ENHANCED WATERSHED MANAGEMENT PROGRAM WORK PLAN FOR THE DOMINGUEZ CHANNEL WATERSHED MANAGEMENT AREA GROUP

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DRAFT

Submitted to:
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Acronyms

ARS	Automatic Retractable Screen
ASCE	American Society of Civil Engineers
BMP	Best Management Practice
BOE	Bureau of Engineering
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CIMIS	California Irrigation Management Information System
CO	Current Organics
CPI	Catchment Priority Index
CPS	Connector Pipe Screen
CTR	California Toxics Rule
CWA	Clean Water Act
DC WMA	Dominguez Channel Watershed Management Area
DC WMG	Dominguez Channel Watershed Management Group
DWMMP	Dominguez Watershed Management Master Plan
EMC	Event Mean Concentration
ERL	Effect Range Low
ERM	Effect Range Median
ETo	Evapotranspiration
EWMP	Enhanced Watershed Management Program
GIS	Geographic Information System
GLAC	Greater Los Angeles County
GPS	Global Positioning System
HHWC	Household Hazardous Waste Collection
HO	Historical Organics
HRU	Hydrologic Response Units
HSPF	Hydrologic Simulation Program - FORTRAN
IC/ID	Illicit Connection/Illicit Discharge
IGP	Industrial General Permit
IRWMP	Integrated Regional Watershed Management Plan
LABOS	Los Angeles Bureau of Sanitation
LACDPW	Los Angeles County Department of Public Works
LACFCD	Los Angeles County Flood Control District
LARWQCB	Los Angeles Regional Water Quality Control Board
LB	Long Beach
LID	Low Impact Development
LSPC	Loading Simulation Program in C++
LWQMP	Lake Water Quality Management Plan
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MFAC	Minimum Frequency of Assessment and Collection
MOA	Memorandum of Agreement

MS4	Municipal Separate Storm and Sewer System
NCDC	National Climatic Data Center
NEXGEN	Next Generation Radar
NIMS	Nonlinearity-Interval Mapping Scheme
NOI	Notice of Intent
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
PIPP	Public Information and Participation Program
POLA	Port of Los Angeles
POLB	Port of Long Beach
PPP	Pollution Prevention Plan
QA/QC	Quality Assurance/Quality Control
RAA	Reasonable Assurance Analysis
RWL	Receiving Water Limitation
SBPAT	Structural BMP Prioritization and Analysis Tool
SCCWRP	Southern California Coastal Water Research Project
SIC	Standard Industrial Classification
SQO	Sediment Quality Objectives
SRP	Spill Response Plan
SUSMP	Standard Urban Stormwater Mitigation Plan
SUSTAIN	System for Urban Stormwater Treatment and Analysis INtegration
SWAMP	Surface Water Ambient Monitoring Program
SWMM	Storm Water Management Model
SWPPP	Stormwater Pollution Prevention Plan
TAC	Technical Advisory Committee
TBD	To Be Determined
TIWRP	Terminal Island Water Reclamation Plant
TMDL	Total Maximum Daily Load
TSO	Time Schedule Order
USEPA	United States Environmental Protection Agency
WBPC	Water Body-Pollutant Combination
WDR	Waste Discharge Requirement
WLA	Waste Load Allocation
WMA	Watershed Management Area
WMMS	Watershed Management Modeling System
WMP	Watershed Management Program
WQBEL	Water Quality Based Effluent Limitation
WQO	Water Quality Objective

Units

µg/kg	Microgram per kilogram
µg/L	Microgram per liter
cfu	Colony Forming Unit
g/day	Grams per day
g/yr	Grams per year
kg	Kilogram
kg/yr	Kilograms per year
mg/L	Milligram per liter
mg/kg	Milligram per kilogram
mL	Milliliter
MPN	Most Probable Number
TUc	Toxic Unit Chronic

1 Introduction

This Work Plan outlines how the Dominguez Channel Watershed Management Area Group (DC WMG) intends to develop an Enhanced Watershed Management Program (EWMP) pursuant to the requirements set forth by Order No. R4-2012-0175, Los Angeles County Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (MS4 Permit). The subsequent DC WMG EWMP will build on the information gathered during the development of this Work Plan. This section describes the applicability of the Work Plan, watershed background and geographical characteristics, regulatory requirements set forth by the MS4 Permit, the EWMP development process, and an overview of this Work Plan.

1.1 Applicability of Work Plan

The agencies participating in this EWMP are the Cities of El Segundo, Hawthorne, Inglewood, Lomita and Los Angeles, the unincorporated areas of the County of Los Angeles, and the Los Angeles County Flood Control District (LACFCD). The area break down for the DC WMG is provided in Table 1.1. Attachment A, Figure A.1 provides a map of the Dominguez Channel Watershed Management Area (WMA) boundaries and the delineations of the areas of the DC WMG participating in the development of this EWMP. Additionally other MS4 Permittees in the watershed that are not participating in this EWMP are clearly identified. Attachment A, Figure A.2 provides a map illustrating the boundaries of the jurisdictions within DC WMG area. This EWMP Work Plan is voluntarily submitted to assist the LARWQCB in implementing the DC and LA Harbor Waters Toxics Pollutants TMDL. The DC WMG has entered into an Amended Consent Decree with the United States and the State of California, including the LARWQCB, pursuant to which the LARWQCB has released the DC WMG from responsibility for toxic pollutants in the DC and the harbors. Accordingly, no inference should be drawn from the submission of this EWMP Work Plan or from any action or implementation taken pursuant to it that the DC WMG is obligated to implement the TMDL, including this EWMP (Work Plan) or any of the TMDL's other obligations or plans, or that the DC WMG has waived any rights under the Amended Consent Decree. Additional information regarding the LACFCD is provided in the Attachments.

Table 1.1: DC WMG Area

DC WMG Member	Total Area (acres)	Percent of Group
City of El Segundo	1,252.18	3.33%
City of Hawthorne	3,891.93	10.34%
City of Inglewood	3,884.28	10.32%
City of Lomita	1,227.70	3.26%
City of Los Angeles	19,243.25	51.12%
Los Angeles County	8,140.91	21.63%
LACFCD	N/A	N/A

1.2 Geographic Scope and Characteristics

The physical and hydrologic watershed characteristics of the Dominguez Channel WMA that are unique to the DC WMG and are further discussed. In addition, the extent of the MS4 and receiving waters addressed by this EWMP Work Plan are also discussed.

1.2.1 Watershed Characteristics

As described on the Los Angeles County Department of Public Works (LACDPW) website (LACDPW, Dominguez Watershed), the Dominguez Channel WMA is located within the southern portion of Los Angeles County, California, and encompasses approximately 133 square miles of land and water, including the Upper Dominguez Channel Watershed, the Machado Lake Watershed, and the Los Angeles/Long Beach Harbors Watershed as demonstrated in Attachment A, Figure A.2. The DC WMG accounts for just over 58 square miles, approximately 42 percent of the Dominguez Channel WMA. Table 1.2 and Attachment A, Figure A.3 present the land use break down within the DC WMG.

Table 1.2: DC WMG Land Use

Land Use Category	Area (square miles)	Percentage
Agriculture	0.2	0.3%
Commercial	10.7	18.4%
Industrial	9.1	15.7%
Multi-Family Residential	8.3	14.2%
Single Family Residential	16.1	27.7%
Open	4.6	7.8%
Other Urban	9.3	15.9%
Total:	**58.3**	**100%**

The hydrologic characteristics of the DC WMG include:

- Low relief terrain except in the southwest (Attachment A, Figure A.4);
- Fully built-out area with a high percentage of impervious area except in the southwest (Attachment A, Figure A.4);
- Soil types based on the Los Angeles County Hydrology Manual (2006) (Attachment A, Figure A.5);
- Storm intensity that increases to the northwest, as indicated by the 50-year, 24-hour rainfall intensity distribution (Attachment A, Figure A.6); and
- Storm depth that increases to the north with a local high point over the Palos Verde Hills, as indicated by the 85th percentile, 24-hour rainfall depth distribution (Attachment A, Figure A.7).

1.2.2 Water Body Characteristics

The DC WMG is tributary to the water bodies listed below, which have been assessed by the State Water Resources Control Board (State Board). A figure illustrating these water bodies can be found in Attachment A, Figure A.8 and Figure A.9 and a summary of the major characteristics can be found in Table 1.3.

- Dominguez Channel
  - Dominguez Channel (lined portion above Vermont Avenue)
  - Dominguez Channel Estuary (unlined portion below Vermont Avenue)
  - Torrance Carson Channel (Torrance Lateral)
- Machado Lake
  - Machado Lake
  - Wilmington Drain

- Los Angeles Harbor
  - Inner Cabrillo Beach
  - Consolidated Slip

Dominguez Channel

The lined portion of the Dominguez Channel above Vermont Avenue is 6.7 miles, spanning from Imperial Highway near Interstate 105 to Vermont Avenue near Interstate 110 (USEPA, 2014b). Three miles of the lined portion of the Dominguez Channel are within the DC WMG jurisdiction The Basin Plan has identified the existing beneficial uses as RARE and REC-2 and potential beneficial uses as WARM, WILD, and REC-1 for the lined portion of the Dominguez Channel. Further downstream, below Vermont Avenue, is the unlined portion of the Dominguez Channel commonly referred to as the Dominguez Channel Estuary. The estuary is approximately 0.22 square miles, 140.8 acres (8.2 miles in length) spanning from the downstream end of the lined portion of the Dominguez Channel to the Los Angeles Harbor, just south of Anaheim Street and west of Interstate 710 (USEPA, 2014b). Approximately 2.2 miles of the Dominguez Channel Estuary is within the DC WMG jurisdiction. The Basin Plan has identified the existing beneficial uses as COMM, EST, MAR, WILD, RARE, MIGR, SPWN, REC-1, and REC-2 and a potential beneficial use as NAV for the Dominguez Channel Estuary. The Torrance Carson Channel, also referred to as Torrance Lateral, is 3.4 miles in length and tributary to the Dominguez Channel Estuary. The Torrance Lateral spans from Western Avenue south of Torrance Boulevard to its confluence with the Dominguez Channel Estuary near Avalon Boulevard and Interstate 405. 1.8 miles of the Torrance Lateral is within the DC WMG jurisdiction. The water quality associated with these water bodies is discussed in Section 2**.**

Machado Lake

Machado Lake is considered a freshwater reservoir or lake approximately 40 acres in size located adjacent to Vermont Avenue south of its intersection with Pacific Coast Highway (USEPA, 2014b). The Basin Plan has identified the existing beneficial uses as WARM, WILD, RARE, WET, REC-1, and REC-2. Machado Lake is comprised of upper and lower basins separated by a lower earthen dam. The upper basin contains the 40-acre recreational lake created by the impoundment of stormwater runoff while the lower basin is a seasonal freshwater marsh of roughly 63 acres. The Wilmington Drain is a LACFCD facility managed by LACDPW tributary to Machado Lake. The earthen bottom section is characterized as a soft bottom vegetated channel, approximately 3,000 feet long. This portion of Wilmington Drain spans from Pacific Coast Highway to just north of Lomita Boulevard, bordered by mostly residential land uses to the west and the Interstate 110 to the east. Just south of Interstate 110 and upstream, the channel is concrete lined. Beneficial uses for the Wilmington Drain were identified based on the tributary rule, therefore have the same beneficial uses as Machado Lake (LARWQCB, 1994). The water quality associated with these water bodies is discussed in Section 2.

Los Angeles Harbor

There are many components that make up the Los Angeles Harbor as a whole, as illustrated in Attachment A, Figure A.8. The Dominguez Channel WMA empties into the northeast side of the Consolidated Slip, the most upstream portion of the Los Angeles Harbor, located downstream of the Dominguez Channel Estuary near Anaheim Street west of Interstate 710 and spans to Shore Road where it confluences with the Los Angeles Inner Harbor. This portion of the harbor is approximately 0.06 square miles, 13.5 acres (USEPA, 2014b). The Basin Plan designates beneficial uses to "all other inner areas", including the Consolidated Slip. Existing beneficial uses for the inner harbor areas include IND, NAV, REC-2, COMM, MAR, and RARE and potential beneficial uses include REC-1 and SHELL. The Los Angeles Inner Harbor is approximately 3,003

acres and is located downstream of the Consolidated Slip. The Inner Harbor includes portions of both the Los Angeles Harbor and Long Beach Harbor (USEPA, 2014b). The Fish Harbor which is located within the Los Angeles Harbor area, is approximately 0.14 square miles, 91 acres, located east of the harbor near Wharf Street, is also considered part of the Inner Harbor area (USEPA, 2014b) and has the same beneficial uses. The inner and outer portions of Cabrillo Beach are also a part of the Los Angeles Harbor. Inner Cabrillo Beach is considered a bay/harbor and is located to the west of Fish Harbor, adjacent to Shoshonean Road, approximately 0.13 square miles, 82 acres. Outer Cabrillo Beach is considered a coastal shoreline approximately 0.58 miles long on the south side of the peninsula bordering inner and outer Cabrillo Beach (USEPA, 2014). The Basin Plan has identified existing beneficial uses for Cabrillo Beach as NAV, REC-1, REC-2, COMM, MAR, WILD, MIGR, SPWN, and SHELL. The water quality associated with the Los Angeles Harbor water bodies is discussed in Section 2.

Table 1.3: Summary of DC WMG Water Bodies

Water Body		Existing Beneficial Uses	Potential Beneficial Uses
Dominguez Channel	Lined portion above Vermont Avenue (Freshwater)	RARE, REC-2	WARM, WILD, REC-1, MUN[1]
	Unlined portion below Vermont Avenue (Estuary)	COMM, EST, MAR, WILD, RARE, MIGR, SPWN, REC-1, REC-2	NAV
	Torrance Carson Channel[2]	RARE, REC-2	WARM, WILD, REC-1, MUN[1]
Machado Lake	Machado Lake	WARM, WILD, WET, REC-1, REC-2	None
	Wilmington Drain[3]	WARM, WILD, WET, REC-1, REC-2	None
Los Angeles Harbor	Consolidated Slip	IND, NAV, REC-2, COMM, MAR, RARE	REC-1, SHELL
	Inner Harbor	IND, NAV, REC-2, COMM, MAR, RARE	REC-1, SHELL
	Fish Harbor	IND, NAV, REC-2, COMM, MAR, RARE	REC-1, SHELL
	Inner Cabrillo Beach	NAV, REC-1, REC-2, COMM, MAR, WILD, MIGR, SPWN, SHELL	None
	Outer Cabrillo Beach	NAV, REC-1, REC-2, COMM, MAR, WILD, MIGR, SPWN, SHELL	None

[1] MUN designation is P*. Associated water quality objectives are not applicable until such time as the use is confirmed.
[2] Beneficial uses based on TMDL Staff Report (LARWQCB, 2011).
[3] Beneficial uses based on the tributary rule (LARWQCB, 1994).

1.3 Regulatory Framework

In 1972, provisions of the Federal Water Pollution Control Act, also referred to as the Clean Water Act (CWA), were amended so that the discharge of pollutants to waters of the United States from any point source is effectively prohibited, unless the discharge is in compliance with a NPDES permit. In 1987 the CWA was amended, also called the Water Quality Act of 1987, to require United States Environmental Protection Agency (USEPA) to establish a program to address storm water discharges.

In response, EPA promulgated the NPDES storm water permit application regulations. These regulations required that facilities with storm water discharges "…from a large or medium municipal storm sewer system; or (3) a discharge which EPA or the state/tribe determines to contribute to a violation of a water quality standard or which…" apply for an NPDES permit. On November 16, 1990, the USEPA published final regulations that established application requirements for stormwater permits for MS4s serving a population of over 100,000 (Phase I communities) and certain industrial facilities, including construction sites greater than 5 acres. On December 8, 1999, the USEPA published the final regulations for communities under 100,000 (Phase II MS4s) and operators of construction sites between one and five acres.

The State of California Porter-Cologne Act (Water Code 13000, et seq.) is the principal legislation for controlling stormwater pollutants in California, requiring the development of Basin Plans for drainage basins within California. Each plan serves as a blueprint for protecting water quality within the various watersheds. These basin plans are used in turn to identify more specific controls for discharges (e.g., wastewater treatment plant effluent, urban runoff, and agriculture drainage). Under Porter-Cologne, specific controls are implemented through permits called Waste Discharge Requirements (WDRs) issued by the nine Regional Water Quality Control Boards. For discharges to surface waters, the WDR also serves as an NPDES permit.

The Los Angeles Regional Water Quality Control Board (LARWQCB or Regional Board) adopted WDRs for MS4 discharges within the Coastal Watersheds of Los Angeles County, (Order No. R4-2012-0175; NPDES Permit No. CAS004001) on November 8, 2012. The MS4 Permit became effective on December 28, 2012. The MS4 Permit contains effluent limitations, receiving water limitations (RWLs), Minimum Control Measures (MCMs), Total Maximum Daily Load (TMDL) provisions, and outlines the process for developing watershed management programs (WMPs), including the EWMP. The MS4 Permit incorporates the TMDL Waste Load Allocations (WLAs) applicable to dry- and wet-weather as Water Quality-Based Effluent Limitations (WQBELs) and/or Receiving Water Limitations (RWLs). Part V.A (pages 38-39) of the MS4 Permit requires compliance with the WQBELs as outlined in the respective TMDLs.

1.3.1 MS4 Permit Requirements

Part VI.C.1.g (page 47) of the MS4 Permit states that Permittees may elect to develop an EWMP that comprehensively evaluates opportunities within the participating WMA as a whole for collaboration among Permittees and other partners on multi-benefit regional projects, referred to as regional EWMP projects, that wherever feasible retain non-stormwater runoff and stormwater runoff from the 85th percentile, 24-hour storm event for drainage areas tributary to the project. These regional EWMP projects should also incorporate other benefits including flood control and water supply. In the drainage areas where regional EWMP projects are not feasible, a Reasonable Assurance Analysis (RAA) should be included to demonstrate that applicable WQBELs and RWLs will be achieved through implementation of other watershed control measures. According to Parts VI.C.1.g.i.-ix (pages 48-49) of the MS4 Permit the EWMP must:

i. Be consistent with the provisions in Part VI.C.1.a.-f (pages 46-47) and VI.C.5-C.8 (pages 58-66);
ii. Incorporate applicable State agency input on priority setting and other key implementation issues;
iii. Provide for meeting water quality standards and other CWA obligations by utilizing provisions in the CWA and its implementing regulations, policies, and guidance;
iv. Include multi-benefit regional projects to ensure that MS4 discharges achieve compliance with final WQBELs set forth in Part VI.E (page 141) of the MS4 Permit and do not cause or contribute to exceedances of receiving water limitations in Part V.A (page 38) of the MS4 Permit by retaining through infiltration or capture and reuse the stormwater volume

from the 85th percentile, 24-hour storm for the drainage areas tributary to the multi-benefit regional projects;

v. In drainage areas where retention of the stormwater volume from the 85th percentile, 24-hour storm event is not technically feasible, include other watershed control measures to ensure that MS4 discharges achieve compliance with interim and final WQBELs set forth in Part VI.E (page 141) of the MS4 Permit with compliance deadlines occurring after approval of an EWMP and to ensure that MS4 discharges do not cause or contribute to exceedances of receiving water limitations in Part V.A (page 38) of the MS4 Permit;

vi. Maximize the effectiveness of funds through analysis of alternatives and the selection and sequencing of actions needed to address human health and water quality related challenges and non-compliance;

vii. Incorporate effective innovative technologies, approaches and practices including green infrastructure;

viii. Ensure that existing requirements to comply with technology-based effluent limitations and core requirements (e.g., including elimination of non-stormwater discharges of pollutants through the MS4, and controls to reduce the discharge of pollutants in stormwater to the maximum extent practicable) are not delayed; and

ix. Ensure that a financial strategy is in place.

Part VI.C.4.c.iv (page 53-58) of the MS4 Permit states that Permittees that elect to collaborate and develop an EWMP, such as the DC WMG, shall submit the Work Plan for development of the EWMP no later than June 28, 2014. The draft EWMP shall be submitted no later than June 28, 2015. These deadlines stand true if the conditions described in Parts VI.C.4.c.iv.(1)-(3) (page 57) of the MS4 Permit are met in greater than fifty percent of the land area in the watershed. The conditions of Parts VI.C.4.c.iv.(1)-(3) (page 57) are required within six months of the MS4 Permit effective date and are as follows:

1. Demonstrate there are Low Impact Development (LID) ordinances in place that meet the requirements of the Planning and Land Development Program as described by Part VI.D.7 (pages 94-113) of the MS4 Permit;
2. Demonstrate that green streets policies are in place; and
3. Submit a Notice of Intent (NOI) to develop an EWMP.

The DC WMG has met these conditions. The requirements of the EWMP Work Plan are specified in the MS4 Permit Part VI.C.5 (pages 58-65) as the EWMP Program Development and focuses on the following tasks which are expanded on in this Work Plan.

a. Identification of water quality priorities;
b. Selection of watershed control measures; and
c. Compliance schedules.

1.3.2 Relevant TMDLs

A TMDL is a regulatory term used to describe a value of the maximum amount of a pollutant that a water body can receive while still meeting water quality standards. Attachment N of the MS4 Permit, titled "TMDLs in Dominguez Channel and Greater Harbor Waters Watershed Management Area" lists information on TMDLs and incorporates WQBELs and RWLs relevant to the DC WMG including the TMDLs identified in Table 1.4.

Table 1.4: DC WMG TMDLs and Effective Dates		
TMDL	**LARWQCB Resolution Number**	**Effective Date and/or Approval Date**
Los Angeles Harbor Bacteria TMDL	R12-007[1]	November 7, 2013
	2004-011	March 10, 2005
Machado Lake Trash TMDL	2007-006	March 6, 2008
Machado Lake Nutrient TMDL	2008-006	March 11, 2009
Machado Lake Pesticides and PCBs TMDL[2]	R10-008	March 20, 2012
DC and LA Harbor Waters Toxic Pollutants TMDL	R11-008	March 23, 2012

[1] Reconsideration of Certain Technical Matters of the Los Angeles Harbor Inner Cabrillo Beach and Main Ship Channel Bacteria TMDL
[2] Also referred to as the Machado Lake Toxics TMDL

Table 1.5 demonstrates which DC WMG members are affected by each of the TMDLs per Attachment K, Table K.4, of the MS4 Permit. The Water Quality Objectives (WQOs) associated with each of the TMDLs are included in Attachment B.

