

SAN DIEGUITO WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM

FISCAL YEAR 2010 ANNUAL REPORT

JANUARY 31, 2011

PREPARED AND SUBMITTED BY THE SAN DIEGUITO WATERSHED
COPERMITTEES

CITY OF DEL MAR
CITY OF ESCONDIDO
CITY OF POWAY
CITY OF SAN DIEGO
CITY OF SOLANA BEACH
COUNTY OF SAN DIEGO

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	1
1 INTRODUCTION.....	1
1.1 COPERMITTEE COLLABORATION.....	1
1.1.1 SAN DIEGUITO WURMP MEETINGS.....	1
1.2 WATERSHED MAP UPDATE.....	2
2 WATER QUALITY ASSESSMENT.....	3
2.1 MONITORING PROGRAMS.....	3
2.2 303(D) LISTINGS.....	3
2.3 ASSESSMENT.....	6
2.4 INTEGRATED ASSESSMENT.....	8
2.5 HIGH PRIORITY WATER QUALITY PROBLEMS.....	9
3 POLLUTANT SOURCES ASSESSMENT.....	11
4 IMPLEMENTATION OF WATERSHED ACTIVITIES.....	19
4.1 JURMP AND WATERSHED ACTIVITIES.....	19
4.2 WATERSHED EDUCATION ACTIVITIES.....	23
4.3 PUBLIC PARTICIPATION ACTIVITIES.....	24
4.3.1 INTRODUCTION.....	24
4.3.2 ACTIVITIES CONDUCTED.....	24
4.3.3 FUTURE EFFORTS.....	25
4.4 COLLABORATIVE LAND-USE PLANNING EFFORTS.....	25
4.4.1 INTRODUCTION.....	25
4.4.2 ACTIVITIES CONDUCTED.....	25
4.4.3 FUTURE EFFORTS.....	26
4.5 5-YEAR STRATEGIC PLAN.....	26
4.5.1 NEW WATERSHED ACTIVITIES.....	26
4.5.2 UPDATED 5-YEAR STRATEGIC PLAN.....	27
5 EFFECTIVENESS ASSESSMENT.....	30
5.1 ASSESSMENT OF OVERALL WURMP EFFECTIVENESS.....	31
5.1.1 ACTIVITIES ASSESSMENT.....	32
5.2 ASSESSMENT OF TMDL BMP IMPLEMENTATION PLAN EFFECTIVENESS.....	33
6 CONCLUSIONS AND PROGRAM IMPROVEMENTS.....	39
6.1 CONCLUSIONS.....	39
6.2 PROGRAM IMPROVEMENTS.....	40
REFERNCES.....	40

APPENDIX A – JURMP ACTIVITY METHODOLOGY

APPENDIX B – WATERSHED ACTIVITY SHEETS

LIST OF FIGURES

FIGURE 2-1 SAN DIEGUITO WMA 2009-2010 DRY WEATHER MONITORING STATION LOCATION MAP 4

FIGURE 2-2 SAN DIEGUITO WMA 2009-2010 WET WEATHER MONITORING STATION LOCATION MAP 5

LIST OF TABLES

TABLE 1-1 WURMP MEETING DATES AND AGENDA ITEMS DISCUSSED..... 1

TABLE 2-1 2009-2010 MONITORING PROGRAM ACTIVITIES 3

TABLE 2-2 SAN DIEGUITO WMA SWRCB 303(d) LISTED WATERBODIES AND TMDL STATUS 3

TABLE 2-3 SUMMARY OF WMA ASSESSMENT FINDINGS 7

TABLE 2-4 SAN DIEGUITO RIVER MLS DRAINAGE AREA ASSESSMENT FINDINGS BELOW LAKE HODGES DAM..... 8

TABLE 2-5 SAN DIEGUITO RIVER MLS DRAINAGE AREA ASSESSMENT FINDINGS ABOVE LAKE HODGES DAM..... 9

TABLE 3-1 LAND USE ACREAGE BY HYDROLOGIC AREA 12

TABLE 3-2 POLLUTANT GENERATING SOURCES – 905.1 SOLANA BEACH HYDROLOGIC AREA ... 13

TABLE 3-3 POLLUTANT GENERATING SOURCES – 905.2 HODGES HYDROLOGIC AREA..... 14

TABLE 3-4 POLLUTANT GENERATING SOURCES – 905.3 SAN PASQUAL HYDROLOGIC AREA 15

TABLE 3-5 POLLUTANT GENERATING SOURCES – 905.4 SANTA MARIA HYDROLOGIC AREA 16

TABLE 3-6 POLLUTANT GENERATING SOURCES – 905.5 SANTA YSABEL HYDROLOGIC AREA..... 17

TABLE 4-1 JURMP AND WURMP ACTIVITIES – 905.1 SOLANA BEACH HYDROLOGIC AREA 20

TABLE 4-2 JURMP AND WURMP ACTIVITIES – 905.2 HODGES HYDROLOGIC AREA..... 21

TABLE 4-3 JURMP AND WURMP ACTIVITIES – 905.3 SAN PASQUAL HYDROLOGIC AREA 22

TABLE 4-4 JURMP AND WURMP ACTIVITIES – 905.4 SANTA MARIA HYDROLOGIC AREA 23

TABLE 4-5 JURMP AND WURMP ACTIVITIES – 905.5 SANTA YSABEL HYDROLOGIC AREA..... 23

TABLE 4-6 WATERSHED EDUCATION ACTIVITIES IMPLEMENTED DURING FY 2010 24

TABLE 4-7 NUMBER OF HITS: PROJECT CLEAN WATER SAN DIEGUITO WMA WEB SITE 24

TABLE 4-8 NUMBER OF HITS: PROJECT CLEAN WATER SAN DIEGUITO WURMP WEB SITE..... 24

TABLE 4-9 COMMUNITY EVENTS IN FY 2010..... 25

TABLE 4-10 UPDATED 5-YEAR STRATEGIC PLAN 28

TABLE 5-1 PERMIT COMPONENT COMPLIANCE (LEVEL 1)..... 31

TABLE 5-2 OUTCOME LEVELS: LEVELS 1-6..... 32

TABLE 5-3 SUMMARY OF IMPLEMENTED ACTIVITIES FOR FY 2010 – 905.1 SOLANA BEACH HYDROLOGIC AREA 34

TABLE 5-4 SUMMARY OF IMPLEMENTED ACTIVITIES FOR FY 2010 – 905.2 HODGES HYDROLOGIC AREA 35

TABLE 5-5 SUMMARY OF IMPLEMENTED ACTIVITIES FOR FY 2010 – 905.3 SAN PASQUAL HYDROLOGIC AREA 37

TABLE 5-6 SUMMARY OF IMPLEMENTED ACTIVITIES FOR FY 2010 – 905.4 SANTA MARIA HYDROLOGIC AREA 38

TABLE 5-7 SUMMARY OF IMPLEMENTED ACTIVITIES FOR FY 2010 – 905.5 SANTA YSABEL HYDROLOGIC AREA 39

EXECUTIVE SUMMARY

Since January 2002, the County of San Diego and the Cities of Del Mar, Escondido, Poway, San Diego and Solana Beach (herein referred to as the “San Dieguito WURMP Copermittees” or “Copermittees”) have been active in planning, developing and implementing watershed-based programs in the San Dieguito Watershed Management Area (WMA). This Annual Report describes the actions taken by San Dieguito WURMP Copermittees in Fiscal Year (FY) 2010 (July 1st, 2009 to June 30th, 2010) to implement and refine the 2008 San Dieguito Watershed Urban Runoff Management Program (WURMP), and the progress made towards decreasing urban runoff and improving receiving water quality in the WMA.

The Copermittees collaborated on efforts to address high priority surface water quality issues throughout the San Dieguito WMA. This was coordinated through periodic meetings held throughout the reporting period. The meetings were held in order to effectively plan and implement the San Dieguito WURMP, develop and prioritize water quality activities that address pollutants of concern in the WMA, exchange ideas on how to address High Priority Water Quality Problems (HPWQPs) in the WMA, evaluate the effectiveness of actions, and collaborate on development of required submittals. In order to complete the objectives, the group performed assessments and conducted activities to address the water quality problems. These assessments and activities include: (1) a water quality assessment; (2) a pollutant source assessment; (3) planning and implementation of watershed activities; and (4) an assessment of the Copermittees’ activities in the WMA.

A water quality assessment was performed that includes a summary of analysis of the urban runoff and receiving waters analysis in the San Dieguito WMA based on data collected and evaluated from July 2009 through June 2010. In order to assess the water quality of regional WMAs on an annual basis, Regional Copermittees completed the San Diego County Municipal Copermittees Urban Runoff Monitoring Report (Annual Monitoring Report) for FY 2010 in compliance with the San Diego Regional Water Quality Control Board Order No. R9-2007-0001. Based on the data and findings of this report, the San Dieguito WURMP Copermittees focused their efforts on targeting the following HPWQPs for the San Dieguito WMA: (1) Bacteria in all hydrologic areas (HAs); and (2) Nutrients in the San Pasqual HA.

The Copermittees also completed an assessment of potential pollutant-generating sources in each HA in the WMA. The purpose of this assessment was to identify the high priority pollutant sources in each HA based on the HPWQPs identified and each source’s potential to generate those pollutants. For example, an HA with bacteria as a HPWQP would have sources such as Food Establishments and Animal Facilities included as high priority sources (in addition to others) based on their potential for generating bacteria as a pollutant.

All WURMP activities required by Order R9-2007-0001 were conducted during the reporting period. Details of these activities are found in Section 4 and [Appendix B](#) of this Annual Report. A plan for implementation has been developed and updated. The plan identifies the WURMP activities and when they plan to be implemented. Each WURMP Activity is associated with at least one of the HPWQPs in each HA where the activity is to be implemented. Collectively, the Copermittees conducted eleven (11) WURMP Watershed Activities – nine (9) Water Quality Activities and two (2) Water Quality Education Activities.

As required, Copermittees implemented activities in the WMA as part of their Jurisdictional Urban Runoff Management Program (JURMP) and WURMP programs. In an effort to

report on the Copermittees' actions to improve water quality in the WMA, the Copermittees began the process to collect and report on JURMP and WURMP activities performed on an HA basis. This information is not comprehensive and for some data sets, estimates were used to generate quantities of activities. The Copermittees believe that this is an important first step toward integrating the activities and reporting to best assess and plan for activities that address the identified HPWQPs on an HA basis.

The Copermittees also performed an Effectiveness Assessment to determine the overall effectiveness of the San Dieguito WURMP and the activities conducted by the Copermittees. The assessment includes activity-specific assessments as well as a comprehensive summary of the effectiveness of the WURMP activities implemented during the reporting period. This is the second year in which the Copermittees have included their JURMP activities as they were performed in each HA; however, the JURMP activities reported are limited in type due to the infancy of this type of reporting. The Copermittees are committed to continue this process and further develop the reporting and assessment of all activities conducted on an HA basis.

Activities selected and conducted by the San Dieguito WURMP Copermittees during the reporting period address the overall goal of the WURMP and the Permit by focusing on the HPWQPs within the WMA. The effectiveness of the individual activities is variable; however, collectively the Copermittees' program actions are having positive effects on water quality.

As they improve their understanding of the complex issues affecting the WMA, the San Dieguito WURMP Copermittees will continue to refine and augment the San Dieguito WURMP to protect and improve water quality in the region. Such refinement and augmentation are supported by the iterative process used to develop and implement the San Dieguito WURMP, which establishes mechanisms for stakeholders to evaluate priorities, improve coordination, assess program goals, and allocate finite resources in a cost-effective manner.

