

TABLE OF CONTENTS

2011-12 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 Environment C-1-2
 C-1.3.2 Clean Water Act C-1-3
 C-1.3.3 Municipal NPDES Stormwater Permits..... C-1-3
 C-1.3.4 Drainage Area Management Plan (DAMP)..... C-1-3
 C-1.4 Major Program Accomplishments..... C-1-4
 C-1.5 Program Effectiveness Assessment Strategy C-1-6
 C-1.5.1 Assessment Measures..... C-1-6
 C-1.5.2 Effectiveness Assessment..... C-1-7

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-2.3 Accomplishments..... C-2-2
 C-2.3.1 Agreement for Program Implementation C-2-2
 C-2.3.2 Management Framework..... C-2-3
 C-2.3.3 Management Framework – Program Implementation C-2-5
 C-2.3.4 Orange County Stormwater Program Representation C-2-5
 C-2.4 Assessment..... C-2-7
 C-2.4.1 Implementation Agreement C-2-7
 C-2.4.2 Management Framework..... C-2-7
 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-2-9

C-3.0 PLAN DEVELOPMENT C-3-1
 C-3.1 Introduction C-3-1
 C-3.1.1 Water Quality Planning..... C-3-1
 C-3.2 Accomplishments..... C-3-2
 C-3.2.1 Programmatic Enhancements..... C-3-2
 C-3.2.2 Enhancements in Environmental Assessment C-3-4
 C-3.2.3 Enhancements in Assessment Methodologies C-3-5
 C-3.2.4 Enhancements in BMP Knowledge C-3-7
 C-3.2.5 Enhancements in Data Management..... C-3-10
 C-3.2.6 BMP Selection C-3-10

TABLE OF CONTENTS

C-3.3	Assessment.....	C-3-13
C-3.3.1	Programmatic Assessment.....	C-3-13
C-3.3.2	Environmental Assessment	C-3-14
C-3.3.3	Assessment Methods	C-3-15
C-3.3.4	BMP Knowledge.....	C-3-15
C-3.3.5	BMP Retrofitting.....	C-3-15
C-3.4	Summary	C-3-16
C-4.0	LEGAL AUTHORITY	C-4-1
C-4.1	Introduction.....	C-4-1
C-4.2	Accomplishments.....	C-4-1
C-4.3	Assessment.....	C-4-1
C-4.4	Summary	C-4-1
C-5.0	MUNICIPAL ACTIVITIES.....	C-5-1
C-5.1	Introduction.....	C-5-1
C-5.2	Accomplishments.....	C-5-1
C-5.2.1	Model Municipal Activities Program.....	C-5-1
C-5.2.2	IPM, Pesticides and Fertilizer	C-5-4
C-5.2.3	Baseline BMPs.....	C-5-7
C-5.3	Assessment.....	C-5-10
C-5.3.1	Model Municipal Activities Program.....	C-5-10
C-5.3.2	Model Integrated Pest Management, Pesticide and Fertilizer Guidelines	C-5-11
C-5.3.3	Baseline BMPs.....	C-5-13
C-5.4	Summary	C-5-15
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	Accomplishments.....	C-6-2
C-6.3.1	Countywide Efforts.....	C-6-2
C-6.3.2	Public Education Sub-committee	C-6-14
C-6.3.3	Other Principal Permittee Outreach Efforts	C-6-14
C-6.4	Assessment.....	C-6-15
C-6.4.1	Public Awareness Surveys.....	C-6-15
C-6.4.2	Other Metrics	C-6-19
C-6.4.3	Program Modifications	C-6-19
C-6.5	Summary	C-6-20
C-7.0	NEW DEVELOPMENT/SIGNIFICANT REDEVELOPMENT.....	C-7-1
C-7.1	Introduction.....	C-7-1
C-7.2	Accomplishments.....	C-7-1
C-7.2.1	New Development/Significant Redevelopment Program.....	C-7-1
C-7.2.2	General Plan Assessment and Development Standards Review	C-7-3
C-7.2.3	Enhancements in Assessment Methodologies and Their Role in New Development/Significant Redevelopment.....	C-7-4

