

# UNIFIED ANNUAL PROGRESS REPORT PROGRAM EFFECTIVENESS ASSESSMENT (San Diego Region)

2004-2005 Reporting Period



November 15, 2005



A COOPERATIVE PROJECT OF THE COUNTY OF  
ORANGE, THE CITIES OF ORANGE COUNTY, AND  
THE ORANGE COUNTY FLOOD CONTROL DISTRICT

TABLE OF CONTENTS

---

2004-2005 Unified Annual Progress Report

Signed Certified Statement  
Executive Summary  
Acronyms

C-1.0 INTRODUCTION..... C-1-1  
    C-1.1 Annual Reports ..... C-1-1  
    C-1.2 Purpose and Organization of Reports..... C-1-1  
    C-1.3 Background..... C-1-2  
        C-1.3.1 Clean Water Act ..... C-1-2  
        C-1.3.2 Municipal NPDES Stormwater Permits..... C-1-2  
        C-1.3.3 Drainage Area Management Plan (DAMP)..... C-1-3  
    C-1.4 Major Program Accomplishments..... C-1-4  
    C-1.5 Effectiveness Assessment Strategy..... C-1-4  
        C-1.5.1 Assessment Measures..... C-1-5  
        C-1.5.2 Effectiveness Assessment..... C-1-6

C-2.0 PROGRAM MANAGEMENT ..... C-2-1  
    C-2.1 Introduction..... C-2-1  
    C-2.2 Permittee Responsibilities..... C-2-1  
        C-2.2.1 NPDES Permit Responsibilities..... C-2-1  
        C-2.2.2 Agreement for Program Implementation..... C-2-2  
        C-2.2.3 NPDES Permit Reporting Requirements ..... C-2-3  
    C-2.3 Management Activities ..... C-2-3  
        C-2.3.1 Management Framework..... C-2-3  
        C-2.3.2 Management Framework-Program Implementation..... C-2-6  
    C-2.4 Orange County Stormwater Program Representation ..... C-2-6  
    C-2.5 Fiscal Analysis ..... C-2-8  
        C-2.5.1 Shared Costs..... C-2-8  
        C-2.5.2 Individual Costs ..... C-2-9  
        C-2.5.3 Funding Sources..... C-2-10

C-3.0 PLAN DEVELOPMENT..... C-3-1  
    C-3.1 Introduction..... C-3-1  
    C-3.2 Planning Process ..... C-3-1  
    C-3.3 Assessment..... C-3-1  
        C-3.3.1 Investigations (Environmental Conditions) ..... C-3-2  
        C-3.3.2 Assessments of BMP Program Effectiveness..... C-3-3  
        C-3.3.3 Assessments of BMP Effectiveness..... C-3-3  
    C-3.4 Planning ..... C-3-6  
    C-3.5 Implementation ..... C-3-6  
        C-3.5.1 BMP Retrofitting Opportunities..... C-3-7