In short, the FY 2010 San Dieguito WURMP Annual Report presents an update on the San Dieguito WURMP Copermittees' successful long-term efforts to protect and enhance the water quality of the WMA using a comprehensive watershed-based approach.

1 INTRODUCTION

The San Diego Regional Water Quality Control Board (RWQCB) Order No. R9-2007-0001 (Municipal Permit) requires Copermittees within the San Dieguito Watershed Management Area (WMA) to collaborate and implement a Watershed Urban Runoff Management Program (WURMP). The WURMP consists of the Copermittees’ combined efforts to address and identify High Priority Water Quality Problems (HPWQPs) in the WMA; develop and implement activities that address pollutant load reduction and pollutant source abatement in Watershed Water Quality Activities and Watershed Education Activities; and participate in collaborative land use planning efforts. The reporting period for this Annual Report is from July 1st, 2009, through June 30th, 2010.

1.1 COPERMITTEE COLLABORATION

1.1.1 SAN DIEGUITO WURMP MEETINGS

The San Dieguito Watershed Copermittees met nine (9) times during FY 2010 to develop and implement the San Dieguito WURMP. The Copermittees collaborated to develop, prioritize and implement watershed activities that address pollutants of concern and sources in the WMA and the development of the Annual Report. The Copermittees exchanged ideas on how to address HPWQPs in the WMA and evaluated the effectiveness of the watershed activities. **Table 1-1** is a summary of the San Dieguito WURMP meetings and an outline of agenda items discussed at these meetings.

Table 1-1 WURMP Meeting Dates and Agenda Items Discussed

Date	Agenda Item Topics
8/13/2009	Permit WURMP Language Revisions; Annual Reporting Database; Alternative Reporting; Quality of Life Funding Strategy
10/8/2009	WURMP Annual Report – Database and Alternative Reporting; Permit WURMP Language Revisions; Quality of Life Funding Strategy; Cost Share Agreement; 303(d) Listings
11/12/2009	WURMP Annual Report –Alternative Reporting; Quality of Life Funding Strategy; Cost Share Agreement
1/14/2010	WURMP Annual Report – Certifications and Scheduling; Quality of Life Funding Strategy; Cost Share Agreement; Public Outreach Coordination
2/11/2010	WURMP Activities; Follow-up to Annual Reporting; Quality of Life Funding Strategy; Outreach Coordination – Fiesta de Los Peñasquitos 2010; Bacteria TMDL
3/11/2010	WURMP Activities; Quality of Life Funding Strategy; Outreach Coordination – Fiesta de Los Peñasquitos 2010; Bacteria TMDL
4/15/2010	WURMP Activities – Sediment Basins, Source ID Studies; Quality of Life Funding Strategy; Fiesta de Los Peñasquitos 2010; Bacteria TMDL; Unfunded Mandate Test Claim
5/13/2010	WURMP Activities – Source ID Studies; WURMP Calendar; Quality of Life Funding; Fiesta de Los Peñasquitos; Bacteria TMDL; TWAS Locations; Hodges Basin Natural Treatment System
6/17/2010	WURMP Calendar; Quality of Life Funding Strategy; TWAS Locations; TMDLs – Bacteria, Los Peñasquitos Lagoon; WURMP Activities – Source ID Studies

The general watershed meetings of the San Dieguito WURMP Workgroup were led by the City of Escondido, the WURMP lead Copermittee. A cost-share agreement was executed by the Copermittees to cover the cost of technical assistance for the watershed program. Activities and tasks were then carried out by the Copermittees, each within the structure of

their jurisdictional organization. Task completion was then tracked and assessed at the Workgroup meetings and reported in the Annual Report.

1.2 WATERSHED MAP UPDATE

The San Dieguito River Watershed drains an area of approximately 221,440 acres in west-central San Diego County. The San Dieguito River watershed extends through a diverse array of habitats from the eastern headwaters in the Volcan Mountains to the outlet at the San Dieguito Lagoon and Pacific Ocean. The watershed consists of five hydrologic areas (HAs). The watershed includes portions of the Cities of Del Mar, Escondido, Poway, San Diego, and Solana Beach, and unincorporated areas of San Diego County. Land use within the watershed is classified primarily as vacant and undeveloped land (42%). Other major land use classifications are residential (19%), open space/parks and recreation (17%), and agriculture (15%). Transportation, commercial, industrial, public facility, and water comprise the remaining 7% of the watershed. Over 60% of the watershed is privately owned land. The remaining portions are mostly federally or locally owned, and a small percentage of land is state-owned.

No updates have been made to the previously submitted Watershed Map. See the San Dieguito WURMP Annual Report submitted in January 2009 for the most recent Watershed Map.

2 WATER QUALITY ASSESSMENT

This section provides an assessment of the 2009-2010 monitoring programs conducted in the San Dieguito River WMA. A complete presentation of the regional monitoring efforts conducted during the reporting period is located in the *2009-2010 San Diego County Municipal Copermittes Urban Runoff Monitoring Report* (Urban Runoff Monitoring Report) (Weston, January 2011).

2.1 MONITORING PROGRAMS

Monitoring activities conducted in the WMA to comply with Order R9-2007-0001 are provided in **Table 2-1**. Two maps showing the 2009-2010 Monitoring Station Locations are provided on the following pages.

Table 2-1 2009-2010 Monitoring Program Activities

Program Data Set	Constituents Assessed
Receiving Water Monitoring	
Ambient Monitoring	Water chemistry and toxicity
Rapid Stream Bioassessments	Benthic macroinvertebrates, periphyton, and physical habitat
Wet Weather Monitoring	Water chemistry, bacteria, toxicity, and trash
Post-Storm Sediment Pyrethroid Monitoring	Grain size, synthetic pyrethroid pesticides, and TOC
Urban Runoff Monitoring	
Jurisdictional Dry Weather Monitoring	Field and analytical chemistry, trash
MS4 Outfall Random Dry Weather Monitoring	Chemistry and bacteria
MS4 Outfall Random Wet Weather Monitoring	Chemistry and bacteria
MS4 Outfall Targeted Dry Monitoring	Chemistry, metals, and bacteria
MS4 Outfall Targeted Wet Monitoring	Chemistry, metals, pesticides, and bacteria
Regional Source Identification Monitoring	Chemistry, metals, pesticides, and bacteria
Coastal Storm Drain Monitoring (CSDM) Program	Fecal indicator bacteria

2.2 303(D) LISTINGS

Within this WMA, contaminants identified on the 2006 State Water Resources Control Board (SWRCB) Section 303(d) list are provided in **Table 2-2** with relevant total maximum daily load (TMDL) status. However, several changes are currently proposed in the 2008 Draft 303(d) list currently under development.

Table 2-2 San Dieguito WMA SWRCB 303(d) Listed Waterbodies and TMDL Status

Waterbody Name	Pollutant/Stressor on 2006 SWRCB 303(d) List	TMDL Status
Pacific Ocean Shoreline	Bacterial indicators	Adopted
Green Valley Creek	Sulfates, chloride, manganese, and PCP	Proposed for Completion in 2019
Lake Hodges	Color, nitrogen, phosphorus, turbidity, manganese, and pH	
Kit Carson Creek	TDS and PCP	
Felicita Creek	TDS and aluminum	
Cloverdale Creek	Phosphorus and TDS	
Sutherland Reservoir	Color, manganese, and pH	

Figure 2-1 San Dieguito WMA 2009-2010 Dry Weather Monitoring Station Location Map

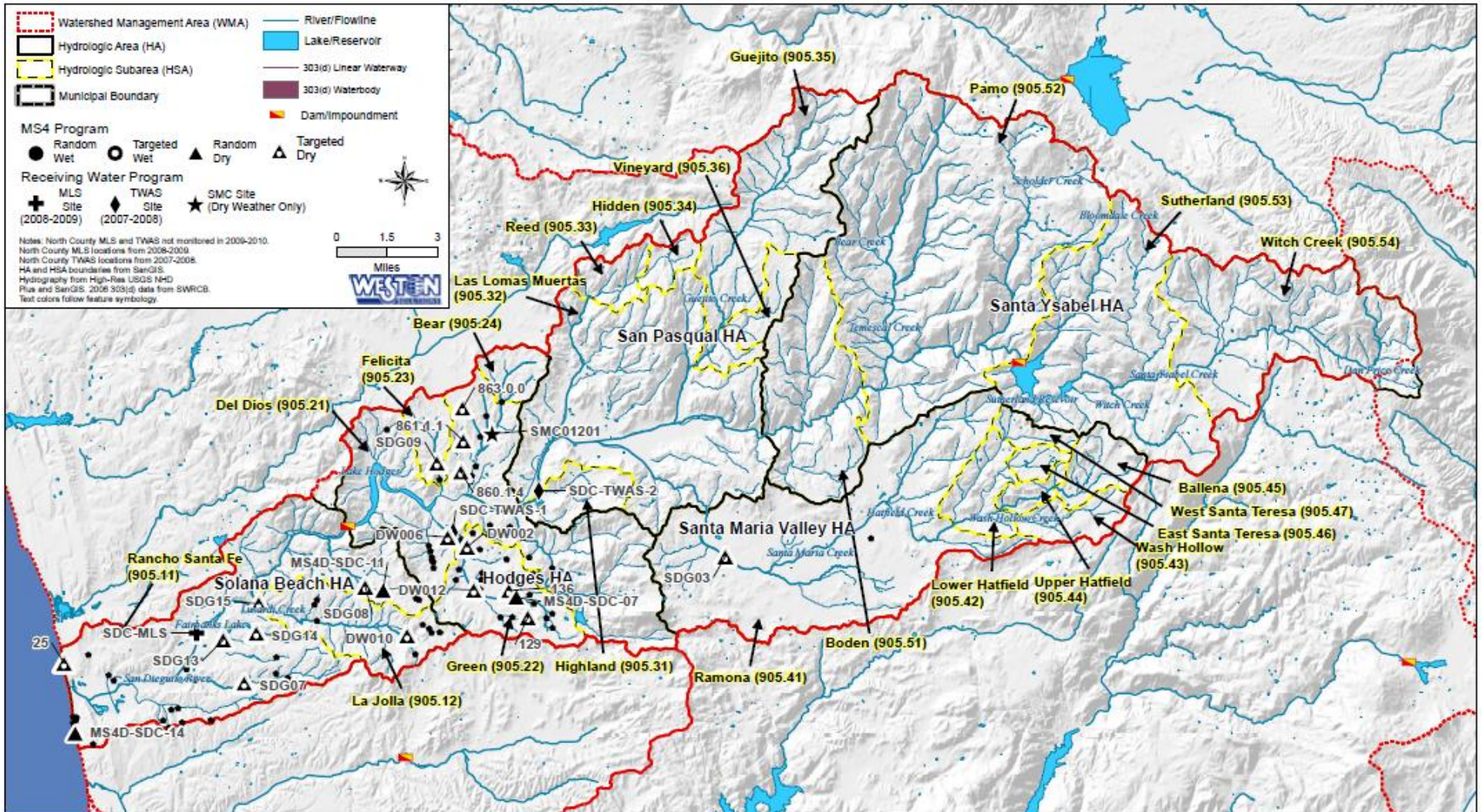
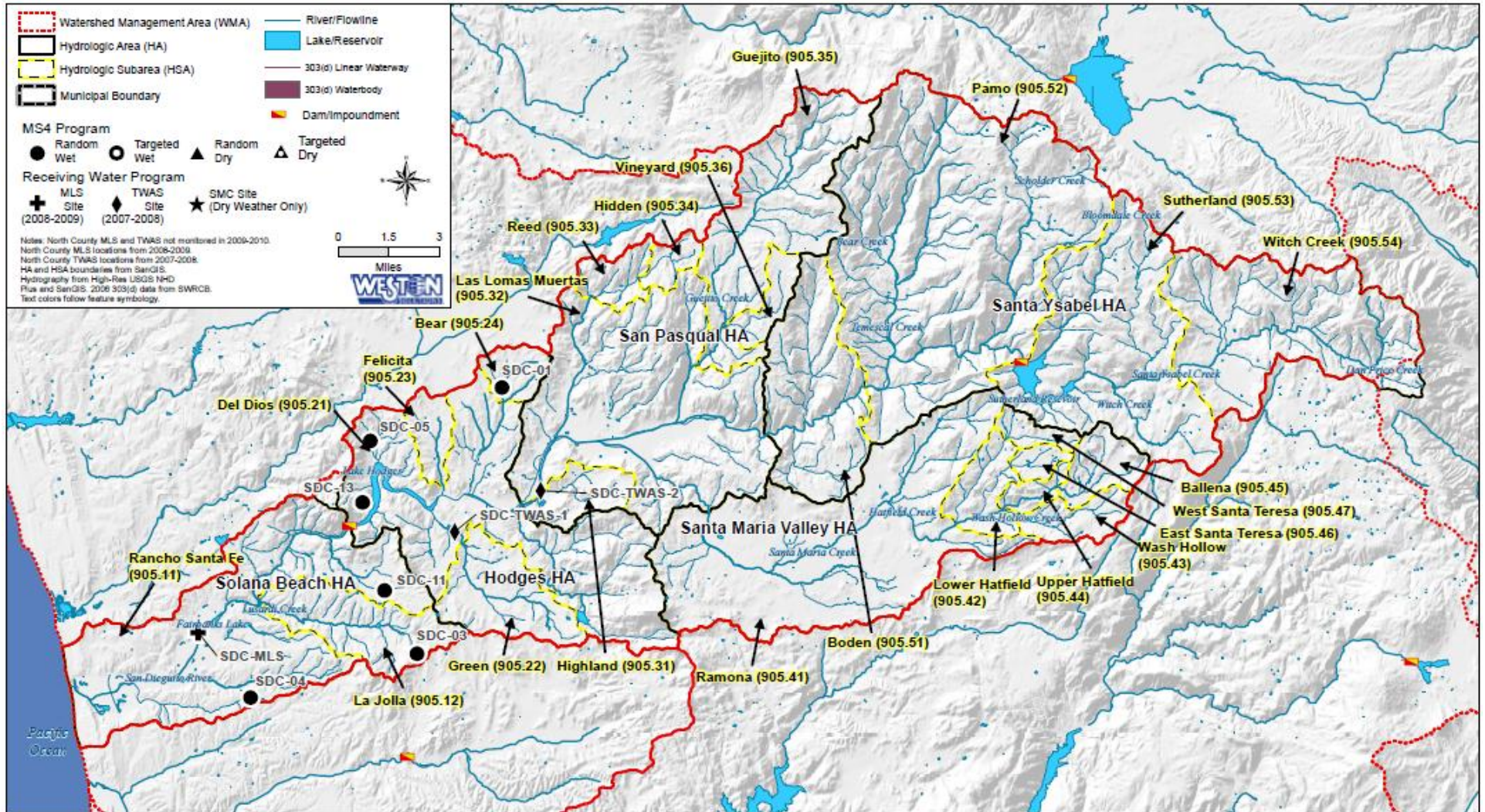


