standards that persist notwithstanding implementation of the control measures specified in the LIP, the Permittees will comply with the procedure specified in Section VII.D of the 2010 SAR MS4 Permit as follows:

Notification

If a Permittee/Permittees determines that discharges from the MS4 are causing or contributing to an exceedance within a Receiving Water of an applicable Receiving Water Quality Standard, within two (2) working days, the Permittee or Principal Permittee 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 a Permittee is notified by the Executive Officer of a determination by the Regional Board that discharges from the MS4 are causing or contributing to an exceedance within a Receiving Water of an applicable Receiving Water Quality Standard, within two (2) working days the Permittee/Permittees 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 Permittee/Permittees 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 Permittee's jurisdiction or control, within ten (10) calendar days of becoming aware of the situation, the Permittee/Permittees will provide documentation of these discharges to the Executive Officer. Subsequently, the Permittee/Permittees will document the situation within the Annual Report. (VII.D.4)

Otherwise, following the notifications above the Permittee/Permittees 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 and the 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, 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 Permittee/Permittees will submit a revised report.

Update Compliance Programs

Within thirty (30) days following approval by the Executive Officer of the report described above, the Permittee/Permittees will revise the applicable sections of their LIP, and where applicable coordinate with the other Permittees to update the DAMP and/or 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 Permittee/Permittees will implement the revised programs in accordance with the approved schedule for implementation of any new/revised BMPs.

12.4 DAMP REVISIONS

As part of the annual reporting process for the SAR, the Permittees review the DAMP to identify the need, if any, for revisions. Such revisions may include the incorporation of newly developed program elements. The Annual Reports will include the findings of these reviews. Additionally, the Permittees will propose revisions to the DAMP under the following conditions:

- 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 TMDL process for Impaired Waterbodies.
- As directed by the Executive Officer where the DAMP must be revised in order to address exceedances of Receiving Water Limitations that have been determined to be contributed to or caused by Urban Runoff.

Specific TMDL requirements and programs will also be incorporated into the DAMP as the TMDLs are incorporated into the Basin Plan. The DAMP is sufficiently flexible to allow many TMDL requirements to be incorporated without the need for revision. These requirements may include schedules for meeting interim and final Urban Runoff WLAs, evaluating the effectiveness of BMPs and/or other control actions implemented to meet the WLAs, and evaluating compliance with the WLAs. Interagency Agreements or Memoranda of Agreement may be developed to identify Permittee and non-Permittee responsibility in TMDL activities. The revised DAMP will be submitted with the respective SAR ROWD. Upon approval by the Executive Officer, the Permittees will implement the DAMP revisions in accordance with the schedule included as part of the ROWD.

13.0 TMDL IMPLEMENTATION

13.1 INTRODUCTION

The Federal Clean Water Act Section 303(d) requires that states identify Receiving Waters that do not or are not expected to meet Water Quality Standards (Beneficial Uses, Water Quality Objectives and the anti-degradation policy). Once a waterbody has been identified and placed on the 303(d) List of Impaired waters, states are required to develop a TMDL to address each Pollutant causing Impairment. A TMDL defines how much of a Pollutant a waterbody can tolerate and still meet Water Quality Standards. Each TMDL must account for all sources of the Pollutant, including: discharges from wastewater treatment facilities; runoff from homes, forested lands, agriculture, and streets or highways; contaminated soils/sediments, legacy contaminants; onsite disposal systems (septic systems); and aerial deposition.

Federal regulations require that the TMDL, at a minimum, account for contributions from point sources (permitted discharges) and contributions from Non-Point Sources, including natural background. In addition to accounting for past and current activities, TMDLs may consider projected growth that could increase Pollutant levels. TMDLs allocate allowable Pollutant loads to each source, and identify management measures that, when implemented, will assure that Water Quality Standards are attained. State Water Code Section 13000 also requires the Regional Boards to develop implementation plans to define schedules, dischargers, tasks, and other actions necessary to attain Water Quality Standards.

This section summarizes the Permittees' programs to comply with TMDL WLAs and TMDL implementation plan tasks assigned to the Permittees through the incorporation of Water Quality Based Effluent Limits into the 2010 SAR MS4 Permit. The 2010 SAR MS4 Permit allowed the Permittees to propose a Comprehensive Bacteria Reduction Plan (CBRP) for the Middle Santa Ana River Bacterial Indicators TMDL by December 31, 2010 and a Comprehensive Nutrient Reduction Plan (CNRP) for the Lake Elsinore/Canyon Lake Nutrient TMDL by December 31, 2011. Both of these plans were submitted to the Santa Ana Regional Board. The CBRP and CNRP are long term plans designed to achieve compliance with the TMDL. The CBRP was approved by the Santa Ana Regional Board on February 10, 2012; the CNRP was approved by the Santa Ana Regional Board on July 19, 2013. The approved plans are narrative WQBELs for their respective TMDLs.

It should be noted that TMDLs are waterbody specific and, therefore, do not always regulate all of the Permittees in the SAR. Specific Permittees identified as discharging to TMDL regulated waterbodies are identified in Tables 13-1 and 13-2. Existing TMDL WLAs that have been incorporated into the 2010 SAR MS4 Permit through narrative and/or numeric Water Quality Based Effluent Limits and implementation plan tasks assigned to the Permittees as part of USEPA approved TMDLs are also summarized in Tables 13-1 and 13-2.

Several tables from Chapter 5 of the Santa Ana Region Basin Plan are summarized in this section of the DAMP. However, the Basin Plan is a living document and is amended on occasion. The Basin Plans should always be reviewed for the most accurate and up-to-date information regarding TMDL compliance requirements.