## TABLE OF CONTENTS

---

C-4.0	LEGAL AUTHORITY .....	C-4-1
C-4.1	Introduction .....	C-4-1
C-5.0	MUNICIPAL ACTIVITIES.....	C-5-1
C-5.1	Introduction .....	C-5-1
C-5.2	Baseline BMPs .....	C-5-1
C-5.2.1	Trash and Debris Controls (formerly Litter Control).....	C-5-1
C-5.2.2	Solid Waste Collection/Recycling .....	C-5-3
C-5.2.3	Drainage Facility Maintenance.....	C-5-3
C-5.2.4	Catch Basin Stenciling .....	C-5-4
C-5.2.5	Street Sweeping .....	C-5-4
C-5.2.6	Household Hazardous Waste Collection.....	C-5-4
C-5.2.7	Emergency Spill Response .....	C-5-5
C-5.3	Municipal Activities Program.....	C-5-6
C-5.3.1	Municipal Facility BMP Implementation.....	C-5-6
C-5.3.2	Municipal Facility Prioritization.....	C-5-7
C-5.4	Integrated Pest Management, Pesticides and Fertilizer .....	C-5-7
C-5.4.1	Fertilizer Management .....	C-5-8
C-5.4.2	Pesticide Management.....	C-5-10
C-5.4.3	Integrated Pest Management.....	C-5-10
C-5.4.4	Collaboration with the State of California Department of Pesticide Regulation. ....	C-5-11
C-5.4.5	Assistance from the University of California Cooperative Extension Program.....	C-5-12
C-5.5	Program Training and Outreach.....	C-5-13
C-6.0	PUBLIC EDUCATION.....	C-6-1
C-6.1	Introduction .....	C-6-1
C-6.2	Program Background .....	C-6-1
C-6.3	Program Implementation.....	C-6-3
C-6.3.1	Countywide Efforts.....	C-6-3
C-6.3.2	Principal Permittee Efforts.....	C-6-19
C-6.3.3	Watershed Specific Public Education.....	C-6-21
C-6.3.4	Business Specific Education.....	C-6-22
6.4	Public Awareness Surveys .....	C-6-23
C-6.4.1	Future Program Effectiveness Assessments.....	C-6-24
C-7.0	NEW DEVELOPMENT .....	C-7-1
C-7.1	Introduction .....	C-7-1
C-7.2	Program Development .....	C-7-1
C-7.2.1	First and Second Permit Terms .....	C-7-1
C-7.2.2	Third Term Permit .....	C-7-1
C-7.3	Program Implementation.....	C-7-2
C-7.4	Program Training and Outreach.....	C-7-3
C-8.0	CONSTRUCTION .....	C-8-1
C-8.1	Introduction .....	C-8-1

## TABLE OF CONTENTS

---

C-8.2	Program Development .....	C-8-1
C-8.3	Program Implementation.....	C-8-2
C-8.4	Program Training and Outreach.....	C-8-3
C-9.0	EXISTING DEVELOPMENT .....	C-9-1
C-9.1	Introduction.....	C-9-1
C-9.2	Program Development .....	C-9-1
C-9.3	Program Implementation.....	C-9-2
C-9.3.1	Industrial and Commercial Facility BMP Implementation.....	C-9-3
C-9.3.2	Industrial and Commercial Facility Prioritization .....	C-9-3
C-9.3.3	Enforcement.....	C-9-4
C-9.3.4	Food Facility Inspection Program.....	C-9-5
C-9.4	Program Training and Outreach.....	C-9-6
C-10.0	ILLEGAL DISCHARGES/ILLICIT CONNECTIONS.....	C-10-1
C-10.1	Introduction .....	C-10-1
C-10.2	Program Development .....	C-10-1
C-10.3	Illicit Connections .....	C-10-1
C-10.4	Detection/Elimination of Illegal Discharges .....	C-10-2
C-10.4.1	Tustin Area Spill Control Demonstration (TASC) Project .....	C-10-4
C-10.5	ID/IC Dry Weather Monitoring .....	C-10-4
C-10.6	Program Training and Outreach.....	C-10-5
C-11.0	WATER QUALITY MONITORING SUMMARY AND ANALYSES.....	C-11-1
C-11.1	Introduction .....	C-11-1
C-11.2	Program Development .....	C-11-2
C-11.2.1	Pre-NPDES Water Quality Monitoring.....	C-11-2
C-11.2.2	First Term Permit Monitoring Under Order 90-38.....	C-11-2
C-11.2.3	Second Term Permit Monitoring Under Order 96-03 .....	C-11-3
C-11.2.4	Third Term Permit Monitoring Under Order R9-2002-0001.....	C-11-4
C-11.3	Monitoring Approach .....	C-11-5
C-11.4	Description of Monitoring Procedures .....	C-11-6
C-11.4.1	Urban Stream Bioassessment .....	C-11-6
C-11.4.2	Long-Term Mass Loading.....	C-11-6
C-11.4.3	Coastal Stormdrain Outfall Monitoring.....	C-11-9
C-11.4.4	Ambient Coastal Receiving Water Monitoring.....	C-11-11
C-11.4.5	Dry Weather Reconnaissance.....	C-11-11
C-11.5	Methods of Data Analysis.....	C-11-12
C-11.5.1	Comparison to Water Quality Guidance .....	C-11-12
C-11.5.2	Toxicity Testing.....	C-11-13
C-11.5.3	Bioassessment and Index of Biotic Integrity (IBI).....	C-11-15
C-11.5.4	Evaluation of Triad Data.....	C-11-16
C-11.5.5	Mass Load Calculations .....	C-11-19
C-11.5.6	Evaluation of Coastal Stormdrain Water Data .....	C-11-20
C-11.5.7	Evaluation of Ambient Coastal Receiving Water Data.....	C-11-21
C-11.5.8	Prioritization of Dry Weather Sites for Source Identification.....	C-11-22
C-11.6	Analysis of Data .....	C-11-22