Figure 2-2 San Dieguito WMA 2009-2010 Wet Weather Monitoring Station Location Map



2.3 ASSESSMENT

Receiving water monitoring was conducted during one ambient weather event at one Southern California Stormwater Monitoring Coalition (SMC) site. No receiving water monitoring was conducted at the MLS or TWAS in the San Dieguito River WMA in 2009-2010 due to the rotational nature of the permit: the South County received the MLS and TWAS monitoring. Annual receiving water monitoring is conducted on a rotating schedule between the north and south portions of San Diego County as described in Table 1 of the Order with the exception of Chollas Creek which is monitored each year. Ambient and wet weather receiving water monitoring will be conducted during the 2010–2011 Monitoring Season.

Assessments were conducted using data from multiple current and historical monitoring programs, and the results derived using a weight-of-evidence approach. Each HA in the San Dieguito River WMA was assessed individually and summarized for the entire WMA by program element in **Table 2-3**.

Table 2-3. Summary of WMA Assessment Findings

WMA	Monitoring Program Elements	Assessment	Summary of Findings
San Dieguito River WMA	Receiving Water Monitoring Program	Ambient Receiving Water Assessment	<ul style="list-style-type: none"> ▪ Constituents of concern¹: <ul style="list-style-type: none"> - High frequency of occurrence (TDS, chloride, sulfate, Index of Biotic Integrity (IBI), and total nitrogen). - Medium frequency of occurrence (toxicity – <i>C. dubia</i> reproduction). ▪ Data based on one site within the SMC Regional Monitoring Program; monitoring at the MLS and TWAS sites did not occur in 2009-2010. ▪ Bacteria were not analyzed as part of the SMC Regional Bioassessment Monitoring Program.
		Wet Weather Receiving Water Assessment	<ul style="list-style-type: none"> ▪ Wet weather receiving water assessment did not occur in 2009-2010. The following results are from 2008-2009: ▪ Constituents of concern¹: <ul style="list-style-type: none"> - High frequency of occurrence (TDS). - Medium frequency of occurrence (fecal coliform). - Low frequency of occurrence (TSS, turbidity and Bifenthrin). ▪ No constituents had a magnitude of exceedance greater than five times the benchmark. ▪ No persistent toxicity was observed. ▪ Bifenthrin was not detected in storm water at the MLS site. ▪ No pyrethroids were detected in post-storm sediment samples at the MLS.
		Rapid Stream Bioassessment	<ul style="list-style-type: none"> ▪ Rapid Stream Bioassessment did not occur in 2009-2010. The following results are from 2008-2009: ▪ Altered benthic macroinvertebrate communities (Very Poor IBI rating at TWAS-1 and Poor IBI rating at MLS).
	Urban Runoff Monitoring	Ambient Urban Runoff Areas Assessment (Jurisdictional, MS4, CSDM)	<ul style="list-style-type: none"> ▪ Constituents of concern¹: <ul style="list-style-type: none"> - High priority constituents: <ul style="list-style-type: none"> ▪ Above Lake Hodges (905.2): TDS, sulfate, total nitrogen, total phosphorous, Enterococci, and chloride. ▪ Below Lake Hodges (905.1): TDS, total phosphorous. - Medium priority constituents: <ul style="list-style-type: none"> ▪ Above Lake Hodges (905.2): fecal coliform. ▪ Below Lake Hodges (905.1): Enterococci. ▪ There were no submarginal or poor trash ratings in the San Dieguito River WMA. No human health or aquatic health threats were identified.
		Wet Weather Urban Runoff Areas Assessment (MS4)	<ul style="list-style-type: none"> ▪ Constituents of concern¹: <ul style="list-style-type: none"> - High priority constituents: <ul style="list-style-type: none"> ▪ Above Lake Hodges (905.2): TSS, pH, fecal coliform. ▪ Below Lake Hodges (905.1): fecal coliform. - Medium priority constituents: <ul style="list-style-type: none"> ▪ Above Lake Hodges (905.2): none identified. ▪ Below Lake Hodges (905.1): TDS, pH.
	WMA Assessment	Receiving Water Trend Assessment	<ul style="list-style-type: none"> ▪ Trend analysis based on available data (2008-2009). ▪ Significantly increasing trends were observed for Total Kjeldahl Nitrogen (TKN), total phosphorus, and conductivity. ▪ No significantly decreasing trends were evident.
		2001–2006 Baseline Long-Term Effectiveness Assessment Ratings	<ul style="list-style-type: none"> ▪ WMA high frequency of occurrence rating for TDS, chloride, sulfate, and total nitrogen are consistent with the 2001–2006 BLTEA ratings as it relates to the Solana Beach HA.

¹ Constituents of concern are determined by a rating system that evaluates the frequency and magnitude of a constituent above its relevant criteria developed in FY 2009. Low, medium, and high frequency of occurrence describe the relative ranking of those constituents. The ranking methodology is described in Appendix B of the 2008-2009 Annual Monitoring Report (Weston, 2010).

2.4 INTEGRATED ASSESSMENT

Assessment of the San Dieguito WMA during both wet weather and ambient weather monitoring conditions is presented in an integrated manner to provide managers with an overall assessment of the WMA and to provide answers to the core management questions as described in the regional monitoring program. The integrated assessment provides the results of the receiving water assessments and urban runoff assessments during both storm events and ambient weather events. It also provides a summary of the overall WMA findings. The integrated assessment further provides the ability to identify where COCs (Constituents of Concern) overlap between urban runoff and receiving waters. It is anticipated that MS4 Outfall Program data and Source Identification Monitoring Program data will bolster the assessment process as additional data become available in future years. Integrated WMA assessments results are presented in **Tables 2-4** and **2-5**.

Table 2-4 San Dieguito River MLS Drainage Area Assessment Findings Below Lake Hodges Dam

System Assessed	Annual Dry Weather Constituent Assessment ¹	Annual Wet Weather Constituent Assessment ¹
Receiving Water Monitoring (MLS, TWAS, and SMC)	<p>No MLS Sampling During 2009-2010 Season</p> <p>SMC Results-2009 (1 Station-SMC00473)</p> <ul style="list-style-type: none"> • Chemistry – Chloride, Sulfate, TDS, Total Nitrogen, TSS • Bacteria – Not Assessed • Toxicity – <i>C. dubia</i> reproduction • Bioassessment – Poor IBI <p>Synthetic Pyrethroids Assessment (2008-2009) – Below thresholds (sediment)</p>	<p>No MLS Sampling During 2009-2010 Season</p> <p>2008-2009 Season Results</p> <ul style="list-style-type: none"> • Chemistry – TDS, TSS, Turbidity • Bacteria – Fecal Coliform • Toxicity – No Toxicity • Synthetic Pyrethroids Assessment – Below benchmarks.
Urban Runoff Monitoring (MS4 Outfall)	<ul style="list-style-type: none"> • Chemistry – TDS, Total Phosphorus • Bacteria – Enterococci (Med) 	<ul style="list-style-type: none"> • Chemistry – TDS (Med), pH (Med) • Bacteria – Fecal Coliform
MLS Trends*		
Increasing		TKN, Total Phosphorus, and Conductivity
Decreasing		No Decreasing Trends

*Trends based on available data. Due to the rotational nature of the monitoring program, some years may not have recorded data (based on 2008-2009 Season).

1: High and medium priority constituents are determined following the Final Draft Annual Assessment Methodology developed during the 2009-2010 Monitoring Season.