Table 1.5: Applicability of DC WMG TMDLs					
DC WMG Participating Agency	**Los Angeles Harbor Bacteria TMDL**	**Machado Lake Trash TMDL**	**Machado Lake Nutrient TMDL**	**Machado Lake Pesticides and PCBs TMDL**	**DC and LA Harbor Waters Toxic Pollutants TMDL[1]**
City of El Segundo					X
City of Hawthorne					X
City of Inglewood					X
City of Los Angeles	X	X	X	X	X
City of Lomita		X	X	X	
County of Los Angeles	X	X	X	X	X
LACFCD	X	X	X	X	X

[1] The requirements of the MS4 Permit to implement the obligations of this TMDL do not apply to a Permittee to the extent that it is determined that the Permittee has been released from that obligation pursuant to the Amended Consent decree entered in *United States v. Montrose Chemical Corp.*, Case No. 90-3122 AAH (JRx).

1.4 EWMP Development Process

According to Part VI.C.1.f.v (page 48) of the MS4 Permit, each watershed management program (WMPs and EWMPs) must provide appropriate opportunity for meaningful stakeholder input, including, but not limited to, a permit-wide watershed management program Technical Advisory Committee (TAC) that will advise and participate in the development of the WMP or EWMP at month six through the date of approval. The MS4 Permit requires that the TAC include at least one Permittee representative from each WMA for which a WMP or EWMP is being developed and must include a minimum of one public representative from a non-governmental organization with public membership and staff from the Regional Board and USEPA Region IX. The DC WMG has been part of

the TAC and has provided input on the various topics discussed. Additionally the DC WMG is working with local and regional stakeholders to receive input for the EWMP process.

The DC WMG has developed a list of stakeholders in order to establish the stakeholder participants, as well as provide guidance on how to engage the identified key stakeholders. The stakeholders include:

- Key administrators, stormwater program managers, council districts, etc.;
- Environmental and community organizations; and
- Collaborating governmental agencies such as the Regional Board, USEPA Region IX, United States Army Corps of Engineers, water districts, and other WMP or EWMP agencies.

A series of three EWMP stakeholder workshops are anticipated, the first two workshops having two sessions each, one for the entire region and the other being watershed-specific. The third workshop will be watershed-specific. DC WMG may hold additional workshops if needed. The first workshop was completed on April 10, 2014 at the Witherbee Auditorium at LA Zoo. This workshop was conducted in concert with three other WMGs and approximately 500 invitations were sent out to the above types of stakeholders. Workshop No. 1 was intended to initiate the process for receiving input from a broad stakeholder group. This workshop initiated the stakeholder process and addressed the EWMP watersheds of the Los Angeles River, Ballona Creek, Marina del Rey, Santa Monica Bay Jurisdictions 2 and 3, and the DC WMG. The agenda consisted of introducing the planned EWMP stakeholder process, explaining the relevance and context of the EWMP process, and solicit input from stakeholders for the Draft EWMP Work Plan and ideas on potential projects.

The following preparation was conducted and is anticipated for each of the remaining workshops:

- Meeting notices (one page flier) distributed via email to identified stakeholders and posted on the City of Los Angeles a website for EWMP materials and activities at least one month prior to the workshop;
- Material for each workshop distributed and posted to the www.lastormwater.org website;
- A draft workshop summary, including presentation materials, distributed no later than two weeks after each workshop to solicit additional stakeholder feedback;
- Locations of the workshops that are reasonably accessible and accommodates up to 250 attendees;

In addition to distributing workshop material through the Los Angeles Stormwater website, the DC WMG also posted workshop information on their community outreach websites and on social media.

The DC WMG anticipates the following workshops in the future in response to the EWMP development:

- **Workshop No. 2 - Presenting Draft EWMP Work Plans**
  Target date: August or September 2014
  This workshop will recap the first workshop and focus on a presentation of the Draft EWMP Work Plans, explaining how the input received at the first workshop was addressed. Modeling results from the RAA will be presented. During the second half of the workshop, breakout sessions will allow for watershed-specific discussions.

- **Workshop No. 3 - Input into the Draft EWMP Plan**
  Target date: Late 2014/Early 2015
  This workshop will be specific to each watershed in order to provide a summary of activities and work products to date and to present the outline and key elements of the Draft EWMP to solicit input. The primary objective of this workshop is to present the draft list of proposed regional projects in order to receive feedback.

The DC WMG anticipates additional one-on-one meetings or participation in other stakeholder forums when appropriate and on a case-by-case basis. The stakeholder process is important to the EWMP development process so that communication is occurring, and ideas are being discussed in an appropriate timeframe so that conflicts can be resolved early on.

1.5 EWMP Work Plan Overview

This EWMP Work Plan is required as part of the DC WMG EWMP development process per Part VI.C.4.c.iv (page 57) of the MS4 Permit.

The EWMP Work Plan documents the progress thus far in the development of the EWMP by detailing the water quality priorities within the DC WMG, identifying the existing and potential control measures, as well as the approach to identifying additional projects, and outlining the approach to the RAA, as required by the MS4 Permit. The purpose of identifying significant watershed characteristics and presenting an approach is so that stakeholders can become involved, and feedback can be solicited and incorporated into the EWMP. The EWMP Work Plan will be used as the frame of the EWMP and includes the following sections:

- **Section Water Quality Priorities**
  The receiving waters are identified and characterized based on the available water quality data. Water body Pollutant Classifications are developed so that each water body-pollutant combination can be classified into an appropriate category in order to develop an approach to prioritizing the identified water quality priorities.

- **Section Watershed Control Measures**
  This section outlines the existing and potential control measures. Watershed control measures consist of both structural and non-structural Best Management Practices (BMPs). Existing structural BMPs are identified and planning documents are reviewed in order to identify potential regional projects. In addition, an approach to identifying and selecting additional regional and distributed BMPs is included. The current minimum control measures are described and an approach to modifying the programs, as well as potential modifications, is presented.

- **Section Reasonable Assurance Analysis Approach**
  The modeling system and approach to conducting the RAA is presented in this section. The modeling system being used by the DC WMG is highlighted along with the process and modeling approach. The spatial domain, time period, water quality, and BMP model integration are described. Lastly, the output anticipated from the RAA is detailed and examples are provided.

- **Section EWMP Development Process**
  This section outlines the process and approach for implementing the Work Plan and completing the EWMP, including the process for incorporating comments from the Regional Board and other interested parties. The schedule for EWMP completion and associated milestones, including alternative milestones, will be presented. Lastly, the adaptive nature of the EWMP development is discussed.

2 Water Quality Priorities

Identification of the water quality priorities in the DC WMG is a key component of the EWMP process. Part VI.C.5.a (page 58-60) of the MS4 Permit outlines the pertinent elements of the prioritization process as follows:

1. Water quality characterization (VI.C.5.a.i, page 58) based on available monitoring data, TMDLs, 303(d) lists, storm water annual reports, etc.;
2. Water body-pollutant classification (VI.C.5.a.ii, page 59) to identify water body-pollutant combinations that fall into three MS4 Permit-defined categories;
3. Source assessment (VI.C.5.a.iii, page 59) for the water body-pollutant combinations in the three categories; and
4. Prioritization of the water body-pollutant combinations (VI.C.5.a.iv, page 60).

The three MS4 Permit defined categories are:

- Category 1 (Highest Priority): Water body-pollutant combinations for which WQBELs and/or RWLs are established in Part VI.E (page 141) and Attachment N of the MS4 Permit.

- Category 2 (High Priority): Pollutants for which data indicate water quality impairment in the receiving water according to the State's Water Quality Control Policy for Developing California's CWA Section 303(d) List (State Listing Policy) and for which MS4 discharges may be causing or contributing to the impairment.

- Category 3 (Medium Priority): Pollutants for which there are insufficient data to indicate water quality impairment in the receiving water according to the State's Listing Policy, but which exceed applicable receiving water limitations contained in the MS4 Permit and for which MS4 discharges may be causing or contributing to the exceedance.

The following sections presented below describe the characterization and prioritization of those water body-pollutant combinations (WBPCs) found to be issues in DC WMG.

2.1 Water Quality Characterization

Water quality monitoring data and reports were gathered for the Dominguez Channel water body segments (including the lined portion above Vermont Avenue, the unlined Dominguez Channel Estuary, and the Torrance Lateral), the Machado Lake water body segments (including the Wilmington Drain), and the Los Angeles Harbor (including the Consolidated Slip and Cabrillo Beach). The raw data available was assessed for quality and compiled into a database by wet-weather and dry-weather conditions and locations. Sources for this data included:

- LACDPW Dominguez Channel MS4 NPDES Mass Emission Monitoring;
- AMEC's Port of Los Angeles (POLA) Artesia Pollutograph Study;
- City of Los Angeles Bureau of Sanitation (LABOS) Special Ammonia Sampling and Status and Trends Monitoring Programs in the Dominguez Channel; and
- LABOS Machado Lake Water Quality Monitoring Program and Nutrient TMDL Monitoring Program.

The sampling locations for the data are shown in Attachment C (Figures C.1 and C.2) and additional details regarding the available data, including which sampling effort was conducted at each site, are presented in Attachment D.

In addition to the sampling data, water and sediment quality monitoring reports were collected and reviewed as part of the characterization. These reports are summarized in Table 2.1.

Table 2.1: Monitoring Reports Reviewed for Water Quality Characterization

Source	Water Body(ies)	Date Range
LACDPW NPDES MS4 Stormwater Monitoring Reports	Dominguez Channel Mass Emission Station	2002-2012
	Dominguez Channel Tributary Monitoring	2008-2011
Surface Water Ambient Monitoring Program (SWAMP)	Dominguez Channel, Machado Lake and LA/LB Harbor	2003
Dominguez Channel/Consolidated Slip Erosion Study	Dominguez Channel Estuary and Consolidated Slip	2011
Southern California Bight Regional Monitoring Program	LA/LB Harbor	2003 2008
POLA water data	Inner, Fish, and Outer Harbor	2005
Port of Long Beach (POLB) water data	Inner Harbor	2006
POLA/POLB Sediment Survey	Inner and Outer Harbor	2006
City of LA Terminal Island Water Reclamation Plant Biennial Assessment Report	Outer Harbor	2002/2003 2008/2009 2010/2011
Southern California Coastal Water Research Project (SCCWRP) DDE Inventory	Inner and Outer Harbor	2003
Consolidated Slip Restoration Project Concept Plan Supplemental Report	Dominguez Channel, Dominguez Channel Estuary, Torrance Lateral, and Consolidated Slip	2002
SCCWRP Atmospheric Deposition in LA/LB Harbor study	Consolidated Slip	2006
Wilmington Drain Sediment Characterization Study - LACDPW and City of Los Angeles Bureau of Engineering (BOE)	Wilmington Drain	2007
City of LA Machado Lake Nutrients and Toxics TMDL Lake Water Quality Management Plan	Machado Lake and Wilmington Drain	2001-2009

Basin Plan; the TMDLs for Dominguez Channel, Machado Lake, and the Los Angeles Harbor adopted as Basin Plan Amendments; other amendments to the Basin Plan Water Quality Standards; and the CTR (USEPA, 2000) were used to evaluate whether data exceeded RWLs. Applicable WQOs were established based on existing and potential beneficial uses for each water body segment and the weather conditions the samples were collected under.

The data analysis applied criteria for potential beneficial uses in addition to existing uses as a conservative measure. In doing so, water quality monitoring samples from the lined portion of the Dominguez Channel were screened against criteria applicable for the protection of REC-1 beneficial uses. Criteria for the protection of human health for the consumption of organisms only were applied to segments with either existing or potential REC-1 beneficial uses under both dry- and wet-weather conditions. Where human health criteria were not applicable or established, chronic water quality criteria for the protection of aquatic life were applied to dry-weather samples and acute water quality criteria were applied to wet-weather samples to account for the shorter exposure period consistent with TMDLs in the region.

Water body segments were classified as either freshwater or saltwater to apply the correct WQOs. The lined portion of the Dominguez Channel, as well as tributaries (i.e., the Torrance Lateral), were classified as freshwater, while portions of the Los Angeles Harbor were classified as marine (saltwater). Due to tidal influence in the estuarine portion of the WMA and a lack of salinity data at the sampling locations in the Estuary, water quality samples from the Estuary were screened against both salt and freshwater criteria and the more stringent of the two criteria under the physical conditions at the time of sampling was used. Future confirmation of the salinity level at these monitoring locations can further refine these assumptions.

Hardness measurements at the time of sampling were used to calculate hardness-dependent dissolved metals WQOs. When hardness was not recorded, the median hardness for dry-weather samples at each sample site was used for dry-weather conditions and a value of 50 mg/L was used for wet-weather based on the hardness used in the TMDL for Toxic Pollutants in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters.

2.1.1 Characterization of Receiving Water Quality

Statistical summaries of the water quality monitoring (raw) data are presented in Attachment D. Tables of the observed exceedances over the monitoring period and exceedances over the past five years (starting in January 2008) are summarized in Table 2.2 to Table 2.4 below. The last ten years of data was identified and evaluated based on the requirements specified in the RAA Guidelines and the most recent five years of data was focused on, as it is the most relevant. Note that metals were evaluated in dissolved form. For details on the WQOs utilized to measure exceedances, refer to the Attachment D.

Table 2.2: Summary of Exceedances for the Dominguez Channel Monitoring Locations

				Mainstream of Dominguez Channel								Tributaries			
				El Segundo Blvd		Mass Emission Station, S-28 (Artesia Blvd)		Western Ave		Vermont Ave		Yukon Ave		Carson Plaza Dr	
		Date Range		Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years
Constituent	**Weather**	**From**	**To**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**
Copper[A]	Wet	7/25/02	2/22/07	5/11	-	21/39	12/20	4/11	-	1/4	-	3/4	-	1/4	-
	Dry	4/26/01	5/26/09	35/83	2/16	7/33	5/22	16/82	0/16	7/47	0/16	14/45	3/15	9/36	0/8
Lead[A]	Wet	7/25/02	2/22/07	2/11	-	5/34	5/20	3/11	-	1/3	-	1/4	-	1/4	-
	Dry	4/26/01	5/26/09	8/81	1/16	1/30	1/22	2/81	1/16	1/47	1/16	2/46	1/15	0/36	0/8
Zinc[A]	Wet	7/25/02	2/22/07	3/11	-	18/39	11/20	2/11	-	0/4	-	1/4	-	0/4	-
	Dry	4/26/01	5/26/09	0/82	0/16	2/33	2/22	0/82	0/16	0/47	0/16	1/42	0/15	0/36	0/8
Cadmium	Wet	7/25/02	2/22/07	1/11	-	-	-	0/11	-	0/4	-	0/4	-	0/4	-
	Dry	4/26/01	5/26/09	0/82	0/16	-	-	1/82	0/16	0/47	0/16	0/46	0/15	0/36	0/8
Chromium	Dry	4/26/01	5/26/09	1/83	0/16	-	-	0/83	0/16	1/47	1/16	2/46	0/15	0/36	0/8
Mercury	Wet	7/25/02	8/25/05	2/10	-	0/37	0/20	2/10	-	0/3	-	0/3	-	0/3	-
	Dry	4/26/01	2/24/06	8/46	-	1/65	0/22	7/46	-	0/11	-	0/11	-	0/9	-
Thallium	Dry	3/31/05	2/24/06	2/47	-	-	-	1/47	-	0/11	-	0/11	-	0/9	-
Selenium	Dry	5/31/01	5/26/09	0/82	0/17	-	-	0/82	0/17	0/48	0/17	0/47	0/16	7/37	7/9
E. coli[B]	Wet	11/29/01	12/23/08	24/38	22/34	4/4	4/4	29/38	6/6	19/38	5/6	10/12	1/2	9/12	1/2
	Dry	4/3/01	5/26/09	120/250	5/6	5/5	5/5	194/250	27/34	113/250	30/34	41/71	9/15	48/77	6/15
Fecal Coliform	Wet	11/8/02	1/24/13	-	-	44/46	21/21	-	-	-	-	-	-	-	-
	Dry	10/10/02	4/9/13	-	-	19/27	12/18	-	-	-	-	-	-	-	-
Ammonia	Dry	7/1/09	8/13/09	1/7	1/7	-	-	0/7	0/7	0/7	0/7	-	-	-	-
Diazinon	Wet	10/31/06	6/12/13	-	-	3/31	0/20	-	-	-	-	-	-	-	-
	Dry	2/11/03	1/24/13	-	-	0/28	0/22	-	-	-	-	-	-	-	-
Bis(2-Ethylhexl) phthalate	Wet	10/28/03	6/12/13	-	-	3/31	0/21	-	-	-	-	-	-	-	-
	Dry	10/31/03	1/24/13	-	-	1/30	0/23	-	-	-	-	-	-	-	-

Table 2.2: Summary of Exceedances for the Dominguez Channel Monitoring Locations

				Mainstream of Dominguez Channel								Tributaries			
				El Segundo Blvd		Mass Emission Station, S-28 (Artesia Blvd)		Western Ave		Vermont Ave		Yukon Ave		Carson Plaza Dr	
		Date Range		Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years
Constituent	**Weather**	**From**	**To**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**
pH	Wet	11/8/02	1/24/13	-	-	5/39	3/20	-	-	-	-	-	-	-	-
	Dry	10/10/02	6/12/13	-	-	9/33	8/22	-	-	-	-	-	-	-	-
Dissolved Oxygen	Wet	11/8/2002	1/24/2013	-	-	1/42	0/18	-	-	-	-	-	-	-	-

E/N = Number of Exceedances/Number of Samples
- = No Data
[A] Copper, Lead, and Zinc measurements for Sampling Station S-28 were taken on the following dates: 2/27/2006 - 1/24/2013 (wet) and 5/16/2005-6/12/2013 (dry)
[B] E. Coli at Sampling Station S-28 was taken on the following dates: 10/11/2012 - 1/24/2013 (wet) and 10/10/2012-4/9/2013 (dry)

Table 2.3: Summary of Exceedances at the Torrance Lateral Monitoring Location

				Main Street	
		Date Range		Overall	Past 5 Years
Constituent	**Weather**	**From**	**To**	**E/N**	**E/N**
Copper	Wet	4/28/2005	2/22/2007	1/4	-
	Dry	1/27/2005	5/26/2009	7/47	1/16
Lead	Wet	4/28/2005	2/22/2007	1/3	-
	Dry	1/27/2005	5/26/2009	1/47	1/16
Zinc	Wet	4/28/2005	2/22/2007	1/4	-
Cadmium	Wet	4/28/2005	2/22/2007	1/4	-
	Dry	1/27/2005	5/26/2009	1/47	0/16
E. coli	Wet	2/27/2003	12/23/2008	7/12	2/2
	Dry	1/17/2002	5/26/2009	42/77	13/15

E/N = Number of Exceedances/Number of Samples
- = No Data

Table 2.4: Summary of Exceedances for the Dominguez Channel Estuary Monitoring Locations

				Wilmington Avenue		Henry Ford Avenue	
		Date Range		Overall	Past 5 Years	Overall	Past 5 Years
Constituent	Weather	From	To	E/N	E/N	E/N	E/N
Copper	Wet	7/25/2002	2/22/2007	10/11	-	5/10	-
	Dry	4/26/2001	5/26/2009	44/72	10/10	43/73	9/10
Lead	Wet	7/25/2002	2/22/2007	0/11	-	2/11	-
	Dry	4/26/2001	5/26/2009	12/72	1/9	14/75	1/10
Zinc	Wet	7/25/2002	2/22/2007	2/10	-	1/11	-
	Dry	4/26/2001	5/26/2009	4/75	2/10	0/74	0/10
Silver	Dry	4/26/2001	5/26/2009	1/75	0/9	3/74	0/9
Nickel	Wet	7/25/2002	2/22/2007	1/11	-	1/11	-
	Dry	4/26/2001	5/26/2009	16/75	6/10	16/75	6/10
Mercury	Dry	4/26/2001	2/24/2006	10/46	-	8/45	-
Thallium	Wet	7/25/2002	8/25/2005	1/10	-	1/9	-
	Dry	4/26/2001	1/26/2006	4/47	-	4/46	-
Enterococcus	Wet	11/29/2001	12/23/2008	28/38	5/6	21/38	3/6
	Dry	4/3/2001	5/26/2009	31/250	4/34	12/250	0/34
Total Coliform	Wet	11/29/2001	12/23/2008	33/38	5/6	26/38	4/6
	Dry	4/3/2001	5/26/2009	57/250	5/34	11/250	2/34

E/N = Number of Exceedances/Number of Samples
- = No Data

Table 2.5: Summary of Exceedances for the Machado Lake Monitoring Locations

				Machado Lake, ML-1		Machado Lake, ML-2		Machado Lake, ML-3		Machado Lake, ML-4		Project 77 Drain		Project 510 Drain	
		Date Range		Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years	Overall	Past 5 Years
Constituent	**Weather**	**From**	**To**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**	**E/N**
E.Coli	Wet	12/20/07	12/20/07	1/1	-	1/1	-	1/1	-	-	-	-	-	-	-
	Dry	12/26/07	9/29/08	24/54	24/54	18/55	17/54	43/55	43/54	8/47	8/47	2/4	1/3	0/1	-
Total Phosphorus	Wet	5/23/08	2/17/09	1/2	1/1	1/1	1/1	-	-	-	-	-	-	-	-
	Dry	5/19/08	2/7/11	43/52	45/45	45/45	45/45	-	-	-	-	-	-	-	-
Total Nitrogen	Wet	4/17/07	2/17/09	5/6	3/4	4/5	3/4	1/1	1/1	1/1	1/1	6/6	3/3	1/1	-
	Dry	6/16/06	2/7/11	89/106	70/87	92/106	74/87	45/47	45/47	44/47	44/47	40/41	31/32	29/31	22/22
Chlorophyll-a	Wet	5/23/08	2/17/09	1/2	1/2	1/2	1/2	1/1	1/1	1/1	1/1	-	-	-	-
	Dry	5/19/08	2/7/11	43/55	43/55	46/55	46/55	20/20	20/20	19/19	19/19	-	-	-	-
Dissolved Oxygen	Wet	12/26/12	12/26/12	1/1	1/1	1/1	1/1	-	-	-	-	-	-	-	-
	Dry	4/4/11	12/10/12	37/45	37/45	41/45	41/45	-	-	-	-	-	-	-	-

E/N = Number of Exceedances/Number of Samples
- = No Data

Table 2.6: Summary of Exceedances at the Wilmington Drain Monitoring Location

				Wilmington Drain	
		Date Range		Overall	Past 5 Years
Constituent	**Weather**	**From**	**To**	**E/N**	**E/N**
E. Coli	Dry	12/26/2007	2/27/2008	1/4	0/3
Total Nitrogen	Wet	11/30/2007	2/17/2009	6/6	3/3
	Dry	10/19/2007	2/2/2009	30/30	21/21

E/N = Number of Exceedances/Number of Samples
- = No Data

The monitoring reports reviewed during the water quality characterization were for the Dominguez Channel, Machado Lake and Los Angeles Harbor areas. For those programs that investigated sediment quality, exceedances of the Effect Range Low (ERL) sediment quality thresholds were used to assess water body impairment. It was also noted if chemical concentrations exceeded the higher Effect Range Median (ERM) threshold. Significant findings from these reports are summarized in Table 2.7, Table 2.8, and Table 2.9 for the Dominguez Channel water body segments, Machado Lake water body segments, and the Los Angeles Harbor water body segments respectively.