## TABLE OF CONTENTS

---

C-11.6.1 Urban Stream Bioassessment .....	C-11-22
C-11.6.2 Long-Term Mass Loading.....	C-11-25
C-11.6.3 Coastal Stormdrain Outfall Monitoring.....	C-11-26
C-11.6.4 Ambient Coastal Receiving Water Monitoring.....	C-11-29
C-11.6.5 Dry Weather Reconnaissance.....	C-11-30
C-11.6.6 Dana Point Harbor Monitoring.....	C-11-32
C-11.6.6 Additional Toxicity Analyses.....	C-11-33
C-11.6.7 Quality Assurance.....	C-11-34
C-11.6.8 Summary .....	C-11-34
C-12.0 WATERSHEDS .....	C-12-1
C-12.1 Introduction .....	C-12-1
C-13.0 RECOMMENDED PROGRAM CHANGES .....	C-13-1
C-13.1 Introduction .....	C-13-1

### Tables

Table C-1.1 Permit History.....	C-1-7
Table C-1.2 Hierarchy of Indicators (USEPA, 1998).....	C-1-7
Table C-1.3 Headline Measures.....	C-1-8
Table C-2.1 Total Capital Costs .....	C-2-11
Table C-2.2 Total Operations and Maintenance Costs .....	C-2-12
Table C-3.1 Comparison of Water Quality Planning Process .....	C-3-8
Table C-5.1 Solid Waste Collection .....	C-5-14
Table C-5.2 Drainage Facility Maintenance.....	C-5-15
Table C-5.3 Catch Basin Stenciling.....	C-5-16
Table C-5.4 Volume of Street Sweeping Material Collected .....	C-5-17
Table C-5.5 2004-05 Integrated Waste Management Household Hazardous Waste Program Collection Totals.....	C-5-18
Table C-5.6 Used Oil Grant Participation .....	C-5-20
Table C-5.7 BMP Implementation.....	C-5-21
Table C-5.8 Countywide Permittee's Fixed Facility Inventory and Prioritization.....	C-5-22
Table C-5.9 2004-05 Fertilizers and Amounts Applied by Permittee.....	C-5-23
Table C-5.10 Fertilizers and Amounts Applied by Permittees .....	C-5-29
Table C-5.11 Calibration of Pesticide Application Equipment .....	C-5-30
Table C-6.1 Print Advertising Impressions .....	C-6-25
Table C-6.2 Radio Advertising .....	C-6-28
Table C-6.3 Bus Advertising .....	C-6-28
Table C-6.4 Bus Shelter Advertising.....	C-6-29
Table C-6.5 Theater Advertising .....	C-6-29
Table C-6.6 Cable Television Advertising .....	C-6-30
Table C-6.7 Cable Television Advertising by Region.....	C-6-30
Table C-6.8 Advertising Plan for Santa Ana and San Diego Regions .....	C-6-31
Table C-6.9 Advertising Impressions by City .....	C-6-32
Table C-6.10 Impressions Created by the Non-Media Outreach .....	C-6-33