IBI - Index of Biotic Integrity
 Med - Medium Priority Constituent
 MLS - mass loading station
 MS4 - municipal separate storm sewer system
 SMC - Stormwater Monitoring Coalition

TDS - total dissolved solids
 TKN - total kjeldahl nitrogen
 TSS - total suspended solids
 TWAS - temporary watershed assessment station

Table 2-5 San Dieguito River MLS Drainage Area Assessment Findings Above Lake Hodges Dam

System Assessed	Annual Dry Weather Constituent Assessment ¹	Annual Wet Weather Constituent Assessment ¹
Receiving Water Monitoring (MLS, TWAS, and SMC)	<p>No MLS Sampling During 2009-2010 Season</p> <p>SMC Results-2010 (1 Station-SMC01201)</p> <ul style="list-style-type: none"> • Chemistry – Chloride, Sulfate, TDS, Total Nitrogen • Bacteria – Not Assessed • Toxicity – <i>C. dubia</i> reproduction • Bioassessment – Poor IBI 	<p>No MLS Sampling During 2009-2010 Season</p> <p>No TWAS Sampling During 2008-2009 Season (Bight '08).</p>
Urban Runoff Monitoring (MS4 Outfall)	<ul style="list-style-type: none"> • Chemistry – Sulfate, Chloride, TDS, Total Phosphorus, Total Nitrogen • Bacteria – Enterococci, Fecal Coliform (Med) 	<ul style="list-style-type: none"> • Chemistry – TSS, pH • Bacteria – Fecal Coliform

¹: High and medium priority constituents are determined following the Final Draft Annual Assessment Methodology developed during the 2009-2010 Monitoring Season.

IBI - Index of Biotic Integrity

Med - Medium Priority Constituent

MLS - mass loading station

MS4 - municipal separate storm sewer system

SMC - Stormwater Monitoring Coalition

TDS - total dissolved solids

TKN - total kjeldahl nitrogen

TSS - total suspended solids

TWAS - temporary watershed assessment station

2.5 HIGH PRIORITY WATER QUALITY PROBLEMS

Based on the assessments above and the available water quality data, the San Dieguito WURMP Copermittees have determined that the HPWQPs in the San Dieguito WMA are:

1. Bacteria in all HAs (under ambient and wet weather conditions)
2. Nutrients in the San Pasqual Hydrologic Area

It should be noted that the HPWQPs have not changed from previous assessments or the 2008 San Dieguito WURMP, even though this year's assessment included the third year of expanded monitoring data as required under Order No. R9-2007-0001.

This page intentionally left blank
for reproduction purposes

3 POLLUTANT SOURCES ASSESSMENT

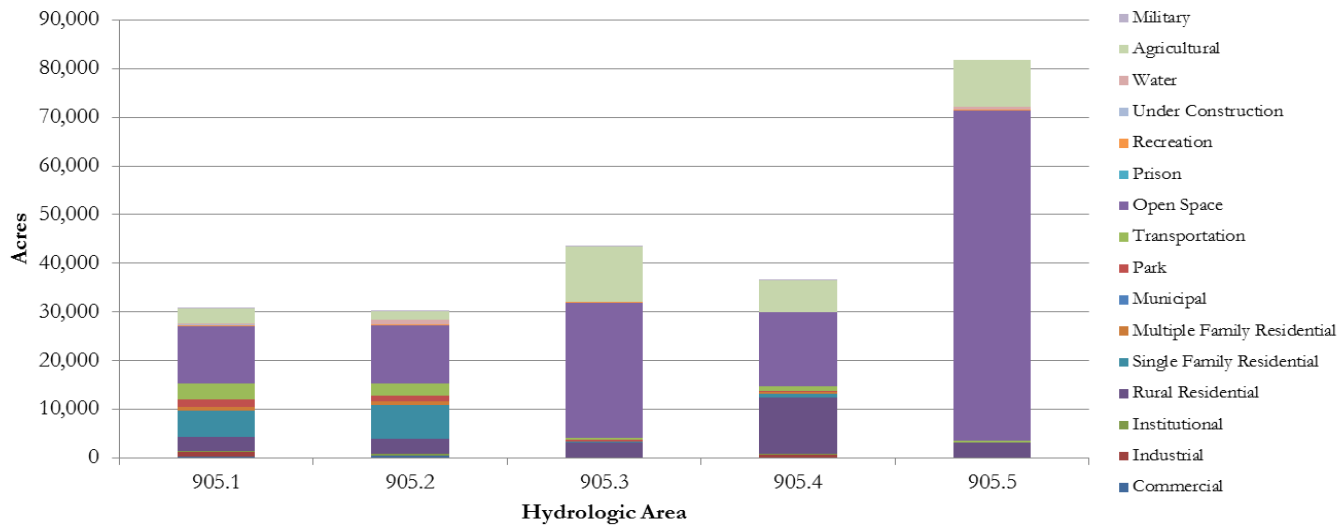
This section identifies, to the extent possible, the potential sources, pollutant discharges, and/or other factors causing the San Dieguito WMA's HPWQPs. The pollutant source assessment is based on currently available data associated with the urban runoff management programs. The pollutant source assessment is presented by HA.

Table 3-1 summarizes the land use in each of the HAs. Land use information is generally associated with wet weather urban runoff where rainfall runoff mobilizes and transports pollutants from areas that are collectively associated with particular land uses. This is opposed to dry weather urban runoff that is generally associated with point dischargers such as residences, commercial facilities, etc. Pollutants in the dry weather urban runoff enter the runoff from pollutant-generating activities and from the conveyance of urban runoff as it enters and travels through the MS4.

Tables 3-2 through **3-6** present a limited inventory of pollutant-generating sources that the Copermittees currently track by HA. The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in each table (yellow highlight signifies HPWQP). This HPWQP is then associated with the sources that are likely to generate those pollutants (blue highlight). The process used to develop the tables was taken directly from the Baseline Long-Term Effectiveness Assessment (BLTEA) (Weston, MOE, LWA, 2005). The data used for the process includes the following: (1) results in the 2009-2010 Regional Annual Monitoring Report (Weston Solutions, 2011); (2) current inventory information from all WMA Copermittees; and (3) the Source Loading Potential (SLP) ratings from the BLTEA (Weston, MOE, LWA, 2005).

Table 3-1 Land Use Acreage by Hydrologic Area

Land Use	Hydrologic Area (acres)				
	905.1	905.2	905.3	905.4	905.5
Open Space	11,811.7	12,038.1	27,837.5	15,164.0	67,813.7
Single Family Residential	5,373.5	6,957.5	226.5	802.2	12.5
Transportation	3,275.8	2,424.0	372.6	966.0	354.1
Agricultural	3,196.0	1,818.8	11,392.8	6,517.7	9,561.5
Rural Residential	2,980.4	3,065.0	3,103.5	11,554.5	3,101.8
Park	1,593.3	1,079.2	223.4	233.5	0.0
Industrial	801.5	161.4	91.8	477.8	13.5
Multiple Family Residential	646.1	736.0	4.6	256.7	25.6
Commercial	373.7	410.3	0.0	136.2	11.6
Institutional	229.6	360.8	27.1	254.4	2.7
Recreation	202.7	109.2	102.4	60.7	183.7
Water	162.6	992.9	13.4	0.0	547.2
Under Construction	90.9	15.9	17.3	92.1	34.1
Municipal	48.6	23.1	0.0	37.5	71.8
Military	9.7	15.3	26.2	2.3	0.0
Prison	0.0	0.0	0.0	0.0	0.0



Source: SANDAG

Table 3-2 Pollutant Generating Sources – 905.1 Solana Beach Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria
Animal	18			N	L	UL	L	UK	L	UK	L
Automotive	57			L	L	L	UL	UL	UK	L	UL
Contractor	62			UL	UL	UL	L	UL	UL	L	UL
Food Establishments	179			N	L	L	UL	UK	UK	L	L
Equipment	8			L	L	L	UL	UL	UK	L	UL
Fueling	6			UK	L	L	UK	N	N	UK	N
General Industrial	2			L	L	L	UK	UK	UK	UK	UK
General Retail	4			UL	UL	UL	L	UL	UL	L	UL
Golf	8			N	N	UL	L	L	L	L	L
Manufacturing	22			L	UK	UK	UK	UK	UK	UK	UL
Metal	5			L	L	L	UK	UK	UK	UK	UL
Nursery	6			L	UL	UL	L	L	L	UK	L
Stone	3			L	UK	UK	UK	UK	UK	UK	UL
Storage & Warehousing	53			L	UK	UK	UK	UK	UK	UK	UL
Municipal	High	Non-High		L	L	L	L	UK	UK	UK	UL
	46	24									
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	23	44	364								

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (blue highlight).

*Prepared based on the WURMP Copermittees FY 2010 JURMP Annual Reports. The methodology for developing the tables is included as [Appendix A](#) to this report

**Other sources are not reported in this table including: Land Development, Residential and Non-inventoried Business Sources

***Pollutant Source Loading Potential taken from BLTEA 2005; N = None, UK = Unknown, UL = Unlikely, L = Likely

Table 3-3 Pollutant Generating Sources – 905.2 Hodges Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria
Animal	7			N	L	UL	L	UK	L	UK	L
Automotive	60			L	L	L	UL	UL	UK	L	UL
Contractor	85			UL	UL	UL	L	UL	UL	L	UL
Food Establishments	182			N	L	L	UL	UK	UK	L	L
Equipment	7			L	L	L	UL	UL	UK	L	UL
Fueling	9			UK	L	L	UK	N	N	UK	N
General Retail	6			UL	UL	UL	L	UL	UL	L	UL
Golf	3			N	N	UL	L	L	L	L	L
Institutional	3			L	UK	UK	UK	UK	UK	UK	UL
Manufacturing	14			L	UK	UK	UK	UK	UK	UK	UL
Metal	3			L	L	L	UK	UK	UK	UK	UL
Nursery	7			L	UL	UL	L	L	L	UK	L
Stone	1			L	UK	UK	UK	UK	UK	UK	UL
Storage & Warehousing	43			L	UK	UK	UK	UK	UK	UK	UL
Municipal	High	Non-High		L	L	L	L	UK	UK	UK	UL
	17	8									
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	12	24	140								

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (blue highlight).

*Prepared based on the WURMP Copermittees FY 2010 JURMP Annual Reports. The methodology for developing the tables is included as [Appendix A](#) to this report

**Other sources are not reported in this table including: Land Development, Residential and Non-inventoried Business Sources

***Pollutant Source Loading Potential taken from BLTEA 2005; N = None, UK = Unknown, UL = Unlikely, L = Likely

Table 3-4 Pollutant Generating Sources – 905.3 San Pasqual Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria
Animal	1			N	L	UL	L	UK	L	UK	L
Automotive	1			L	L	L	UL	UL	UK	L	UL
Contractor	1			UL	UL	UL	L	UL	UL	L	UL
Food Establishments	1			N	L	L	UL	UK	UK	L	L
Equipment	1			L	L	L	UL	UL	UK	L	UL
General Retail	1			UL	UL	UL	L	UL	UL	L	UL
Nursery	4			L	UL	UL	L	L	L	UK	L
Municipal	High		Non-High	L	L	L	L	UK	UK	UK	UL
	2		0								
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	5	9	102								

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (blue highlight).

*Prepared based on the WURMP Copermittees FY 2010 JURMP Annual Reports. The methodology for developing the tables is included as **Appendix A** to this report

**Other sources are not reported in this table including: Land Development, Residential and Non-inventoried Business Sources

***Pollutant Source Loading Potential taken from BLTEA 2005; N = None, UK = Unknown, UL = Unlikely, L = Likely

Table 3-5 Pollutant Generating Sources – 905.4 Santa Maria Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria
Animal	17			N	L	UL	L	UK	L	UK	L
Automotive	34			L	L	L	UL	UL	UK	L	UL
Cemetery	1			N	N	UL	L	L	L	L	L
Contractor	21			UL	UL	UL	L	UL	UL	L	UL
Food Establishments	54			N	L	L	UL	UK	UK	L	L
Equipment	8			L	L	L	UL	UL	UK	L	UL
Fueling	11			UK	L	L	UK	N	N	UK	N
General Industrial	2			L	L	L	UK	UK	UK	UK	UK
General Retail	7			UL	UL	UL	L	UL	UL	L	UL
Golf	1			N	N	UL	L	L	L	L	L
Manufacturing	3			L	UK	UK	UK	UK	UK	UK	UL
Metal	2			L	L	L	UK	UK	UK	UK	UL
Nursery	15			L	UL	UL	L	L	L	UK	L
Stone	3			L	UK	UK	UK	UK	UK	UK	UL
Municipal	High	Non-High		L	L	L	L	UK	UK	UK	UL
	2	6									
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	1	20	194								

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (blue highlight).