Table 2.7: Summary of Exceedances for Monitoring Programs for the Dominguez Channel

Water Body	Program	Date Range	Exceedances
Dominguez Channel	LACDPW NPDES MS4 Stormwater Monitoring	2008-2013	Wet-weather: Copper (diss.), Lead (diss.), and Zinc (diss.), Cyanide, Fecal coliforms, pH Dry-weather: Cyanide, Fecal coliforms, E. coli, pH
	LACDPW NPDES MS4 Stormwater Monitoring	2002-2008	Wet weather: Copper (diss.), Lead (diss.), and Zinc (diss.)
	LACDPW NPDES MS4 Stormwater Monitoring	2002, 2003, 2005	Water column toxicity
	LACDPW NPDES MS4 Stormwater Monitoring	Pre- 2005	Diazinon
	SWAMP	2003	pH
	Consolidated Slip Restoration Project Concept Plan Supplemental Report	2002	Sediment (ERM): Zinc
Torrance Lateral	LACDPW NPDES MS4 Stormwater Monitoring	2008-2012	Wet-Weather: Copper (diss.), Lead (diss.), and Zinc (diss.), Cyanide, Fecal coliforms, pH Dry-Weather: Fecal coliforms, pH, ammonia
	Consolidated Slip Restoration Project Concept Plan Supplemental Report	2002	Sediment (ERM): Lead, Zinc, DDT, PCBs, and PAHs
Dominguez Channel Estuary	Consolidated Slip Erosion Study	2011	Sediment (ERM): Chromium, Copper, Lead, Zinc, Mercury, Silver, DDT, PCBs, Chlordane, Dieldrin Sediment (ERL): Arsenic, Cadmium, Chromium, Copper, Lead, Zinc, Mercury, Nickel, Silver, Total PCBs, DDT, PAHs, Chlordane, and Dieldrin
	SWAP Report	2003	Benthic community effects
	Consolidated Slip Restoration Project Concept Plan Supplemental Report	2002	ERM: Copper, Lead, Zinc, DDT, and PCBs

Table 2.8: Summary of Exceedances for Monitoring Programs for Machado Lake			
Water Body	**Program**	**Date Range**	**Exceedances**
Machado Lake	Machado Lake Nutrients and Toxics TMDL Lake Water Quality Management Plan (Regional Board sediment data set)	2009	Sediment: Chlordane, Total DDT, Total PCBs
	SWAP Report	2003	Dissolved Oxygen
Wilmington Drain	Regional Board Sediment Data	2008	Sediment: Chlordane, Total DDT, Dieldrin
	Wilmington Drain Sediment Characterization Study	2007	Sediment: Chlordane, Total DDT, Total PCBs

Table 2.9: Summary of Exceedances for Monitoring Programs for the Los Angeles Harbor			
Water Body	**Program**	**Date Range**	**Exceedances**
LA Harbor	Southern California Bight Regional Monitoring Program	2008	Sediment (ERL): DDT, Copper
	Southern California Bight Regional Monitoring Program	2003	Sediment (ERL): DDT, Copper, Nickel, Mercury, Sediment Toxicity
Inner Harbor	POLA/POLB Sediment Survey	2006	Copper (diss.), DDT (diss.)
	SWAP Report	2003	Silver (diss.)
	Southern California Bight Regional Monitoring Program	2003	PCBs
Outer Harbor	City of LA Terminal Island Water Reclamation Plant (TIWRP) Biennial Assessment Report	2010-2011	Sediment (ERL): Cadmium, Copper, Nickel, DDT, Total PCBs
	TIRP Biennial Assessment Report	2008-2011	Total PCBs (tissue), Total DDT (tissue)
	POLA/POLB sediment survey	2006	Copper (diss.), DDT (diss.)
	SWAP Report	2003	Silver (diss.)
Consolidated Slip	Consolidated Slip Erosion Study	2011	Sediment (ERM): PCBs, DDT, Chlordane, Dieldrin Sediment (ERL): Arsenic, Cadmium, Chromium, Copper, Lead, Zinc, Mercury, Nickel, Silver, Total PCBs, DDT, PAHs, Chlordane, Dieldrin
	SCCWRP Atmospheric Deposition in LA/LB Harbor study	2006	Total DDT (diss.) and Total PCBs (diss.)
	Consolidated Slip Restoration Project Concept Plan Supplemental Report	2002	Sediment (ERM): Copper, Lead, Zinc, Mercury, Total PCBs, DDT, PAHs, Chlordane and Dieldrin

2.1.2 Characterization of Discharge Quality

Stormwater and non-stormwater discharges will be characterized based on available data. The necessary data may be limited due to the typical lack of data for MS4 discharges within the DC WMG. Regional studies, modeling data, and/or land use data will be further evaluated in order to characterize discharge quality in the EWMP. In addition, data will become available through the future CIMP Outfall Monitoring which will be utilized.

2.2 Water Body Pollutant Classification

Using the data analysis and results from additional monitoring reports, WBPCs were classified into one of the three MS4 Permit categories (Category 1-3). Those WBPCs with a TMDL were classified as Category 1, those WBPCs listed on the State's 303(d) list as impairing a particular water body segment were classified as Category 2, and those remaining WBPCs without an associated TMDL or on the State's 303(d) list, but showing exceedances of water quality criteria were classified as Category 3. A summary of these categorizations is presented in Table 2.10.

Table 2.10: Categorized Water Body-Pollutant Combinations

Water Body	Category 1 (TMDL)	Category 2 (303(d) List)	Category 3 (Other)
Dominguez Channel (lined portion above Vermont Ave)	Copper (diss.), Lead (diss.), Zinc (diss.), Toxicity	Indicator Bacteria, Ammonia, Diazinon	Cadmium(diss.), Chromium (diss.), Mercury (diss.), Thallium (diss.), Bis(2-Ethylhexl) phthalate, pH, Dissolved Oxygen
Torrance Lateral	Copper (diss.), Lead (diss.), Zinc (diss.)	Coliform Bacteria	Cadmium (diss.), Cyanide, pH, Ammonia, PCBs (sed.), DDT (sed.)
Dominguez Estuary (unlined portion below Vermont Ave)	Cadmium (sed.), Copper (diss. and sed.), Lead (diss., sed., & tissue), Zinc (diss. & sed.), DDT (tissue & sed.), PCBs (sed.), Chlordane (tissue & sed.), Dieldrin (tissue & sed.), PAHs (sed.), Benthic Community Effects, Sediment Toxicity	Ammonia, Coliform Bacteria	Arsenic (sed.), Chromium (sed.), Silver (diss. & sed.), Nickel (diss.), Mercury (sed.), Thallium (diss.)
Machado Lake	Trash, Total Phosphorus, Total Nitrogen, Ammonia, Chlorophyll-a, PCBs (sed.), DDT (sed.), Chlordane (sed.), Dieldrin (sed.), Dissolved Oxygen	*None*	*E. coli*, pH
Wilmington Drain	*None*	Coliform Bacteria, Copper (diss.), Lead (diss.)	Total Nitrogen, DDT (sed.), PCBs (sed.), Chlordane, Dieldrin (sed.)
LA Harbor[1] - Cabrillo Marina	DDT (tissue & sed.), PCBs (tissue & sed.), PAHs	*None*	*None*

Table 2.10: Categorized Water Body-Pollutant Combinations			
Water Body	**Category 1 (TMDL)**	**Category 2 (303(d) List)**	**Category 3 (Other)**
LA Harbor[1] - Consolidated Slip	Cadmium, Chromium, Copper, Lead, Mercury, Zinc, DDT (tissue & sed.), PCBs (tissue & sed.), PAHs (sed.), Chlordane (tissue & sed.), Dieldrin, Toxaphene (tissue), Benthic Community Effects, Sediment Toxicity	*None*	Arsenic, Silver, Nickel
LA Harbor[1] - Fish Harbor	Copper, Lead, Mercury, Zinc, DDT (tissue & sed.), PCBs (tissue & sed.), Chlordane, PAHs, Sediment Toxicity	*None*	*None*
LA/LB Inner Harbor[1]	Copper, Zinc, DDT (tissue & sed.), PCBs (tissue & sed.), PAHs, Benthic Community Effects, Sediment Toxicity, Indicator Bacteria	*None*	Copper (diss.), Silver (diss.)
LA/LB Outer Harbor[1]	DDT (tissue & sed.), PCBs (tissue & sed.), Sediment Toxicity	*None*	Cadmium, Nickel, Silver (diss.), Copper (diss. & sed.), Mercury
LA Harbor[1] - Inner Cabrillo Beach	Indicator Bacteria, DDT (sed. & tissue), PCBs (tissue & sed.)	*None*	*None*

[1] Los Angeles Harbor metals and organic pollutants issues are for sediment unless otherwise noted.

To assist with future prioritization efforts, the categorized WBPCs were divided into the subcategories described in Table 2.11.

Table 2.11: Categorized Water Body-Pollutant Combinations		
Category	**Water Body-Pollutant Combinations**	**Description**
1	**Category 1A:** WBPCs with past due or current Permit term TMDL deadlines with exceedances in the past 5 years.	WBPCs with TMDLs with past due or current MS4 Permit term interim and/or final limits. These pollutants are the highest priority for the current MS4 Permit term.
	Category 1B: WBPCs with TMDL deadlines beyond the Permit term with exceedances in the past 5 years.	The MS4 Permit does not require the prioritization of TMDL interim and/or final deadlines outside of the Permit term or USEPA TMDLs, which do not have implementation schedules. To ensure EWMPs consider long term planning requirements and utilize the available compliance mechanisms, these WBPCs should be considered during BMP planning and scheduling, and during CIMP development.
	Category 1C: WBPCs addressed in USEPA TMDL without a Regional Board adopted Implementation Plan.	
	Category 1D: WBPCs with past due or current Permit term TMDL deadlines but have there have been no exceedances in the past 5 years.	WBPCs where specific actions may end up not being identified because recent exceedances have not been observed and specific actions may not be necessary. The CIMP should address these WBPCs to support future re-prioritization.
2	**Category 2A:** 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements with exceedances in the past 5 years.	WBPCs with confirmed impairment or exceedances of RWLs. WBPCs in a similar class[1] as those with TMDLs are identified. WBPCs currently on the 303(d) List are differentiated from those that are not to support utilization of EWMP compliance mechanisms.
	Category 2B: 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements that are not a "pollutant"2 (e.g., toxicity).	WBPCs where specific actions may not be identifiable because the cause of the impairment or exceedances is not resolved. Either routine monitoring or special studies identified in the CIMP should support identification of a "pollutant" linked to the impairment and re-prioritization in the future.
	Category 2C: 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements but there have been no exceedances in the past 5 years.	WBPCs where specific actions for implementation may end up not being identified because recent exceedances have not been observed (and thus specific BMPs may not be necessary). Pollutants that are in a similar class[1] as those with TMDLs are identified. Either routine monitoring or special studies identified in the CIMP should ensure these WBPCs are addressed to support re-prioritization in the future.
3	**Category 3A:** Other WBPCs that have exceeded in the past 5 years.	Pollutants that are in a similar class[1] as those with TMDLs are identified.
	Category 3B: Other WBPCs that are not a "pollutant"2 (e.g., toxicity).	WBPCs where specific actions may not be identifiable because the cause of the impairment or exceedances is not resolved. Either routine monitoring or special studies identified in the CIMP should support identification of a "pollutant" linked to the impairment and re-prioritization in the future.
	Category 3C: Other WBPCs that have exceeded in the past 10 years, but not in past 5 years.	Pollutants that are in a similar class[1] as those with TMDLs are identified.
	Category 3D: WBPCs identified by the DC WMG.	The DC WMG may identify other WBPCs for consideration in EWMP planning.

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Those pollutants with similar fate and transport mechanisms that can be addressed with the same types of control measures were also grouped into classes. These classes include:

- Bacteria
- Metals
- Nutrients
- Trash
- Historical Organics (HO) – organic compounds including pesticides that are no longer in use such as PCBs and DDT
- Current Organics (CO) – organic Compounds such as pesticides and PAHs that are still in use
- To be determined (TBD) – conditions such as pH, dissolved oxygen, and toxicity that are not classified as pollutants and will need further investigation before grouping into other classes

The tables below list the subcategorized WBPCs for DC WMG (Table 2.12), Torrance Lateral (Table 2.13), Dominguez Channel Estuary (Table 2.14), Machado Lake (Table 2.15), Wilmington Drain (Table 2.16), the Consolidated Slip (Table 2.17), and the rest of the Los Angeles Harbor areas (Table 2.18). Those designations that only apply to a specific weather condition (wet or dry) were marked as such. Exceedances of CTR WQOs for dissolved copper, lead, and zinc were observed within the past five years in both dry- and wet-weather in the Dominguez Channel, yet these constituents have been categorized separately due to the TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters only addressing wet-weather exceedances for these metals in the Channel. Refer to Table 2.11 for a description of the subcategories. Subcategorizations may change as more recent monitoring data becomes available for evaluation.

Table 2.12: Summary of Dominguez Channel Subcategorized WBPCs		
Class	**Constituents[1]**	**Subcategory**
Metal	Dissolved Copper (Wet)	1A
Metal	Dissolved Lead (Wet)	1A
Metal	Dissolved Zinc (Wet)	1A
TBD	Toxicity	1D
Bacteria	Indicator Bacteria	2A
Nutrients	Ammonia (Dry)	2A
HO	Diazinon	2C
Metals	Dissolved Copper (Dry)	3A
Metals	Dissolved Lead (Dry)	3A
Metals	Dissolved Zinc (Dry)	3A
Metals	Dissolved Chromium (Dry)	3A
TBD	Cyanide	3A
TBD	pH	3B
Metals	Dissolved Cadmium	3C
Metals	Dissolved Mercury	3C
Metals	Dissolved Thallium (Dry)	3C
CO	Bis (2-Ethylhexl) phthalate	3C
TBD	Dissolved Oxygen	3C

[1] If the constituent is noted as wet or dry, then the priority is only based on wet- or dry-weather.
TBD = To Be Determined
HO = Historical Organics
CO = Current Organics

Table 2.13: Summary of Torrance Lateral Subcategorized WBPCs		
Class	**Constituents[1]**	**Subcategory**
Metal	Dissolved Copper (Wet)	1A
Metal	Dissolved Lead (Wet)	1A
Metal	Dissolved Zinc (Wet)	1A
Bacteria	Coliform Bacteria	2A
Metals	Dissolved Copper (Dry)	3A
Metals	Dissolved Lead (Dry)	3A
TBD	Cyanide	3A
TBD	pH	3A
Nutrients	Ammonia (Dry)	3A
Metals	Dissolved Zinc (Dry)	3C
Metals	Dissolved Cadmium	3C
HO	DDT	3C
HO	PCBs	3C

[1] If the constituent is noted as wet or dry, then the priority is only based on wet- or dry-weather.
TBD = To Be Determined
HO = Historical Organics

Table 2.14: Summary of Dominguez Channel Estuary Subcategorized WBPCs		
Class	**Constituents[1]**	**Subcategory**
Metals	Cadmium (Sediment)	1A
Metals	Copper (Dissolved and Sediment)	1A
Metals	Lead (Dissolved and Sediment)	1A
Metals	Zinc (Dissolved and Sediment)	1A
HO	DDT (Sediment)	1A
HO	PCBs (Sediment)	1A
HO	Chlordane (Sediment)	1A
HO	Dieldrin (Sediment)	1A
CO	PAHs (Sediment)	1A
TBD	Benthic Community Effects	1D
TBD	Sediment Toxicity	1D
Bacteria	Coliform Bacteria	2A
Nutrients	Ammonia (Dry)	2C
Metals	Arsenic (Sediment)	3A
Metals	Chromium (Sediment)	3A
Metals	Mercury (Sediment)	3A
Metals	Silver (Sediment)	3A
Metals	Dissolved Silver (Dry)	3C
Metals	Dissolved Nickel	3C
Metals	Dissolved Mercury (Dry)	3C
Metals	Thallium (Dissolved)	3C

[1] If the constituent is noted as wet or dry, then the priority is only based on wet- or dry-weather.
TBD = To Be Determined
HO = Historical Organics
CO = Current Organics

Table 2.15: Summary of Machado Lake Subcategorized WBPCs		
Class	**Constituents[1]**	**Subcategory**
Trash	Trash	1A
Nutrients	Total Phosphorus	1A
Nutrients	Total Nitrogen	1A
TBD	Dissolved Oxygen	1A
Nutrients	Chlorophyll-a	1A
HO	PCBs (Sediment)	1B
HO	DDT (Sediment)	1B
HO	Chlordane (Sediment)	1B
HO	Dieldrin (Sediment)	1D
Nutrients	Ammonia	1D
Bacteria	E. coli (Dry)	3A
TBD	pH	3C

[1] If the constituent is noted as wet or dry, then the priority is only based on wet- or dry-weather.
TBD = To Be Determined
HO = Historical Organics

Table 2.16: Summary of Wilmington Drain Subcategorized WBPCs		
Class	**Constituents**	**Subcategory**
Bacteria	Coliform Bacteria	2C
Metals	Dissolved Copper	2C
Metals	Dissolved Lead	2C
Nutrients	Total Nitrogen	3A
HO	DDT (Sediment)	3A
HO	Chlordane (Sediment)	3A
HO	Dieldrin (Sediment)	3A
HO	PCBs (Sediment)	3C

HO = Historical Organics

Table 2.17: Summary of Consolidated Slip Subcategorized WBPCs		
Class	**Constituents**	**Subcategory**
Metals	Cadmium (Sediment)	1A
Metals	Chromium (Sediment)	1A
Metals	Copper (Sediment)	1A
Metals	Lead (Sediment)	1A
Metals	Mercury (Sediment)	1A
Metals	Zinc (Sediment)	1A
HO	DDT (Sediment)	1A
HO	PCBs (Sediment)	1A
CO	PAHs (Sediment)	1A
HO	Chlordane (Sediment)	1A
HO	Dieldrin (Sediment)	1A
HO	Toxaphene (Sediment)	1D
TBD	Benthic Community Effects	1D
TBD	Sediment Toxicity	1D
Metals	Silver (Sediment)	3A
Metals	Arsenic (Sediment)	3A
Metals	Nickel (Sediment)	3A

TBD = To Be Determined
HO = Historical Organics
CO = Current Organics

Table 2.18: Summary of Other Los Angeles Harbor Subcategorized WBPCs		
Class	**Constituents**	**Subcategory**
Fish Harbor		
Metals	Copper (Sediment)	1D
Metals	Lead (Sediment)	1D
Metals	Mercury (Sediment)	1D
Metals	Zinc (Sediment)	1D
HO	DDT (Sediment & Tissue)	1D
HO	PCBs (Sediment & Tissue)	1D
HO	Chlordane (Sediment)	1D
CO	PAHs (Sediment)	1D
TBD	Sediment Toxicity	1D
Inner Cabrillo Beach		
Bacteria	Indicator Bacteria	1A
HO	DDT (Sediment & Tissue)	1D
HO	PCBs (Sediment & Tissue)	1D
Cabrillo Marina		
HO	DDT (Sediment & Tissue)	1D
HO	PCBs (Sediment & Tissue)	1D
CO	PAHs (Sediment)	1D

Table 2.18: Summary of Other Los Angeles Harbor Subcategorized WBPCs		
Class	**Constituents**	**Subcategory**
Los Angeles/Long Beach Inner Harbor		
Bacteria	Indicator Bacteria	1D
Metals	Copper (Sediment)	1D
Metals	Zinc (Sediment)	1D
HO	DDT (Sediment & Tissue)	1D
HO	PCBs (Sediment & Tissue)	1D
CO	PAHs (Sediment)	1D
TBD	Benthic Community Effects	1D
TBD	Sediment Toxicity	1D
Metals	Dissolved Copper	3C
Metals	Dissolved Silver	3C
Los Angeles/Long Beach Outer Harbor		
HO	DDT (Sediment & Tissue)	1A
HO	PCBs (Sediment & Tissue)	1A
TBD	Sediment Toxicity	1D
Metals	Cadmium (Sediment)	3A
Metals	Copper (Sediment)	3A
Metals	Nickel (Sediment)	3A
Metals	Mercury (Sediment)	3C
Metals	Dissolved Copper	3C
Metals	Dissolved Silver	3C

TBD = To Be Determined
HO = Historical Organics
CO = Current Organics

Due to a lack of recent monitoring data in the Harbor and Estuary some WBPCs such as sediment toxicity and benthic community effects are classified as not showing exceedances in the past five years. The POLA and POLB are currently conducting bioaccumulation modeling and studies, fish tissue studies, and additional sediment triad studies to ascertain observed effects associated with elevated sediment concentrations of toxic compounds in the Harbor. These WBPCs can be reclassified when more recent data becomes available.