## TABLE OF CONTENTS

---

Table C-6.11	Impressions Created by School Outreach.....	C-6-34
Table C-6.12	Countywide Educational Materials .....	C-6-35
Table C-6.13	Impressions Created by Each Permittee.....	C-6-36
Table C-6.14	Total Impressions Created by Public Education Program .....	C-6-37
Table C-7.1	Historical WQMPs and Acreage Covered .....	C-7-5
Table C-7.2	Structural Source Control BMPs Implemented 2004-05 Reporting Period .....	C-7-6
Table C-7.3	Non-Structural Source Control BMPs Implemented 2004-05 Reporting Period .....	C-7-8
Table C-8.1	Construction Site Inspections, Comparison of 2002-03, 2003-04 and 2004-05.....	C-8-5
Table C-8.2	Inspection Results, Comparison of 2002-03, 2003-04 and 2004-05.....	C-8-6
Table C-8.3	Enforcement Action Taken, Comparison of 2002-03, 2003-04 and 2004-05.....	C-8-7
Table C-9.1	Industrial Inventory and BMP Implementation, Comparison of 2002-03, 2003-04 and 2004-05 .....	C-9-8
Table C-9.2	Commercial Inventory and BMP Implementation, Comparison of 2002-03, 2003-04 and 2004-05.....	C-9-9
Table C-9.3	Countywide Permittee’s Industrial Inventory and Prioritization, Comparison of 2002-03, 2003-04 and 2004-05.....	C-9-10
Table C-9.4	Countywide Permittee’s Commercial Inventory and Prioritization, Comparison of 2002-03, 2003-04 and 2004-05 .....	C-9-11
Table C-9.5	Permittee Enforcement Actions for Industrial Facilities, Comparison of 2002-03, 2003-04 and 2004-05.....	C-9-12
Table C-9.6	Permittee Enforcement Actions for Commercial Facilities, Comparison of 2002-03, 2003-04 and 2004-05.....	C-9-13
Table C-9.7	Food Facility Inspections 2004-05 .....	C-9-14
Table C-10.1	Source of Complaints/Incidents, Comparison of 2002-03, 2003-04 and 2004-05.....	C-10-9
Table C-10.2	Permittee Enforcement Actions, Comparison of 2002-03, 2003-04 and 2004-05.....	C-10-10
Table C-10.3	Types of Materials .....	C-10-11
Table C-11.1	Applicable Water Quality Guidance for the Protection of Aquatic Life .....	C-11 <sup>1</sup>
Table C-11.2	Applicable Sediment Quality Guidelines for the Protection of Aquatic Life.....	C-11 <sup>1</sup>
Table C-11.3	IBI Metrics Used to Characterize Communities.....	C-11 <sup>1</sup>
Table C-11.4	IBI Scoring Ranges for the Seven Metrics in the IBI Values .....	C-11 <sup>1</sup>
Table C-11.5	Decision Framework for Interpreting Triad Results .....	C-11 <sup>1</sup>
Table C-11.6	Stream Bioassessment Monitoring Sites.....	C-11 <sup>1</sup>
Table C-11.7	Toxicity Test Results for June 2004/05 Bioassessment Sampling .....	C-11 <sup>1</sup>
Table C-11.8	Aqueous Chemistry During Bioassessment Samplings.....	C-11 <sup>1</sup>
Table C-11.9	Mass Load Summary: 2004/05.....	C-11 <sup>1</sup>
Table C-11.10	Event Mean Concentrations from Sampled Storms .....	C-11 <sup>1</sup>
Table C-11.11	Aqueous Chemistry Mass Emission Sites in the San Diego Region...	C-11 <sup>1</sup>
Table C-11.12	Summary of Exceedances of CTR Criteria at Mass Loading Stations.	C-11 <sup>1</sup>
Table C-11.13	Toxicity Testing Results for Mass Loading Stations .....	C-11 <sup>1</sup>

## TABLE OF CONTENTS

---

Table C-11.14	Proportion of All Samples Exceeding AB411 Standards .....	C-11 <sup>1</sup>
Table C-11.15	Volume of Flow in Cubic Feet per Second at Coastal Stormdrain sites	C-11 <sup>1</sup>
Table C-11.16a	Coastal Stormdrain Site Ranked AB411 Season .....	C-11 <sup>1</sup>
Table C-11.16b	Coastal Stormdrain Site Ranked Entire Year .....	C-11 <sup>1</sup>
Table C-11.17	Conditions at Drains of Highest Concern.....	C-11 <sup>1</sup>
Table C-11.18	Aqueous Chemistry at Ambient Coastal Receiving Water Sites .....	C-11 <sup>1</sup>
Table C-11.19	Summary of the Number of Acute CTR Exceedances .....	C-11 <sup>1</sup>
Table C-11.20	Toxicity Results for Ambient Coastal Receiving Water Stations.....	C-11 <sup>1</sup>
Table C-11.21	Dry Weather Recon Sites Exceeding Regional Tolerance Interval .....	C-11 <sup>1</sup>
Table C-11.22	Sediment Chemistry and Toxicity in Dana Point Harbor.....	C-11 <sup>1</sup>
Table C-11.23	Benthic Infaunal Community Analysis From Dana Point Harbor.....	C-11 <sup>1</sup>
Table C-11.24	BRI Threshold Levels of Benthic Community Condition .....	C-11 <sup>1</sup>

