



UNIFIED ANNUAL STORMWATER REPORT

REPORTING YEAR 2011-12

Los Angeles County Municipal Stormwater
National Pollutant Discharge Elimination System
Permit No. CAS004001
Los Angeles Regional Water Quality Control Board
Order 01-182

Prepared by

Los Angeles County Department of Public Works

December 15, 2012

On behalf of the
Los Angeles County Flood Control District, the
County of Los Angeles, and
84 Incorporated Cities within the Los Angeles County Flood Control District

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PREFACE

The 2001 Los Angeles County Municipal Stormwater NPDES Permit (Order 01-182) required the Principal Permittee to submit a Unified Annual Stormwater Report (Unified Report) to the Regional Board by October 15 of each year beginning in 2002. In a letter dated October 12, 2012, the Executive Officer of the Regional Water Quality Control Board granted a two-month extension of the deadline to submit the Unified Report to December 15, 2012. Each Unified Report documents the Permittees' progress in implementing the SQMP and the requirements of Order 01-182 for the fiscal year from July 1 to June 30. This Unified Report covers the period from July 1, 2011, to June 30, 2012.

The Unified Report is essentially a compilation of the 86 Permittees' Individual Annual Reports plus six watershed-wide assessments conducted by the Watershed Management Committees (WMC). Program implementation information was submitted by the County of Los Angeles (unincorporated areas), each of the incorporated cities and six WMCs, and compiled by the Principal Permittee, the Los Angeles County Flood Control District (LACFCD). The content was not reviewed for accuracy or modified by the LACFCD. Compilation and submittal of the Unified Report by the LACFCD shall not be interpreted as an agreement or endorsement of the claims and positions taken by the County of Los Angeles (unincorporated areas), any of the cities and/or WMCs.

We thank each Permittee and WMC for their timely submittal of these documents. This is no small task and could not have been done without the cooperation of many.

ACRONYMS

BMP	-	Best Management Practice
NPDES	-	National Pollutant Discharge Elimination System
ROWD	-	Report of Waste Discharge
RWL	-	Receiving Water Limitation
SQMP	-	Stormwater Quality Management Plan
TMDL	-	Total Maximum Daily Load
WMA	-	Watershed Management Area
WMC	-	Watershed Management Committee

SECTION 1. INTRODUCTION

1.1 Background

On December 13, 2001, the Los Angeles Regional Water Quality Control Board (Regional Board) adopted Order 01-182, the National Pollutant Discharge Elimination System Permit for Municipal Stormwater and Urban Runoff Discharges within the County of Los Angeles. Order 01-182 covers 84 cities and the unincorporated areas of the Los Angeles County under County jurisdiction, with the exception of the Cities of Avalon and Long Beach and the portion of the Los Angeles County in the Antelope Valley, where it includes the Cities of Lancaster and Palmdale. Order 01-182 designated the Los Angeles County Flood Control District as the Principal Permittee, and the County of Los Angeles along with the 84 incorporated Cities are designated as Permittees. The Principal Permittee coordinated and facilitated activities necessary to comply with the requirements of Order 01-182 but was not responsible for ensuring the compliance of any Permittee.

Order 01-182 divided the County into six Watershed Management Areas (WMAs):

- Ballona Creek and Urban Santa Monica Bay WMA
- Dominguez Channel/Los Angeles Harbor WMA
- Los Angeles River WMA
- Malibu Creek and Rural Santa Monica Bay WMA
- San Gabriel River WMA
- Santa Clara River WMA

Table 1.1 lists all Permittees under Order 01-182.

Order 01-182 required the Principal Permittee to submit a Unified Annual Stormwater Report by October 15 of each year. The Unified Report includes:

- A compilation of Permittees' Individual Annual Reports.
- Proposed changes to the SQMP, as recommended by the WMCs.
- An assessment of the effectiveness of SQMP requirements to reduce stormwater pollution.
- A compilation of Receiving Water Limitations Compliance Reports, if applicable.

Table 1.1 List of all Permittees under Order 01-182.