Per Part VI.C.2.a.iii (pages 51-52), pollutants for which there are exceedances of receiving water limitations, but which the water body is not identified as impaired on the 303(d) List will be addressed in the EWMP process. For most of the watershed, the most critical requirements are associated with the DC and LA Harbor Waters Toxic Pollutants TMDL as well as the Machado Lake Nutrients and Machado Lake Toxics TMDLs.

In order to address the limiting pollutant, various control measures will be implemented. The DC WMG anticipates that other water quality priorities, including those for which exceedances are observed and no impairment exists (Category 3), will be addressed through the programs used to control higher priority pollutants. Further evaluation will be included in the EWMP.

In addition to addressing the priority pollutant, the DC WMG will also comply with the requirements set forth by the MS4 Permit in regards to Category 2 and 3 pollutants. Pursuant to the MS4 Permit, Parts VI.C.2.a.ii.(5) (pages 50-51) and VI.C.2.a.iii.(2).(d) (page 52), interim and final milestones for

WBPCs identified as Category 2 or 3 in Section 2 will be established as part of the EWMP. These milestones may be established as a percent of the MS4 drainage area required to meet WQOs with dates as soon as possible and the time between dates not exceeding one year. If the dates established in the EWMP as the final compliance dates are beyond the term of the MS4 Permit there will be additional requirements as follows:

- Category 2 (WBPCs with a pollutant identified on the 303(d) list):
  - Areas that have regional EWMP projects will continue to implement control measures established in the EWMP.
  - Other areas will initiate development of a stakeholder proposed TMDL.
- Category 3 (WBPCs with a pollutant not identified in a TMDL or listed on the 303(d) list):
  - Areas that have regional EWMP projects will continue to implement control measures established in the EWMP.
  - Other areas will request that the Regional Board approve EWMP modifications to include additional WBPCs.

2.3 Source Assessment

Due to the nature of the DC WMG being fully built out, highly impervious, and highly industrial and the limited resolution of the water quality data available, the source assessment was limited to an initial first look based on land use and watershed areas according to the Los Angeles County-Wide Structural BMP Prioritization Methodology Guidance Manual (2006).

Catchment Priority Index

The catchment priorities index (CPI) is a means of ranking sub-watersheds against one another based on land use to identify the higher priority watersheds as demonstrated in Attachment C, Figure C.3. The method is based on Event Mean Concentrations (EMCs) developed for different land use types and the areal weighting of different land uses within a given subwatershed. The subwatersheds are ranked against one another to develop a CPI score for each subwatershed. The watersheds with the highest score are considered the highest priorities. The analysis was completed using the GIS platform ArcGIS. The GIS analysis was based on data developed by the City of Los Angeles and the County of Los Angeles.

The initial source assessment took into account which sub-watersheds could be contributing to downstream water quality impairments and exceedances. Priority pollutants such as metals and bacteria were weighted heavier than pollutants of less concern in the watershed. Additional weight was given to sub-watersheds potentially contributing to water body segments with TMDLs or 303(d) listed impairments for particular pollutants.

Potential Sources of Contamination

There are several potential point and nonpoint sources of contamination in the DC WMG. Point sources include stormwater and urban runoff flowing through the MS4 as well as other MS4 discharges, such as those from refineries, generating plants, port operations, and the Terminal Island Water Reclamation Plant that discharges into the Outer Harbor. MS4 outfalls are shown in Figure C.4 in Attachment C. Nonpoint sources include contaminated sediments already in receiving waters and atmospheric deposition.

Major sources of metals contamination in the Los Angeles Harbor may be attributed to the large number of vessels that utilize the facility. Copper contamination in the Harbor may be attributed to the copper containing anti-fouling paints used to protect boats and the wood preservatives used on docks and pilings.

The DC WMG also contains two Superfund Sites that are historically large contributors of organic pollutants: the Montrose Chemical Corporation Site, and the Del Amo Facility Site. The Montrose site manufactured DDT from 1947 to 1982 and the compound can still be found in the soils around the site. Stormwater runoff from this site can contain DDT from the soils. The Del Amo Facility was once the center of large-scale industrial activities such as production of synthetic rubber, a styrene plant, and a butadiene plant. Groundwater and soils in the area are contaminated with volatile organic compounds (VOCs), PAHs, and minor amounts of pesticides, PCBs, and heavy metals. The two Superfund Sites are located next to one other near the Torrance Lateral as shown in Figure C.4 in Attachment C.

Future monitoring data and results will refine the location of contamination, which in turn will refine the identification of potential sources of contamination.

2.4 Approach to Prioritization

To complete an initial prioritization of the WBPCs, pollutants were sub-categorized based on TMDL compliance schedules and exceedance frequencies as outlined in Section 2.2. Those WBPCs that have TMDLs with past due interim and/or final deadlines or with interim and/or final deadlines within the MS4 Permit term will be prioritized higher than those pollutants without TMDLs or with TMDL schedules outside the MS4 Permit term. Other receiving water considerations will include pollutants on the 303(d) list and WBPCs that show exceedances within the last 5 years. Additional prioritization and/or reprioritization may occur during development of the EWMP. The requirements for WBPCs categorized as Category 2 or 3 will be addressed through the EWMP as described above.

Future water quality monitoring conducted as part of the CIMP will further characterize and refine the locations of contamination, which will in turn refine the characterization, source identification and, potentially, prioritization.

3 Watershed Control Measures

This section summarizes the existing and potential control measures necessary as part of the Work Plan, prior to the development of the EWMP by identifying existing BMPs and MCMs utilized by the DC WMG and evaluate data regarding the performance of the existing structural (regional and distributed) BMPs, and institutional (non-structural) control measures being implemented. Potential opportunities for customization of MCMs are identified and the information required to support the modifications is also discussed.

In order to comply with EWMP requirements, an evaluation must be performed that considers opportunities within the participating Permittees jurisdictions to utilize multi-benefit regional projects that, when feasible, detain non-stormwater discharge and the flows produced by the 85th percentile, 24-hour storm event. A review of relevant TMDL implementation plans and watershed management plans was performed to identify previously identified regional projects within the DC WMG. These projects are then evaluated to identify if they meet the regional EWMP project criteria. In addition, an approach was developed that may be utilized to evaluate additional potential regional project sites.

3.1 Structural BMPs

In order to address the identified impairment priorities within a watershed, structural BMPs will be utilized. Structural BMPs are constructed control measures which are made up of both Regional and Distributed BMPs. Structural BMPs are used to improve water quality, eliminate impairments and achieve receiving water beneficial uses. Generally, regional BMPs are installed on large public parcels or adjacent storm drain outfalls and receiving waters. Some examples of regional BMPs include the following:

- Infiltration Basins
- Detention Basins
- Constructed Wetlands
- Treatment Facility
- Low Flow Diversion

Generally, distributed BMPs are installed and constructed during the development/redevelopment process or at construction sites as part of the various MCM programs required by the MS4 Permit and discussed in greater detail in Section 3.2. Distributed BMPs are implemented at the street-scale level for parcels typically less than ten acres. The following list includes common distributed BMPs that can be implemented at the parcel level:

- Site Scale Detention (Dry/Wet Detention Ponds, Detention Chambers)
- Biofiltration
- Bioretention
- Porous/Permeable Pavers
- Green Streets
- Bioswales/Buffer Strips
- Rainfall Harvesting (Green Roofs, Rain Barrels & Cisterns)
- Catch Basin Inserts/Screens
- Hydrodynamic Separators
- Gross Solids Removal Devices (GSRDs)
- Media Filters

A variety of potential structural BMPs are discussed in greater detail, however, surface soils within the DC WMG are not conducive to infiltration, therefore some of the identified BMPs may not be feasible, but are included in the discussion in case they become more relevant in the future.

3.1.1 Categories of Structural BMPs

As previously discussed, structural BMPs are constructed control measures that include both regional and distributed. Table 3.1 illustrates the categories and subcategories of structural BMPs, followed by a detailed discussion of commonly implemented structural BMPs. Different types of regional and distributed BMPs are detailed in Attachment F that fall within the categories listed below.

Table 3.1: Categories and Subcategories of Structural BMPs Within DC WMG

Category	Subcategory	Example BMP Types
Regional	**Infiltration**	Surface infiltration basin, subsurface infiltration gallery
	Detention	Surface detention basin, subsurface detention gallery
	Constructed Wetland	Constructed wetland, flow-through/linear wetland
	Treatment Facilities	Facilities designed to treat runoff from and return it to the receiving water
	Low Flow Diversions	BMPs that divert runoff to the sanitary sewer (normally dry weather only)
Distributed	**Site-Scale Detention**	Dry detention pond, wet detention pond, detention chambers, etc.
	Green Infrastructure	**Biofiltration** includes vegetated BMPs with underdrains
		Bioretention includes vegetated BMPs without underdrains
		Permeable pavement
		Green streets (often an aggregate of bioretention, biofiltration and/or permeable pavement)
		Infiltration BMPs include non-vegetated dry wells, infiltration trenches, etc.
		Bioswales include vegetative filter strip and vegetative swales
		Rainfall harvest (rain barrels, green roofs and cisterns)
	Flow-through Treatment BMPs	Treatment BMPs with a minor (or non-existent) infiltration component, often modular/vault-type BMPs including cartridge media filters
	Source Control Structural BMPs	Catch basin inserts, screens, hydrodynamic separators, trash enclosures, etc.

3.1.2 Summary of Existing Structural BMPs

To compile information on existing control measures, including MCMs and BMP programs already in effect for each of the participating Permittees in the EWMP, information was extrapolated from the following available sources:

- Los Angeles County Unified Annual Stormwater Report for Fiscal Years 2010-2011 and 2011-2012
  - Summary of MCMs for the Dominguez Channel Watershed
  - Summary of BMPs Installed and Maintained for the Dominguez Channel Watershed
  - Individual Annual Reports for each of the participating Permittees
- Standard Urban Stormwater Mitigation Plans (SUSMP) and LID projects in DC WMG
- City of Los Angeles Green Infrastructure Project List
- Proposition O Project Website (www.lapropo.org)
- Opti Website (http://irwm.rmcwater.com/la/login.php)

The Los Angeles County Unified Annual Stormwater Report for Fiscal Years 2010-2011 and 2011-2012 has been used to create tables identifying the existing structural BMPs installed and maintained by the DC WMG and is included as Attachment G. The information provided by the DC WMG has been incorporated into the tables. Information pertaining to the existing MCMs implemented by the DC WMG are discussed in Section 3.2, and tables created based on the Unified Annual Stormwater Reports for Fiscal Years 2010-2011 and 2011-2012 can be found in Attachment I.

The SUSMP and LID project listings provided by the DC WMG have been used to map the existing distributed BMPs located in Attachment E, Figure E.1. The figure only includes the BMPs for which an address or global positioning system (GPS) coordinates was provided. It is assumed that the SUSMP and LID BMPs were also reported as part of the annual reports. A detailed list of the SUSMP and LID BMPs is provided in Attachment G.

BMPs, including regional BMP projects, implemented prior to the baseline pollutant loads being used for the RAA calibration (2012) are considered part of the baseline. BMPs, including regional projects, that were implemented after the baseline pollutant loads, can be modeled in the RAA in order to demonstrate a load reduction. A few regional projects have been implemented in the DC WMG utilizing Proposition O funding. These projects were evaluated to verify if they meet EWMP criteria. If the project does satisfy EWMP criteria, the area tributary to the project would be deemed compliant based on the MS4 Permit. The regional projects that do not satisfy EWMP criteria will be evaluated to quantify the load reduction that would be associated with project implementation so that it could be modeled in the RAA. The Lake Machado Water Quality Improvements Project and the Rosecrans Recreation Center Stormwater Enhancements Project were constructed following the pollutant load baseline determination and are evaluated below based on EWMP project criteria.

Lake Machado Water Quality Improvements, including Wilmington Drain (Phase 1 of 2)

Specific drivers for the Machado Lake Ecosystem Rehabilitation and Wilmington Drain Multi-Use projects are to improve water quality, meet adopted and future TMDLs, enhance riparian, wetland, and upland habitat, improve hydrologic and hydraulic conditions, and create and restore recreational amenities (City of Los Angeles, 2009). The project received its Notice to Proceed in May 2013, broke ground on March 22, 2014, and has an anticipated completion date in April 2016 (Prop O, 2014). The Wilmington Drain is a channelized stream that conveys urban runoff and stormwater flows to Machado Lake. The Wilmington Drain feeds more than half of the water that flows into Machado Lake from its 15,553 acre watershed. A majority of the Machado Lake

and Wilmington Drain improvements involve enhancing the habitat and incorporating BMPs that will help with treatment components. The area will utilize bioswales in the parking areas, incorporate smart irrigation systems, install trash netting systems, include the use of biofilters and similar vegetated BMPs, and improve the pedestrian trail system (Measure O). This project has been jointly funded by the City of Los Angeles and the LACFCD. This project will provide water quality benefits and will be evaluated to verify whether the project will satisfy the EWMP requirements outlined in the Permit. The project incorporates numerous distributed BMPs that will reduce the amount of flow reaching downstream receiving waters, but the main intention of the project is to provide treatment.

Rosecrans Recreation Center Stormwater Enhancements
The Rosecrans Recreation Center Stormwater Enhancement project was completed in October 2013. The project achieved some of the goals outlined in the 2013 IRWMP and included the installation of smart irrigation systems, bioswales in parking lots, permeable parking lots, vegetated retention basins, infiltration cisterns/irrigation cisterns, a synthetic soccer field, landscaped areas, and decomposed granite pathways. The project treats a tributary watershed of 12.73 acres made up of mostly the park and some surrounding residential areas (CDM Rosecrans Recreation Center, 2006). This project incorporates water capture and use of stormwater. Further investigation will be needed to establish if the project meets the EWMP criteria of retaining flows from the 85th percentile, 24-hour storm event.

3.1.3 Planned Structural BMPs

To identify regional projects, the following existing implementation plans and watershed management plans were reviewed that may satisfy the EWMP criteria, as specified in Part VI.C.1.g (pages 48-49) of the MS4 Permit:

- 2013 Public Draft Update for the Greater Los Angeles County (GLAC) Integrated Regional Water Management Plan (IRWMP);
- 2013 Proposition O (Clean Water Bond Program) October Monthly Report;
- 2012 GLAC IRWMP Update, the Greater Los Angeles County Open Space for Habitat and Recreation;
- 2012 GLAC IRWM South Bay Subregional Plan;
- 2011 Multi-pollutant TMDL Implementation Plan for the County of Los Angeles Unincorporated Area of Machado Lake Watershed;
- 2004 Dominguez Watershed Management Master Plan (DWMMP);
- 2003 Dry-Weather Discharge Treatment Feasibility Study submitted by the County of Los Angeles Department of Public Works Watershed Management Division;
- Opti, part of the GLAC IRWMP online project database; and
- Los Angeles County Clean Water, Clean Beaches online project database.

The TMDL Implementation Plans developed by DC WMG were also reviewed in an effort to identify planned projects, and may be assessed during the EWMP development process to evaluate if they satisfy EWMP criteria for regional projects and represent feasible implementation options. These projects are included in Attachment E, Figure E.2. Some of the references include broad plans outlining the steps necessary towards improving water quality and recommending different BMPs under different conditions. These documents provided conceptual scenarios without going into great detail. Some of the potential regional BMP projects identified in older references have since been built or are in construction. In addition, valuable information was obtained from Opti and the Los Angeles Clean Water, Clean Beaches online project databases. The data reviewed included no information regarding planned distributed BMP projects. A majority of distributed projects are in response to LID/SUSMP requirements, therefore executed by private developers and not included in public agency planning documents.

TMDL Implementation Plans

Implementation plans often detail activities, costs, anticipated outcomes, and schedules that are required to achieve the objectives of strategic plans such as TMDLs. There are two types of implementation plans, one that is produced by the regulator during the TMDL development process and one that is produced by the parties responsible for TMDL implementation. In more recently approved TMDLs, responsible parties are required to develop implementation plans. The existing implementation plans developed by DC WMG members were reviewed and summarized below. Moving forward the EWMP will provide an implementation plan that addresses the various TMDLs.

Los Angeles Harbor Bacteria TMDL

In a letter dated December 24, 2012, the City of Los Angeles Submitted a request to the Regional Board for a Time Schedule Order (TSO) for CB01, the compliance monitoring site at Inner Cabrillo Beach, as described in Attachment B. Pursuant to the TSO, POLA and the City of Los Angeles Department of Public Works Bureau of Sanitation Watershed Protection Division developed a Pollution Prevention Plan (PPP) Work Plan focused on addressing exceedances at CB01 and submitted it to the Regional Board on April 7, 2014.

The PPP includes a source assessment and details other investigations that were performed in order to better understand the bacteria problem in the Harbor. A list of pollution prevention activities, including remedial actions, BMPs, and special studies, was provided in the plan with estimated dates of implementation. Some of the future activities include, but are not limited to, additional observations, evaluating the effectiveness of existing pet waste bag stations near the harbor, repairing fence breaches along Cabrillo Marsh, evaluating the potential for animal screens at the MS4 outfalls and catch basins near the boat ramp, provide additional education and training to people working near the harbor, minimize over-irrigation, and evaluate the feasibility of a low flow diversion system.

Machado Lake Nutrient TMDL

The Machado Lake Nutrient TMDL implements load allocations through Memorandum of Agreements (MOAs) or cleanup and abatement orders. The responsible parties for the load allocations were required to enter into a MOA within six months of the TMDL effective date. The MOA was to include the development of a Lake Water Quality Management Plan (LWQMP). If the MOA and LWQMP do not result in attainment of load allocations, the MOA will be revoked and load allocations must be implemented through a cleanup and abatement order.

The City of Los Angeles entered into an MOA with the Regional Board on April 7, 2010, and a LWQMP was submitted on September 10, 2010 and approved on February 14, 2011. The LWQMP includes an Implementation Plan section which discusses the specific BMPs that will be constructed by the City of Los Angeles within the Wilmington Drain and in Machado Lake that will help meet Machado Lake Nutrient TMDL loads. The Lake Machado Water Quality Improvements project was discussed in detail, some of which is also described above. A variety of strategies for meeting load allocations are identified in the LWQMP, including strategies that would be implemented both in-lake and adjacent to it. The strategies include, but are not limited to, construction of an off-line treatment wetland, implementation of aquatic plant management, re-grading of the Wilmington Drain, installation of trash nets, modifications to the dam operation, and the construction of a park on the west side of Wilmington Drain.

The Multipollutant TMDL Implementation Plan for the County of Los Angeles Unincorporated Area of the Machado Lake Watershed was submitted to the Regional Board September 12, 2011 and covers the implementation for both the Machado Lake Nutrient TMDL and Pesticides and PCBs TMDL. This implementation plan is very detailed and identifies the existing structural and non-

structural BMPs and describes new or enhanced opportunities. Specific project concepts were identified and described in detail.

The Machado Lake Nutrient TMDL Implementation Plan for the LACFCD (LACFCD, 2013) was submitted to the Regional Board in October 2013 and documents the LACFCD effort to address the Machado Lake Nutrient and Pesticides and PCBs TMDL. The implementation plan identifies the Wilmington Drain project that is currently in construction and has an anticipated completion date of 2016.

Machado Lake Pesticides and PCBs TMDL
Compliance with the Machado Lake Pesticides and PCBs TMDL is assessed the same way the Machado Lake Trash TMDL is assessed. The City of Los Angeles amended their MOA that was previously approved for the Machado Lake Nutrients TMDL on March 20, 2013. The LWQMP associated with the MOA has been previously summarized in the Machado Lake Nutrients TMDL section above. The Multi-Pollutant TMDL Implementation Plan for the County of Los Angeles Unincorporated County covers the implementation for Machado Lake Nutrient TMDL and Pesticides and PCBs TMDL as previously discussed. The LACFCD's Implementation Plan covers the implementation of for the Nutrients TMDL and the Pesticides and PCBs TMDL.

3.1.4 Approach to Identifying and Selecting Multi-Benefit Regional Projects (EWMP Projects)

The below approach will be utilized to identify, screen, and evaluate potential regional projects. This approach includes a watershed based assessment of publicly-owned and private properties containing sufficient open space (e.g. large parking lots) and other conditions that would be suitable to support a regional stormwater enhancement project. The approach also evaluates opportunities for incorporation of multi-use features at candidate locations. The approach can be utilized to identify potential projects that could either be classified as regional BMP or EWMP projects. Regional EWMP projects are regional BMP projects that satisfy the EWMP project criteria, whereas regional BMPs are those stormwater enhancement projects that do not meet EWMP criteria based on a project specific analyses, but still contribute to water quality benefits.

The approach to identifying potential regional projects is illustrated in Figure 3.1. Watershed based GIS maps will be used in conjunction with imagery and field analysis to support the process through the collection and management of spatial data.