TABLE OF CONTENTS

C-7.3	Assessment.....	C-7-5
C-7.3.1	New Development/Significant Redevelopment Program.....	C-7-5
C-7.3.2	Water Quality Management Plans (WQMPs).....	C-7-6
C-7.3.3	Stormwater Management BMPs	C-7-7
C-7.4	Summary	C-7-9
C-8.0	CONSTRUCTION	C-8-1
C-8.1	Introduction	C-8-1
C-8.2	Accomplishments.....	C-8-1
C-8.2.1	Model Construction Program.....	C-8-1
C-8.3	Assessment.....	C-8-2
C-8.3.1	Model Construction Program.....	C-8-3
C-8.4	Summary	C-8-5
C-9.0	EXISTING DEVELOPMENT	C-9-1
C-9.1	Introduction	C-9-1
C-9.2	Accomplishments.....	C-9-1
C-9.2.1	Model Industrial/ Commercial Program	C-9-1
C-9.2.2	Model Residential Program.....	C-9-3
C-9.3	Assessment.....	C-9-5
C-9.3.1	Model Industrial/Commercial Program	C-9-5
C-9.3.2	Model Residential Program.....	C-9-11
C-9.4	Summary	C-9-11
C-10.0	ILLEGAL DISCHARGES/ILLICIT CONNECTIONS.....	C-10-1
C-10.1	Introduction	C-10-1
C-10.2	Accomplishments.....	C-10-1
C-10.2.1	Illegal Discharges/Illicit Connections Program	C-10-1
C-10.2.2	Model Sewage Spill Response Procedures	C-10-3
C-10.3	Assessment.....	C-10-3
C-10.3.1	Illegal Discharges/Illicit Connections Program	C-10-3
C-10.3.2	Model Sewage Spill Response Procedures	C-10-5
C-10.4	Summary	C-10-6
C-10.4.1	Illegal Discharges/Illicit Connections Program	C-10-6
C-10.4.2	Model Sewage Spill Response Procedures	C-10-6
C-10.5	ID/IC Dry Weather Monitoring	C-10-6
C-11.0	WATER QUALITY MONITORING SUMMARY AND ANALYSES.....	C-11-1
C-11.1	Introduction	C-11-1
C-11.2	Analysis of 2011-12 Data.....	C-11-1
C-11.2.1	Long Term Mass Emissions Monitoring	C-11-2
C-11.2.2	Harbor /Estuary / Wetlands Monitoring.....	C-11-8
C-11.2.3	Bacteriological / Pathogen Monitoring.....	C-11-12
C-11.2.4	Urban Stream Bioassessment Monitoring.....	C-11-16
C-11.2.5	Reconnaissance Monitoring (dry weather).....	C-11-22
C-11.2.6	Land Use Correlations Monitoring.....	C-11-22

TABLE OF CONTENTS

C-11.2.7 Nutrient TMDL Monitoring..... C-11-22

C-11.3 Additional Monitoring Efforts C-11-22

C-11.4 Evaluation of 2011-12 Water Quality Conditions..... C-11-23

 C-11.4.1 Receiving Water Conditions from Mass Emissions,
 SMC Program, and Harbor, Estuary / Wetlands Monitoring..... C-11-23

 C-11.4.2 Recreational Conditions from Bacteriological / Pathogen
 Monitoring C-11-28

 C-11.4.3 Urban Stream Bioassessment Monitoring..... C-11-29

 C-11.4.4 Dry Weather Reconnaissance Program..... C-11-30

 C-11.4.5 Conditions from Land Use Correlations Monitoring..... C-11-33

 C-11.4.6 Newport Bay Conditions from Nutrient TMDL Monitoring..... C-11-33

C-11.5 Long Term Trends in Water Quality Conditions C-11-33

C-11.6 Quality Assurance / Quality Control C-11-35

C-11.7 Changes in Monitoring Program..... C-11-37

C-11.8 Summary C-11-37

C-12.0 WATERSHED PLANNING C-12-1

 C-12.1 Introduction C-12-1

 C-12.2 Accomplishments..... C-12-2

 C-12.2.1 Watershed Management/Planning Initiatives C-12-2

 C-12.2.2 Environmental Restoration Planning Efforts C-12-4

 C-12.2.3 Watershed-Based Water Quality Planning Efforts C-12-6

 C-12.3 Assessment..... C-12-13

 C-12.3.1 Environmental Restoration Planning Efforts C-12-13

 C-12.3.2 Watershed-Based Water Quality Planning Efforts..... C-12-13

 C-12.4 Summary C-12-14

C-13.0 WORKPLAN C-13-1

 C-13.1 Introduction C-13-1

Tables

Table C-1.1 Permit History..... C-1-9

Table C-1.2 Headline Measures..... C-1-10

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-3-17

Table C-4.1 Current and Potential Outcome Levels (Legal Authority) C-4-2

Table C-5.1 Countywide Permittees’ Fixed Facility Inventory
and Prioritization..... C-5-16