Table 13-1. TMDLs Adopted and Approved by the Regional Board and USEPA and Associated WLAs

Waterbody	Pollutant/Stressor	Assigned Dischargers	Waste Load Allocation (WLA)
Canyon Lake (Resolution R8-2004-0037)	Total Phosphorus – MS4 Discharges	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Menifee, Moreno Valley, Murrieta, Riverside, Wildomar and Beaumont	306 kg/yr (total) based on a 10 year running average to be achieved as soon as possible, but no later than by December 31, 2020
	Total Nitrogen – MS4 Discharges	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Menifee, Moreno Valley, Murrieta, Riverside, Wildomar and Beaumont	3,974 kg/yr (total) based on a 10 year running average to be achieved as soon as possible, but no later than by December 31, 2020
Lake Elsinore (Resolution R8-2004-0037)	Total Phosphorus – MS4 Discharges	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Menifee, Moreno Valley, Murrieta, Riverside, Wildomar and Beaumont	124 kg/yr (total) based on a 10 year running average to be achieved as soon as possible, but no later than by December 31, 2020
	Total Nitrogen – MS4 Discharges	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Menifee, Moreno Valley, Murrieta, Riverside, Wildomar and Beaumont	349 kg/yr (total) based on a 10 year running average to be achieved as soon as possible, but no later than by December 31, 2020
Middle Santa Ana River Reach 3 (Resolution R8-2005-0001)	Bacterial Indicators – MS4 Discharges	County of Riverside, Cities of Corona, Eastvale, Jurupa Valley, Riverside and Norco	Dry Conditions Fecal Coliform: log mean less than 180 organisms/100 ml based on five or more samples per 30 day period, and not more than 10% of the samples exceed 360 organisms/100 ml for any 30-day period to be achieved as soon as possible, but no later than December 31, 2020 *E.Coli:* log mean less than 113 organisms/100 ml based on five or more samples per 30 day period, and not more than 10% of the samples exceed 212 organisms/ 100 ml for any 30-day period to be achieved as soon as possible, but no later than December 31, 2015 Wet Conditions Fecal Coliform: 5–sample/30–day Logarithmic Mean less than 180 organisms/100ml, and not more than 10% of the samples exceed 360 organisms/100ml for any

			30–day period. 5–sample/30–day Logarithmic Mean less than 113 organisms/100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period to be achieved as soon as possible, but no later than December 31, 2025. *E.Coli:* 5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period to be achieved as soon as possible, but no later than December 31, 2025.

Table 13-2. Adopted TMDLs and Implementation Tasks

TMDL	Implementation Plan Task	Schedule	Responsible Parties
Nutrient TMDLs for Lake Elsinore and Canyon Lake (Resolution R8-2004-0037)	Task 4 – Nutrient Water Quality Monitoring Program for Lake Elsinore, Canyon Lake and the San Jacinto Watershed	Complete and approved by Regional Board March 2006	Among other agencies, the County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Moreno Valley, Murrieta, Riverside and Beaumont
	Task 6 – On site Disposal Systems (Septic System) Management Plan	Dependent on State Board approval of relevant regulations - ongoing	County of Riverside, Cities of Perris, Moreno Valley, and Murrieta
	Task 7 – Urban Discharges – Revise DAMP and WQMP	Complete	Among other agencies, the County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Menifee, Moreno Valley, Murrieta, Riverside, Wildomar and Beaumont
	Task 9 – Lake Elsinore In-Lake Sediment Nutrient Reduction Plan	Complete	
	Task 10 – Canyon Lake In-Lake Sediment Treatment Evaluation	Complete	
	Task 11 – Watershed and Canyon Lake and Lake Elsinore In-Lake Model Updates	Complete	
	Task 12 – Pollutant Trading Plan	Pending	
Middle Santa Ana River Watershed Bacterial Indicator TMDL (Resolution R8-2005-0001)	Task 3 – Develop and Implement Watershed Wide Bacterial Indicator Water Quality Monitoring Program	Complete	Among other agencies, the County of Riverside, Cities of Corona, Eastvale, Jurupa Valley, Riverside and Norco
	Task 4.1 – Urban Discharges – Develop Urban Source Evaluation Plan	Complete	
	Task 4.3 & 4.5 – Revise DAMP and WQMP	Complete	

13.2 TMDL IMPLEMENTATION STRATEGY

USEPA's Interim Permitting Approach for Water Quality Based Effluent Limitations (WQBEL) in Stormwater Permits, 60 Federal Register 43761 (Aug. 26, 1996) recognizes the need for an iterative BMP approach to control Pollutants in stormwater discharges. In addition, USEPA recommends the use of the term "phased TMDLs" for TMDLs with significant data uncertainty where the State expects that the loading capacity and allocation scheme will be revised in the near future as additional information is collected[28].

The Permittees have continued to work with the Regional Board staff to determine if it is appropriate to implement TMDL WLAs through a phased TMDL and/or iterative BMP process. The Regional Board describes the TMDL Waste Load Allocation and implementation requirements in the TMDL implementation plan. TMDL implementation plans assign responsibilities to specific MS4 dischargers to identify sources of Impairment, to propose BMPs to address those sources, and to monitor, evaluate and revise BMPs based on the effectiveness of the BMP implementation program. Once a TMDL is approved by USEPA, the Regional Board is then required to amend existing NPDES Permits to incorporate either narrative or numeric Water Quality Based Effluent Limits consistent with the intent of the TMDL. In many cases efforts to address the underlying TMDL impairment are already underway prior to approval of the TMDL. For the Middle Santa Ana River and San Jacinto River Watersheds, the Regional Board incorporated TMDL requirements in to the 2010 SAR MS4 Permit.