(<sup>1</sup> Tables follow Section C-11 and are not paginated)

### Figures

Figure C-1.1	General Classification of Outcome Types.....	C-1-9
Figure C-1.2	Program Effectiveness Assessment Flow Chart.....	C-1-10
Figure C-2.1	Orange County Municipal NPDES Management Framework .....	C-2-13
Figure C-2.2	General Permittee Meeting Attendance .....	C-2-14
Figure C-2.3	Historical Review of Total Individual Permittee Costs .....	C-2-15
Figure C-2.4	2004-05 Funding Sources.....	C-2-16
Figure C-2.5	2005-06 Projected Funding Sources .....	C-2-16
Figure C-3.1	Water Quality Planning Process.....	C-3-8
Figure C-5.1	Lbs. Nitrogen Per Acre by Permittee (2004-05).....	C-5-31
Figure C-5.2	Lbs. Phosphorous Per Acre by Permittee (2004-05).....	C-5-32
Figure C-10.1	Source of Complaints.....	C-10-12
Figure C-10.2	Permittee Enforcement Actions 2002-03, 2003-04 and 2004-05 .....	C-10-13
Figure C-11.1	Receiving Waters Monitoring Program Evolution .....	C-11 <sup>2</sup>
Figure C-11.2	Locations of Bioassessment Monitoring Stations.....	C-11 <sup>2</sup>
Figure C-11.3	IBI Results of the Fall 2004 Sampling.....	C-11 <sup>2</sup>
Figure C-11.4	IBI Results of the Spring 2005 Sampling .....	C-11 <sup>2</sup>
Figure C-11.5	Cumulative IBI Results From 2002 - 2005.....	C-11 <sup>2</sup>
Figure C-11.6a	Summary of Overall Conditions in Fall 2004 .....	C-11 <sup>2</sup>
Figure C-11.6b	Summary of Overall Conditions in Spring 2005 .....	C-11 <sup>2</sup>
Figure C-11.7	Station Dendrogram for All Bioassessment Surveys.....	C-11 <sup>2</sup>
Figure C-11.8	Two-way Coincidence Table of Stations and Species for All Bioassessment Surveys .....	C-11 <sup>2</sup>
Figure C-11.9	Station Dendrogram for Spring Bioassessment Surveys .....	C-11 <sup>2</sup>
Figure C-11.10	Two-way Coincidence Table of Stations and Species for Spring Bioassessment Surveys.....	C-11 <sup>2</sup>
Figure C-11.11	Station Dendrogram for Fall Bioassessment Surveys.....	C-11 <sup>2</sup>
Figure C-11.12	Two-way Table of Stations and Species for Fall Bioassessment Surveys .....	C-11 <sup>2</sup>
Figure C-11.13a	Box and Whisker Plots of Related Biological Parameters for Spring Bioassessment Surveys .....	C-11 <sup>2</sup>

TABLE OF CONTENTS

---

Figure C-11.13b Box and Whisker Plots of Related Physical Habitat Parameters  
for Spring Bioassessment Surveys ..... C-11<sup>2</sup>

Figure C-11.13c Box and Whisker Plots of Related Water Quality Parameters  
for Spring Bioassessment Surveys ..... C-11<sup>2</sup>

Figure C-11.13d Box and Whisker Plots of Related Pollutant Parameters  
for Spring Bioassessment Surveys ..... C-11<sup>2</sup>

Figure C-11.14a Box and Whisker Plots of Related Biological Parameters  
for Fall Bioassessment Surveys..... C-11<sup>2</sup>

Figure C-11.14b Box and Whisker Plots of Related Physical Habitat Parameters  
for Fall Bioassessment Surveys..... C-11<sup>2</sup>