Table C-5.2 Fixed Facility BMP Implementation C-5-17

Table C-5.3 2011-12 Fertilizers and Amounts Applied by Permittee (raw data) .. C-5-18

Table C-5.4 2011-12 Fertilizers Applied (Amount per Acre)..... C-5-23

Table C-5.5 2011-12 Pesticide Use by Class of Concern C-5-24

Table C-5.6 Street Sweeping – Volume of Material Collected &

TABLE OF CONTENTS

	Street Miles Swept	C-5-25
Table C-5.7	Solid Waste Collection	C-5-26
Table C-5.8	Catch Basin Stenciling.....	C-5-27
Table C-5.9	Drainage Facility Maintenance.....	C-5-28
Table C-5.10	Household Hazardous Waste Program	C-5-29
Table C-5.11	Used Oil Grant Participation	C-5-30
Table C-5.12	Current and Potential Outcome Levels (Municipal Activities)	C-5-31
Table C-5.13	Current and Potential Outcome Levels (IPM).....	C-5-32
Table C-6.1	Countywide Educational Materials	C-6-21
Table C-6.2	Print Advertising Impressions	C-6-25
Table C-6.3	Bus Shelter Advertising Impressions	C-6-26
Table C-6.4	Impressions Created by OC HCA Used Oil Bus Advertising.....	C-6-26
Table C-6.5	Impressions Created by OC HCA Billboard Advertising	C-6-27
Table C-6.6	Impressions Created by Media Outreach	C-6-27
Table C-6.7	Impressions Created by Automotive Repair Industry Outreach	C-6-28
Table C-6.8	Impressions Created by the Non-Media Outreach.....	C-6-29
Table C-6.9	Impressions Created by School Outreach.....	C-6-29
Table C-6.10	Impressions Created by Each Permittee.....	C-6.30
Table C-6.11	Total Impressions Created by Public Education Program	C-6-31
Table C-6.12	Current and Potential Outcome Levels (Public Education)	C-6-32
Table C-7.1	Current and Potential Outcome Levels (New Development/ Significant Redevelopment).....	C-7-10
Table C-7.2	Historical WQMPs and Acreage Covered	C-7-11
Table C-7.3	Regional/Watershed BMPs and Treatment Control BMPs Approved/ Implemented, 2011-12 Reporting Period	C-7-12
Table C-8.1	Construction Sites Inspected: Comparison of 2007-08 2008-09, 2009-10, 2010-11 and 2011-12.....	C-8-6
Table C-8.2	Inspection Results: Comparison of 2007-08, 2008-09 2009-10, 2010-11 and 2011-12	C-8-7
Table C-8.3	Enforcement Action Taken: Comparison of 2007-08 2008-09, 2009-10, 2010-11 and 2011-12.....	C-8-8
Table C-8.4	Current and Potential Outcome Levels (Construction)	C-8-9
Table C-9.1	Countywide Industrial Inventory and Prioritization: Comparison of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12	C-9-13
Table C-9.2	Countywide Commercial Inventory and Prioritization: Comparison of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12	C-9-14
Table C-9.3	Industrial Inventory and BMP Implementation: Comparison of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12.....	C-9-15
Table C-9.4	Commercial Inventory and BMP Implementation: Comparison of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12.....	C-9-16
Table C-9.5	Food Facility Inspections 2011-12	C-9-17
Table C-9.6	Permittee Enforcement Actions for Industrial Facilities: Comparison of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12	C-9-18
Table C-9.7	Permittee Enforcement Actions for Commercial Facilities: Comparison of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12	C-9-19
Table C-9.8	Current and Potential Outcome Levels (Industrial/Commercial).....	C-9-20
Table C-9.9	Current and Potential Outcome Levels (Residential).....	C-9-21