Because TMDLs often regulate a broad cross-section of dischargers beyond MS4 permittees, the stakeholders generally form a task force to address an implementation plan task assigned to multiple dischargers. A task force utilizes economies of scale for implementing TMDL compliance tasks and assists in the pursuit of grant opportunities. Task forces specifically are useful to develop a regional BMP compliance document, implement regional compliance monitoring, and develop stakeholder consensus on necessary recommendations regarding modification to the TMDL or Basin Plan that are necessary to protect Beneficial Uses or to recognize site specific conditions. Such Basin Plan amendments are usually submitted to the Regional Board through the Basin Plan Triennial Review Process. In the Middle Santa Ana River and San Jacinto River Watersheds, the Permittees formed the MSAR TMDL Task Force and the LE/CL Nutrient TMDL Task Force respectively to implement the TMDL requirements.

13.3 LAKE ELSINORE / CANYON LAKE NUTRIENT TMDL

13.3.1 Regional Board Action History

In 1998, the Santa Ana Regional Board listed Lake Elsinore and Canyon Lake as Impaired waterbodies in the Clean Water Act Section 303(d) list for excessive levels of nutrients. Lake Elsinore was also listed for low dissolved oxygen (DO) among other constituents.

In 2000, the Santa Ana Regional Board initiated the process to develop a nutrient TMDL (with response targets for Chlorophyll *a*, low DO, and ammonia) for Canyon Lake and Lake Elsinore, as required by the Federal Clean Water Act and California's Non-point Source Pollution Control Plan. This process included

[28] US EPA 2006. Clarification Regarding "Phased" Total Maximum Daily Loads, http://www.epa.gov/owow/tmdl/tmdl_clarification_letter.html

the formation of the Lake Elsinore/Canyon Lake (LE/CL) TMDL Workgroup in August 2000, as well as, the development and implementation of various in-lake and watershed water quality monitoring programs.

In December 2004, the Santa Ana Regional Board adopted the proposed Lake Elsinore and Canyon Lake Nutrient TMDL Basin Plan Amendment. The Basin Plan Amendment established nutrient WLAs and Load Allocations (LAs) and included an implementation plan. The implementation plan requires stakeholders to develop various nutrient management plans and long term monitoring plans aimed at identifying appropriate lake management measures reducing nutrient discharges to Lake Elsinore and Canyon Lake and assessing the appropriateness of TMDL targets and allocations.

USEPA recommends the use of the term "phased TMDLs" for TMDLs with significant data uncertainty where the State expects that the loading capacity and allocation scheme will be revised in the near future as additional information is collected. The Lake Elsinore/Canyon Lake TMDL has implemented a phased approach in recognition of the limits of the current data and that optimum strategies for TMDL compliance may change with better data. Work on the TMDL is on-going through the efforts of the LE/CL Nutrient TMDL Task Force.

The Santa Ana Regional Board is in the process of considering delisting the Canyon Lake Bacterial Indicator Impairment.

13.3.2 TMDL Task Force

Since August 2000, TMDL Task Force efforts have been coordinated and administered through the Lake Elsinore San Jacinto Watersheds Authority (LESJWA), a joint powers authority. As a result of the adoption of the TMDL in 2004 the TMDL dischargers formally organized the existing TMDL stakeholder group into a funded TMDL Task Force. The purpose of the Task Force is to conduct studies necessary to collect data to analyze the appropriateness of the TMDL, identify in-lake and regional watershed solutions, pursue grants, coordinate activities among all of the various stakeholders, and recommend appropriate revision to the Basin Plan language regarding Lake Elsinore and Canyon Lake based on data collection and analysis.

13.3.3 Comprehensive Nutrient Reduction Plan

The 2010 SAR MS4 Permit incorporated requirements addressing the LE/CL Nutrient TMDL and allows the Permittees to propose a Comprehensive Nutrient Reduction Plan (CNRP) for the LE/CL Nutrient TMDL. The LE/CL Nutrient TMDL Permittees have prepared a CNRP. The CNRP is a long-term plan designed to achieve compliance with WLAs established in the LE/CL TMDLs. The Permittees submitted the CNRP to the Santa Ana Regional Board on January 3, 2012. The Permittees received comments from the Santa Ana Regional Board on the CNRP on April 2, 2012. The Permittees addressed the Santa Ana Regional Board comments and submitted a revised CNRP on July 2, 2012, and a follow up addendum in January 2013. The Santa Ana Regional Board approved the CNRP on July 19, 2013, and is now a narrative effluent limit for the LE/CL Nutrient TMDL.

13.3.4 Final WQBELs for the LE/CL Nutrient TMDL

According to Section II.F.23 of the 2010 SAR MS4 Permit, in the absence of an approved CNRP, the WLAs specified in the approved LE/CL Nutrient TMDL will constitute the final numeric WQBELs.

The Regional Board established specific requirements for the content of the CNRP. These requirements can be found in section VI.D.2 in the 2010 SAR MS4 permit. The Permittees submitted and obtained approval for a CNRP which describes in detail the specific actions that have been taken or will be taken to achieve compliance with the urban WLA by December 31, 2020. The CNRP includes the following:

- Evaluation of the effectiveness of BMPs (Best Management Practices) and other control actions implemented. This evaluation shall include the following:
  - The specific ordinance(s) adopted or proposed for adoption to reduce the concentration of Nutrients in urban sources.
  - The specific BMPs implemented to reduce the concentration of urban nutrient sources and the water quality improvements expected to result from these BMPs.
  - The specific inspection criteria used to identify and manage the urban sources most likely causing exceedances of water quality objectives for nutrients.
  - The specific regional treatment facilities and the locations where such facilities will be built to reduce the concentration of nutrient discharged from the urban sources and the expected water quality improvements to result when the facilities are complete.