Santa Monica Bay	Los Angeles River	San Gabriel River
Malibu Creek and Other Rural	Alhambra	Artesia
Agoura Hills	Arcadia	Azusa
*Calabasas	Bell	Baldwin Park
<i>Los Angeles County Flood Control</i>	Bell Gardens	
<i>Los Angeles County</i>	Burbank	Bellflower
Malibu	Commerce	Bradbury
Westlake Village	Compton	Cerritos
	Cudahy	Claremont
Ballona Creek and Other Urban	El Monte	Covina
Beverly Hills	*Glendale	Diamond Bar
Culver City	Hidden Hills	Downey
El Segundo	Huntington Park	Duarte
Hermosa Beach	La Canada Flintridge	Glendora
<i>Los Angeles (City of)</i>	<i>Los Angeles (City of)</i>	Hawaiian Gardens
<i>Los Angeles County Flood Control</i>	<i>Los Angeles County Flood Control</i>	Industry
<i>Los Angeles (County of)</i>	<i>Los Angeles (County of)</i>	Irwindale
Manhattan Beach	Lynwood	La Habra Heights
Palos Verdes Estates	Maywood	La Mirada
Rancho Palos Verdes	Monrovia	La Puente
Redondo Beach	Montebello	La Verne
Rolling Hills	Monterey Park	Lakewood
Rolling Hills Estates	Paramount	
*Santa Monica	Pasadena	<i>Los Angeles County Flood Control</i>
West Hollywood	Rosemead	<i>Los Angeles (County of)</i>
	San Fernando	Norwalk
	San Gabriel	*Pomona
Dominguez Channel	San Marino	Pico Rivera
Carson	Sierra Madre	San Dimas
Gardena	Signal Hill	Santa Fe Springs
Hawthorne	South El Monte	Walnut
Inglewood	South Gate	West Covina
Lawndale	South Pasadena	Whittier
Lomita	Temple City	
<i>Los Angeles (City of)</i>	Vernon	
<i>Los Angeles County Flood Control</i>		Santa Clara River
<i>Los Angeles (County of)</i>		*Santa Clarita
*Torrance		<i>Los Angeles County Flood Control</i>
		<i>Los Angeles (County of)</i>

Agencies indicated in italicized font are present in more than one Watershed Management Area. * Indicates City with the largest watershed population other than County of Los Angeles and the City of Los Angeles.

**Los Angeles County Municipal Stormwater NPDES Permit
2011-2012 Unified Annual Report**

Los Angeles County Department of Public Works (Public Works), representing the Los Angeles County Flood Control District as Principal Permittee, prepared this 2011-12 Unified Report.

SECTION 2. PERMITTEE INDIVIDUAL ANNUAL REPORTS

All Permittees, with the exception of the City of Cudahy, submitted their respective Individual Annual Reports to the Principal Permittee for inclusion in this Unified Report. Web-based reporting, initiated in 2004, has proven to be a success by streamlining the once-cumbersome process.

Permittees' Individual Annual Reports can be found in Appendix D to Appendix J. Digital versions of the Individual Annual Reports and this Unified Report also can be viewed at the Regional Board's Website at http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/los_angeles_ms4/lams4annualreport.shtml.

SECTION 3. PROPOSED CHANGES TO THE SQMP

Permittees' proposed changes to the SQMP were previously submitted to the Regional Board in four Reports of Waste Discharge (ROWD) dated June 12, 2006. These ROWDs were submitted by:

- The County of Los Angeles, the Los Angeles County Flood Control District, and 78 Permittees.
- City of Downey.
- City of Signal Hill.
- Cities of Azusa, Claremont, Glendora, Irwindale, and Whittier.

The Los Angeles County Flood Control District (LACFCD) submitted its own ROWD to the Regional Board, with proposed changes to the SQMP that are relevant to the LACFCD. The LACFCD ROWD was submitted in November 2010.

SECTION 4. SQMP EFFECTIVENESS ASSESSMENT

Generally, Permittees have implemented the SQMP management measures as required by Order 01-182 but do not employ formal program effectiveness measures. Some assume a positive effect on receiving water quality by virtue of having fully implemented the required measures (i.e., the number of catch basin inserts installed, the number of times streets are swept, etc.); others rely on indirect implementation measures (i.e., the number of follow-up inspections/enforcement actions required, the number of impressions made through a media campaign, the number of Clean Bay-certified restaurants, or the number of hits to a stormwater program website, etc.) to evaluate effectiveness. Although water quality monitoring is conducted as required by Order 01-182 and adopted TMDLs, direct measures of effectiveness (i.e. water quality evaluations) are generally not done because of the prohibitive cost. As discussed below in Section 4.5, the Monitoring Program associated with Order 01-182 is not suited to evaluate the effectiveness of SQMP implementation in reducing stormwater pollution from year-to-year.

Proposed by the California Stormwater Quality Association (CASQA) and described in a draft White Paper sent to the Regional Board on August 15, 2007, Public Works is in support of the “Progressive Approach” to regulate stormwater discharges. We appreciate CASQA’s efforts to advance the science and regulation of stormwater management and believe the concepts outlined in the draft White Paper provide a roadmap toward better water quality protection.