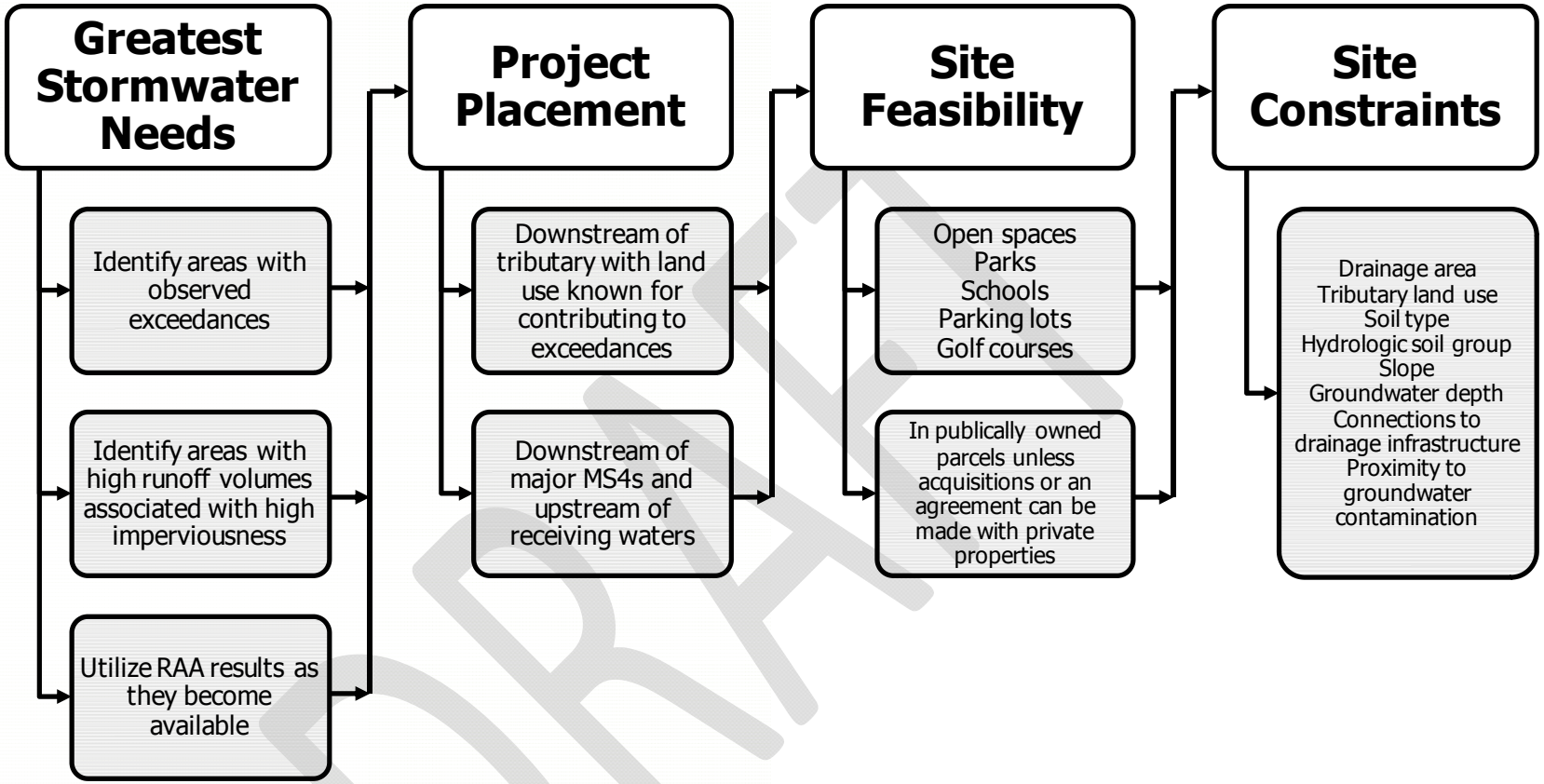

Figure 3.1. Approach to Identifying Potential Regional Projects

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A centralized GIS data integration and communication system will be used to encourage stakeholder participation and support planning efforts. This system can be used as a precursor to analytical modeling. Key drivers behind the development of a GIS decision support tool are to enable stakeholders to identify potential sites for specific BMPs suitable for a particular location, and to support the integration of multi-criteria analysis approach to support wider considerations such as potential multi-use benefits involved in urban planning and decision processes.

The last step before finalizing a regional BMP project site would be to perform a feasibility study to evaluate whether the proposed project site would be effective. In most cases, a project site can be modified to accommodate poor site conditions, but in some cases the costs outweigh the benefits and the feasibility study should identify these sites. Feasibility reports will also provide an initial cost estimate and the cost per volume of flows mitigated could be used as a basis to compare different regional BMP projects.

Once a project site is established as feasible, the potential projects will be evaluated to prioritize projects. Based on the process outlined in Figure 3.1, an initial long list of potential projects will be narrowed down. Next, the projects will be evaluated based on a smaller list of criteria, as summarized in Table 3.2.

A generic worksheet was developed and is provided in Attachment J, which may be utilized throughout the process. A scoring system for each of the identified criteria will be developed prior to using this process. Each potential project can be evaluated based on these criteria, and a score can be assigned to each subcategory. The summation of the subcategory scores can then be used as a basis to compare various regional projects. This approach may easily be modified by the DC WMG by developing a weight for each of the ranking criteria, allowing specific criteria to play a more significant role in determining regional BMP projects. Using this method, the score developed will be multiplied by the respective ranking criteria weight and then the scores will be summed to establish the most beneficial projects.

Table 3.2: Potential Regional Projects Ranking Criteria

Ranking Criteria
General Criteria
Proximity to receiving water/MS4 infrastructure
Ownership
Size of opportunity site
Size of catchment area
Catchment area land use and likely pollutants
Multi-use opportunities and connectivity
Underlying Soil Conditions
Seasonal high groundwater table depth
Proximity to groundwater production wells
Pollutants in soil or groundwater
Geotechnical hazards
Soil type
Infiltration rates

3.1.5 Approach to Identifying Additional Distributed BMPs

Opportunities for additional distributed BMPs may exist at sites that do not fall under SUSMP, LID, or green streets policies. These sites should be further evaluated in order to evaluate if water quality improvements could be incorporated at a relatively low cost. For example, road

resurfacing often includes a grind and overlay back to existing grade, therefore SUSMP/LID and green streets may not be applicable. Since construction is occurring, the site could potentially be retrofitted to include distributed BMPs if feasible and if the location is in a high priority area. Distributed BMPs also may be incorporated through the stakeholder process, allowing the stakeholders to provide input on additional distributed BMP locations and types.

3.2 MCMs/Institutional BMPs

MS4 Permit Part VI.C.5.b.iv.(1) (pages 61-62) directs that the MCMs identified in Parts VI.D.4 to VI.D.10 (pages 70-141) be incorporated as part of the EWMP. The placement of this reference section within the EWMP portion of the permit (Part VI.C, pages 47-67) allows the MCMs in the subsequent section (VI.D, pages 67-141) to be assessed for potential effectiveness and even modified to emphasize the pollution control priorities identified within the EWMP Plan. Part VI.C.5.b.iv.(1).(c) (page 62) explicitly allows some MCM sections to be deleted, and wholly replaced, when accompanied by appropriate justification. The Planning and Land Development Program, is not identified as an MCM that must be evaluated for potential modifications or elimination. The general MCMs categories identified in Part VI.D (pages 67-141) of the MS4 Permit are listed below. Some of the MCM categories are also applicable to the LACFCD, as identified indicated with an asterisk (*).

1. Public Information and Participation Program (PIPP) (Part VI.D.5, pages 86-88)*
2. Industrial/Commercial Facilities Program (Part VI.D.6, pages 88-94)*
3. Planning and Land Development Program (Part VI.D.7, pages 94-113)
4. Development and Construction Program (Part VI.D.8, pages 113-130)
5. Public Agency Activities Program (Part VI.D.9. pages 130-137)*
6. Illicit Connections and Illicit Discharges (IC/ID) Detection and Elimination Program (Part VI.D.10, pages 137-141)*

The 2012 MS4 Permit (VI.D.1.b.ii, page 68) requires that the MCM programs, as specified in the 2001 MS4 Permit, continue to be implemented until the EWMP is approved by the Regional Board. The same six categories listed above were to be implemented under the 2001 MS4 Permit, with the 2012 MS4 Permit having more stringent requirements, some of which are listed below. Attachment H provides a detailed comparison of the program requirements of the 2001 MS4 Permit and the current 2012 MS4 Permit.

- New requirements for erosion and sediment control procedures, especially for sites less than one acre, and for Erosion and Sediment Control Plans;
- Additional tracking requirements as part of the Industrial/Commercial Facilities Program; and
- Extensive new requirements for LID and hydromodification controls as part of the Planning and Land Development Program.

MCMs are considered a subset of institutional BMPs (City of Los Angeles, 2013). Institutional BMPs are non-constructed control measures that prevent the release of flow/pollutants or transport of pollutants within the MS4 area (City of Los Angeles, 2013). Institutional BMPs include:

- Irrigation control
- Brake pad replacement
- Replacement of lead in wheel weights
- Street sweeping
- Catch basin cleaning
- Downspout disconnect program

3.2.1 Summary of Existing MCMs/Institutional BMPs

The existing MCMs/institutional BMPs within the DC WMG were evaluated and summarized based on the Los Angeles County Unified Annual Stormwater Reports for the Fiscal Years 2010-2011 and 2011-2012. Tables summarizing the existing MCMs/Institutional BMPs by DC WMG are presented in Attachment I.

3.2.2 Potential Approaches to Modifying MCMs/Institutional BMPs

In order for the DC WMG to identify potential MCM/institutional BMP modifications, it is essential to first evaluate the effectiveness of the existing programs. Once the baseline effectiveness is established, it can be used as a basis to compare with the potential MCM modification. A response to a comment made by the Los Angeles Permit Group regarding the MS4 Permit MCM program stated that "the criterion to allow customization is based on showing equivalent effectiveness" (LARWQCB, 2012). Once the effectiveness is assessed, customization alternatives may be evaluated to assess if they would be equally effective. Potential modifications to MCM programs are being considered, as they may provide load reductions and bring the DC WMG closer to the achievement of WQOs. Alternatively, if MCMs are not modified, implementation of structural controls will be required. This section identifies a program effectiveness assessment strategy, assessment measures, and assesses the effectiveness of the existing MCMs in order to identify potential MCM/institutional BMP modifications.

Program Effectiveness Assessment Strategy
The stormwater management program is comprised of the MCMs discussed in Section 3.2.1 which are implemented with the intent of reducing pollutants in urban and stormwater discharges. MCM implementation programs are an iterative process and the MS4 Permit has recognized this. Part VI.D.1.a (page 67) of the MS4 Permit states that Permittees may implement the programs described in the MS4 Permit, or may customize them as set forth in an approved EWMP or WMP. Assessing the existing MCM implementation, as well as the MS4 Permit requirements, will assist in identifying potential additional or modified actions that might further the MCMs objectives and water quality protection outcomes.

Figure 3.2. CASQA Classification of Outcome Levels

Water quality protection outcomes are the result of an activity, program element, or the overall program and have been characterized by the California Stormwater Quality Association (CASQA) in terms of six levels. Figure 3.2 shows these levels as a progression from activity-based to water quality based outcomes and illustrates the successive steps toward the ultimate goal of achieving and protecting receiving water quality. Levels 1 to 3 are considered to be implementation based outcomes, level 4 marks a transition from implementation to water quality based outcomes, and levels 5 and 6 emphasize water quality outcomes. Each level has a different value and emphasis in informing the regional management process and levels, or activities, are not always equally important, necessary, or even possible in every instance (CASQA, 2007).

Assessment Measures

Assessment measures can be categorized many different ways. In this EWMP Work Plan, two categories are recognized, one related to the short term confirmation of BMP implementation and the other to long term verification of environmental improvement. In essence, the categorization of measures reflects two basic assessment questions:

- Are program elements being implemented correctly?
- Are environmental improvements being realized?

Programmatic and environmental indicators are conceptualized by the USEPA as having a hierarchical relationship as shown in Figure 3.3. This relationship further illustrates the fact that environmental outcomes rest on, or follow from, jurisdictional program implementation. Moreover, it recognizes that scientifically robust evidence of changing water quality indicators will follow ongoing program implementation and should not be anticipated concurrently.

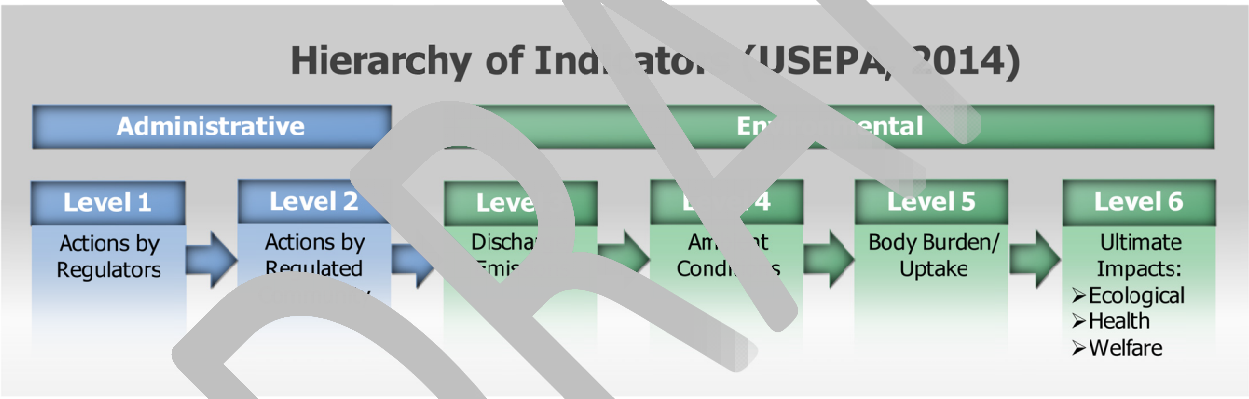

Figure 3.3. Hierarchy of Indicators

Key attributes of BMP and water quality assessment include:

- Measurability (statistically and repetitively measurable);
- Relevance (significant, demonstrable relationship to strategy and objectives);
- Reliability (easily documented and reproducible);
- Availability (based upon data obtainable at reasonable cost);
- Scientific validity (based on sound science); and
- Replicability (capable of being regularly assessed to develop trends).

Effectiveness Assessment

Assessing program effectiveness is a challenge for MS4 program managers across California, and the DC WMG appreciate and acknowledge the effort of CASQA to develop and publish the Municipal Stormwater Program Effectiveness Assessment Guidance (CASQA, 2007). During the

EWMP development process, DC WMG will attempt to follow these guidelines in assessing the MCMs in order to satisfy the requirements of the MS4 Permit and reduce the discharge of pollutants from the MS4. While program effectiveness assessment is a key step in the iterative adaptive process of program implementation, it is also part of the evolving management process. Section 3.2.2.1 provides potential MCM modifications that will require further evaluation during the EWMP development process.

3.2.2.1 Potential MCM/Institutional BMP Modifications

The approach described in this section will be utilized during the EWMP development process to evaluate if modifications to MCMs/institutional BMPs would be beneficial. Table 3.3 identifies potential modifications that may be considered by DC WMG. If modifications are desirable, special studies, analyses, and literature reviews will be conducted to establish the associated load reduction so it can be incorporated into the RAA.

Table 3.3: Summary of Potential Non-Structural BMP Enhancements

Potential Modification or Enhancement	Justification
Public Information and Participation Program (PIPP)	
Develop a Grassroots Committee.[1]	Community leaders may have stronger community connections, thus a better platform to provide educational and outreach materials.
Industrial/Commercial Facilities Program	
Evaluate operations of industrial facilities inspected to verify whether their operations are subject to Industrial General Permit (IGP).[1]	Identifying activities at industrial/commercial facilities where the SIC code does not require coverage under IGP will require facilities to get coverage and comply with requirements in IGP.
Development and Construction Program	
Recommend monitoring and sampling as part of the Erosion and Sediment Control Plan requirements.	Conducting monitoring, sampling, and inspections will give the DC WMG more presence at construction sites which will most likely result in more thorough BMP implementation by developers and contractors.
Inspect construction sites where Erosion and Sediment Control Plans have been approved.	
Public Agency Activities Program	
More frequent street sweeping, especially in areas that lack full capture certified trash control devices.	Implementing a more vigorous street sweeping schedule will allow debris to be captured before they can be transported downstream.
Utilize street sweeping using the regenerative air vacuum equipment in land use areas that generate high metals loads.[2]	Vacuum street cleaners would be more effective at removing metals compared to sweepers.
Set maximum street sweeper speeds to optimize effectiveness in removing trash, debris, and sediments.[2]	Traveling at speeds recommended by street sweeping manufacturers will improve the sweeping effectiveness at removing pollutants.
Sweeping center median gutters, and "pork chop" islands at street intersections.	Sweeping areas that are not normally swept may capture additional pollutants.
Revise curb miles cleaned as an indicator to volume of trash collected.	Volume of trash collected provides a better indication of the program effectiveness.
Enhanced maintenance of catch basins, especially those with connector pipe screens.[1]	Enhanced maintenance will prevent sediments and debris from accumulating and traveling downstream.

Table 3.3: Summary of Potential Non-Structural BMP Enhancements	
Potential Modification or Enhancement	**Justification**
Illicit Discharge/Illicit Connection (IC/ID) Program	
Municipal Codes that include enforcement action such as the issuance of Notice of Violations (NOVs) for illicit connections.[1]	Utilizing violations will give the DC WMG a greater presence and the threat of a penalty may have a greater influence over developers and others.
Municipal Codes that require follow up inspections within ten days for illicit connections.[1]	Implementing a time schedule for follow up inspections will ensure that the cleanup is completed in a timely manner.
Abatement and cleanup required within one day of discovery.	Current procedures allow for up to 72 hours, therefore a quicker response will positively correlate to a lower load contribution.
Other Institutional BMPs	
Enhanced Irrigation Control	
Promote replacement of grass with xeriscape vegetation.	Installing artificial turf and/or drought tolerant plants, or installing weather based irrigation controllers, will conserve water and reduce runoff associated with irrigation which is often the source of dry-weather flows, which are often the most concentrated with pollutants.
Promote replacement of grass with drought tolerant native plant species.	
Outreach the focuses on the installation of weather based irrigation controllers.	
Perform landscape irrigation audits.	Actions that require residents to become aware of their water usage as well as limiting it may reduce the amount of irrigation occurring, thus reducing runoff due to excess irrigation.
Implement water budgets.	
Inform residents on other types of BMPs or irrigation equipment that may be utilized.	
Downspout Disconnection Program	
Implement a second phase of the downspout disconnect program.	Implementing a downspout disconnect program will promote water conservation and reuse, by capturing stormwater runoff for irrigation use, thus reducing the volume of water reaching the storm drain system.
Expand the downspout disconnect program to include additional area within DC WMG.	

[1] Potential modification applicable to LACFCD.
[2] Applicable to LACFCD's parking lot sweeping.

3.2.3 Potential Approaches to Additional Non-Stormwater Discharge Control Measures

Non-stormwater discharge is often the most polluted, as it is highly concentrated from an activity that generally consists of washing down something or over irrigating. In an attempt to capture what is referred to as the "first flush", water quality requirements often include the mitigation of the 85th percentile, 24-hour storm event or the 0.75-inch storm event, such as regional EWMP projects and SUSMP/LID projects. MCMs and other institutional BMPs are in place in an attempt to reduce non-stormwater discharges as well. One source of non-stormwater discharge that is not addressed through the MCMs and other institutional BMPs are exempt non-stormwater discharges as specified in Part III of the MS4 Permit.

In order to evaluate effective non-stormwater discharge control measures, in addition to those already required and proposed, research and analysis will be performed. The DC WMG may want to implement additional non-stormwater discharge control measures if a load reduction is anticipated at a relatively low cost. In order to identify these control measures, the DC WMG will compile a list of exempt non-stormwater discharges that occur in their jurisdiction or impact the

receiving waters relevant to the group. Exempt non-stormwater discharges often include non-emergency firefighting activities, discharges from drinking water supplies, dewatering of lakes, landscape irrigation, swimming pool discharges, decorative fountain dewatering, car washes, and street/sidewalk washing per Part III.2 of the MS4 Permit.

Through a literature review, it may be possible to identify the anticipated pollutant loads due to the typical exempt non-stormwater discharge activity. Through analysis, possible connections between exempt non-stormwater discharge activities and downstream water quality priorities will be identified. If connections are made, then potential control measures may help reduce pollutant loading. Based on the water quality priorities identified in Section 2 locations affected by exempt non-stormwater discharges can be prioritized.

Based on the developed prioritization, additional research and literature reviews can be used to estimate the anticipated pollutant reductions due to different control measure scenarios. The MS4 Permit requires specific BMPs be in place depending on the exempt activities, as well as specifying other conditions that must be met, thus the additional control measures will be in addition to those required. Ideas for additional control measures to control exempt non-stormwater discharges can be discussed with the stakeholders through the stakeholder process. Further evaluation will be completed and incorporated into the EWMP.

3.3 Summary of BMP Performance Data

To summarize performance data of structural (regional and distributed), and institutional (non-structural) control measures for reducing stormwater and non-stormwater flows and priority pollutants, the following sources were reviewed and performance data was compiled:

- CASQA Development and Municipal BMP Handbooks
- California Department of Transportation (Caltrans) BMP Retrofit Pilot Program Report
- Center for Watershed Protection's National Pollutant Removal Performance Database Vers. 3
- Priority A and B Catch Basin Cleanout Data

Tables summarizing the BMP performance data can be found in Attachment K. The table associated with the CASQA Development and Municipal BMPs handbook provides a general summary of BMP performance within Southern California, while the tables associated with the other sources provides site specific performance data based on site specific testing.

4 Reasonable Assurance Analysis Approach

The RAA is a required under the MS4 Permit, Part VI.C.5.b.iv.(5) (pages 63-64).

The purpose of the RAA is to demonstrate that the implementation scenarios proposed in the EWMP will meet the MS4 Permit effluent and receiving water limits for the priority pollutants of concern identified in Section 2. The WQOs are specified in the TMDLs and included in Attachment B, along with other MS4 Permit limitations for each WBPC addressed in the EWMP. The identification and numeric expression of these other limitations are not addressed explicitly in this section but will be included in the EWMP and evaluated as part of the final RAA. The limiting pollutant used to control the implementation efforts of the DC WMG will meet the following criteria:

- Relatively high priority with respect to meeting TMDL WLAs and/or other WQOs;
- Conservative with respect to attenuation during fate and transport modeling; and
- Require the greatest amount of volumetric control to achieve TMDL WLAs and other objectives.

The approach below will be used to evaluate proposed enhancements to MCMs and structural BMPs, as identified in Section 3. The output from the RAA will provide guidance on the types of MCMs and BMPs to be implemented. It will also provide guidance on the location, types, and sizing needs of the required BMPs, as well as the estimated cost and schedule for BMP implementation. Areas tributary to a regional EWMP project, will not be included in the RAA, as they will be considered compliant based on the MS4 Permit. The following sections discuss the modeling software to be used, provide an overview of the RAA process, include details on the modeling approach, and discuss the RAA output format.