TABLE OF CONTENTS

Table C-10.1	Current and Potential Outcome Levels (ID/IC)	C-10-7
Table C-10.2	Source of Complaints/Incidents: Comparison of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12	C-10-8
Table C-10.3	Permittee Enforcement Actions: Comparison of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12	C-10-19
Table C-10.4	Types of Materials	C-10-10
Table C-10.5	Santa Ana Region Dry Weather Monitoring Notifications, 2011-12 Reporting Year	C-10-11
Table C-10.6	San Diego Region NALs Field Exceedance Notifications, 2011-12 Reporting Year	C-10-13
Table C-11.1	Stormwater toxicity testing results for 2011-12	C-11-39
Table C-11.2	Pesticide detections frequencies and concentrations summary statistics (ng/L) from samples collected during storm events	C-11-40
Table C-11.3	Fall 2011 SQO assessments and indicator determinations	C-11-41
Table C-11.4	Harbor, estuary, and wetland Fall 2011 sediment toxicity testing results	C-11-42
Table C-11.5	Regional bioassessment sites surveyed in 2012	C-11-43
Table C-11.6	Metric scores, Index of Biotic Integrity scores of regional bioassessment sites in 2012	C-11-43
Table C-11.7	Fecal indicator bacteria exceedance frequencies at all beach and channel sites during the entire year and AB411 period	C-11-44
Table C-11.8	Ranking of sites by percentage (%) of fecal indicator bacteria exceedances during all year and the AB411 period	C-11-45
Table C-11.9	T Prioritization of receiving water monitored constituents based on 2011-12 data when compared to assessment benchmarks	C-11-46
Table C-11.10	Mean total inorganic nitrogen concentrations (mg/L) in receiving waters during dry weather and storm events conditions	C-11-47
Table C-11.11a	Mean total phosphorus concentrations (mg/L) in receiving waters during dry weather and storm events conditions	C-11-48
Table C-11.12	Selenium and Copper regional CTR exceedance patterns in inland receiving waters	C-11-49
Table C-11.13	Mean total recoverable copper concentrations (ug/L) in inland receiving waters during dry weather and storm events	C-11-49
Table C-11.14	Harbor, Estuary, Wetland 2011-12 Eohaustorius estuaries 10 day survival rates in sediments	C-11-50

Figures

Figure C-1.1	General Classification of Outcome Types	C-1-11
Figure C-1.2	Program Effectiveness Assessment Flow Chart	C-1-12
Figure C-2.1	Orange County Municipal NPDES Management Framework (2011-12 Reporting Period)	C-2-13
Figure C-2.2	General Permittee Meeting Attendance	C-2-14
Figure C-2.3	Total Individual Permittee Costs	C-2-15
Figure C-2.4	Historical Review of Total Individual Permittee Costs	C-2-16
Figure C-2.5	2011-12 Actual Funding Sources	C-2-17
Figure C-2.6	2012-13 Projected Funding Sources	C-2-18