4.1 Summary of Common Activities

Common permittee activities for 2011-12 are discussed below.

4.1.1 Executive Advisory Committee and Watershed Management Committees

Permittees met regularly to improve their respective programs through information exchange at Executive Advisory Committee (EAC) and Watershed Management Committee (WMC) meetings. The EAC, though not a requirement of Order 01-182, met monthly, and some of the WMCs met more often than the required four-times per year frequency. Appendix K contains a list of the permittees’ representatives to these committees during this reporting period.

4.1.2 Public Outreach

In addition to meeting regularly, most joint permittee activities revolved around public education and outreach efforts. Public Works provided 21 co-permittees with more than 9,300 pollution prevention collateral materials for distribution at community events and public counters. For more information, see the WMA Assessments in Appendix E through Appendix J.

4.2 WMA BMP Implementation

Permittees continued to implement a variety of BMPs, both structural and institutional, to reduce pollution from urban runoff. Table 4.1 summarizes the most-used BMPs

reported by permittees in 2011-12. Table 4.2 summarizes popular BMPs by the number of Cities using a particular BMP.

Table 4.1 Most used BMPs Countywide during 2011-12

BMP Type	Total Number Installed
Catch Basin Opening Screen	61876
Automatic Retractable Catch Basin Trash Screen(ARS)	7197
Fossil Filter Catch Basin Insert	6538
Catch Basin Connector Pipe Full Capture(CPS)	5936
Bioretention Facility	4355
Extra Trash Can	3476
Covered Trash Bin	3434
Clean Screen Catch Basin Insert	2353
Drain Pac Catch Basin Insert	1562
CulTec Infiltration Systems	1284
Infiltration Trenches	1150
Sediment Trap	957
Infiltration Pit	944
Signage & Stenciling	786
Downspout Filters	659
Abtech Ultra Urban Catch Basin Insert	486
CDS Gross Pollutant Separator	474
United Storm Water Catch Basin Screen Inserts	403
Restaurants Vent Traps	277
Stormceptor Gross Pollutant Separators	248

Table 4.2 Most popular proprietary and non-proprietary BMPs during 2011-12

Types of Nonproprietary BMPs Used By Most Permittees		Types of Proprietary BMPs Used By Most Permittees	
BMP Type	No. of Cities	BMP Type	No. of Cities
Infiltration Trenches	42	Fossil Filter Catch Basin Inserts	42
Covered Trash Bins	27	CDS Gross Pollutant Separator	27
Enhanced Street Sweeping	27	Clean Screen Catch Basin Insert	22
Extra Trash Bins	24	Drain Pac Catch Basin Insert	19
Dog Parks	19	Stormceptor Gross Pollutant Separator	14

See Appendix B and C for a compilation by WMA of BMPs installed and maintained, respectively.

4.3 Effectiveness of Management Measures

Information contained in this section is extracted from a limited number of Permittees' responses and should not be interpreted as representative statements. In some instances, what is considered strength in one City is an area needing improvement in another; training is one such example.

4.3.1 Strengths

Generally, the following management measures were reported to be effective:

- Street sweeping;
- Catch basin cleaning;
- Catch basin inserts
- End-of-pipe controls such as low-flow diversions;
- Infiltration controls;
- Erosion controls; and
- Public education and outreach, including multi-lingual strategies, expanded online presence, etc.

Permittees also reported commitment of elected officials, management, and staff to the stormwater program as a strength.

4.3.2 Weaknesses

The lack of funding to implement existing NPDES and increasing TMDL requirements is noted by several permittees as an area of weakness.

4.4 Permittee Level of Effort

Permittees' self-evaluated level of effort has been extracted from each Individual Annual Report and presented in Table 4.3. Another way to evaluate level of effort is through the amount of resources a municipality devotes to stormwater pollution prevention-related activities. Therefore, the Permittees' stormwater-related expenditures, plus the estimated amount needed to implement Order 01-182, have been extracted from each Individual Annual Report and presented in Appendix L.

Table 4.3. Permittees' self-evaluated level of effort in implementing the requirements of Order 01-182.