*Prepared based on the WURMP Copermittees FY 2010 JURMP Annual Reports. The methodology for developing the tables is included as [Appendix A](#) to this report

**Other sources are not reported in this table including: Land Development, Residential and Non-inventoried Business Sources

***Pollutant Source Loading Potential taken from BLTEA 2005; N = None, UK = Unknown, UL = Unlikely, L = Likely

Table 3-6 Pollutant Generating Sources – 905.5 Santa Ysabel Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria
Animal	2			N	L	UL	L	UK	L	UK	L
Automotive	1			L	L	L	UL	UL	UK	L	UL
Food Establishments	4			N	L	L	UL	UK	UK	L	L
Fueling	1			UK	L	L	UK	N	N	UK	N
Nursery	1			L	UL	UL	L	L	L	UK	L
Municipal	High		Non-High	L	L	L	L	UK	UK	UK	UL
	1		1								
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	1	2	25								

The highest threat-to-water-quality (TIWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (blue highlight).

*Prepared based on the WURMP Copermittees FY 2010 JURMP Annual Reports. The methodology for developing the tables is included as [Appendix A](#) to this report

**Other sources are not reported in this table including: Land Development, Residential and Non-inventoried Business Sources

***Pollutant Source Loading Potential taken from BLTEA 2005; N = None, UK = Unknown, UL = Unlikely, L = Likely

This page intentionally left blank
for reproduction purposes

4 IMPLEMENTATION OF WATERSHED ACTIVITIES

4.1 JURMP AND WATERSHED ACTIVITIES

The San Dieguito WURMP Copermittees are responsible for implementing JURMP activities throughout their jurisdictions in an effort to improve the water quality of urban runoff. These activities have historically been reported only in jurisdictional annual reports. The Copermittees recognize that in order to assess the effectiveness of urban runoff management programs, it is important to track and report the data and information on a watershed basis.

In addition to their JURMP activities, the San Dieguito WURMP Copermittees are responsible for identifying and implementing watershed water quality activities that address the HPWQPs in the WMA. These activities may be implemented individually or collectively at the regional, watershed or jurisdictional level. The activity selection process is described fully in the March 2008 San Dieguito WURMP.

The tables below present the Copermittees' efforts to report all urban runoff management activities on a watershed basis. Moreover, a comprehensive account of all urban runoff management activities on a watershed basis will assist in the effectiveness assessment when attempting to connect sources to urban runoff water quality problems and activities to urban runoff water quality improvements. The tables identify the JURMP and WURMP activities that are associated with the HPWQPs in each HA.

Collectively, the Copermittees conducted:

- Five (5) watershed water quality activities and one (1) watershed education activity in the Solana Beach HA (905.1);
- Seven (7) watershed water quality and two (2) watershed education activities in the Hodges HA (905.2);
- Three (3) watershed water quality activities and one (1) watershed education activity in the San Pasqual HA (905.3);
- Three (3) watershed water quality activities and one (1) watershed education activity in the Santa Maria HA (905.4); and,
- One (1) watershed water quality and one (1) watershed education activity in the Santa Ysabel HA (905.5);

It is worth noting that several of these activities overlapped HAs.

Table 4-1 JURMP and WURMP Activities – 905.1 Solana Beach Hydrologic Area*

Activity		Results # of Inspections:(Inventory #)	High Priority Water Quality Problem(s)
			Bacteria/Pathogens
Inspections	Animal	8: (18)	X
	Food Establishment	109: (179)	X
	Golf	5: (8)	X
	Nursery	6: (6)	X
Street Sweeping (Tons Collected)		592	X
Basins/Inlets/Ditches/MS4 (Tons Removed)		1,344	X
SDG-WQA2	Land Acquisitions		X
SDG-WQA10	Targeted Inspections (formerly Targeted Restaurant Facility Inspections)		X
SDG-WQA16	Pet Waste Bag Dispenser Program		X
SDG-WQA17	Targeted Restaurant Facility Inspections and Outreach		X
SDG-WQA19	Pet Waste Dispenser Program in County Parks		X
SDG-WQEA11	Focused Outreach to the Equestrian Community		X

*Prepared based on the WURMP Copermittees FY 2010 JURMP Annual Reports. The methodology for developing the tables is included as [Appendix A](#) to this report

Table 4-2 JURMP and WURMP Activities – 905.2 Hodges Hydrologic Area*

Activity		Results # of Inspections: (Inventory #)	High Priority Water Quality Problem(s)
			Bacteria/Pathogens
Inspections	Animal	1: (7)	X
	Food Establishment	111: (182)	X
	Golf	3: (3)	X
	Nursery	7: (7)	X
Street Sweeping (Tons Collected)		621	X
Basins/Inlets/Ditches/MS4 (Tons Removed)		1,294	X
SDG-WQA2	Land Acquisitions		X
SDG-WQA4	San Diego Coastkeeper Trash Cleanup Sponsorship		X
SDG-WQA10	Targeted Inspections (formerly Targeted Restaurant Facility Inspections)		X
SDG-WQA13	ILACSD Trash Cleanup Sponsorship		X
SDG-WQA16	Pet Waste Bag Dispenser Program		X
SDG-WQA17	Targeted Restaurant Facility Inspections and Outreach		X
SDG-WQA19	Pet Waste Dispenser Program in County Parks		X
SDG-WQEA6	Community-Based Social Marketing Outreach Pilot Project		X
SDG-WQEA11	Focused Outreach to the Equestrian Community		X

*Prepared based on the WURMP Copermittees FY 2010 JURMP Annual Reports. The methodology for developing the tables is included as [Appendix A](#) to this report

Table 4-3 JURMP and WURMP Activities – 905.3 San Pasqual Hydrologic Area*

Activity		Results # of Inspections: (Inventory #)	High Priority Water Quality Problem(s)	
			Bacteria/ Pathogens	Nutrients
Inspections	Animal	0: (1)	X	X
	Food Establishment	1: (1)	X	
	Nursery	2: (4)	X	X
Street Sweeping (Tons Collected)		342	X	X
Basins/Inlets/Ditches/MS4 (Tons Removed)		1,070	X	X
SDG-WQA2	Land Acquisitions		X	X
SDG-WQA16	Pet Waste Bag Dispenser Program		X	
SDG-WQA17	Targeted Restaurant Facility Inspections and Outreach		X	X
SDG-WQEA11	Focused Outreach to the Equestrian Community		X	X

*Prepared based on the WURMP Copermittees FY 2010 JURMP Annual Reports. The methodology for developing the tables is included as [Appendix A](#) to this report

Table 4-4 JURMP and WURMP Activities – 905.4 Santa Maria Hydrologic Area*

Activity		Results # of Inspections: (Inventory #)	High Priority Water Quality Problem(s)
			Bacteria/Pathogens
Inspections	Animal	5: (17)	X
	Cemetery	0: (1)	X
	Food Establishment	4: (54)	X
	Golf	0: (1)	X
	Nursery	5: (15)	X
Street Sweeping (Tons Collected)		56	X
Basins/Inlets/Ditches/MS4 (Tons Removed)		231	X
SDG-WQA2	Land Acquisitions		X
SDG-WQA19	Pet Waste Dispenser Program in County Parks		X
SDG-WQA23	Ramona County Library Project		X
SDG-WQEA11	Focused Outreach to the Equestrian Community		X

*Prepared based on the WURMP Copermittees FY 2010 JURMP Annual Reports. The methodology for developing the tables is included as [Appendix A](#) to this report

Table 4-5 JURMP and WURMP Activities – 905.5 Santa Ysabel Hydrologic Area*

Activity		Results # of Inspections: (Inventory #)	High Priority Water Quality Problem(s)
			Bacteria/Pathogens
Inspections	Animal	0: (2)	X
	Food Establishment	0: (4)	X
	Nursery	0: (1)	X
Street Sweeping (Tons Collected)		126	X
Basins/Inlets/Ditches/MS4 (Tons Removed)		517	X
SDG-WQA2	Land Acquisitions		X
SDG-WQEA11	Focused Outreach to the Equestrian Community		X

*Prepared based on the WURMP Copermittees FY 2010 JURMP Annual Reports. The methodology for developing the tables is included as [Appendix A](#) to this report

4.2 WATERSHED EDUCATION ACTIVITIES

This section describes activities implemented by the San Dieguito WURMP Copermittees during the FY 2010 reporting period to enhance the general public’s understanding of basic watershed principles and sources of water pollution. The San Dieguito WURMP Copermittees are responsible for identifying and implementing education activities that

address the HPWQPs in the San Dieguito WMA. The activity selection process is described fully in the 2008 San Dieguito WURMP.

The San Dieguito WURMP Copermittees have made significant progress in developing and implementing programs aimed at improving storm water and urban runoff water quality in the WMA. **Table 4-6** below lists the two (2) education activities implemented during FY 2010 by the San Dieguito WURMP Copermittees. In addition, other activities were in the active planning or assessment phases during the reporting period. For more details on all of the activities, refer to **Table 4-10** and **Appendix B**.

Table 4-6. Watershed Education Activities Implemented During FY 2010

ID #	Activity/Project Name
WQEA6	Community-Based Social Marketing Outreach Pilot Project
WQEA11	Focused Outreach to the Equestrian Community

The effectiveness assessments for these activities are presented in the Activity Implementation Sheets (**Appendix B**) and are summarized in Section 5 – Effectiveness Assessment.

4.3 PUBLIC PARTICIPATION ACTIVITIES

4.3.1 INTRODUCTION

The Public Participation component of the 2008 San Dieguito WURMP encourages residents and organizations within the WMA (such as other agencies, private companies, and environmental groups) to become involved in improving water quality in their communities. This is achieved through public meetings and community workshops, Project Clean Water, and other methods, including direct interaction of San Dieguito WURMP Copermittee staff with members of the public.

4.3.2 ACTIVITIES CONDUCTED

WURMP documents and reports are posted on the Project Clean Water website, <http://www.projectcleanwater.org/>, where they are available to all interested stakeholders. During FY 2010, the San Dieguito Watershed web page on the Project Clean Water website received 2,092 hits and the San Dieguito WURMP page received 567 hits. These totals are slightly higher than those seen in the previous reporting period. A monthly breakdown of the hits can be found in the tables below.

Table 4-7 Numbers of Hits on the Project Clean Water San Dieguito WMA Web Site

July 09	Aug 09	Sep 09	Oct 09	Nov 09	Dec 09	Jan 10	Feb 10	March 10	April 10	May 10	June 10	Total
140	150	188	164	177	185	210	191	206	181	163	137	2,092

Table 4-8 Numbers of Hits on the Project Clean Water San Dieguito WURMP Web Site

July 09	Aug 09	Sep 09	Oct 09	Nov 09	Dec 09	Jan 10	Feb 10	March 10	April 10	May 10	June 10	Total
39	34	52	74	49	39	45	53	65	45	42	30	567

During this reporting period, the San Dieguito WURMP Copermittees participated in eight (8) community events that reached approximately 798 participants, as shown in **Table 4-9**

below. Watershed concepts and principles were incorporated into booth displays and event activities.