TABLE OF CONTENTS

Figure C-3.1	Water Quality Planning Process.....	C-3-18
Figure C-3.2	Overview of Assessment Outcomes and Elements	C-3-19
Figure C-5.1	Municipal Facility Prioritization	C-5-33
Figure C-5.2	Municipal Facility BMP Implementation.....	C-5-34
Figure C-5.3	Fertilizer Application (Pounds of Active Ingredient)	C-5-35
Figure C-5.4	Fertilizer Application (Pounds of Nitrogen per Acre)	C-5-36
Figure C-5.5	Fertilizer Application (Pounds of Phosphorus per Acre).....	C-5-37
Figure C-5.6	Pesticide Application (Pounds of Active Ingredient).....	C-5-38
Figure C-5.7	Street Sweeping - Tons of Material Collected & Miles Swept	C-5-39
Figure C-5.8	Tons of Solid Waste Collected	C-5-40
Figure C-5.9	Number of Catch Basins Re-stenciled	C-5-41
Figure C-5.10	Catch Basin Inventory - Number & Percentage of Catch Basins Inspected and/or Cleaned.....	C-5-42
Figure C-5.11	Drainage Facility Maintenance - Tons of Debris Removed & Miles of Pipe Cleaned	C-5-43
Figure C-5.12	Coastal and Inner-Coastal Clean-up Numbers	C-5-44
Figure C-5.13	Used Oil & Filters Collected	C-5-45
Figure C-6.1	Percentage of 2012 Survey Respondents Participating in “Stormwater Safe” Behaviors With and Without Kids.....	C-6-33
Figure C-7.1	Historical WQMPs and Acreage Covered	C-7-13
Figure C-7.2	Priority and Non-Priority WQMPs Approved in 2011-12.....	C-7-14
Figure C-8.1	Construction Site Inspections & Prioritizations, 2007-08 to 2011-12..	C-8-10
Figure C-8.2	Enforcement Actions Taken, 2007-08 to 2011-12.....	C-8-11
Figure C-8.3	Construction Site Compliance Inspections, 2007-08 to 2011-12	C-8-12
Figure C-9.1	Industrial Facility Prioritization, 2007-08 to 2011-12.....	C-9-22
Figure C-9.2	Commercial Facility Prioritization, 2007-08 to 2011-12.....	C-9-23
Figure C-9.3	Industrial/Commercial Facility Prioritization, 2007-08 to 2011-12....	C-9-24
Figure C-9.4	Industrial/Commercial Facility BMP Implementation, 2007-08 to 2011-12.....	C-9-25
Figure C-9.5	Industrial/Commercial Facility Enforcement Actions, 2007-08 to 2011-12.....	C-9-26
Figure C-9.6	Industrial Facility BMP Implementation, 2007-08 to 2011-12	C-9-27
Figure C-9.7	Commercial Facility BMP Implementation, 2007-08 to 2011-12	C-9-28
Figure C-9.8	Food Facility Inspections, 2007-08 to 2011-12.....	C-9-29
Figure C-10.1	Source of Complaints: Comparison of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12.....	C-10-14
Figure C-10.2	Enforcement Actions: Comparison of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12.....	C-10-15
Figure C-11.1	Annual Rainfall Summary	C-11-51
Figure C-11.2	Regional bioassessment program IBI scores, physical habitat, and CRAM scores in 2012	C-11-52
Figure C-11.3	Spatial IBI distribution pattern analysis of sites surveyed in the SMC Program from 20009 to 2012	C-11-53
Figure C-11.4	Spatial CRAM distribution pattern analysis of sites surveyed in the SMC Program from 20009 to 2012.....	C-11-54
Figure C-11.5	Dendogram analysis of sites surveyed in the SMC Program from 20009 to 2012.....	C-11-55

TABLE OF CONTENTS

Figure C-11.6	Two way coincidence table of sites surveyed in the SMC Program from 2009 to 2012.....	C-11-56
Figure C-11.7	Box and whisker plots of physical habitat variables with biotic cluster groups.....	C-11-57
Figure C-11.8	Box and whisker plots of dissolved metals and major ions with biotic cluster groups.....	C-11-58
Figure C-11.9	Box and whisker plots of nutrient and suspended solids with biotic cluster groups.....	C-11-59
Figure C-11.10	Categorical prioritization of inland receiving water problems based on 2011-12 data when compared to assessment benchmarks	C-11-60
Figure C-11.11	Dry weather nitrate concentrations (mg/L as N) in tributaries and instream sites along San Diego Creek	C-11-61
Figure C-11.12	Trends in dry weather nitrate concentrations (mg/L as N) at sites tributary to Upper Newport Bay.....	C-11-62
Figure C-11.13	Dry weather nitrate (left) and phosphorus (right) concentrations in Anaheim Bay-Huntington Harbour sites. Units of (mg/L).....	C-11-63
Figure C-11.14	Dry weather nitrate (left) and phosphorus (right) concentrations in San Gabriel River-Coyote Creek watershed sites, Units of (mg/L).....	C-11-64
Figure C-11.15	Exceedance frequencies of metals in inland receiving waters during dry weather and storm events conditions	C-11-65
Figure C-11.16	Regional copper exceedances patterns in inland and enclosed bay receiving waters.....	C-11-66
Figure C-11.17	Summary of 2011-12 toxicity testing results.....	C-11-67
Figure C-11.18	Seasonal stormwater toxicity patterns in 2011-12.....	C-11-68
Figure C-11.19	Scatterplot of LC50 normalized Bifenthrin concentrations and <i>Americamysis bahia</i> toxicity from storm event samples collected in 2011-12	C-11-69
Figure C-11.20	Relationship between total pyrethroid pesticide detected in enclosed bay sediments in 2011-12 and <i>Eohaustorius esuarius</i> 10 day survival.....	C-11-70
Figure C-11.21	Extent of intertidal mudflat eutrophication in the Upper Newport Bay Ecological Reserve in summer of 1987.....	C-11-71
Figure C-11.22	Extent of shoreline eutrophication in Lower Newport Bay 1986	C-11-71
Figure C-11.23	Dry weather summer period average nitrate concentrations in San Diego Creek at Campus Drive from 1967 to 2004	C-11-72
Figure C-11.24	Long term changes in summer dry weather flow rates in San Diego Creek at Campus Drive from 1978 to present	C-11-73
Figure C-11.25	Long term changes in summer total nitrogen load in San Diego Creek at Campus Drive from 1978 to present in comparison to the Total Maximum Daily Load regulatory targets	C-11-74
Figure C-11.26	Extent of algae growth on the intertidal mudflats in the Upper Newport Bay Ecological Reserve in summer of 2010	C-11-75
Figure C-11.27	Indicator bacteria exceedance frequencies over the period of 2007 to 2012 at beach water quality monitoring sites.....	C-11-76
Figure C-11.28	Median Fecal Coliform and Enterococcus concentrations in MS4 dry weather discharges from May to September over the	