The RAA approach was developed with the intent of being in accordance with the MS4 Permit requirements, expectations expressed by the Regional Board MS4 Permit and TMDL modeling staff via the Regional Board developed RAA guidelines, and previously approved TMDL Implementation Plans.

4.1 Modeling System

The Regional Board has developed guidelines for conducting the RAA throughout Los Angeles County. The models approved for developing a BMP stormwater management system are listed in Table 3-1 of the RAA Guidelines (LARWQCB, 2014) and were selected based on the following model capabilities:

1. Provides dynamic continuous long-term simulation for modeling pollutant loadings, flows, and concentrations in receiving water from land uses within a watershed system;
2. Represents rainfall, runoff, and groundwater processes in urban and natural watershed systems;
3. Demonstrate variability in pollutant loadings based on land use, soil hydrologic group, and watershed slope;
4. Includes a BMP process based approach or empirically based BMP approach; and
5. Provides decision support to evaluate BMP performance.

The RAA guidelines indicate that Permittees are allowed to select a combination of the models for land/watershed, receiving water, and BMP performance, or select one of the modeling systems from integrated BMP modeling systems. The RAA for the DC WMG will be conducted using the two integrated BMP modeling systems, Watershed Management Modeling System (WMMS) and Structural BMP Prioritization and Analysis Tool (SBPAT). Both models will be used to take advantage of different analytical strengths to provide an effective analysis.

The modeling capabilities of both regional models are provided in Table 4.1 and model details are illustrated in Figure 4.1.

Table 4.1: Summary of Model Capabilities

Model Capability	WMMS	SBPAT
Continuous Hydrologic Model	Y	Y
Models Pollutant Loading in the Watershed	Y	Y
Models Distributed BMPs	Y	Y
Models Regional BMPs	Y	Y
Provides Water Quality Benefit from BMP Implementation	Y	Y
Provides Cost Estimate for Management Plan	Y	Y
Ease of Use	Easy	Moderate
Provides Specific Locations for BMP Siting	N	Y
Automatically Determines BMP Needs Estimate	Y	N
Allows User to Modify Input Data Sets	Minimal	Y

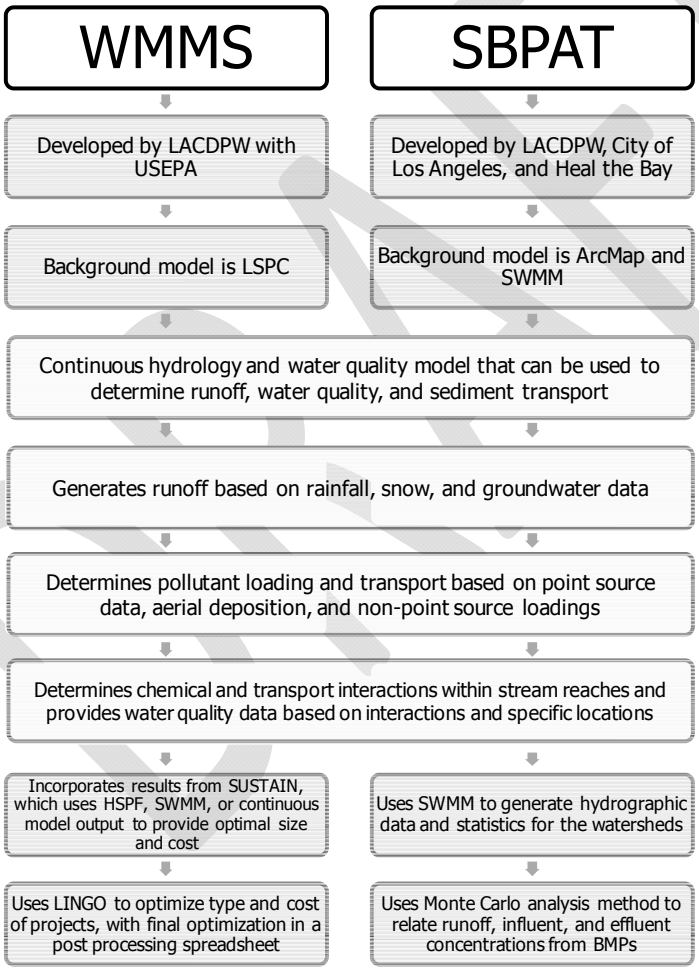

Figure 4.1. Overview of WMMS and SBPAT

LSPC = Loading Simulation Program in C++; SWMM = Storm Water Management Model; SUSTAIN = System for Urban Stormwater Treatment and Analysis INtegration; and HSPF = Hydrologic Simulation Program - FORTRAN.

4.2 RAA Process Overview

The RAA for the DC WMG EWMP will evaluate wet-weather pollutant loads using WMMS and SBPAT, and conduct analyses for dry-weather and legacy pollutants. Meeting MS4 Permit WLAs will require achieving control of the limiting pollutant. For most of the watershed, the most critical requirements are associated with the DC and LA Harbor Waters Toxic Pollutants TMDL as well as the Machado Lake Nutrients and Machado Lake Toxics TMDLs, therefore toxics such as metals, pesticides, and organics will likely be used as the limiting pollutant. The MS4 Permit requirements regarding various categories of WBPCs, in addition to the limiting pollutant, will be addressed through the EWMP as described in Section 2.2.

One limiting pollutant for the first years of planning may be the preferred modeling method, with a change in the limiting pollutant for later planning years due to the differing deadlines associated with TMDLs and other WQOs. The iterative modeling process allows identification of the pollutant that gives the best results in terms of achieving WQOs for objectives within stated and desired timeframes rather than a-priority assignment of the limiting pollutant.

The WMMS model efficiently provides optimized load reduction targets, recommended distributed BMPs, and cost estimates. It provides limited guidance on actual BMP placement. SBPAT recommends locations for regional BMPs and provides assumptions regarding the extent of distributed BMPs within smaller subwatersheds, which allows for a better feasibility analysis. The recommendations are based on a CPI score based on which pollutants, land uses, and BMPs are most appropriate for the watersheds. The score ranges from five to one, with the higher CPI scores indicating higher priority subareas. SBPAT also provides expected load reductions, implementation cost estimates for specified BMPs, and provides a bacteria TMDL compliance analysis.

The process summarized in Figure 4.2 is flexible and responsive the DC WMG preferences and shows how each model will be utilized for the analysis. Pollutant loads and target load reductions as a percentage of the total load will be established utilizing WMMS. The model will also provide suggested volumes of treatment and specify the type of treatment system that can be used. In WMMS, the candidate BMPs are established based on land use. Residential areas are treated using rain barrels and bioretention BMPs. Commercial, industrial, and institutional land use areas are treated using porous pavement and bioretention BMPs. Transportation facilities are treated using bioretention BMPs.

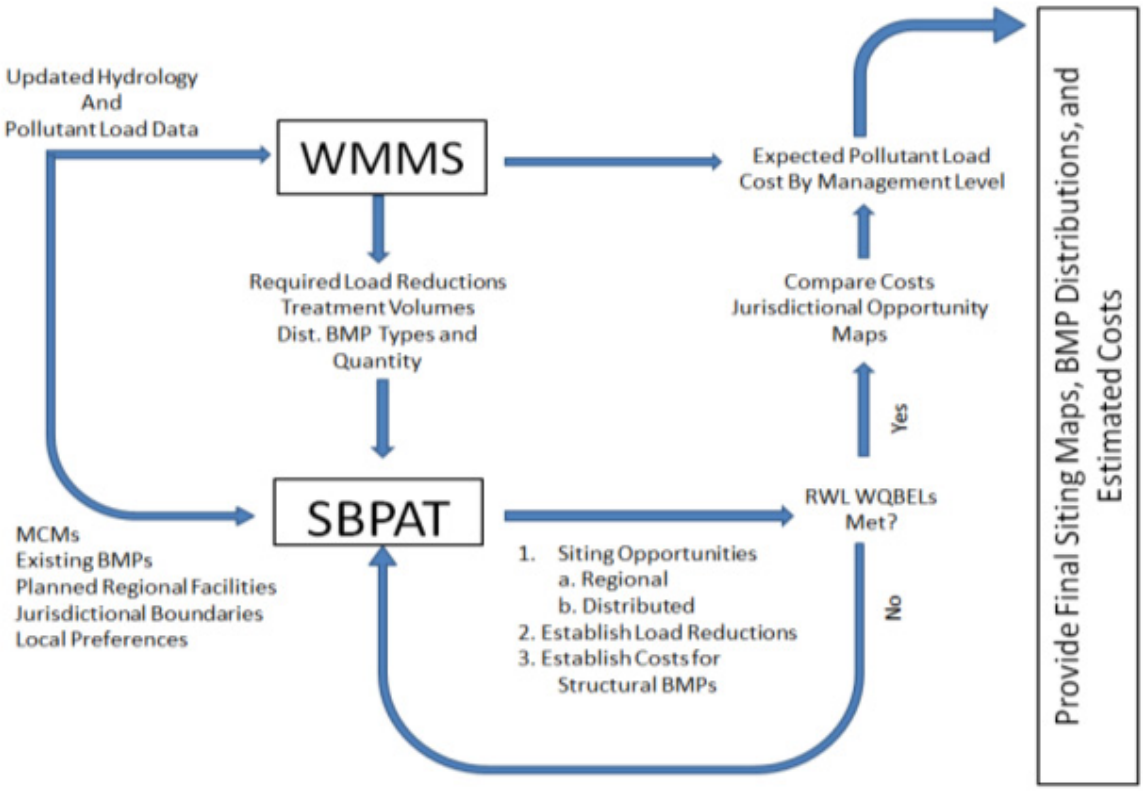

Figure 4.2. Overview of RAA Process

Using WMMS output along with DC WMG specific preferences for control measures, SBPAT will be run to prioritize smaller subwatershed areas within the DC WMG jurisdictions. The SBPAT model input will include jurisdictional preferences for MCMs, BMPs, and planned regional BMPs to analyze the impacts of the various control measures. Distributed BMPs will be assigned based on the initial findings from WMMS. The number and size of regional and distributed BMPs will be modified as necessary to meet load reduction targets. The existing dates established in TMDLs are as follows:

- July 9, 2009 (Final WQBELs for Los Angeles Harbor Bacteria TMDL)
- March 6, 2016 (Final WQBELs for Machado Lake Trash TMDL)
- December 28, 2017 (Final WQBELs and RWLs for Los Angeles Harbor Bacteria TMDL at Station CB1 based on the Time Schedule Order (see Attachment B)
- September 11, 2018 (Final RWLs and WQBELs for Machado Lake Nutrients TMDL)
- September 19, 2019 (Final WQBELs for Machado Lake Pesticides and PCBs TMDL)
- March 23, 2032 (Wet-Weather Final Freshwater WQBELs for DC and LA Harbor Waters Toxic Pollutants TMDL)

The required milestones will be established through the EWMP development process as the RAA is conducted and modified through the adaptive management process. The milestones will be based on the MS4 Permit requirements and will consider the implementation needs and a feasible timeline.

The non-stormwater and dry-weather impacts will be evaluated based on the expected impacts from MCMs and other control measures and by using volume reduction for runoff that is captured and used, diverted, or infiltrated. This approach will evaluate volume and sediment reduction potential. The types of non-stormwater structural BMPs would include low-flow diversion and treatment in a sanitary sewer system, extended detention times in subsurface wetlands, park reuse where plants and microbes would break down or absorb contaminants, and infiltration BMPs. Estimated daily

yields will be derived from local dry-weather flow monitoring data within the region (Stein and Ackerman, 2007) and available measured flow rates. The data collected through the CIMP efforts will become available in the future and may include information regarding non-stormwater flow rates, which may be utilized through the adaptive management process. Captured flows will be subtracted from total non-storm flow estimates. Pollutant load reductions will be evaluated based on the ratio of total flow reduction.

Legacy pollutants (toxics) are a concern in the Dominguez Channel WMA. Toxics include heavy metals (cadmium, chromium, copper, mercury, lead, and zinc), chlordane, dieldrin, DDT, PCBs, and certain PAH compounds (LARWQCB, 2010b). Toxics other than metals are not modeled in the pollutant load models due to the limited information on point and non-point sources tied to land use. In order to model these pollutants, the relationships explained below will need to be developed.

Pollutants such as heavy metals, toxics, phosphorous and organic compounds are partially adsorbed onto the TSS particles. The concentrations of these pollutants are often correlated to the concentration of sediment in the water bodies. Relationships between compounds and TSS are location and pollutant type dependent. Presently, an analysis of the correlation between TSS and various toxics is required before effectiveness of sediment removal processes for toxics removal can be estimated. Existing data pertaining to these relationships will be evaluated to assess if a linkage does exist and findings will be documented in the EWMP.

The relationships between compounds and TSS may be more clearly defined using data gathered during the CIMP. These findings would be used with future RAA reviews through the adaptive management process to establish a relationship between toxics and TSS or land uses. Once relationships are developed, reductions in TSS or land use based EMCs can be correlated to reductions in toxics. Limiting transport of toxics from contaminated sites into the storm drains during wet- and dry-weather has to be a component of current and future site remediation. Detailed steps for the RAA are further discussed below.

4.2.1 Selecting Potential MCM and BMP Opportunities

Selection of appropriate MCMs, distributed, and regional BMPs begins with identifying the current MCM and BMP practices utilized by the DC WMG as described in Section 3. The DC WMG preferences will be incorporated into the model in order to evaluate implementation strategies.

As described in Section 3, MCMs may be modified to achieve greater load reductions, which will be quantified in terms of percentage removal from the DC WMG. During the EWMP development process, DC WMG will evaluate if modified MCMs are desirable. The process for demonstrating the effects of the MCMs and BMPs on water quality is discussed in the following subsection.

4.2.2 Demonstrating Effects of BMPs

Prior to evaluating the watershed control measures, a load reduction analysis will be completed to understand which types of controls will be most effective. Target load reductions will be established using the WMMS optimization algorithm for metals, nutrients, and TSS based on catchment-scale optimized treatment volumes, or alternatively, TMDL-based required load reductions may be used. Target pollutant load reductions for remaining TMDL and 303(d) pollutants that are not optimized in the version of WMMS available from LACDPW, including bacteria and oil, will be established for specific monitoring locations based on receiving water monitoring data. For bacteria in particular, target pollutant load reductions will be based on the TMDL compliance metrics reduced for high flow recreational use suspension. Target load reductions will account for receiving water conditions and processes, but will be established to represent contributions from only DC WMG agencies. The areas within each WMMS

subwatershed will be divided into smaller subareas for SBPAT. The smaller subareas will be broken along jurisdictional boundaries to establish jurisdiction-specific target load reductions for distributed BMP analysis. Regional contributions can be evaluated based on the land use type and acreage within the watershed tributary to regional projects.

The benefits of the MCMs and structural controls to receiving water loadings will be evaluated based on the load to load reduction ratio for the subareas managed by the DC WMG. The Dominguez Channel WMA encompasses several cities and unincorporated areas within the County of Los Angeles. Many of the cities have decided to pursue other watershed plans separately from the DC WMG. This decision limits the ability of the RAA in predicting the receiving water limits where DC WMG and non-participating agencies are both tributary. In this case, the loads generated by the participating agencies will be evaluated as the baseline load. The baseline load will then be compared to load reductions achieved through the implementation of MCMs and institutional BMPs to demonstrate that the total load reductions meet WQBELs and RWLs.

Figure 4.3 provides a graphical representation of the prioritization of BMPs that will be included in the EWMP process and RAA analysis. In order to be considered a regional EWMP project as discussed in Section 3.1.4, the projects must retain dry-weather flows and flows produced by the 85th percentile, 24-hour storm event.

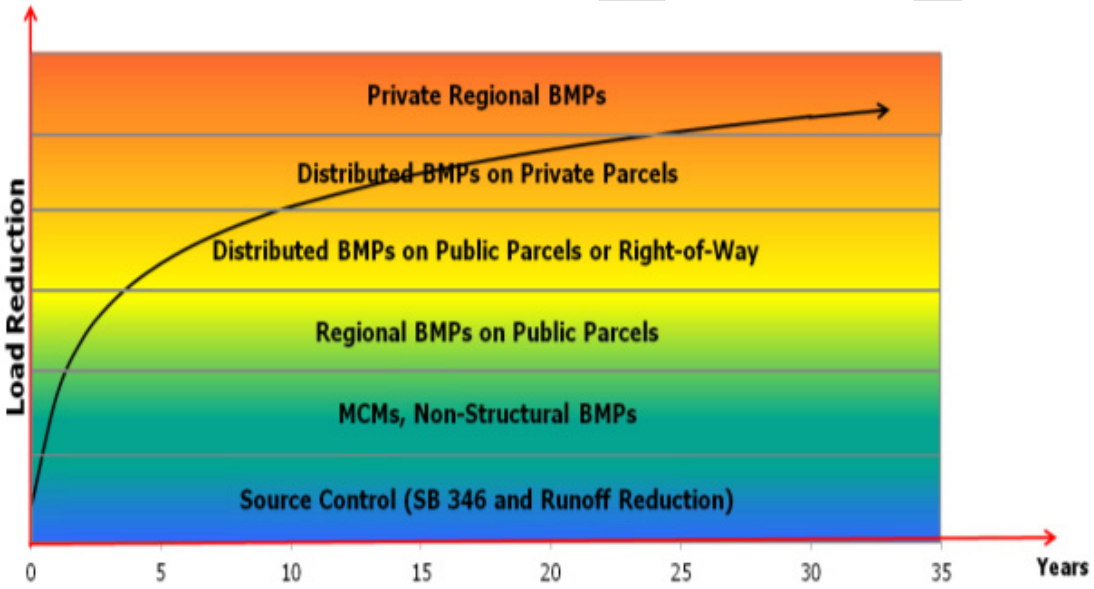

Figure 4.3. Prioritization of Water Quality Improvement Tools

The process for representing watershed control measures in the modeling system and quantifying their effectiveness in reducing stormwater pollutant reduction is described in the step-by-step approach found below.

MCMs and Institutional BMP Pollutant Load Reductions

Existing control measures such as MCMs and institutional BMPs initiated in response to various TMDLs, as identified in Section 3, will be evaluated in terms of associated pollutant load reductions at relevant monitoring locations where data is available. The stormwater and non-stormwater water quality benefit of planned and implemented non-structural BMPs will be evaluated for TMDL and 303(d) pollutants based on available data and identified non-structural opportunities. These measures include true source control programs such as the phase-out of copper in brake pads and of zinc in rubber tires. The load reductions from copper in brake pads

and zinc in tires will be based on recent quantitative mass balance estimates identified in relevant literature (Moran, 2011). To allow for an efficient and high value/low cost evaluation, non-structural quantification methodologies will be developed based on methods used in existing TMDL implementation plans where appropriate.

WMMS and SBPAT require land use based load estimates to identify pollutant loads generated by rainfall events. To implement non-structural control in the analysis, land use based loadings will be modified based on the estimated load reductions. Once the reductions to loading factors are established, the model can be run to evaluate the effectiveness of the MCM and/or institutional BMP.

Regional Structural BMP Load Reductions

DC WMG preferences on potential regional projects and additional input from the DC WMG and stakeholders will be sought and included in the analysis of structural BMPs in the EWMP. The SBPAT model will also be run to evaluate other potential regional BMP project siting locations. Selected sites will be evaluated for potential pollutant reduction capacity. The steps in the evaluation process include:

1. A discussion of existing and planned structural BMPs and potential retrofit opportunities. Input will be gleaned on structural BMP preferences, regional projects, potential retrofit opportunities, infiltration versus flow-through options, ownership, maintenance, catchment location, land use, multiple objective features, etc. This information will then be used to guide structural BMP plan development;
2. If potential retrofit opportunities exist, retrofit feasibility will be estimated based on the proposed facility design and location;
3. The effectiveness of the regional BMPs will be evaluated by comparing load reductions estimated by WMMS and SBPAT against loads estimated for the watersheds without BMPs; and
4. The SBPAT model will be used to evaluate regional BMP load reductions throughout the watershed utilizing the criteria desired by the DC WMG.

Distributed Structural BMP Load Reductions

With the storage and infiltration volumes from WMMS and input on preferred distributed BMP types from DC WMG, SBPAT will be used to evaluate distributed BMP placement throughout the watershed to meet WQOs.

The approach for developing additional structural retrofit BMPs for inclusion in the EWMP Plan and quantification in the RAA is to report and compare both of the following:

1. WMMS default output, if applicable (i.e. built-in generalized distributed BMP assumptions evaluated for feasibility at a regional level based on land use); and
2. BMPs identified by SBPAT using site-specific land use-based evaluation of water quality needs and implementation opportunities to identify specific distributed BMP implementation opportunities. Agencies will be provided with Draft Structural BMP Opportunity Maps that will identify land use zones and/or specific parcels for structural BMP implementation depending on the preferred approach.

The effectiveness of the distributed BMPs will be evaluated by comparing load reductions estimated by WMMS and SBPAT against loads estimated for the watersheds without BMPs.

4.2.3 Address Water Quality Priorities

The RAA will demonstrate the effects of proposed watershed control measures on stormwater quality, non-stormwater quality, and receiving water quality as appropriate. The DC WMG is responsible for addressing the following TMDLs discussed in Section 1.3.2, as well as Section 2:

- Los Angeles Harbor Bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel);
- Machado Lake Trash TMDL;
- Machado Lake Nutrient TMDL;
- Machado Lake Pesticides and PCBs TMDL; and
- DC and LA Harbor Waters Toxic Pollutants TMDL.

Compliance analysis will first emphasize implementation of MCMs, institutional BMPs, and existing structural BMPs. The final level of analysis will evaluate new structural project opportunities.