Table 4-9 Community Events in FY 2010

Date	Event Title	Target Audience	Estimated Attendance	Location
9/19/2009	Coastal Cleanup Day	Public	155	Powerhouse Park
9/19/2009	Coastal Cleanup Day	Public	186	Fletcher Cove
9/19/2009	Coastal Cleanup Day	Public	80	Lake Hodges
4/24/2010	Creek to Bay Cleanup	Public	114	Powerhouse Park
4/24/2010	Creek to Bay Cleanup	Public	57	Fletcher Cove
4/24/2010	Creek to Bay Cleanup	Public	113	Lake Hodges
4/24/2010	Creek to Bay Cleanup	Public	67	Ramona Community Park
4/24/2010	Creek to Bay Cleanup	Public	26	Ramona Trash Transfer Station

4.3.3 FUTURE EFFORTS

The San Dieguito WURMP Copermittees will continue to provide opportunities for residents and other interested parties to participate in San Dieguito WURMP activities. Documents and other information will be posted on the Project Clean Water website to elicit feedback. Community events and workshops will encourage involvement of all stakeholders in improving water quality throughout the San Dieguito WMA.

4.4 COLLABORATIVE LAND-USE PLANNING EFFORTS

4.4.1 INTRODUCTION

The Land-Use Planning component of the 2008 San Dieguito WURMP identifies several different activities and procedures designed to integrate watershed principles into comprehensive planning and to increase coordination of land-use planning goals and principles across San Dieguito WURMP Copermittees within the WMA. Effective land-use planning can provide important water quality protection by controlling the type and placement of activities allowed in critical areas, and by providing a framework within which site-specific control measures may be identified and imposed during land development and redevelopment activities.

4.4.2 ACTIVITIES CONDUCTED

Integrated Regional Water Management (IRWM)

The WURMP Copermittees have been active participants in the Integrated Regional Water Management (IRWM) planning process (IRWMPP). The IRWM Plan provides a mechanism for coordinating, refining and integrating existing planning efforts within a comprehensive, regional context; identifying specific regional and watershed-based priorities for implementation projects; and providing funding support for the plans, programs, projects, and priorities of existing agencies and stakeholders. Participation in the IRWMPP has already led to funding approval for a number of BMP (Best Management Practice) installation projects that will benefit the WMA by reducing runoff.

Quality of Life Funding Strategy

The County of San Diego has been invited to participate in SANDAG's Quality of Life Funding Strategy, and asked to take the lead on the Water Quality Enhancement Element. Based upon past analysis from SANDAG's Regional Comprehensive Plan (RCP), it has been determined that the region lacks a long-term and sustainable funding source for different areas of infrastructure, including stormwater. The County has worked collaboratively with other Copermittees, as well as interested regional stakeholders, to explore a variety of funding options, conduct a regional needs assessment, and help establish funding priorities related to water quality. This is an ongoing effort that currently has a vision through 2012.

4.4.3 FUTURE EFFORTS

In FY 2011, the Copermittees will continue to participate in the IWRMP process, and the expenditure of grant money and implementation of BMP projects will begin. Monitoring the effectiveness and maintenance requirements of the BMPs during the lifecycle of the grant will allow for the development of recommendations for future use by the Copermittees.

The San Dieguito WURMP Copermittees remain committed to encouraging collaborative, watershed-based land-use planning in their jurisdictional planning departments. The Copermittees will continue to work together to seek additional means of collaboration in this area.

4.5 5-YEAR STRATEGIC PLAN

4.5.1 NEW WATERSHED ACTIVITIES

Proposed watershed activities Implementation Sheets can be found in **Appendix B**. New activity information includes a description of how each activity was selected, and how the activities are expected to abate sources and reduce pollutant discharges that may be causing the identified HPWQPs in the WMA.

Each activity on the WMA activities list is fully described in an Activity Implementation Sheet and includes the following information:

1. A description of the activity;
2. A time schedule for implementation of the activity, including key milestones;
3. An identification of the specific responsibilities of WMA Copermittees in completing the activity;
4. A description of how the activity will address the identified HPWQPs of the WMA;
5. A description of how the activity is consistent with the collective watershed strategy;
6. A description of the expected benefits of implementing the activity; and
7. A description of how implementation effectiveness will be measured.

The San Dieguito WURMP Copermittees will implement identified WMA activities pursuant to the proposed schedule. For each Permit year, no fewer than two watershed water quality activities will be in an active implementation phase. A watershed water quality activity is in an active implementation phase when significant pollutant load reductions, source abatement, or other quantifiable benefits to discharge or receiving water quality can reasonably be established in relation to the WMA's HPWQPs. Watershed water quality activities that are capital projects are in active implementation for the first year of implementation only.

See the Updated 5-Year Strategic Plan below for specific information about the implementation schedule for these new watershed activities.

4.5.2 UPDATED 5-YEAR STRATEGIC PLAN

This section describes the results of the Collective Watershed Strategy process described in the 2008 San Dieguito WURMP. The strategy was specifically applied at the HA level in an effort to focus the Copermittees' activities at a scale where actions and results can be reasonably measured.

To reiterate, the basic strategy applied was to first identify (where sufficient data is available) water quality problems. From those water quality problems, the Copermittees reviewed water quality data and used best professional judgment to determine the HPWQPs in each HA.

The second step was to identify the sources that are most likely to contribute (having the highest TTWQ ratings) to the High HPWQPs for each HA-HPWQP combination in the WMA. Based on the available data, the Copermittees made appropriate management decisions on which watershed water quality and education activities to implement in the WMA.

Where sufficient data was not available to make a determination about the state of water quality in an HA, the San Dieguito WURMP Copermittees used available information to identify where additional water quality monitoring may be conducted to effectively determine the level of water quality problems.

The Updated 5-Year Strategic Plan presented at the end of this section is intended to supersede earlier versions presented in the 2008 San Dieguito WURMP and the FY 2008 and FY 2009 WURMP Annual Reports.

Table 4-10 5-Year Strategic Plan

Water Quality Activity/Project Name		Jurisdiction(s)	Watershed Priorities		Implementation Schedule			
			Bacteria	Nutrients	FY 2010	FY 2011	FY 2012	Future Fiscal Year(s)
SDG-WQA2	Land Acquisitions	COUNTY	X		WQI	WQI	WQI	WQI
SDG-WQA3	San Dieguito Watershed Municipal Rain Barrel Installation and Downspout Disconnects	SD	X		WQI	Completed – Will no longer be reported		
SDG-WQA4	Coastal Cleanup Day Sponsorship	SD	X		WQI	WQI	WQI	WQI
SDG-WQA5	Sediment and Peak Flow Controls #1	SD	X	X	On hold	P	-	-
SDG-WQA6	Sediment and Peak Flow Controls #2	SD	X	X	Project on hold			
SDG-WQA10	Targeted Inspections (formerly Targeted Restaurant Facility Inspections)	SD	X	X	WQI	WQI	Completed	
SDG-WQA11	Bernardo Center Drive Trash Segregation BMP	SD	X		P	I	WQI	-
SDG-WQA13	ILACSD Trash Cleanup Sponsorship	SD	X		WQI	WQI	WQI	WQI
SDG-WQA14	Park and Open Space Irrigation and Controllers	DM	Completed – Will no longer be reported					
SDG-WQA15	Median Irrigation System Replacement	DM	Completed – Will no longer be reported					
SDG-WQA16	Pet Waste Bag Dispenser Program	SD	X		WQI	Completed – Will no longer be reported		
SDG-WQA17	Targeted Restaurant Facility Inspections and Outreach	ESC/SB/DM	X	X	WQI	WQI	WQI	WQI
SDG-WQA18	Stormwater Quality Master Plans for Special Drainage Fee Areas	COUNTY	X	X	P	WQI	A	A
SDG-WQA19	Pet Waste Bag Dispenser Program in County Parks	COUNTY	X		WQI	WQI	WQI	WQI
SDG-WQA20	Outdoor Water Conservation Rebate Program	SD	X	X	P	I	I	WQI
SDG-WQA21	Median Sweeping Pilot Study	SD	Completed – Will no longer be reported					
SDG-WQA22	City of San Diego <i>Strategic Plan for Watershed Activity Implementation</i>	SD	X	X	I	I	I	I
SDG-WQA23	Ramona County Library Project	COUNTY	X	X	WQI	-	-	-
SDG-WQA24	San Dieguito River Volunteer Clean Up Event	COUNTY	X	X	Not implemented – Will no longer be reported			
SDG-WQA25	Rancho Bernardo Library Limited Low Flow Storm Drain Inlet Multi-Pollutant Treatment	SD	X	X	P	P	P	P, WQI
SDG-WQA26	Residential Rain Barrel Subsidies & Distribution	COUNTY	X	X	P	WQI	WQI	WQI

Table 4-10 5-Year Strategic Plan - Continued

Education Activity/Project Name		Jurisdiction(s)	Watershed Priorities		Implementation Schedule			
			Bacteria	Nutrients	FY 2010	FY 2011	FY 2012	Future Fiscal Year(s)
SDG-WQEA1	Residential Water Conservation Outreach	DM/SB	X	X	P	WE	-	-
SDG-WQEA2	LID and Watershed Planning Education	COUNTY/DM	Completed – Will no longer be reported					
SDG-WQEA3	Public Service Announcements: <i>Karma, Karma Second Chance, Karma Tourist</i>	SD	X		E	-	-	-
SDG-WQEA6	Community-Based Social Marketing Outreach Pilot Project	SD	X		WE	Completed – Will no longer be reported		
SDG-WQEA8	Erosion and Sediment Control Poster	SD	X		E	Completed – Will no longer be reported		
SDG-WQEA9	Restaurant Best Management Practices Booklet	SD	X		E	Completed – Will no longer be reported		
SDG-WQEA10	San Dieguito River Watershed Brochure	SD	X	X	P	P	WE	-
SDG-WQEA11	Focused Outreach to the Equestrian Community	ESC/COUNTY	X	X	WE	WE	WE	-

WQI = Watershed Water Quality Activity Implementation (Active Implementation)
I = Watershed Water Quality Activity Implementation (No WURMP Credit)
A = Watershed Activity Assessment (No WURMP Credit)
P = Watershed Activity Planning (No WURMP Credit)
WE = Watershed Education Activity (Active Implementation)

E = Watershed Education Activity (No WURMP Credit)
PP = Watershed Public Participation Activity
M = Water Quality Monitoring Activity (No WURMP Credit)
S = Source ID/Characterization Activity (No WURMP Credit)

This page intentionally left blank
for reproduction purposes

5 EFFECTIVENESS ASSESSMENT

The Municipal Permit requires that the effectiveness of the WURMP program and activities be assessed on an annual basis. The purpose of the assessment is to determine if the management and implementation of the program is achieving its goals and objectives, to assess the effectiveness of the activities conducted to meet those goals and objectives, and to identify areas that may need improvement. This report section is written pursuant to the requirements of Section J.2.i of the Municipal Permit, and reports on the activities planned and implemented during FY 2010.

5.1 ASSESSMENT OF OVERALL WURMP EFFECTIVENESS

Activities collaborated upon and selected by the San Dieguito WURMP Copermittees address the overall goal of the WURMP by focusing on the HPWQPs within the WMA.

As set forth in the Municipal Permit and outlined in the 2008 San Dieguito WURMP, the following minimum permit requirements (Level 1 Outcomes) are tracked annually to demonstrate permit compliance. This table describes whether or not compliance was demonstrated by the San Dieguito WURMP Copermittees in FY 2010, and where in this report required compliance points are fulfilled or described.