TABLE OF CONTENTS

period of 2006 to 2012	C-11-77
Figure C-11.29 Average inorganic nitrogen and orthophosphorus concentrations in MS4 dry weather discharges from May to September over the period of 2006 to 2012	C-11-78
Figure C-11.30 Average MS4 dry weather discharges rates from May to September over the period of 2006 to 2012.....	C-11-79
Figure C-12.1 Orange County Watershed Boundaries.....	C-12-15
Figure C-12.2 Watershed Management Areas.....	C-12-16

Attachments

Attachment C-11.I Maps	
Attachment C-11.II Data	
Attachment C-11.III Program Development, Monitoring Approaches, and Methods of Analysis	
Attachment C-11.IV Quality Assurance/Quality Control	

Exhibits

Exhibit 1	Anaheim PEA ¹
Exhibit 2	Brea PEA ¹
Exhibit 3	Buena Park PEA ¹
Exhibit 4	Costa Mesa PEA ¹
Exhibit 5	Cypress PEA ¹
Exhibit 6	Fountain Valley PEA ¹
Exhibit 7	Fullerton PEA ¹
Exhibit 8	Garden Grove PEA ¹
Exhibit 9	Huntington Beach PEA ¹
Exhibit 10	Irvine PEA ¹
Exhibit 11	La Habra PEA ¹
Exhibit 12	La Palma PEA ¹
Exhibit 13	Laguna Hills PEA ¹
Exhibit 14	Laguna Woods PEA ¹
Exhibit 15	Lake Forest PEA ¹
Exhibit 16	Newport Beach PEA ¹
Exhibit 17	Orange PEA ¹
Exhibit 18	Placentia PEA ¹
Exhibit 19	Santa Ana PEA ¹
Exhibit 20	Seal Beach PEA ¹
Exhibit 21	Stanton PEA ¹
Exhibit 22	Tustin PEA ¹
Exhibit 23	Villa Park PEA ¹
Exhibit 24	Westminster PEA ¹
Exhibit 25	Yorba Linda PEA ¹
Exhibit 26	County of Orange/OCFCD PEA ¹

(¹ Bound separately)

PREPARED UNDER THE DIRECTION OF:

Chris Crompton, Manager, Environmental Resources

Stormwater-External Section:

Richard Boon, Supervisor

Jennifer Shook, Environmental Resources Specialist

Jenna Voss, Environmental Resources Specialist

Christy Suppes, Environmental Resources Specialist

Ruth Herrera, Stormwater External Staff Aide

Environmental Data Management Section:

Richard Boon, Supervisor

Teresa Von Bitner, Environmental Resources Specialist

Rita Abellar, Environmental Resources Specialist

Justin Grewal, Environmental Resources Specialist

Monitoring Programs:

Theodore Von Bitner, Supervisor

Water Quality Planning Section:

Theodore Von Bitner, Supervisor

Kacen Clapper, Environmental Resource Specialist