Stormwater quality will be analyzed based on estimated load reductions from SBPAT. The load reductions from SBPAT will be compared with the target pollutant load reductions from WMMS to compare against both load-based and exceedance day-based TMDL compliance metrics. Expected pollutant reduction ranges will be provided, thereby capturing the variability of BMP performance. Non-stormwater structural BMP performance estimates will be based on static volume and load reduction calculations. A staged implementation strategy will be developed for each milestone. Milestones will be developed pursuant to the MS4 Permit Parts VI.C.2.a.ii.(5) (pages 50-51) and VI.C.2.a.iii.(2).(d) (page 52) for pollutants that are not in the same class as an existing TMDL and for which a water quality priority was established. These milestones will be evaluated through the EWMP development process as the RAA is conducted and will be re-evaluated through the adaptive management process.

BMP performance and load reductions will be compared to receiving water limitations, TMDL waste load allocations, WQBELs and other applicable targets at the watershed and jurisdictional scale through determining the improvements in the watershed due to BMP implementation. The RAA will provide a breakdown of BMP implementation in each DC WMG agency jurisdiction to show where implementation efforts are most effective.

4.2.4 Schedule for Implementation

As discussed, existing TMDLs have compliance dates that must be considered in the RAA process. A few of the TMDLs identified have interim target load reductions that became effective in 2012 when the MS4 Permit was adopted. The interim and final compliance dates identified in the EWMP for WBPCs categorized as Categories 2 or 3, as required by the MS4 Permit, will also represent significant milestones in determining the schedule for implementation.

Due to the wide range of pollutants within the DC WMG, including sediments, metals, bacteria, and dissolved pollutants such as nutrients, addressing TMDLs through the RAA is expected to address the non-TMDL pollutants on the 303(d) list and receiving water limitation exceedances.

The total load reduction required by the MS4 Permit for target years will be evaluated and the impacts of MCMs and BMPs will be considered based on implementation time frames. BMPs will be added to the system until interim load reductions are met. At this point, the details of the proposed BMPs will be documented in order to develop a construction schedule that will meet the requirements of the MS4 Permit. The model will then be ran again, incorporating modifications to MCMs, land uses, and additional BMPs to achieve the next load reduction at the milestones. The details of BMPs and MCM combinations will be documented. The process will be repeated until target dates are modeled and the final results provide the required target load reductions.

4.2.5 Characterizing Uncertainty

The strength of the proposed RAA approach is that it utilizes the tools of developed regional models effectively in the analysis of water quality benefits. The resulting output from SBPAT provides an expected load reduction with statistics for evaluating the uncertainty of the predictions inherent to the process. The uncertainties are tied to uncertainties in expected rainfall events, land use EMC based loads, and BMP effectiveness. The output from the model will provide the expected range of possible load reductions to effectively communicate the uncertainty within the analysis framework.

4.3 Modeling Approach

As discussed in Section 4.1, the WMMS and SBPAT regional models will be used for the DC WMG RAA.

4.3.1 Spatial Domain

The analysis of BMPs and MCMs through the RAA process will be performed only for the areas covered by the participating agencies in the DC WMG. The other areas will be modeled with the assumption the jurisdictions are meeting the requirements of the MS4 Permit (e.g., meeting WQBELs and RWLs on schedule). Figure L.1 in Attachment L provides an overview of the Dominguez Channel WMA areas of interest for the EWMP, including the POLA.

The modeling approach will evaluate land uses based on the Hydrologic Response Units (HRUs) in WMMS and the seven land use classifications in SBPAT, along with data provided by the DC WMG to identify non-MS4 dischargers such as Caltrans and industrial sources.

The models will be calibrated using the watershed subareas and land uses. Once the model is calibrated, the HUC loading rates will be reduced until the TMDL loading rates are achieved. The model will then be modified so that it only models the land use within the DC WMG to evaluate loads and required load reductions. Agency jurisdictions not included in the DC WMG and Industrial Permittees will be modified to generate pollutants at the MS4 Permit required levels prior to the analysis of pollutant load reduction requirements within the DC WMG. SBPAT will then be used to evaluate BMP placement to achieve the required load reductions. A similar procedure will be followed when assessing the water quality within a jurisdiction when a subarea incorporates multiple jurisdictions.

The exclusion of non-participating agencies is justified since each of these entities either has a separate permit with regulations that they are required to meet or is required by the MS4 Permit to meet compliance within their jurisdiction. These permits normally require that the responsible parties test and verify that discharges meet the CTR and TMDL requirements for the downstream water bodies where the discharge occurs.

The industrial facilities covered under the IGP within the DC WMG have been identified based on their WDID number and mapped based on their parcel, as illustrated in Figure L.2 in Attachment L. A detailed list of the facilities covered under the IGP within DC WMG is presented in Attachment M. These parcels will be modified in the model to meet the new IGP requirements prior to the analysis of pollutant load reduction requirements within the DC WMG.

WMMS and SBPAT are integrated into GIS software packages. WMMS utilizes the MapWindows software, while SBPAT uses ArcGIS. Various GIS layers will be used for each model and the model also utilizes several shapefiles stored within the models database. The data sets contain

land use information, soil types, imperviousness, and stream segment connectivity. Rain gage location is also a spatial variable that has already been assigned to the subwatersheds.

4.3.2 Hydrology

Hydrologic modeling will be incorporated through the use of WMMS and SBPAT.

WMMS

The LSPC model developed for use in the WMMS system relies on many parameters and can be calibrated for both water quantity and quality. The model hydrology was calibrated based on rainfall records from 148 gaging stations with short interval records (5-minute) for the time period from 1997 through 2012. Figure N.1 in Attachment N shows the rain gage locations and the estimated rain gage data set quality used for the WMMS LSPC model development.

Evaporation data was also utilized to evaluate evapotranspiration effects in the model. Three evapotranspiration zones were developed for the area of the DC WMG (LACDPW, 2010a). Figure N.2 in Attachment N shows the evaporation zones for Los Angeles County. Land use is based on HRUs, which incorporate imperviousness and slope. Soil types are based on SSURGO data for the region.

Figure N.3 in Attachment N shows no runoff stations are located within DC WMG. Data from historic runoff stations exist within the watershed and will be utilized for flow calibrations. The data is most likely to be available in daily flow rather than short interval data, requiring use of daily precipitation gage data for analysis and comparison. The time period for the runoff gages will be evaluated to assess whether they represent current watershed conditions adequately or are not representative due to changes in land use over time. Calibration of the watershed will require utilizing relevant subareas tributary to the runoff stations along with the runoff data associated with the mass emissions station in Dominguez Channel. The rainfall data and corresponding water quality data from monitoring events at S-28 will be used to calibrate the model.

SBPAT

The SBPAT model subarea breakups will be tied to the extensive LACFCD and City drainage systems. Larger subareas outside of the jurisdictional boundaries will be used to model the tributary watersheds to possible regional facilities.

The precision of the SBPAT results is heavily dependent on how well the hydrologic, water quality and BMP effectiveness data describe the actual site characteristics. Local and regional data are used to the fullest extent possible to help minimize errors in predictions, but such data is limited and traditional calibration and verification of the model is not feasible (LACDPW, 2008b).

SBPAT utilizes EPA SWMM 4.4 to evaluate runoff. The modified SWMM engine tracks volumes in the Runoff and Storage-Treatment Blocks on a storm event basis using a volume-accounting approach. Such tracking is required as the SWMM simulation is conducted continuously, but must be summarized by storm event to facilitate the SBPAT Monte Carlo routines (Geosyntec, 2008b).

The SBPAT model utilizes approximately 18 rainfall gages with long-term hourly data that have been obtained from National Climatic Data Center (NCDC) monitoring stations throughout Los Angeles County. The data sets were evaluated on the completeness, the periods of record, and the relative spatial distribution of gages.

SWMM in SBPAT accounts for losses due to infiltration based on the Green and Ampt method utilizing a saturated hydraulic conductivity and suction head. Evapotranspiration rates in the SBPAT are based on published California Irrigation Management Information System (CIMIS) reference evapotranspiration (ETo) data for Los Angeles County (Zone 4), adjusted for imperviousness, and typical urban landscaping. Table 4.2 summarizes the ETo values published by CIMIS (Geosyntec, 2008b).

Table 4.2: Evapotranspiration by Month (inches)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.86	2.24	3.72	4.80	5.27	5.70	5.89	5.58	4.50	3.41	2.40	1.86

No runoff stations are used for evaluation of modeled versus measured runoff in SBPAT.

4.3.3 Time Period

The time period for running the WMMS LSPC model encompasses the time period from 1996 through 2012, which is the period of available short-interval data that matches rain gages selected for the model. The time period for the Los Angeles County rain gages in SBPAT run until 2008 and haven't been updated since that time period in the data sets. These sets will be updated to add the last five years of data. The data sets will be collected from the LACDPW and the NCDC. Both of these agencies perform quality control procedures on the data sets prior to making them official record. The rainfall data for the added time periods will be evaluated to assess whether the event volumes are reasonable and consistent with the remainder of the record. Anomalies will be investigated utilizing the archived Next Generation Radar (NEXGEN) data sets. If total daily rainfall volumes are consistent with NEXRAD data, the gage set will be considered valid and data will be used. If differences in volume are large, the data will be evaluated for correction or removal from the record.

4.3.4 Water Quality

The RAA Guidelines suggest that Permittees provide an initial assessment of current/baseline pollutant loading for WBPCs based on data collected within the last ten years, including land use and pollutant loading data. At a minimum, baseline pollutants loadings shall be provided for each subwatershed identified in the TMDLs. Pollutant loadings shall be calculated based on EMCs available for different land use sites as referenced in sources as listed in Table 4.3.

Table 4.3: Median Statistics of BMP Effluent Concentration (95% Conf. Interval)

Source No.	Reference
1	Sources, patterns and mechanisms of storm water pollutant loading from watersheds and land uses of the greater Los Angeles area, California, USA. 2007. ED Stein, LL Tiefenthaler, KC Schiff. Technical Report 510. Southern California Coastal Water Research Project. Costa Mesa.
2	Levels and patterns of fecal indicator bacteria in stormwater runoff from homogenous land use sites and urban watersheds. Request Only. 2011. LLTiefenthaler, ED Stein, KC Schiff. Journal of Water and Health 9:279-290.
3	Los Angeles County 2006 EMC Report.

The pollutant loads generated in LSPC are based on natural loading from native sources, point and non-point pollutant sources, and aerial deposition. The model utilizes a build-up/wash-off methodology common to continuous simulation models that requires rates of build-up and

evaluates how quickly the pollutants wash off the HRUs. The LSPC model is currently calibrated for the most recent data sets available. The details of the calibration are provided in the WMMS documentation (LACDPW, 2010b). If further data sets become available for pollutant loading calibration, a similar process will be followed to evaluate pollutant loadings that can be related to the EMCs in Table 4.3.

QA/QC checks will be performed for prediction of water quality variables at milestone points within the watershed based on the criteria provided in the RAA Guidelines. The RAA Guidelines provide estimated ranges of the variables that are used in both the WMMS and SBPAT models. The water quality input ranges will be evaluated based on a comparison to the values in the guidelines to evaluate whether data is consistent with regional standards. Deviations will be noted or corrected as appropriate.

The bacteria loads will be calibrated against the mass emission station data. When more data is available through the CIMP, the data will be used to refine the model calibration.

The water quality calibration was developed on the basis of building and testing a parameter set for land use-specific pollutant load predictions. The calibration approach includes calibration by varying parameters to develop best fit HRU/EMC responses for individual land use sites and then adding in-stream point source load contributions and hydromodification. Validation requires evaluating responses at downstream mass emission locations for a combined model using a fixed parameter set. The calibration steps were applied first for sediment, followed by water- and sediment-associated pollutants.

SBPAT has the ability to model pollutants that can be tied to a land use using EMCs and that have been evaluated in the American Society of Civil Engineers (ASCE) BMP Database. In general, hydrophobic pollutants, such as DDT, PAHs, and PCBs have correlations to TSS. For those toxics that are rarely monitored both in time and space for DC WMG, the empirical approach for loading and load reductions is to create a TSS-toxic relationship from measured data to develop an EMC and estimate pollutant load reductions.

Establishing pollutant reductions goals for addressing water quality priorities was discussed in Section 4.1. WMMS will be used to evaluate pollutant loads and evaluate required pollutant load reductions to meet WQOs. Load reductions due to MCMs, source control, and non-structural BMPs will be evaluated using the simplified TMDL reduction tool in LSPC based on expected reductions. SBPAT will then be used to evaluate placement of preferred BMPs and the load reductions calculated will be compared to required load reductions. An iterative process will begin where the number of BMPs is increased throughout the watershed until constituents are addressed for the milestone date. Then the next milestone date model will be developed and the iterations will begin again.

SBPAT has the ability to evaluate the number of days where water quality parameters are exceeded. This tool will be used to evaluate exceedance criteria and how often exceedances may be expected. If water effect ratios are established for the DC WMG, the evaluation of the increase in allowable metals will be considered in future evaluations in the spirit of adaptive management.

4.3.5 Representation of Individual BMPs

As discussed in Section 4.1, the preferences of the DC WMG will be used to dictate BMP selection, which may require that different BMPs be utilized within different jurisdictions. This is possible in the SBPAT model, due to the flexibility of specifying distributed structural BMPs by land use type or by subwatershed. Regional BMPs that control runoff and water quality from more than one DC WMG agency will require coordination among the agencies for preferences and funding related issues.

MCMs and other institutional BMP strategies are often the most cost effective approach to load reductions. These types of water quality improvement strategies and programs will be evaluated to assess the volume of water or percentage of load they can reasonably expect to remove from the system. This will be done through studies of literature and reductions experienced by other jurisdictions as discussed in Section 3.2.2.1. The load reductions can then be made through the LSPC TMDL model interface, which allows reductions of loads by a percentage in each subwatershed for each of the MCMs discussed in Section 3.2

Other load reductions that will be evaluated include source control programs such as the phase-out of copper in brake pads and of zinc in rubber tires, and water conservation programs to reduce over-irrigation and dry-weather runoff. Load reductions for copper will be calculated based on the study by Dr. Moran detailing expected load reductions based on SB 346. The model land use loadings will be adjusted to decrease metal loadings by specific percentages to simulate reductions related to this non-structural BMP.

Second to MCMs, regional BMPs provide the best source control for the money spent. The types of regional BMPs that may be modeled include infiltration basins, detention basins, detention basins with subsurface wetlands, constructed wetlands, treatment facilities, hydrodynamic devices, and channel naturalization. A storage volume is specified based on depth, width, and length of the BMP within the model. Losses to infiltration are specified based on soil classifications. SBPAT simulates the runoff volume, BMP storage and treatment, and effluent volume is evaluated. Load reductions based on statistical probabilities are assessed and a load reduction is produced.

Distributed BMPs which may be modeled include cisterns, bioretention, vegetated swales, green roofs, porous/permeable pavements, gross solids removal devices, media filters, and catch basin inserts.

Once the load reductions are established for each milestone model, QA/QC checks will be performed on the results to verify that they make sense and provide a solid basis for the development of construction schedules and budgets. Table 4.4 provides a summary of median statistics for BMP effluents. This range can be checked against output from SBPAT to evaluate whether the model is providing sound results.

Once modeled, the range of influent and effluent concentrations is available as output. The output values can be compared to the values in Table 4.4. If the results do not compare well with the values, an evaluation of the data sets used to specify effluent concentration probabilities is warranted. Outliers will be justified or modified to demonstrate that QA/QC has occurred and that the model is performing as expected.

Table 4.4: Median Statistics of BMP Effluent Concentrations (95% Conf. Interval)											
Pollutant	**Units**	**Bioretention**	**Bioswale**	**Detention Basin**	**Filter Strip**	**Manufactured Device**	**Media Filter**	**Porous Pavement**	**Retention Pond**	**Wetland Basin**	**Wetland Channel**
Fecal Coliform	/100 mL	NA	2852-18572	196-3647	NA	1438-3431	101-464	NA	35-411	NA	NA
TSS	mg/L	6.0-13.0	7.0-11.0	19.0-27.0	14.0-20.0	19.0-25.0	6.0-8.0	10.0-17.0	10.0-12.0	6.0-9.0	8.0-16.0
Total Phosphorus	mg/L	0.1-0.16	0.17-0.20	0.18-0.23	0.16-0.23	0.11-0.14	0.08-0.11	0.07-0.11	0.08-0.11	0.06-0.08	0.11-0.15
Dissolved Phosphorus	mg/L	NA	0.21-0.35	0.06-0.11	0.16-0.26	0.05-0.08	0.08-0.11	NA	0.04-0.06	0.03-0.04	0.07-0.10
Total Nitrogen	mg/L	0.98-1.24	0.54-0.66	1.77-2.75	NA	1.85-2.34	0.67-0.91	NA	1.16-1.35	1.06-1.21	1.40-2.00
Total Kjeldahl Nitrogen	mg/L	0.84-1.30	0.43-0.62	1.20-1.80	1.10-1.40	1.40-1.60	0.61-0.80	0.91-1.35	1.00-1.15	0.95-1.13	0.90-1.30
NO_x (NO_2+NO_3, and NO_3)	mg/L	0.17-0.27	0.23-0.30	0.22-0.47	0.33-0.51	0.38-0.45	0.45-0.63	0.83-1.23	0.11-0.16	0.05-0.10	0.33-0.96
Total Copper	µg/L	5.8-10.5	6.5-8.5	4.5-9.0	6.4-7.9	9.4-12.0	5.1-7.5	8.8-11.1	5.0-6.0	3.0-4.0	5.0-10.0
Total Lead	µg/L	NA	2.0-2.0	2.5-7.9	1.3-2.2	5.0-5.0	1.1-1.5	2.5-2.5	2.0-3.0	1.0-1.0	3.6-10.0
Total Zinc	µg/L	10.0-26.0	30.0-30.0	15.0-34.5	16.9-27.0	52.5-64.5	15.0-20.0	14.6-20.0	17.0-20.0	16.1-24.0	11.0-20.0
Total Arsenic	µg/L	NA	1.0-1.3	1.2-1.8	0.5-1.0	1.3-2.4	0.7-1.0	2.5-2.5	0.5-1.0	NA	NA
Total Cadmium	µg/L	NA	0.3-0.3	0.5-0.5	0.2-0.2	0.6-1.0	0.1-0.2	0.3-0.3	0.3-0.5	0.1-0.5	0.5-0.5
Total Nickel	µg/L	NA	2.4-4.3	2.4-4.5	2.4-3.2	4.0-5.0	2.0-2.8	1.55-2.1	2.1-5.0	NA	2.0-3.0

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4.3.6 Representation of BMP Selection and Cumulative Effect

The BMP selection using SBPAT features that evaluate some of the potential BMP siting fatal flaws, such as slopes, limited infiltration capacity, and incompatible land uses to suggest potential BMPs. BMPs will be utilized in the modeling process to meet the required load reductions from within the boundaries. Smaller watershed subareas from SBPAT modeling will be used to evaluate the spatial location for siting BMPs within high priority catchments. Catchments with CPI scores of 4 and 5 will be considered for BMP siting prior to those with lower prioritization scores.

Uncertainty for reduction of pollutant loads will be characterized on the output from SBPAT. One of the strengths of the model is that the stochastic approach provides an expected treatment value, with a range of possible outcomes identified.

4.4 RAA Output

The RAA output will be provided in tables and graphics for both the WMMS and SBPAT modeling per recommendations provided in the RAA Guidelines. The spatial resolution for displaying BMPs to be included in the EWMP for implementation varies for the different types of BMPs. Institutional BMPs will not be displayed spatially, but will be displayed within a table showing the BMPs and the expected load reductions by percent at each milestone.

Output from WMMS will include a catchment prioritization map, as demonstrated in Figure 4.4, along with tables indicating the percentage reduction required for each subwatershed to bring the compliance points into alignment with TMDL requirements. Current pollutant loadings will be provided as an appendix and will include a table of subwatershed loads by land use. The baseline load output will also include the optimized percent load reductions needed to achieve stormwater compliance with 95 percent confidence.

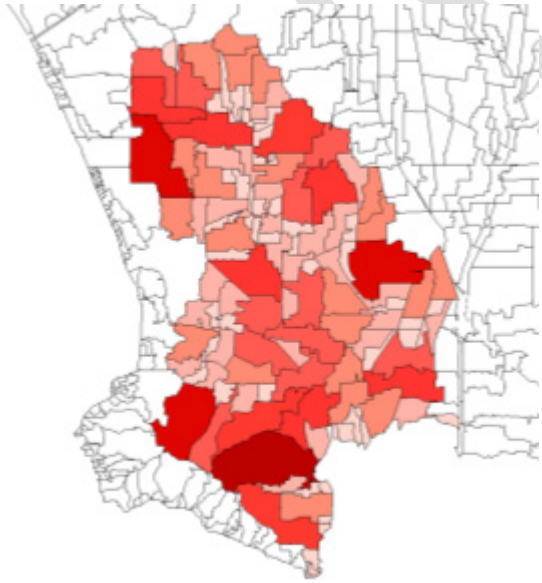

Figure 4.4. WMMS Optimized Catchment Prioritization Example

The BMP Selection Tool developed for use with the WMMS model provides recommendations for BMPs and design parameters to be used in the watershed based on required flow reduction. Based on the 40 percent reduction in load recommended by the Nonlinearity-Interval Mapping Scheme (NIMS) optimization, Management Level III is the recommended treatment level for the

subwatershed. The recommended BMPs and total volume of runoff reduction are included in the output.

Based on the recommended treatment capacity in WMMS, regional and distributed BMP scenarios will be developed in SBPAT. Prioritization for distributed and regional structural BMPs will be displayed on CPI maps and tables showing the size and number of the BMPs to be implemented. Examples of the regional and distributed BMP CPI maps are provided in Figures L.3 and L.4 of Attachment L, respectively. The figures shows the nodal CPI used for determining regional BMP placement and the catchment CPI map used for distributed BMP placement. These maps utilize the WMMS subareas currently, but these subwatersheds will be divided into smaller subwatersheds for the DC WMG RAA.

Regional BMP opportunities will be evaluated based on criteria specified in Section 3.1.4. Output regarding regional BMPs will include the location by address and geographic coordinates, the footprint size of the BMP, the depth, and the total storage volume. Each regional BMP will be plotted on a watershed map. BMPs that are to be implemented will be listed by year of anticipated construction.