Table 5-1 Permit Component Compliance (Level 1)

Targeted Outcome	Measure	Report Section
Update any watershed maps.	Not Applicable	1
Update assessments and analyses of the WMA’s current and past applicable water quality data, reports, analyses, and other information, including identification of the watershed’s water quality problems and HPWQP(s) during the reporting period.	Completed	2
Identify the likely sources, pollutant discharges, and/or other factors causing the HPWQPs within the WMA.	Completed	3
Update list of potential Watershed Water Quality Activities.	Completed	4
Identify and describe the Watershed Water Quality Activities implemented by each Copermittee during the reporting period.	Completed	4
Update list of potential Watershed Education Activities.	Completed	4
Identify and describe the Watershed Education Activities implemented by each Copermittee during the reporting period.	Completed	4
Describe the public participation mechanisms used during the reporting period and the parties that were involved.	Completed	4
Describe Copermittee collaboration efforts including meeting as the San Dieguito WMA WURMP Workgroup.	Completed	1
Describe the efforts implemented to encourage collaborative, watershed-based, land-use planning.	Completed	4
Describe all TMDL activities implemented for each approved TMDL in the watershed. The description shall include: any additional source identification information; the number, type, location, and other relevant information about BMP implementation; updates in the BMP implementation prioritization and schedule; an assessment of the effectiveness of the BMP Implementation Plan; and a discussion of the progress to date meeting the TMDL numeric targets and WLAs, which incorporates the results of the effectiveness assessment, compliance monitoring, and an evaluation of additional efforts needed to date.	Not Applicable	N/A

As shown in **Table 5-1**, the San Dieguito WURMP Copermittees were in compliance with all Level 1 WURMP related Municipal Permit requirements during FY 2010.

5.1.1 ACTIVITIES ASSESSMENT

The effectiveness of each Watershed Water Quality and Watershed Education Activity is assessed on an annual basis. Data are typically collected and assessed during or after activity implementation to determine effectiveness in achieving targeted outcomes. Copermittees collaborated on and selected activities that would address high level HPWQPs not only within each jurisdiction, but throughout the WMA. In some cases, these activities can reach a regional audience. The following is a description of the activities planned and implemented during this timeframe.

Each activity summary sheet in **Appendix B** identifies specific targeted outcomes (Levels 1-6 – as described in **Table 5-2** below) that will be assessed, and the measures and methods that will be used to gauge activity effectiveness. Each watershed activity is unique and its impacts on water quality are equally distinctive. As a result, measurable outcomes do not always follow a linear path (assessing effectiveness at each of the six outcome levels). For example, while a capital project may result in pollutant load reductions (Level 4), it may not have any bearing on changes in the awareness or behavior of a target population (Levels 2 and 3). It is also unlikely that implementation of an individual watershed activity would be measurable at Levels 5 or 6.

Table 5-2 Outcome Levels: Levels 1-6

Outcome Level		Anticipated Outcome of Activity	Effectiveness Metrics or Methods
1	Permit Compliance	Compliance with Permit requirement to implement Watershed Activities	Number of applicable Watershed Activities implemented per jurisdiction per year.
2	Changes in Attitudes	Increased awareness among the targeted audience regarding sources of pollutants and the need to reduce pollutant discharges/exposure.	Pre and post implementation surveys targeted audience attitudes.
3	Behavioral Change	Reduction in targeted audience behaviors that generate pollutants. Increase in targeted audience behaviors that support watershed health and water quality.	Pre and post implementation observations of targeted audience behavior. Behavior may be directly observed/measured or inferred from observed or documented conditions.
4	Load Reductions	Identification of sources and quantification of baseline loadings. Reduced volume of flow and/or reduced concentration of priority pollutants in dry and wet weather runoff.	Use permit required source identification monitoring data for targeted sources. If necessary, supplement with a special study.
5	Discharge Quality	Reduced volume of flow and/or concentration of priority pollutants in dry and wet weather discharges at storm drain outfalls.	Use permit required outfall and dry weather monitoring data down gradient of targeted sources. If necessary, supplement with a special study.
6	Receiving Water Quality	Reduced frequency of receiving water violations of WQOs for targeted priority pollutants.	Use permit required and other available regional monitoring data down gradient of targeted sources. If necessary, supplement with a special study.

During FY 2010, there were twelve (12) activities in the active implementation phase, ten (10) of which focused on water quality and two (2) focused on education. These activities addressed the HPWQPs in the San Dieguito WMA, which include bacteria and nutrients; and are the activities that the Copermittees are counting towards the minimum requirement to have two active water quality and two active education activities each year. **Tables 5-3** through **5-7** below summarize the assessments of the water quality and education activities, on a HA basis, to provide a snapshot of the overall effectiveness of the watershed activities.

In addition to the WURMP activities included in the table, the WURMP Copermittees are presenting their JURMP activities that are related to the HPWQPs in each HA. It is important to note that not all JURMP activities are included in this presentation. This year's annual reporting effort is intended to be a follow-up to the initial presentation of JURMP activities conducted by WURMP Copermittees that are relatable based on hydrologic area of implementation. For complete assessment of JURMP activities, the reader may review each WURMP Copermittees' JURMP Annual Reports.

5.2 ASSESSMENT OF TMDL BMP IMPLEMENTATION PLAN EFFECTIVENESS

At this time, there are no adopted TMDLs with implementation plans currently in effect within the San Dieguito WMA.

Table 5-3 Summary of Implemented Activities for FY 2010 – 905.1 Solana Beach Hydrologic Area (HPWQP = Bacteria)

#	Activity:	Type:	Priority Problems Addressed:	Level Outcomes:	Pollutant Load Reduction, Source Abatement or Other Benefit Derived:
-	JURMP Industrial/Commercial Inspections	Water Quality	Bacteria	Levels 1, 3 and 4	The Copermittees inspected the following business categories in the HA: Animal Facilities; Food Establishments; Golf Courses and Nurseries. Inspections with immediate corrective actions initiated are confirmed source abatement activities. Additionally, when IC/IDs are observed, immediate corrections are required to eliminate the pollutant loading.
-	JURMP MS4 Cleaning & Street Sweeping	Water Quality	Bacteria	Level 1 and 4	The Copermittees removed materials from the MS4 and by street sweeping which has a direct Load Reduction of bacteria in the HA
SDG-WQA2	Land Acquisitions	Water Quality	All	Level 4	Land acquisitions can directly benefit water quality by precluding future development in those areas acquired. There were 61.81 acres of land acquired during this fiscal year in this HA.
SDG-WQA10	Targeted Inspections	Water Quality	Bacteria	Levels 1, 3 and 4	Inspections lead to education, BMP implementation, and load-reducing effectiveness. Inspections with immediate corrective actions initiated are confirmed source abatement activities. Additionally, when IC/IDs are observed, immediate corrections are required to eliminate the pollutant loading.
SDG-WQA16	Pet Waste Bag Dispenser Program	Water Quality	Bacteria	Levels 1, 2 and 4	Reducing the amount of pet waste and educating the public on the need to cleanup after their pets will result in the reduction of pollutant loads, particularly bacteria and nutrients.
SDG-WQA17	Targeted Restaurant Facility Inspections and Outreach	Water Quality	Bacteria	Levels 1, 3 and 4	Inspections lead to education, BMP implementation, and load-reducing effectiveness. Inspections with immediate corrective actions initiated are confirmed source abatement activities. Additionally, when IC/IDs are observed, immediate corrections are required to eliminate the pollutant loading.
SDG-WQA19	Pet Waste Dispenser Program in County Parks	Water Quality	Bacteria	Levels 1, 2 and 4	No additional dispensers were added during FY 2010 to the 9 dispensers located throughout 3 parks in the County. Reducing the amount of pet waste found in parks and educating the public on the need to cleanup after their pets will result in the reduction of pollutant loads, particularly bacteria and nutrients.
SDG-WQEA11	Focused Outreach to the Equestrian Community	Water Education	All	Levels 1, 2 and 3	Focused outreach leads to education, BMP implementation, and load-reducing effectiveness. Workshops targeted the equestrian community, including manure management, composting, and erosion control. Controlling animal waste and educating the public on BMPs will result in the reduction of pollutant loads, particularly bacteria and nutrients.

Table 5-4 Summary of Implemented Activities for FY 2010 – 905.2 Hodges Hydrologic Area (HPWQP = Bacteria)

#	Activity:	Type:	Priority Problems Addressed:	Level Outcomes:	Pollutant Load Reduction, Source Abatement or Other Benefit Derived:
-	JURMP Industrial/Commercial Inspections	Water Quality	Bacteria	Levels 1, 3 and 4	The Copermittees inspected the following business categories in the HA: Animal Facilities; Food Establishments; Golf Courses and Nurseries.
-	JURMP MS4 Cleaning & Street Sweeping	Water Quality	Bacteria	Level1 and 4	The Copermittees removed materials from the MS4 and by street sweeping which has a direct Load Reduction of bacteria in the HA.
SDG-WQA2	Land Acquisitions	Water Quality	All	Level 4	Land acquisitions can directly benefit water quality by precluding future development in those areas acquired. There were 187 acres of land acquired during this fiscal year in this HA.
SDG-WQA4	California Coastal Cleanup Day Sponsorship	Water Quality	Bacteria	Levels 1 and 4	During this event 80 participants removed approximately 462 pounds of trash and debris and 75 pounds of recycling within the HA. At an estimated cost of \$5,000 spent on the cleanup within the HA, the activity efficiency was approximately \$9.31/lb.
SDG-WQA10	Targeted Inspections	Water Quality	Bacteria	Levels 1, 3 and 4	Inspections lead to education, BMP implementation, and load-reducing effectiveness. Inspections with immediate corrective actions initiated are confirmed source abatement activities. Additionally, when IC/IDs are observed, immediate corrections are required to eliminate the pollutant loading.
SDG-WQA13	ILACSD Trash Cleanup Sponsorship	Water Quality	Bacteria	Levels 1 and 4	During one event 113 participants removed 250 pounds of trash and debris and recycled 20 pounds of trash and debris. Sponsorship of this event resulted in a load reduction of 270 pounds of trash and debris. At an estimated cost of \$5,000 spent on the cleanup within the HA, the activity efficiency was approximately \$18.52/lb.
SDG-WQA16	Pet Waste Bag Dispenser Program	Water Quality	Bacteria	Levels 1, 2 and 4	Reducing the amount of pet waste and educating the public on the need to cleanup after their pets will result in the reduction of pollutant loads, particularly bacteria and nutrients.
SDG-WQA17	Targeted Restaurant Facility Inspections and Outreach	Water Quality	Bacteria	Levels 1, 3 and 4	Inspections lead to education, BMP implementation, and load-reducing effectiveness. Inspections with immediate corrective actions initiated are confirmed source abatement activities. Additionally, when IC/IDs are observed, immediate corrections are required to eliminate the pollutant loading.
SDG-WQA19	Pet Waste Dispenser Program in County Parks	Water Quality	Bacteria	Levels 1, 2 and 4	No additional dispensers were added during FY 2010 to the 9 dispensers located throughout 3 parks in the County. Reducing the amount of pet waste found in parks and educating the public on the need to cleanup after their pets will result in the reduction of pollutant loads, particularly bacteria and nutrients.
SDG-WQEA6	Community-Based Social Marketing Outreach Pilot Project	Water Education	Bacteria	Levels 1, 3 and 4	Evaluation of the effectiveness of installing pet waste bag dispensers at parks in San Diego showed that there was an 81% decrease in the number of people who did not pick up after their pet and a 60% decrease in the number of dog piles on the ground.
SDG-WQEA11	Focused Outreach to the Equestrian Community	Water Education	All	Levels 1, 2 and 3	Focused outreach leads to education, BMP implementation, and load-reducing effectiveness. Workshops targeted the equestrian community, including manure management, composting, and erosion control. Controlling animal waste and educating the public on BMPs will result in the reduction of pollutant loads, particularly bacteria and nutrients.