Figure C-11.14c Box and Whisker Plots of Related Water Quality Parameters  
for Fall Bioassessment Surveys..... C-11<sup>2</sup>

Figure C-11.14d Box and Whisker Plots of Related Pollutant Parameters  
for Fall Bioassessment Surveys..... C-11<sup>2</sup>

Figure C-11.15 Locations of Mass Loading Monitoring Stations

Figure C-11.16 Annual Rainfall Summary..... C-11<sup>2</sup>

Figure C-11.17 Locations of Coastal Stormdrain Outfall Monitoring Stations ..... C-11<sup>2</sup>

Figure C-11.18 Relative Level of AB411 Exceedances (Hits) During  
the Entire Year..... C-11<sup>2</sup>

Figure C-11.19 Relative Level of AB411 Exceedances (Hits) During the  
AB411 Season ..... C-11<sup>2</sup>

Figure C-11.20 Relationship Between Indicators in Receiving Waters and ..... C-11<sup>2</sup>  
Stormdrain Discharge ..... C-11<sup>2</sup>

Figure C-11.21 Regression Analysis for Relationship between Receiving  
Waters and Stormdrain Discharge..... C-11<sup>2</sup>

Figure C-11.22 Locations of Ambient Coastal Monitoring Stations..... C-11<sup>2</sup>

Figure C-11.23 Summary of Toxicity Testing Results at Ambient  
Coastal Receiving Water Sites..... C-11<sup>2</sup>

Figure C-11.24 Pollutants that may have Affected Toxicity Testing Results  
from DSB-5 ..... C-11<sup>2</sup>

Figure C-11.25 Comparison Between Observed and Predicted Toxicity  
for Key Ambient Coastal Stations ..... C-11<sup>2</sup>

Figure C-11.26 Locations of Dry Weather Monitoring Stations ..... C-11<sup>2</sup>

Figure C-11.27 Locations of Dana Point Monitoring Stations ..... C-11<sup>2</sup>

Figure C-11.28 Cumulative Frequency Curve of Benthic Toxicity From the  
Bight '03 Program..... C-11<sup>2</sup>

Figure C-11.29 Sediment Toxicity at Dana Point Stations over the Past Two  
Monitoring years ..... C-11<sup>2</sup>

Figure C-11.30 BRI Scores for the Dana Point Monitoring Stations..... C-11<sup>2</sup>

Figure C-11.31 BRI Scores vs. Sediment Toxicity ..... C-11<sup>2</sup>

(<sup>2</sup> Figures follow Section C-11 and are not paginated)



## TABLE OF CONTENTS

---

### Attachments

Attachment C-3.1	TASC Report
Attachment C-6.1	Outreach Materials Developed 2004-05
Attachment C-6.2	Utility Newsletters
Attachment C-11-I	Standard Operating Procedure for Toxicity Tests
Attachment C-11-II	Coastal Stormdrain Outfall Monitoring Data
Attachment C-11-III	Dry Weather Reconnaissance Sampling Data
Attachment C-11-IV	QA/QC Details

### Exhibits

Exhibit 1	Aliso Viejo PEA <sup>3</sup>
Exhibit 2	Dana Point PEA <sup>3</sup>
Exhibit 3	Laguna Beach PEA <sup>3</sup>
Exhibit 4	Laguna Hills <sup>3</sup>
Exhibit 5	Laguna Niguel PEA <sup>3</sup>
Exhibit 6	Laguna Woods PEA <sup>3</sup>
Exhibit 7	Lake Forest PEA <sup>3</sup>
Exhibit 8	Mission Viejo PEA <sup>3</sup>
Exhibit 9	Rancho Santa Margarita PEA <sup>3</sup>
Exhibit 10	San Clemente PEA <sup>3</sup>
Exhibit 11	San Juan Capistrano PEA <sup>3</sup>
Exhibit 12	County of Orange PEA <sup>3</sup>
Exhibit 13	Laguna Coastal Streams Watershed Chapter Annual Report <sup>3</sup>
Exhibit 14	Aliso Creek Watershed Chapter Annual Report <sup>3</sup>
Exhibit 15	Dana Point Coastal Streams Watershed Chapter Annual Report <sup>3</sup>
Exhibit 16	San Juan Creek Watershed Chapter Annual Report <sup>3</sup>
Exhibit 17	San Clemente Coastal Streams Watershed Chapter Annual Report <sup>3</sup>
Exhibit 18	San Mateo Creek Watershed Chapter Annual Report <sup>3</sup>