- Proposed method for evaluating progress towards compliance with the nutrient WLA for Urban Runoff. The progress evaluation shall include:
  - The scientific and technical documentation used to conclude that the CNRP, once fully implemented, is expected to achieve compliance with the urban waste load allocation for nutrient by December 31, 2020.
  - A detailed schedule for implementing the CNRP. The schedule must identify discrete milestones decision points and alternative analyses necessary to assess satisfactory progress toward meeting the urban WLAs for nutrient by December 31, 2020. The schedule must also indicate which agency or agencies are responsible for meeting each milestone.
  - The specific metric(s) that will be established to demonstrate the effectiveness of the CNRP and acceptable progress toward meeting the urban WLAs for nutrient by December 31, 2020.
  - The DAMP, WQMP, and LIPs shall be revised consistent with the CNRP no more than 180 days after the CNRP is approved by the Regional Board.
  - Detailed description of any additional BMPs planned, and the time that is required to implement them. In the event that data from the watershed-wide water quality monitoring program indicate that water quality objectives for nutrients are still being exceeded after the CNRP is fully implemented.

13.3.5 Permittee Compliance Strategy

13.3.5.1 Implementation Plan

Due to limits in the quality of monitoring data, the Santa Ana Regional Board and dischargers agreed to incorporate USEPA's interim approach for TMDL implementation (60 FR 43761) by proposing a phased implementation of the LE/CL Nutrient TMDL. The TMDL also allows the dischargers until 2020 to comply with nutrient WLAs and LAs so that iterative BMP implementation can also be considered. The TMDL

implementation plan also provides for an initial phase of data collection and analysis necessary to determine if a Use Attainability Analysis, Site Specific Objective or other regulatory actions such as modifications to TMDL numeric targets, LAs or WLAs are appropriate.

The Permittees delivered recommendations to the Regional Board as part of the submission of the CNRP in January 2013. The CNRP was approved by the Regional Board on July, 19 2013. This DAMP has been updated with the specific compliance tasks that the LE/CL Nutrient TMDL Task Force will implement. The approved CNRP incorporates the overall implementation steps and elements that the LE/CL Nutrient TMDL Permittees are implementing to comply with the LE/CL Nutrient TMDL. The Permittees describe the specific actions it has taken consistent with the CNRP in its annual report. Where those actions result in on-going programs elements that the Permittees will implement, those programs are identified in the following sections.

13.3.5.2 CNRP Implementation-Watershed Based BMPs

The CNRP includes the following BMPs to be implemented:

- Ordinances Development: Permittees will continue to evaluate the need to revise existing or establish new ordinances to reduce sources of nutrients in the watershed.
- Street Sweeping and Debris Removal: Permittees will continue to implement street sweeping practices as described in Section 5 of the DAMP to help remove pollutants, including nutrients sources, before they enter the MS4. The Permittees will evaluate the need to revise existing practices to reduce sources of nutrients in the watershed.
- Inspection and Enforcement: The Permittees will continue the implementation of inspections and enforcement programs.
- Septic System Management: The Permittees will continue the implementation of a Septic System Management Plan for the watershed and modify implementation as needed to comply with the State's Onsite Water Treatment System Policy.
- Public Education and Outreach: The Permittees will continue the implementation of a public education and outreach program.
- WQMP Implementation: The Permittees will continue to implement LID based WQMP following Santa Ana Regional Board approval.

13.3.5.3 In-Lake Remediation Projects

The CNRP includes the following in-lake remediation projects to be implemented:

- Lake Elsinore: The Lake Elsinore aeration system, incorporated into the CNRP, is currently being implemented. During CNRP implementation the MS4 Permittees will support the continued operation of this system as needed to comply with urban WLAs. However, the Permittees will continue to evaluate alternative compliance approaches including use of chemical additives such as alum. If it is determined that an alternative approach is more cost effective for achieving compliance with the urban WLAs and septic LAs, the Permittees will recommend revision to the CNRP.
- Canyon Lake: The Task force has completed detailed evaluations of aeration, oxygenation, and chemical addition (Anderson, 2008; CDM, 2011; Anderson, 2012b; Anderson, 2012c). Based on these

evaluations, the Task force has determined that chemical addition, using aluminum sulfate (alum), is the most effective in-lake nutrient control strategy to achieve interim numeric targets for the response variables, chlorophyll-a, and DO. In September 2013, alum application was performed according to the schedule outlined in the CNRP. After the fifth alum application in September of 2015, the LE/CL Nutrient TMDL Permittees evaluated water quality data in the lake, and determined that progress towards the response targets was substantial, and warranted if modification(s) to the alum application plan. The alum application plan was expanded to continue treating Canyon Lake with alum twice annually, as well as modify the plan to include treatment of the lake north of the causeway, where the San Jacinto River discharges into Canyon Lake.

In 2016, the TMDL was reopened to revise the final numeric target for DO to incorporate controllability by means of an allowable exceedance frequency, which is representative of the pre-development condition in the watershed. The 2012 DYRESM-CAEDYM simulations of lake water quality expected for a pre-development level of watershed nutrient loads will be used as the basis for determining the uncontrollable frequency of exceeding a final DO target of at least 5 mg/L in the hypolimnion. A cumulative frequency plot of average daily DO data from the two year period of alum applications (Sep 2013 through Sep 2015) was compared to the pre-development cumulative frequency to determine whether sufficient improvement to DO was achieved with the alum applications. It was determined that additional alum treatments to Canyon Lake will continue to improve water quality and make additional progress toward achieving the interim numeric targets for the response variables, chlorophyll-a and DO.