Ballona Creek and Urban Santa Monica Bay WMA					
Beverly Hills	7.5	County of Los Angeles	10	Rolling Hills	10
Culver City	10	Manhattan Beach	10	Rolling Hills Estates	10
El Segundo	10	Palos Verdes Estates	10	Santa Monica	10
Hermosa Beach	10	Rancho Palos Verdes	10	West Hollywood	10
Los Angeles	10	Redondo Beach	10	Flood Control District	10
Dominguez Channel and Los Angeles Harbor WMA					
Carson	10	Inglewood	10	Los Angeles	10
Gardena	10	Lawndale	10	County of Los Angeles	10
Hawthorne	10	Lomita	10	Torrance	10
Flood Control District	10				
Los Angeles River WMA					
Alhambra	NR	La Canada Flintridge	8	San Fernando	10
Arcadia	10	Los Angeles	10	San Gabriel	NR
Bell	NR	County of Los Angeles	10	San Marino	9
Bell Gardens	10	Lynwood	10	Sierra Madre	10
Burbank	9-10	Maywood	5	Signal Hill	10
Commerce	9	Monrovia	9	South El Monte	10
Compton	10	Montebello	10	South Gate	10
Cudahy		Monterey Park	10	South Pasadena	10
El Monte	10	Paramount	8	Temple City	10
Glendale	10	Pasadena	10	Vernon	11
Hidden Hills	10	Rosemead	8	Flood Control District	10
Huntington Park	NR				
Malibu Creek and Rural Santa Monica Bay WMA					
Agoura Hills	10	County of Los Angeles	10	Westlake Village	10
Calabasas	10	Malibu	9.5	Flood Control District	10
San Gabriel River WMA					
Artesia	9	Duarte	10	County of Los Angeles	10
Azusa	10	Glendora	10	Norwalk	10
Baldwin Park	10	Hawaiian Gardens	9	Pico Rivera	10
Bellflower	10	Industry	9	Pomona	8
Bradbury	NR	Irwindale	10	San Dimas	10
Cerritos	NR	La Habra Heights	5	Santa Fe Springs	NR
Claremont	NR	Lakewood	NR	Walnut	NR
Covina	9	La Mirada	9	West Covina	10
Diamond Bar	10	La Puente	8	Whittier	10
Downey	10	La Verne	7	Flood Control District	10
Santa Clara River WMA					
Santa Clarita	9	County of Los Angeles	10	Flood Control District	10
NOTE: Scores are self-assessed on a scale 0 - 10 with 10 being completely compliant by all deadlines. NR = Not Reported					

4.5 Monitoring Program Summary

On August 14, 2012, Public Works submitted to the Regional Board the Los Angeles County 2011-12 Annual Stormwater Monitoring Report. The 2011-12 Monitoring Report presents the 2011-12 monitoring results for the Monitoring and Reporting Program No. 6748 associated with Order 01-182. The Monitoring Report's findings are summarized below; the full report can be downloaded at www.lawatersheds.org. As reference, Appendix M contains the Executive Summary for the 2011-12 Monitoring Report.

4.5.1 Monitoring Program Overview

During 2011-12, the Monitoring Program consisted of the following:

- Dry- and wet-weather mass emissions monitoring, including toxicity testing, at seven locations throughout the Los Angeles County;
- Dry- and wet-weather tributary monitoring at six locations in the Malibu Creek watershed;
- Shoreline monitoring for bacteria indicators;
- Regional monitoring programs including a Countywide bioassessment program and participation in the Bight '08 regional monitoring program; and
- Special studies.

Except for shoreline monitoring, the Los Angeles County Flood Control District continued to implement the Monitoring Program on behalf of the Permittees. Shoreline monitoring is conducted by the City of Los Angeles.

Non-NPDES monitoring was conducted for the following:

- Effectiveness monitoring for the Dominguez Gap Wetlands Project, the Marie Canyon Water Quality Improvement Project, Sun Valley Park Drain and Infiltration Project, and the LACFCD Low Flow Diversion Projects
- Los Angeles River and San Gabriel River Watershed-wide Monitoring Program – Bioassessments
- Strathern Wetlands Park Project Baseline Monitoring – wet weather sampling to establish baseline

TMDL monitoring was conducted for the following:

- Marina del Rey Mothers' Beach and Back Basins Bacteria TMDL
- Marina del Rey Toxics TMDL CMP
- Ballona Creek Metals and Estuary Toxic Pollutants TMDLs
- Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDL
- Malibu Creek Bacteria TMDL
- Los Angeles River and Tributaries Metals TMDL

- Santa Monica Bay Beaches Dry- and Wet-Weather Bacteria TMDLs
- Santa Clara River Bacteria TMDL

4.5.2 Water Quality Improvement or Degradation

The Monitoring Program in its current form is generally not suitable for detecting short-term trends in receiving water quality. In fact, to conduct such a program Countywide would be cost prohibitive. For a ten-year analysis of water quality trends, see the “1994-2005 Integrated Receiving Waters Impact Report” (1994-2005 Integrated Monitoring Report) at www.lawatersheds.org. The Table of Contents and Executive Summary for the 1994-2005 Integrated Monitoring Report can be found in Appendix N.