(<sup>3</sup> Bound separately)

**PREPARED UNDER THE DIRECTION OF:**

Chris Crompton, Manager, Environmental Resources

Water Quality Section:

Bruce Moore, Supervisor, Water Quality

Stormwater Section:

Richard Boon, Supervisor, Stormwater Section – External  
Zoila Verdaguer-Finch, Environmental Resources Specialist  
Nicole Murphy, Environmental Resources Specialist  
Jennifer Weiland, Environmental Resources Specialist

## EXECUTIVE SUMMARY

---

The purpose of this document is to comply with the Third Term Permits, Regional Water Quality Control Board Orders R8-2002-0010 (Santa Ana Regional Board) and R9-2002-0001 (San Diego Regional Board) which require annual submittal by November 15 of a progress report. This Report discusses the Permittees' Third Term Permit compliance activities over the period July 1, 2004 to June 30, 2005, and includes a description of all activities that were conducted during the reporting period and an assessment of program effectiveness

The organization of the report reflects the organization of the 2003 Drainage Area Management Plan (DAMP). Due to the complexity of the Third Term Permits, Local Implementation Plans (LIPs) were created to provide for a jurisdiction-specific plan within the broader policy and program framework of the DAMP. Consequently, the Annual Progress Report, which is now an integral part of the Program Effectiveness Assessment (PEA) includes: jurisdictional assessments completed individually by each Permittee (See **Exhibits**); watershed assessments based on the DAMP/Watershed Chapters completed to date for the San Diego Regional Board Permittees and a countywide assessment in this Unified Annual Progress Report.

The activities undertaken during this reporting period essentially mark the second year of full implementation of a program that was substantially revised to meet the requirements of the Third Term Permits. Notable programmatic accomplishments that occurred during the reporting period include:

- Implementation of a re-aligned management framework, including a LIP/PEA Committee, Water Use Efficiency Task Force and Ad-Hoc Group (Wastewater Disposal) (**DAMP Section 2.0**);
- Major resource commitments to advancing stormwater science (**DAMP Section 3.0**);
- Commencement and completion of special planning studies to evaluate the effectiveness and applicability of various source control and treatment control Best Management Practices (**DAMP Section 3.0**);
- Implementation of enhanced cooperative local agency procedures and practices for sewage spill response (**Section C-10.0**);
- Implementation of the DAMP/Watershed Chapters in the San Diego Regional Board area (**Section C-12.0**) and significant progress toward completion of Chapters for the Newport Bay and Santa Ana River watersheds;
- Implementation of an internet-based annual reporting system;
- Development and implementation of formalized training elements across a number of program areas (multiple Sections), and
- Participation with the California Stormwater Quality Association in the development of a White Paper – An Introduction to Stormwater Program Effectiveness Assessment.

To provide a basis for annual PEAs, the Permittees have selected a series of Headline Measures, comprising *Process* and *Result* (both *Direct* and *Indirect*) based indices to respectively verify program implementation and ultimately validate achievement of program goals. The choice of indices necessarily recognizes that scientifically robust evidence of improved water quality will follow confirmation of program implementation and should not be expected to be evident initially.

## EXECUTIVE SUMMARY

---

While evidence of the connection between programmatic activities and changing environmental conditions remains elusive, the Permittees believe that there is strong evidence of increasing program effectiveness. Indeed, compared to the previous reporting period this year's PEA shows:

- Continued high level of participation by the Permittees in the General Permittee Committee and supporting management framework (see **Section C-1.0**);
- Significant program investment by the Permittees of \$76.3m (see **Section C-2.0**);
- A 9.8% increase in the amount of household hazardous waste (up from 5,741,522 pounds to 6,303,938 pounds) taken to collection centers (see **Section C-5.0**);
- Reduction for a third consecutive year in the total amount of nitrogen fertilizer and pesticides applied to public land (see **Section C-5.0**);
- The achievement of over 80,000,000 impressions in the Countywide public education effort compared to 45,000,000 impressions last year and 37,000,000 impressions in the 2002-03 reporting period (see **Section C-6.0**), and
- Reductions in the number of complaints reported to the Permittees and use of the enforcement tools provided by the Permittees' local Water Quality Ordinances indicating increased levels of compliance (see **Section C-10.0**).