13.3.5.4 TMDL Task Specific to Permittee Dischargers

13.3.5.4.1 Onsite Disposal Systems Management Plan

Task 6 of the Lake Elsinore and Canyon Lake Nutrient TMDL Implementation Plan requires that no later than 6 months after the effective date of an agreement between the County of Riverside and the Santa Ana Regional Board to implement regulations adopted pursuant to Water Code Sections 13290-13291.7, or if no such agreement is required or completed, within 12 months of the effective date of these regulations, the County and the Cities of Perris, Moreno Valley, and Murrieta shall, as a group, submit a Septic System Management Plan to identify and address nutrient discharges from septic systems within the San Jacinto watershed. The Septic System Management Plan implements regulations adopted by the State Water Resources Control Board pursuant to California Water Code Section 13290 – 13291.7.

The State Water Resources Control Board (SWRCB) is currently promulgating regulations for Sections 13290-13291.7. Upon adoption of these regulations by the SWRCB, the named Permittees will develop the required Septic System Management Plan in accordance with Task 6. The Septic System Management Plan may be incorporated into the DAMP and/or Water Quality Management Plan (WQMP) upon its completion.

In the interim, the County of Riverside adopted Ordinance 856 on August 29, 2006 which prohibited new septic systems in two designated areas of Quail Valley, which is within the San Jacinto watershed. This prohibition affected 1,530 lots, constituting 59% of the undeveloped lots in those areas. The Ordinance also mandated the connection of all existing homes in Quail Valley to a sewer system within one year of its availability. In addition to this Ordinance the Department of Environmental Health refined the review

process for septic systems and revised County Ordinance 650 on May 16, 2006 to preclude lots that would be contributory to the surfacing septic waste issue in the region.

In addition, the Permittees partnered with the San Jacinto River Watershed Council to obtain a Proposition 50 Integrated Regional Water Management (IRWM) Planning Grant, which included a task to develop preliminary data for a septic system management plan for the San Jacinto watershed that was completed on November 17, 2007. The grant funded the development of a map of areas of concentrated septic systems that may be adversely impacting surface waters or groundwaters within the watershed and a basis for prioritizing response actions. The Proposition 50 IRWM Planning Grant septic system management plan will form the basis for the final Task 6 Septic System Management Plan, which will be completed no later than six (6) months after the effective date of an agreement between the County of Riverside and the Santa Ana Regional Board to implement regulations adopted pursuant to Water Code Sections 13290-13291.7, or if no such agreement is required or completed, within 12 months of the effective date of these regulations.

13.3.5.4.1.2Urban Discharges

Task 7 of the Lake Elsinore and Canyon Lake Nutrient TMDL Implementation Plan mandates that various Urban Runoff dischargers modify compliance documents as necessary to comply with the Lake Elsinore and Canyon Lake Nutrient TMDL. Tasks 7.1 and 7.2 require the specified Permittees (County of Riverside, Cities of Beaumont, Canyon Lake, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Perris, Riverside, and San Jacinto) to modify the DAMP and WQMP (Appendix I to the DAMP), respectively to address TMDL Implementation Plan requirements. These revisions were completed and submitted to the Regional Board on April 27, 2007 as part of the Report of Waste Discharge for the 2010 SAR MS4 Permit. Necessary revisions to comply with Tasks 7.1 and 7.2 are incorporated throughout the DAMP and are summarized in the following paragraphs.

Specifically:

- Section 13.3.4 summarizes the Permittees' strategy for complying with the Lake Elsinore and Canyon Lake TMDL Waste Load Allocation (WLA) assigned to the specified Permittees.
- Section 13.3.5.2describes programmatic BMPs implemented by the Permittees to address this TMDL, including public education and outreach, inspection and enforcement actions taken by the Permittees.
- Section 13.3.2 describes the Permittees' participation in the Lake Elsinore and Canyon Lake TMDL Task Force and LESJWA, and their roles in assisting the Permittees in implementing Tasks 4, 9, 10, 11, and 12 of the Lake Elsinore and Canyon Lake Nutrient TMDL Implementation Plan.
- Section 13.3.5.6describes how the Permittees propose to address BMP Effectiveness evaluations.
- Section 13.3.5.7describes how the Permittees propose to conduct monitoring to determine compliance with Lake Elsinore and Canyon Lake Nutrient TMDL WLAs assigned to the Permittees.
- In addition to the compliance programs specified above, the Permittees also implement the following additional compliance programs that manage nutrient discharges to Canyon Lake and Lake Elsinore:
    - The Permittees have coordinated with local sanitary sewer operators to develop a Sanitary Sewer Overflow (SSO) response procedure designed to protect the MS4 from impacts of SSOs (Section

4.10 of the DAMP). In addition, the Permittees have summarized County Health Department regulations related to septic system management.