The exception is the shoreline monitoring program reported by the City of Los Angeles, which can be found in Appendix D of the 2011-12 Annual Monitoring Report.

The tributary monitoring program was initiated for the Malibu Creek Watershed in Fiscal Year 2011-12. Tributary monitoring was conducted at six locations for the first time, and detected bacteria, dissolved cadmium, dissolved copper, dissolved zinc, sulfate, and Total Dissolved Solids at concentrations above water quality objectives at some locations. Several studies discussed known or suspected sources for the constituents that did not meet applicable water quality objectives.

Copper can come from vehicle brake pad emissions or industrial (e.g., the textile industry) and mining sources; various metals from highway runoff; lead, copper, cadmium, and zinc from building siding; zinc from tire wear; and cadmium, copper and lead from atmospheric deposition. Permittees have supported the Brake Pad Partnership in passing Senate Bill 346, a powerful legislation that phases out copper from vehicle brake pads. This will help reduce the copper dust that can become airborne or settle on roads and wash into the storm drains, and eventually finding its way into creeks, rivers, and bays.

Sulfate concentrations can be largely attributable to the presence of eroded sulfur-rich sediment. Fungal and bacterial processes within the creek and surrounding areas may facilitate the release of sediment-bound sulfur into the water column. Sulfur may also be potentially present in the effluent from water reclamation plants, although additional tests and/or review of data would be required to confirm whether the upstream reclamation facility is a significant contributor.

Eliminating these and other water quality impairments in the Malibu Creek Watershed is the goal of six separate current and potential future TMDLs – bacteria, nutrients, sediment, sulfate, toxics, and trash developed or potentially to be developed for this rural stream. The Permittees that are responsible agencies under these current and potential future TMDLs are and will be working cooperatively to comply with these TMDLs and ultimately achieve the waste load reductions.

SECTION 5. RECEIVING WATER LIMITATION COMPLIANCE REPORTS

For the Fiscal Year 2011-12 reporting period, nine Permittees in addition to the Los Angeles County Flood Control District submitted Receiving Water Limitations (RWL) Compliance Reports and/or Status Reports:

1. Hermosa Beach (in annual report)
2. City of Malibu
3. City of Manhattan Beach (in annual report)
4. Redondo Beach (in annual report)
5. City of Rolling Hills (in annual report)
6. City of Rolling Hills Estates (in annual report)
7. City of Santa Monica (in annual report)
8. City of Torrance (in annual report and attachment "Monitoring Program Effectiveness")
9. County of Los Angeles
10. Los Angeles County Flood Control District

These reports are included in Appendix O.

APPENDICES

APPENDIX A

2011-12 PROGRAM YEAR SUMMARY

APPENDIX B

BMP'S INSTALLED IN 2011-12

APPENDIX C

BMP'S MAINTAINED IN 2011-12

APPENDIX D

PRINCIPAL PERMITTEE INDIVIDUAL ANNUAL REPORT

APPENDIX E

**BALLONA CREEK AND URBAN SANTA MONICA BAY WMA WATERSHED
ASSESSMENT**

APPENDIX F

**DOMINGUEZ CHANNEL/LOS ANGELES HARBOR WMA WATERSHED
ASSESSMENT**

APPENDIX G

LOS ANGELES RIVER WMA WATERSHED ASSESSMENT

APPENDIX H

**MALIBU CREEK AND RURAL SANTA MONICA BAY WMA WATERSHED
ASSESSMENT**

APPENDIX I

SAN GABRIEL RIVER WMA WATERSHED ASSESSMENT

APPENDIX J

SANTA CLARA RIVER WMA WATERSHED ASSESSMENT

APPENDIX K

EAC AND WMC REPRESENTATIVES

APPENDIX L

**PERMITTEES' EXPENDITURES FOR 2011-12 AND PROJECTED EXPENDITURES
FOR 2012-13**

APPENDIX M

**TABLE OF CONTENTS AND EXECUTIVE SUMMARY, 2010-11 STORMWATER
MONITORING REPORT**

APPENDIX N

**TABLE OF CONTENTS AND EXECUTIVE SUMMARY, 1994-2005 INTEGRATED
RECEIVING WATERS IMPACT MONITORING REPORT**

APPENDIX O

RECEIVING WATER LIMITATIONS COMPLIANCE REPORT