In addition key baseline data has been compiled on a jurisdictional, watershed and countywide basis for future comparative assessment in the areas of municipal activities, new development, construction and existing development.

With respect to water quality monitoring (see **Section C-11.0**):

- The Second Permit Term Monitoring Program in the Santa Ana Regional Board area was continued while concurrently gaining approval of the Third term Monitoring Program;
- LabTrak, the water quality data management system, was brought fully on-line, allowing improved integration of water quality monitoring, hydrographic monitoring and program management;
- The Third Permit Term Monitoring Program in the San Diego Regional Board area completed its second full year allowing significantly improved statistical evaluations of progress, including new analysis approaches for estimating annual loads, evaluating recreational impacts in the coastal zone, and prioritizing stormdrain outfalls; estimating the degree of unexplained toxicity, and displaying the results of bioassessment monitoring; and
- The Dry Season Reconnaissance Program information distribution was improved allowing immediate follow-up to poor water quality and, in limited cases, the identification of pollution sources.

## ACRONYMS

---

AB	Assembly Bill
AI	Authorized Inspectors
APWA	American Public Works Association
AQMD	Air Quality Management District
BIA	Building Industry Association
BMP	Best Management Practice
CAP	Household Hazardous Waste Community Awareness Program
CAR	Critical Aquatic Resources
CCR	California Code of Regulations
CCTV	Closed Circuit Television
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
DA	District Attorney
DAMP	Drainage Area Management Plan
DHS	Department of Health Services
DMV	Department of Motor Vehicles
DOT	Department of Transportation
DTSC	California Department of Toxic Substance Control
EA	Enforcing Attorney
ECG	Enforcement Consistency Guide
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPR	Environmental Performance Reporting
ERP	Enforcement Response Plan
ESA	Environmentally Sensitive Area
F&G	California Department of Fish & Game
GIS	Geographic Information System
HAZMAT	Hazardous Materials
HCA	Health Care Agency
HHW	Household Hazardous Waste
HMI	Hazardous Materials Incident
HWI	Hazardous Waste Inspector
IC	Incident Commander
IPM	Integrated Pest Management
IRWD	Irvine Ranch Water District
IWMD	Integrated Waste Management Department
JPA	Joint Powers Authorities
JURMP	Jurisdictional Urban Runoff Management Plan
LIP	Local Implementation Plan
MCAS	Marine Corp Air Station
MEP	Maximum Extent Practicable
MOU	Memorandum of Understanding
MRP	Monitoring and Reporting Programs
MS4	Municipal Separate Storm Sewer

## ACRONYMS

---

NC	Non-compliance
NPDES	National Pollutant Discharge Elimination System
OC	County of Orange
OCC	Orange County Code
OCFCD	Orange County Flood Control District
OCSO	Orange County Sanitation District
OES	Office of Emergency Services
OSHA	Occupational Safety and Health Act
PFRD	Public Facilities & Resources Department
PNIR	Pollution Notification/Investigation Request
PPE	Personal Protective Equipment
PWC	Public Works Crew
PWD	Public Works Department
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
ROWD	Report of Waste Discharge
RP	Responsible Party
RPS	Regional Pump Stations
RWQCB	Regional Water Quality Control Board
SA	Santa Ana
SCAG	Southern California Association of Governments
SCCWRP	Southern California Coastal Waters Research Program
SD	San Diego
SIC	Standard Industrial Classification Code
SOCWA	South Orange County Wastewater Authority
SR	Spill Responder
SSMP	Sewer System Management Plans
SSO	Sanitary Sewer Overflow
SUSMP	Standard Urban Storm Water Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TMDL	Total Maximum Daily Load
UHWM	Uniform Hazardous Waste Manifest
USAF	United States Air Force
USCG	United States Coast Guard
WDR	Waste Discharge Requirement
WQMP	Water Quality Management Plan
WSPA	Western States Petroleum Association