- The Permittees implement a comprehensive HHW collection program (Section 4.11.1 of the DAMP) designed to collect fertilizers among other potential Pollutants. These collection programs help to reduce the nutrient loading from urban areas to Lake Elsinore and Canyon Lake.
- Applicable Permittee public works projects are required to comply with WQMP requirements (Section 5.1 of the DAMP). See the DAMP, Appendix I for specific WQMP requirements that address the TMDLs.
- Permittee construction projects are required to comply with the provisions of the Construction General Permit, including the preparation of a SWPPP (Section 5.2 of the DAMP). The SWPPP ensures that stormwater and non-stormwater Pollutant discharges, including sediments, nutrients, and other Pollutants from Permittee construction projects are mitigated.
- The Permittees developed maintenance schedules and report on BMP and MS4 maintenance activities annually (Section 5.3.1 of the DAMP). The maintenance schedules promote proper operation of publicly owned BMPs and MS4 facilities and assist with mitigating Pollutant discharges from MS4s and effective Pollutant removal from BMPs.
- The Permittees are required to develop, implement and maintain facility specific Pollution Prevention Plans (PPP). Section 5.3.2 of the DAMP includes a summary of applicable nutrient-related BMPs to be incorporated into the facility-specific PPPs. Nutrient management measures include BMPs for outdoor material storage, building and grounds maintenance, housekeeping practices, landscape maintenance, and water and sewer utility maintenance. Additional BMPs are identified and incorporated as necessary to address unique discharges from the facility.
- During General Plan updates, the Permittees are asked to evaluate their General Plan's ability to address several policy questions including "Are there existing or proposed TMDLs or other such regulations pertaining to Receiving Waters in the jurisdiction?" If so, the Permittees are asked to consider additional watershed protection principals and objectives for managing Urban Runoff (Section 6.2 of the DAMP).
- The Permittees have implemented procedures to ensure that New Development and Significant Redevelopment projects address their water quality impacts (Section 6.5). These procedures include requiring developers to identify the impacts of their projects, propose appropriate BMPs to mitigate those impacts, and identify perpetual maintenance mechanisms to ensure that those BMPs will continue to function throughout the life of the development. Requirements for project types rising to WQMP status are addressed in Appendix I. Projects not rising to WQMP status, defined as "Other Development Projects" in DAMP Section 6.5.4, are also required to mitigate their impacts. Section 6.5.4 specifically notes that Other Development Projects are required to implement Site Design BMPs and Source Control BMPs. Other Development Projects may also be required to implement Treatment Control BMPs if they discharge Urban Runoff to Receiving Waters listed as Impaired on the State Board's 303(d) List.
- The WQMP is designed to specifically address the TMDL requirements. Per Provision XII.D.2 of the 2010 SAR MS4 Permit, the Permittees must require developments of the applicable categories to implement a WQMP. BMPs must include Low Impact Development BMPs including

minimizing Urban Runoff, conserving natural areas and minimizing directly connected impervious areas. Source Control BMPs include resident education (including garden and lawn care guides, pet waste brochures and HHW/ABOP event brochures), irrigation system and landscape maintenance restrictions, common area litter control, drainage facility inspection and maintenance, wash water controls for food preparation areas, and properly designed trash storage areas and outdoor material storage areas. Developers must also propose adequate operation, maintenance and funding mechanisms to ensure the efficacy of the BMPs for the life of the development.

- The District has also developed new, more comprehensive BMP guidance for use by the Permittees and the development community to assure compliance with the nutrient WLAs for Urban Runoff. The revised guidance focuses on landscape based BMPs with infiltration components. These BMPs are more effective at addressing nutrient sources from new development by reducing runoff volume and trapping nutrients in sand media.
- Construction Sites that disturb an area greater than one acre and are located adjacent to, within 200 feet of, or directly discharge to an identified impaired waterbody within the Permit area are assigned a high priority for wet weather inspections (Section 7.4 of the DAMP).
- The Permittees are required to inspect a number of Industrial and Commercial Facilities including nurseries, greenhouses, landscape and hardscape installation business base of operations, restaurants, and facilities handling Hazardous Wastes. The Permittees review the activities of these businesses to ensure compliance with local stormwater ordinances and the 2010 SAR MS4 Permit. Inspectors specifically look for observations of non-stormwater discharges, potential Illicit Connections, and Illegal Discharges to the MS4, and for implementation and maintenance of appropriate minimum BMPs, including a quantitative assessment of the effectiveness of the BMPs implemented. Appropriate education materials are also distributed (Section 8 of the DAMP).

13.3.5.5 Other TMDL Tasks Including Permittee Dischargers

The following tasks outlined in the Lake Elsinore/Canyon Lake TMDL[29] are assigned to a number of stakeholders in the TMDL, including specific Permittees. Compliance documents are prepared through the TMDL Task Force to collectively comply with the TMDL. The tasks are outlined in Table 13-2 as well as listed below:

- Task 4 – Nutrient Water Quality Monitoring Program for Lake Elsinore, Canyon Lake and the San Jacinto Watersheds – Completed and approved by Regional Board March 2006.
- Task 9 – Lake Elsinore In-Lake Sediment Nutrient Reduction Plan – Completed and submitted to Regional Board on October 31, 2007.
- Task 10 – Canyon Lake In-Lake Sediment Treatment Evaluation – Completed and submitted to the Regional Board on June 25, 2007.
- Task 11 – Watershed and Canyon Lake and Lake Elsinore In-Lake Model Updates – Completed and submitted to Regional Board on December 30, 2010.

[29] http://www.sawpa.org/tmdl/Lake_elsinore_Canyon_lake.html

13.3.5.6 Effectiveness Analysis

The existing effectiveness and qualitative assessments described in Section 12 of the DAMP meet TMDL BMP evaluation requirements. In summary, the Permittees annually review their programs for indications of internal process/procedure deficiencies that need to be addressed to properly implement specified BMPs. Every five years as part of the ROWD the Permittees evaluate the overall effectiveness of their MS4 programs, including attainment of specified WLAs and TMDL implementation plan requirements and make appropriate changes to MS4 Permit compliance programs. As part of the CNRP submittal, an annual reporting worksheet was created to track the progress the Permittees are making towards implementation.

13.3.5.7 Monitoring for Compliance with the TMDL

Urban WLA compliance monitoring is achieved through Task 4 of the TMDL Implementation Plan, which requires three separate monitoring programs (watershed-wide, Lake Elsinore, and Canyon Lake monitoring programs). The three monitoring programs are administered by the TMDL Task Force to determine compliance with TMDL WLAs and LAs. The monitoring program is supported by District staff and funded from designated Permittees. The TMDL Task Force prepares and submits annual reports on behalf of the Permittees.