Table 5-5 Summary of Implemented Activities for FY 2010 – 905.3 San Pasqual Hydrologic Area (HPWQPs = Bacteria & Nutrients)

#	Activity:	Type:	Priority Problems Addressed:	Level Outcomes:	Pollutant Load Reduction, Source Abatement or Other Benefit Derived:
-	JURMP Industrial/Commercial Inspections	Water Quality	Bacteria	Levels 1, 3 and 4	The Copermittees inspected the following business categories in the HA: Food Establishments and Nurseries.
-	JURMP MS4 Cleaning & Street Sweeping	Water Quality	Bacteria	Level1 and 4	The Copermittees removed materials from the MS4 and by street sweeping which has a direct Load Reduction of bacteria and nutrients in the HA.
SDG-WQA2	Land Acquisitions	Water Quality	All	Level 4	Land acquisitions can directly benefit water quality by precluding future development in those areas acquired. No land was acquired during this fiscal year in this HA.
SDG-WQA16	Pet Waste Bag Dispenser Program	Water Quality	Bacteria	Levels 1, 2 and 4	Reducing the amount of pet waste and educating the public on the need to cleanup after their pets will result in the reduction of pollutant loads, particularly bacteria and nutrients.
SDG-WQA17	Targeted Restaurant Facility Inspections and Outreach	Water Quality	Bacteria	Levels 1, 3 and 4	Inspections lead to education, BMP implementation, and load-reducing effectiveness. Inspections with immediate corrective actions initiated are confirmed source abatement activities. Additionally, when IC/IDs are observed, immediate corrections are required to eliminate the pollutant loading.
SDG-WQE11	Focused Outreach to the Equestrian Community	Water Education	All	Levels 1, 2 and 3	Focused outreach leads to education, BMP implementation, and load-reducing effectiveness. Workshops targeted the equestrian community, including manure management, composting, and erosion control. Controlling animal waste and educating the public on BMPs will result in the reduction of pollutant loads, particularly bacteria and nutrients.

Table 5-6 Summary of Implemented Activities for FY 2010 – 905.4 Santa Maria Hydrologic Area (HPWQP = Bacteria)

#	Activity:	Type:	Priority Problems Addressed:	Level Outcomes:	Pollutant Load Reduction, Source Abatement or Other Benefit Derived:
-	JURMP Industrial/Commercial Inspections	Water Quality	Bacteria	Levels 1, 3 and 4	The Copermittees inspected the following business categories in the HA: Animal Facilities; Food Establishments and Nurseries.
-	JURMP MS4 Cleaning & Street Sweeping	Water Quality	Bacteria	Levels 1 and 4	The Copermittees removed materials from the MS4 and by street sweeping which has a direct Load Reduction of bacteria in the HA.
SDG-WQA2	Land Acquisitions	Water Quality	All	Level 4	Land acquisitions can directly benefit water quality by precluding future development in those areas acquired. There were 13.51 acres of land acquired during this fiscal year in this HA.
SDG-WQA19	Pet Waste Dispenser Program in County Parks	Water Quality	Bacteria	Levels 1, 2 and 4	No additional dispensers were added during FY 2010 to the 9 dispensers located throughout 3 parks in the County. Reducing the amount of pet waste found in parks and educating the public on the need to cleanup after their pets will result in the reduction of pollutant loads, particularly bacteria and nutrients.
SDG-WQA23	Ramona County Library Project	Water Quality	All	Levels 1 and 4	The new facility utilizes LID design applied throughout the site. Direct benefits for the watershed include reduction of runoff from impervious surfaces, reuse of runoff for drought tolerant irrigation, and filtering of runoff through bio-swales to decrease the amount of pollutants leaving the facility.
SDG-WQEA11	Focused Outreach to the Equestrian Community	Water Education	All	Levels 1, 2 and 3	Focused outreach leads to education, BMP implementation, and load-reducing effectiveness. Workshops targeted the equestrian community, including manure management, composting, and erosion control. Controlling animal waste and educating the public on BMPs will result in the reduction of pollutant loads, particularly bacteria and nutrients.

Table 5-7 Summary of Implemented Activities for FY 2010 – 905.5 Santa Ysabel Hydrologic Area (HPWQP = Bacteria)

#	Activity:	Type:	Priority Problems Addressed:	Level Outcomes:	Pollutant Load Reduction, Source Abatement or Other Benefit Derived:
-	JURMP MS4 Cleaning & Street Sweeping	Water Quality	Bacteria	Level 1 and 4	The Copermittees removed materials from the MS4 and by street sweeping which has a direct Load Reduction of bacteria in the HA.
SDG-WQA2	Land Acquisitions	Water Quality	All	Level 4	Land acquisitions can directly benefit water quality by precluding future development in those areas acquired. No land was acquired during this fiscal year in this HA.
SDG-WQEA11	Focused Outreach to the Equestrian Community	Water Education	All	Levels 1, 2 and 3	Focused outreach leads to education, BMP implementation, and load-reducing effectiveness. Workshops targeted the equestrian community, including manure management, composting, and erosion control. Controlling animal waste and educating the public on BMPs will result in the reduction of pollutant loads, particularly bacteria and nutrients.

6 CONCLUSIONS AND PROGRAM IMPROVEMENTS

6.1 CONCLUSIONS

During FY 2010, the San Dieguito WURMP Copermittees strove to address the overall goal of the WURMP—to have a positive impact on the water quality of the San Dieguito WMA—by focusing on its HPWQPs. To target the identified pollutants, the Copermittees employed the strategy articulated in their 2008 San Dieguito WURMP, which strives to link identified water quality problems to their potential sources. Based on the Water Quality Assessment in Section 2, the Copermittees determined that the HPWQPs in the San Dieguito WMA are bacteria/pathogens in all HAs and nutrients in the San Pasqual HA. It should be noted that the HPWQPs have not changed from previous assessments even though this year’s evaluation included the first year of expanded monitoring mandated under the new Municipal Permit.

The San Dieguito WMA consists of five individual HAs or watersheds. Therefore, to effectively address the WMA’s water quality issues, the San Dieguito WURMP Copermittees identified and then evaluated them for likely sources at the individual HA level (please refer to **Tables 3-2** through **3-6**). As a result of examining each HA in the WMA, the Copermittees drew some general conclusions: a) water quality problems appear to be well characterized in the receiving waters and consistent throughout the WURMP and Regional Monitoring Programs; b) water quality and education activities appear to be targeting suspected sources of the HPWQPs and are mostly viewed as effective at reducing the impacts of the sources. Based on this analysis, the San Dieguito WURMP Copermittees focused their activities on the following suspected priority sources: eating/drinking establishments; animal facilities; botanical/zoological gardens; landscaping; auto/mechanical repair, maintenance fueling, or cleaning; and Publicly Owned Treatment Works (POTWs).

The San Dieguito WURMP Copermittees then developed and implemented watershed water quality and education activities to address these HPWQPs and their sources. **Tables 4-1** and **4-2** summarize the activities implemented during the reporting period. However, because there is currently no definitive link between identified water quality sources and their impacts on water quality, it is difficult to quantitatively assess the activities’ effect on overall water quality. Despite there being no currently established direct connection between the potential sources and water quality issues, the San Dieguito WURMP Copermittees undertook a qualitative assessment of their water quality activities, which determined that they were in compliance with all Level 1 Municipal Permit requirements (e.g., identifying likely pollutant sources, updating water quality and education activities, updating assessments and analyses, etc.). Moreover, twelve (12) activities were implemented, ten (10) of which focused on water quality and two (2) on education. All of these activities targeted the priority pollutants in the San Dieguito WMA, which are bacteria and nutrients. The San Dieguito WURMP Copermittees satisfied the Permit requirement by having at least two water quality activities and two education activities in active implementation during the reporting period.

In an effort to report on the Copermittees’ actions to improve water quality in the WMA, the Copermittees continued the process to collect and report on JURMP and WURMP activities performed on an HA basis. The Copermittees believe that it is an important step toward integrating the activities and reporting to best assess and plan for activities that address the identified HPWQPs on an HA basis.

The San Dieguito WURMP Copermittees have responded to meet the challenges of implementing the new requirements outlined in the Municipal Permit as they continue to refine and improve their WURMP program. In addition to evaluating the WURMP program, the Copermittees worked diligently at a regional level with other WMA working groups during the reporting period to collaborate for consistent implementation of the WURMPs across the region. Furthermore, the San Dieguito WURMP Copermittees will continue to implement the activities described in Section 4 of this document in future reporting periods.

6.2 PROGRAM IMPROVEMENTS

The lack of water quality data directly related to sources makes true effectiveness assessment of the activities difficult. Without the data, the Copermittees are limited to qualitative assessments, which contain substantial assumptions linking the sources to the water quality problems. In order to work toward more effective management of water quality in the WMA, the San Dieguito WURMP Copermittees must further develop and characterize source inventories and research existing data related to the suspected sources, or collect data unique to the WMA. In doing so, the linkage between sources and pollutants may be more directly confirmed, allowing the Copermittees to justifiably prioritize the sources for activity development.

Moreover, once inventories are developed specific to the HAs, linkages need to be established between the suspected sources and water quality. This may be accomplished through a combination of research, analysis of existing data, and monitoring. Significant source identification studies have been undertaken in southern California, which may provide relevant data linking some of the suspected sources to water quality problems in the WMA. In some studies, pollutant loading estimates specific to sources and/or land uses have been developed. There are also substantial amounts of data collected in the jurisdictional dry weather monitoring programs that may provide insight into specific sources, since this program is designed to detect illicit discharges and connections. To date, analysis of this data has been performed only at the macro level, i.e., evaluating the data from the larger watershed level. Analysis of the data at the HA level may provide useful information to the 2008 San Dieguito WURMP.

In many cases, water quality data may be unavailable to accurately characterize loading from suspected sources. Where there is sufficient evidence of impacts to water quality from suspected sources, the Copermittees may need to collect water quality data to characterize the impacts. Without this confirmatory step, further assumptions related to effectiveness may be unsubstantiated. With confirmed linkages between the sources and the water quality problems, watershed Copermittees can prioritize activities and provide true, effective assessments of them and their impacts on water quality.

To further support the goal of the 2008 San Dieguito WURMP—to determine and target the sources contributing to the HPWQPs – the Copermittees will continue to implement the following complementary objectives:

- Develop activities to assess and improve water quality within the WMA;
- Integrate watershed principles into land use planning;
- Enhance public understanding of water pollution sources; and
- Encourage and develop stakeholder participation.

REFERENCES

San Diego County Municipal Copermittees 2009-2010 Urban Runoff Monitoring Final Report, Weston, January 2011.

San Dieguito Watershed Urban Runoff Management Program, San Dieguito WURMP Copermittees, March 2008

San Dieguito Watershed Urban Runoff Management Program Annual Report, San Dieguito WURMP Copermittees, January 2009

San Dieguito Watershed Urban Runoff Management Program Annual Report, San Dieguito WURMP Copermittees, January 2010

This page intentionally left blank
for reproduction purposes