In addition, the Permittees' NPDES MS4 Monitoring Program also collects data on nutrient discharges. The Permittees also participate in regional monitoring efforts sponsored by the southern California Stormwater Monitoring Coalition, the southern California Coastal Watershed Research Group, California Stormwater Quality Association, and other groups as appropriate. Data and conclusions from these programs are analyzed and summarized as part of the Permittees' Annual Monitoring Reports.

13.4 THE MIDDLE SANTA ANA RIVER BACTERIAL INDICATOR TMDL

13.4.1 Regional Board Action History

In August 2001, the Santa Ana Regional Board initiated TMDL development to address the excess levels of Bacterial Indicators in Reach 3 of the Santa Ana River, Cucamonga Creek, and Mill Creek. This effort included the formation of the Middle Santa Ana River TMDL Workgroup. This workgroup (which includes representatives from Cities in Riverside, San Bernardino, and Los Angeles Counties, the Counties of Riverside and San Bernardino, agriculture and dairy operators, and environmental groups) worked in cooperation with Santa Ana Regional Board staff to assess Bacterial Indicator sources to the impaired waterbodies and identify potential mitigation measures.

The objectives of the workgroup efforts include the development and implementation of a water quality monitoring program to evaluate in-stream "Bacterial Indicator" concentrations. In addition, a field survey to evaluate the extent, frequency, and degree to which these waterbodies are used by the public for recreational activities (REC-1 and REC-2). Funding for this project has been provided in full or in part through an agreement with the State Board pursuant to the Costa-Machado Water Act of 2000 (Proposition 13) and any amendments thereto for the implementation of California's Non-point Source Pollution Control Program.

Beginning in February 2002, the workgroup developed and implemented an extensive Bacterial Indicator water quality monitoring program. Samples were collected by Santa Ana Regional Board staff and stakeholder agencies at 10-13 locations on a weekly basis during nine 30-day sampling periods. These

sampling periods occurred during February, March, July and September of 2002, January and March of 2003, and from January through mid-April 2004. Agencies participating in the monitoring program included San Bernardino County Flood Control District, City of Riverside, Orange County Water District, Inland Empire Utilities Agency, and Chino Basin Watermaster. Results of this program verified significant Impairments to the identified waterbodies and established the basis of the Santa Ana Regional Board TMDL report.

The TMDL Workgroup also conducted a Beneficial Use survey of the watershed as part of the data collection effort to support the development of TMDLs for the Middle Santa Ana River Watershed. The primary objective of this effort was to collect data to evaluate the extent, frequency, and degree to which the Santa Ana River channel and its Chino Basin tributaries are used by the public for recreational activities (REC-1 and REC-2). The Middle Santa Ana River TMDL was adopted by the Regional Board on August 26, 2005.

The 2010 SAR MS4 Permit incorporated requirements addressing the MSAR TMDL. The 2010 SAR MS4 Permit allowed the Permittees to propose a CBRP for the MSAR TMDL by December 31, 2010. The Regional board approved the CBRP on February 10, 2012 and is now a narrative WQBEL for the MSAR TMDL.

13.4.2 TMDL Task Force

In 2002 the stakeholder groups formed a TMDL Task Force. TMDL Task Force efforts have been coordinated and administered through the Santa Ana Watershed Project Authority (SAWPA), a joint powers authority. SAWPA jurisdiction extends throughout the Santa Ana Watershed, crossing over multiple jurisdictional lines. Their jurisdictional scope and expertise have been instrumental in carrying out interagency functions. The purpose of the Task Force is to conduct studies necessary to collect data to analyze sources of Impairments and potential mitigation measures, pursue grants, and coordinate activities among all of the various stakeholders.

The TMDL Implementation Plan also provides for an initial phase of data collection and analysis necessary to determine if a Use Attainability Analysis, Site Specific Objective or other regulatory actions such as modifications to TMDL numeric targets, LAs or WLAs are appropriate. The Stormwater Quality Standards Task Force (SWQSTF) was created to reevaluate Water Quality Standards as they relate to stormwater and dry weather flows within the watershed necessary to protect REC-1 Beneficial Uses. Changes to the Water Quality Standards and an evaluation of Beneficial Uses would be incorporated into the Basin Plan through the Triennial Review process.

13.4.3 Comprehensive Bacteria Reduction Plan

The MSAR Permittees have prepared a CBRP that describes the specific actions that have been or will be taken to achieve compliance with the Urban WLA during the Dry Season (April 1st through October 31st) by December 31, 2015. The draft CBRP was submitted to the Regional Board on December 30, 2010. Regional Board staff reviewed the draft CBRP and recommended necessary revisions in a letter dated March 30, 2011. The MSAR Permittees submitted an amended version of the CBRP on June 28, 2011. The Regional Board approved the CBRP, as a final WQBEL for the Dry Season Urban WLA, on February 10, 2012. In approving the CBRP as the final WQBELs, the Regional Board found that the CBRP, when fully implemented, shall achieve the Urban WLA for Bacterial Indicator.

13.4.4 Final WQBELs for MSAR Bacterial Indicator TMDL under Dry Season Conditions

Section VI.D.1 of the 2010 SAR MS4 Permit requires that the final WQBELs for Bacterial Indicators during the Dry Season in the MSAR must be achieved by December 31, 2015. For the MSAR TMDL the approved CBRP is the narrative WQBEL.

In cooperation with the San Bernardino County MSAR MS4 Permittees, the Riverside County MSAR Permittees developed and obtained approval by the Regional Board, for the CBRP. The CBRP describes the specific actions that have or will be taken to achieve compliance with the Urban WLA during the Dry Season (April 1st through October 31st). The CBRP includes:

- Schedule for developing Ordinances (where necessary) to reduce the concentration of Bacterial Indicators in urban sources.
- The specific BMPs implemented to reduce the concentration of Bacterial Indicators from urban sources and the water quality improvements expected to result from these BMPs.
- The specific inspection criteria used to identify and manage the urban sources most likely causing exceedances of Water Quality Objectives for Bacterial Indicators.
- The process for identifying possible treatment facilities and probable locations where such facilities can be built to reduce the levels of controllable Bacterial Indicator discharged from urban sources.
- The scientific and technical documentation used to conclude that the CBRP, once fully implemented, is expected to achieve compliance with the Urban WLA for Bacterial Indicators.
- A detailed schedule for implementing the CBRP. The schedule identified discrete milestones to assess satisfactory progress toward meeting the Urban WLA during the Dry Season. The schedule also indicates which agency or agencies are responsible for meeting each milestone.
- The specific metric(s) that will be established to demonstrate the effectiveness of the CBRP and acceptable progress toward meeting the Urban WLA for Bacterial Indicator.
- Detailed descriptions of any additional BMPs planned, and the time required to implement those BMPs, in the event that data from the watershed-wide water quality monitoring program indicate that Water Quality Objectives for Bacterial Indicators are still being exceeded after the CBRP is fully implemented.
- A schedule for developing a CBRP needed to comply with the Urban WLA for Bacterial Indicator during the Wet Season (November 1st thru March 31st) to achieve compliance by December 31, 2025.

The CBRP is currently being implemented and will be updated and/or revised once a new SAR MS4 Permit is developed and approved.

13.4.5 Permittee Compliance Strategy

13.4.5.1 Implementation Plan

The overall implementation steps and elements that MSAR Permittees are implementing to comply with the MSAR TMDL are incorporated into the approved CBRP and summarized below. The specific actions that the Permittees have taken consistent with the CBRP are described in each applicable annual report.

13.4.5.2 CBRP Implementation-Specific BMPs

The CBRP includes seven BMPs to be implemented:

- **Transient Camps:** The Permittees will continue to report the locations of known or discovered transient camps within the District's MS4, which may be contributing to elevated levels of bacteria in dry weather flows, and coordinate with the District as necessary for the removal of the encampment. In addition, if the District discovers, as a result of the Urban Source Evaluations any transient camps outside of the MS4 that are impacting water quality, the District will coordinate transient camp closures in coordination with appropriate local agencies.
- **IDDE Program:** The Permittees will continue to implement the IDDE program described in section 4.0 of the DAMP to reduce or eliminate problematic dry weather flows to the MS4.
- **Street sweeping and debris removal:** The Permittees will continue to implement street sweeping practices as described in Section 5 of the DAMP to help remove pollutants, including bacterial indicator sources before they enter the MS4. The Permittees have evaluated the need to revise existing practices to reduce sources of bacterial indicators in the watershed.
- **Irrigation or Water Conservation Practices:** The Permittees have evaluated existing irrigation and water conservation BMPs to determine if enhancements to existing BMPs where necessary.
- **Water Quality Management Plan Revision:** The Permittees revised the WQMP per the schedule in CBRP attachment E.
- **Septic System Management:** The Permittees addressed this requirement per the schedule in CBRP attachment E.
- **Pet Waste Management:** The Permittees have evaluated Pet Waste Management BMPs to determine if enhancements to existing BMPs were necessary.

13.4.5.3 CBRP Implementation-Inspection Criteria

Element 3 of the CBRP addresses the requirement for inclusion of specific inspection criteria to identify and manage urban sources that are causing exceedances of water quality objectives for indicator bacteria. This element of the CBRP has led the Permittees to conduct Dry Weather Flow (DWF) and bacterial indicator source evaluation activities within each subwatershed draining to a watershed-wide compliance site. This effort has been implemented by the MSAR TMDL Permittees while working together through the MSAR TMDL Task Force.

Data from Tier 1 sites as outlined in the CBRP has been collected during the implementation period of the CBRP. This data has been used to make informed decisions regarding the potential for each MS4 Outfall or group of outfalls to discharge controllable sources of bacterial indicators. A summary report of the findings of the Tier 1 monitoring, with prioritized drainage areas for source assessments, was developed and submitted to the Regional Board on March 31, 2013. In these prioritized drainage areas, the Permittees have conducted source assessments and evaluated mitigation alternatives. As necessary, the assessment included sampling of Tier 2 sites upstream of the impacted Tier 1 site. The Permittees have begun implementing this element of the CBRP by developing their IDDE program and implantation of water conservation BMPs. Completion of these elements will help guide implementation of the inspection program. Conversely, implementation of the inspection program may impact how or where specific BMPs are implemented or how decisions are made regarding the need for additional ordinance authority. The

inspection program process consists of Tier 1 Reconnaissance, Prioritization, Evaluation of Mitigation Alternatives, and Selection of Mitigation Alternatives. The outcomes of this process are further described by the Permittees in Appendix H of the Annual Report. Details on this element of CBRP implementation as well as an implementation schedule are contained in CBRP attachment C and E, see DAMP Appendix M.

13.4.5.4 CBRP Implementation-Regional Treatment

Element 4 of the CBRP focuses on the planning, design and construction of structural BMPs to mitigate controllable sources of DWF and bacterial indicators. In response to the Urban Source Evaluations described in Section 13.4.5.3 above, the Permittees have and will continue to identify structural BMPs as needed to mitigate the controllable urban sources of dry weather flows and bacterial indicators. Such BMPs may be regional or outfall-specific. In addition, the Permittees have prepared a Watershed Action Plan which includes an evaluation of retrofit opportunities (update to the 2005 BMP Retrofit Study). The Permittees will consider the results of this study to help select mitigation alternatives for prioritized drainage areas resulting from Tier 2 monitoring report. Currently, structural BMPs that are in the Regional Treatment process are further described in the Annual Report.

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