Distributed BMPs will be listed by SBPAT subarea and the details include the type of BMPs, an average BMP size in length, depth, and width, and the total volume to be treated in the subwatershed. BMPs that are to be implemented will be listed by year of anticipated construction. In addition, design intensity will be calculated using the model output and provided.

SBPAT output provides a storm event summary that includes the baseline loading and the average loads with distributed and regional BMPs. The percent reduction based on the BMPs utilized in the analysis is also included. Storm event exceedances are provided if threshold levels are set in the model.

In addition, the SBPAT output provides a summary of average annual loads by pollutant type before and after BMP implementation as well as the percent removed. These numbers will be evaluated against the WMMS numbers to assess whether targets were met during the specific time period of interest as specified in Section 4.1.

The final summary table provided by SBPAT is the cost summary for capital costs, maintenance costs, and land costs. These numbers are based on input to the SBPAT model that will be established by the DC WMG. The default values and DC WMG input can then be compared to the output costs from WMMS. These estimates will provide a range of possibilities to encompass the uncertainties in the planning process.

5 EWMP Development Process

The EWMP Work Plan is the first major step towards completing the development of the EWMP. The Work Plan identifies major watershed characteristics in order to evaluate water quality priorities, as well as develops several approaches for addressing those water quality priorities that will be further evaluated prior to EWMP development. The following major events can be concluded from the Work Plan and will be required prior to the development of the EWMP:

- Ongoing stakeholder efforts will be implemented throughout the development of the EWMP in order to receive input on structural BMP projects and programmatic implementation through MCMs and other institutional BMPs.
- Multi-benefit regional projects, that preferably satisfy the EWMP criteria for regional projects, will be selected by utilizing the approach developed in Section 3.1.4 and through the stakeholder process. This may include additional feasibility studies in order to evaluate anticipated load reductions.
- Distributed BMP projects will be identified and selected by utilizing the approach developed in Section 3.1.5 and through the stakeholder process. Whenever feasible, additional information will be obtained in order to evaluate anticipated load reductions.
- The potential MCM/institutional BMP control measures will be further evaluated in order to evaluate if the potential modifications identified in Section 3.2.2.1, or other modifications, would be justifiable due to anticipated pollutant load reductions.
- Existing data will be evaluated to assess if a relationship can be made between various toxic pollutants and TSS so that the toxic pollutants may be modeled in the RAA, as they represent the priority pollutant for DC WMG.
- The RAA will be further developed and structural and non-structural BMPs identified through the processes listed above will be incorporated into the SBPAT model in order to evaluate the quantity of BMPs required and the implementation cost and schedule.
- The EWMP will be developed, submitted, and reviewed before it can be approved. The schedule outlined in Table 9 or Part VI.C.4 (pages 53-58) of the MS4 Permit will be followed and is summarized in Table 5.1.

Table 5.1: EWMP Implementation Requirements

MS4 Permit Part	Provision	Due Date
VI.C.4.b (pages 55-56)	Notify Regional Board of intent to develop an EWMP and request submittal date for draft program.	6 months after MS4 Permit effective date (June 2013)
VI.C.4.c.iv (page 57)	For Permittees who elect to collaborate in an EWMP, submit draft plan to Regional Board.	18 months after MS4 effective date (June 2014) provide final Work Plan for EWMP development.
		30 months after MS4 Permit effective date (June 2015) submit draft plan.
VI.C.4.c (pages 56-57)	Comments provided to Permittees by Regional Board.	4 months after submittal of draft plan.
VI.C.4.c (pages 56-57)	Submit final plan to Regional Board.	3 months after receipt of Regional Board comments on draft.
VI.C.4.c (pages 56-57)	Approval or denial of final plan by Regional Board or by Executive officer.	3 months after submittal of the final plan.
VI.C.6 (page 65)	Begin implementation of the EWMP.	Upon approval of the plan.
VI.C.8 (pages 66-67)	Comprehensive evaluation of EWMP and submittal of modifications to plan.	Every two years from date of approval.

In addition to the schedule provided in the MS4 Permit, DC WMG included a schedule with completion dates and associated milestones for EWMP development in their NOI. Currently the DC WMG is on schedule and will continue to work towards achieving the schedule outlined in the NOI and reiterated in Table 5.2. The milestones and due dates identified in the NOI appear to continue to be appropriate; therefore no alternative milestones are presented at this time.

Table 5.2: EWMP Schedule from DC WMG NOI

Milestone	Due Date
Draft Technical Memorandums • Approach to USEPA, TMDL, 303(d) listings, other exceedances of RWLs • Final selection of regional projects • Feasibility analyses of regional projects, customization of MCMs, identification of other BMPs • Project schedules and cost estimates	April 2015
Draft EWMP	May 2015
Final Draft EWMP submitted to Regional Board	June 2015

The Work Plan will be used as a guide for EWMP development and provides the framework required. As noted in Table 5.1, a comprehensive evaluation of the EWMP and modifications are required every two years following the EWMP approval. The EWMP is part of an adaptive management process as described in Part VI.C.8 (pages 66-67) of the MS4 Permit. Part VI.C.8 (page 66-67) states that every two years the EWMP will adapt to become more effective, based on, but not limited to, the following:

- Progress towards achieving interim and/or final WQBELs/RWLs according to TMDL schedules;
- Progress towards achieving improved water quality in MS4 discharges and achieving receiving water limitations through implementation of watershed control measures based on an evaluation of outfall-based and receiving water monitoring data;
- Achievement of interim milestones;
- Re-evaluation of the water quality priorities identified for the DC WMG based on more recent water quality data for discharges from the MS4 and receiving waters(s) and a reassessment of sources of pollutants;
- Availability of new information and data from sources other than the Permittees monitoring programs within the DC WMG that informs the effectiveness of the actions implemented;
- Regional Board recommendations; and
- Recommendations for modifications to the EWMP through a public participation process.

The adaptive nature of the EWMP allows the process to be iterative, allowing the DC WMG and other groups to identify a plan that is successful in improving water quality in their region.

6 References

AMEC Earth & Environmental, Inc. 2003. Supplemental Report Consolidated Slip Restoration Project Concept Plan. Prepared for Regional Water Quality Control Board Los Angeles Region and the Port of Los Angeles.

AMEC. 2011. Port of Los Angeles Dominguez Channel and Consolidated Slip Erosion Study Chemistry EDDs.

Attachment A to Resolution No. R4-2007-006. Adopted by RWQCB June 7, 2007. Proposed Amendments to the Water Quality Control Plan - Los Angeles Region for the Machado Lake Trash TMDL.

Attachment A to Resolution No. R08-006. Adopted by Regional Board September 2, 2010. Proposed Amendment to the Water Quality Control Plan - Los Angeles Region to incorporate the Total Maximum Daily Load for Pesticides and PCBs in Machado Lake.

Attachment A to Resolution No. R10-008. May 5, 2011. Amendment to the Water Quality Control Plan - Los Angeles Region to Incorporate the Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters.

Attachment A to Resolution No. R11-008. May 5, 2011. Amendment to the Water Quality Control Plan - Los Angeles Region to Incorporate the Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters.

Attachment C to Resolution No. R12-007. June 7, 2012. Amendment to the Water Quality Control Plan - Los Angeles Region to revise the Los Angeles Harbor Bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel).

Bay Area Stormwater Management Agencies Association. April 29, 2011. Bay Area Stormwater Management Agencies Association Feasibility/Infeasibility Criteria Report – NPDES Municipal Regional Permit Provisions C.3.c.i.(2)(b)(iv) and C.3.c.iii.(1).

Bureau of Engineering Prop O Bond Division. October 2013. Proposition O - Clean Water Bond Program; October 2013 Monthly Report. http://www.lapropo.org/.

Bureau of Engineering Prop O Bond Division. March 2014. Proposition O - Clean Water Bond Program; March 2014 Monthly Report. http://www.lapropo.org/.

California Environmental Protection Agency. Los Angeles Regional Water Quality Control Board. 2014. Basin Plan Amendments - TMDLs. http://www.waterboards.ca.gov/rwqcb4/water_issues/programs/tmdl/tmdl_list.shtml.

California Regional Water Quality Control Board. July 11, 2007. Trash Total Maximum Daily Load for Machado Lake in the Dominguez Channel Watershed.

California Regional Water Quality Control Board, Los Angeles Region. Revised Draft April 2008. Machado Lake Eutrophic, Algae, Ammonia, and Odors (Nutrient) TMDL.

Caltrans. January 2009. BMP Pilot Study Guidance Manual (CTSW-RT-06-171.02.1). California Department of Transportation.

CASQA. 2003. California Stormwater Quality Association. *California Stormwater BMP Handbooks.* Four Handbooks: New Development and Redevelopment, Construction, Municipal, and Industrial/Commercial. www.cabmphandbooks.org.

CASQA. 2007. California Stormwater Quality Association. *Municipal Stormwater Program Effectiveness Assessment Guidance*.

CDM for City of Los Angeles Department of Public Works Bureau of Sanitation. October 11, 2006. Final Project Concept Report Rosecrans Recreation Center Stormwater Enhancements Proposition O Project. http://www.lapropo.org/sitefiles/docs/Concept_Reports/Rosecrans_FINALReport.pdf.

CDM for City of Los Angeles Department of Public Works Bureau of Sanitation. October 11, 2006. Project Concept Report Peck Park Canyon Proposition O Project. http://www.lapropo.org/sitefiles/docs/Concept_Reports/PeckPark_ConcptReport.pdf.

CDM for City of Los Angeles Department of Public Works Bureau of Sanitation. December 13, 2006. Final Project Concept Report Machado Lake Ecosystem Rehabilitation Project. http://www.lapropo.org/sitefiles/docs/Concept_Reports/Machado_CR.pdf.

City of Los Angeles. Environment LA Sanitation. Project Information Form. Provided by Alfredo Magallanes February 16, 2014.

City of Los Angeles. 2003, 2010, 2011. Los Angeles Harbor—Annual Assessment Report(s). City of LA, Department of Public Works, Bureau of Sanitation, Environmental Monitoring Division.

City of Los Angeles. November 18, 2013. Concept Memo #2: Existing and Potential Control Measures.

City of Los Angeles. Bureau of Street Services. 2014. Street Cleaning Section. http://bss.lacity.org/StreetMaintenance/scs.htm.

City of Los Angeles Department of Public Works Bureau of Engineering. July 2009. Machado Lake Ecosystem Rehabilitation Project Wilmington Drain Multi-Use Project Pre-Design Report Executive Summary. http://lapropo.org/sitefiles/Machado/executivesummary.pdf.

City of San Diego. Prepared by URS Corporation. May 31, 2011. Targeted Aggressive Street Sweeping Pilot Program Phase IV Speed Efficiency Study Final Report.

City of San Francisco. 2010. San Francisco Stormwater Design Guidelines. Appendix A: BMP Factsheets. http://www.sfwater.org/modules/showdocument.aspx?documentid=2778.

County of Los Angeles Department of Public Works Watershed Management Division. July 1, 2003. Dry Weather Treatment Feasibility Study.

County of Los Angeles Department of Public Works (LACDPW). April 2004. Dominguez Watershed Management Plan. Submitted by MEC Analytical Systems, Inc. http://ladpw.org/wmd/watershed/dc/DCMP/masterplan.cfm

County of Los Angeles Department of Public Works (LACDPW). 2006. Los Angeles County-Wide Structural BMP Prioritization Methodology: A Guidance Manual for Strategic Storm Water Quality Project Planning. 2006. Prepared for County of Los Angeles Department of Public Works, City of Los Angeles, and Heal the Bay by Geosyntec.

County of Los Angeles Department of Public Works (LACDPW). January 2009. County of Los Angeles Low Impact Development Standards Manual.

County of Los Angeles Department of Public Works (LACDPW). 2010a. Los Angeles County Watershed Model Configuration and Calibration – Part I: Hydrology. August 6, 2010. Submitted to Los Angeles County Department of Public Works by Tetra Tech.

County of Los Angeles Department of Public Works (LACDPW). 2010b. Los Angeles County Watershed Model Configuration and Calibration – Part II: Water Quality. August 6, 2010. Submitted to Los Angeles County Department of Public Works by Tetra Tech.

County of Los Angeles Department of Public Works (LACDPW). 2010c. The Los Angeles County Watershed Management Modeling System Loading Simulation Program in C++ User's Manual. October 1, 2010. Submitted to Los Angeles County Department of Public Works by Tetra Tech.

County of Los Angeles Department of Public Works (LACDPW). 2011a. Phase II Report: Development of the Framework for Watershed Scale Optimization Modeling. June 30, 2011. Submitted to Los Angeles County Department of Public Works by Tetra Tech.

County of Los Angeles Department of Public Works. September 12, 2011. 2011b. Multipollutant TMDL Implementation Plan for the County of Los Angeles Unincorporated Area of the Machado Lake Watershed.

County of Los Angeles Department of Public Works (LACDPW). 2013. The Los Angeles County Watershed Management Modeling System Regional Optimization User's Manual. March 19, 2013. Submitted to Los Angeles County Department of Public Works by Tetra Tech.

CWE. May 24, 2013. Vermont Avenue Median Stormwater Park. Prepared for Council for Watershed Health.

Fraley-McNeal, L., Schueler, T., Winer, R. 2007. National Pollutant Removal Performance Database - Version 3. Center for Watershed Protection, September 2007. http://www.cwp.org/online-watershed-library/doc_download/640-national-pollutant-removal-performance-database-version-3

Gateway Cities Council of Governments. 2013. Trash Implementation Meeting.

Geosyntec. 2008a. A User's Guide for the Structural BMP Prioritization and Analysis Tool (SBPAT v1.0). December 2008. Prepared for Heal the Bay, City of Los Angeles, and County of Los Angeles Department of Public Works by Geosyntec.

Geosyntec. 2008b. A User's Guide for the Structural BMP Prioritization and Analysis Tool (SBPAT v1.0) Technical Appendices. December 2008. Prepared for Heal the Bay, City of Los Angeles, and County of Los Angeles Department of Public Works by Geosyntec.

Hollywood Park Land Company, LLC. October 6, 2011. Standard Urban Stormwater Mitigation Plan and Low Impact Development for Hollywood Park. Prepared by Henrik Nazarian.

John L. Hunter & Associates, Richard Watson & Associates, CWE, and Kinnetic Laboratories. October 2010. Metals TMDL Implementation Plan for Reach 1 of the Los Angeles River and Compton Creek.

Leadership Committee of the Greater Los Angeles County Integrated Regional Water Management Region. July 2013. The Greater Los Angeles County Integrated Regional Water Management Plan. http://dpw.lacounty.gov/wmd/irwmp/index.cfm?fuseaction=TopDocListing&directory=2013_Public_Draft_IRWMP_Update&ttl=2013%20Public%20Draft%20IRWMP%20Update.

Los Angeles County Department of Public Works (LACDPW). 2002 – 2012. Municipal Stormwater Permit Unified Annual Report. 2002 – 2012. http://ladpw.org/wmd/NPDESRSA/AnnualReport/.

Los Angeles County Department of Public Works (LACDPW). 2002-2012. Los Angeles County Municipal Stormwater Monitoring Reports. http://ladpw.org/wmd/NPDES/report_directory.cfm.

Los Angeles County Department of Public Works (LACDPW). January 2006. Hydrology Manual.

Los Angeles County Department of Public Works (LACDPW). Dominguez Watershed. http://ladpw.org/wmd/watershed/dc/. Accessed on February 4, 2014.

Los Angeles County Flood Control District (LACFCD). 2012. Los Angeles County Clean Water, Clean Beaches Measure. http://www.lacountycleanwater.org/.

Los Angeles County Flood Control District (LACFCD). 2013. Machado Lake Nutrient TMDL Implementation Plan for the Los Angeles County Flood Control District.

Los Angeles County GIS Data Portal. 2013. http://egis3.lacounty.gov/dataportal.

Los Angeles County. Office of the Assessor. 2013. http://assessormap.co.la.ca.us/mapping/viewer.asp. Accessed December 9, 2013.

Los Angeles Regional Water Quality Control Board (LARWQCB). Adopted June 13, 1994. Water Quality Control Plan Los Angeles Region. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*.

Los Angeles Regional Water Quality Control Board (LARWQCB). July 1, 2004. Resolution No. 2004-011. Amendment to the *Water Quality Control Plan for the Los Angeles Region* to Incorporate a Total Maximum Daily Load for Bacteria at Los Angeles Harbor (Inner Cabrillo Beach and Main Ship Channel).

Los Angeles Regional Water Quality Control Board (LARWQCB). June 7, 2007. Resolution No. R4-2007-006. Amendment to the *Water Quality Control Plan for the Los Angeles Region* to Incorporate a Total Maximum Daily Load for Trash in Machado Lake.

Los Angeles Regional Water Quality Control Board (LARWQCB). 2007. 2006 CWA Section 303(d) List of Water Quality Limited Segments Requiring TMDLs. June 28, 2007. http://www.usbr.gov/lc/socal/reports/brineconcentrate/3Regs_part2.pdf.

Los Angeles Regional Water Quality Control Board (LARWQCB). May 1, 2008. Resolution No. R08-006. Amendment to the *Water Quality Control Plan for the Los Angeles Region* to Incorporate a Total Maximum Daily Load for Eutrophic, Algae, Ammonia, and Odors (Nutrients) for Machado Lake.

Los Angeles Regional Water Quality Control Board (LARWQCB). 2010a. 2010 List of Impaired Surface Waters (The 303(d) List).

Los Angeles Regional Water Quality Control Board (LARWQCB). 2010b. Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants Total Maximum Daily Loads Draft. December 2010.

Los Angeles Regional Water Quality Control Board (LARWQCB). May 5, 2011. Resolution No. R11-008. Amendment to the *Water Quality Control Plan for the Los Angeles Region* to Incorporate a Total Maximum Daily Load for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters.

Los Angeles Regional Water Quality Control Board (LARWQCB). October 26, 2012. Response to Comments on the Tentative Order. *Minimum Control Matrix*. Accessed February 19, 2014. http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/StormSewer/CommentLetters/E_MCM%20Matrix%2010-26-12%20Final.pdf.

Los Angeles Regional Water Quality Control Board (LARWQCB). 2013. General Required Information for Required Information for the Reasonable Assurance Analysis for Each Water Body-Combination Addressed by the Watershed Management Program. November 6, 2013.

Los Angeles Regional Water Quality Control Board (LARWQCB). February 6, 2014. Time Schedule Order No. R4-2014-0023. Requiring the City of Los Angeles (Inner Cabrillo Beach, Los Angeles Harbor) to Comply with Requirements Prescribed in Order No. R4-2012-0175 (NPDES Permit No. CAS004001.

Low Impact Development Center Inc. April 2010. Low Impact Development Manual for Southern California: Technical Guidance and Site Planning Strategies.

Lyons, J.M. and S. Birosik. 2007. Water Quality in the Dominguez Channel and Los Angeles/Long Beach Harbor Watershed Management Area under the Surface Water Ambient Monitoring Program (SWAMP) Fiscal Year 2002-2003. California Regional Water Quality Control Board, Los Angeles Region.

Machado Lake Ecosystem Rehabilitation Project and Wilmington Drain Mulit-Use Project Final Pre-Design Report, Appendix N, Draft Sediment Removal Plan. 2009. Prepared for City of Los Angeles, Department of Public Works and Bureau of Engineering. Prepared by CDM in association with Parsons.

Measure O Water Quality Improvement Projects for the Dominguez Channel Watershed. http://www.lapropo.org/sitefiles/dominguez.htm. Project pages for: Wilmington Drain Multi-Use Project, Machado Lake Ecosystem Rehabilitation Project, Rosecrans Recreation Center Stormwater Enhancements, and Peck Park Canyon.

Moran, Kelly. tdc Environmental. July 18, 2011. Memo: Brake Pad Copper Reduction - MRP Section C.13.c. Report 2011. http://www.waterboards.ca.gov/rwqcb2/water_issues/programs/stormwater/MRP/2011_AR/BASMAA/A7-A12_2010-11_MRP_AR.pdf.

NPDES Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach. 2001. State Water Resources Control Board; Los Angeles Region. NPDES Permit No. CAS004001; Order No. 01-182.

NPDES Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach. 2012. State Water Resources Control Board; Los Angeles Region. NPDES Permit No. CAS004001; Order No. R4-2012-0175.

Port of Los Angeles (POLA). 2005. Mid-water column monitoring results, enhanced suite analyses. May and Sept. 2005-2008.

Port of Los Angeles (POLA) and City of Los Angeles Department of Public Works Bureau of Sanitation Watershed Protection Division. April 7, 2014. Inner Cabrillo Beach CB01 Compliance Station Pollution Prevention Plan. Prepared by Weston Solutions, Inc.

Port of Long Beach (POLB). 2006. Mid-water column monitoring results. Oct. 2006-2008.

Port of Long Beach (POLB)/Port of Los Angeles (POLA)/Weston Solutions. 2006. Characterization of Sediment Contaminant Flux in Inner and Outer Harbor Water Bodies –TMDL Implementation Support. Sampling and Analysis Plan, prepared for Port of Los Angeles and Port of Long Beach, by Weston Solutions.

Proposition 84 Application/Survey Preview. December 17, 2013. Century Boulevard LID Project. Submitted by the City of Inglewood.

Regional Water Quality Control Board (RWQCB). April 2008. Machado Lake Eutrophic, Algae, Ammonia, and Odors (Nutrient) TMDL. Staff Report.

Regional Water Quality Control Board (RWQCB). September 2, 2010. Machado Lake Pesticides and PCBs TMDL. Staff Report.

RMC Water and Environmental. Opti, Database in response to the Greater Los Angeles County IRWMP. http://irwm.rmcwater.com/la/login.php.

RMC Water and Environmental and Geosyntec Consultants. November 2012. Greater Los Angeles County Integrated Regional Water Management South Bay Subregional Plan Draft. Section 4. http://dpw.lacounty.gov/wmd/irwmp/index.cfm?fuseaction=documents.

RMC Water and Environmental, Geosyntec Consultants, Dr. Ambrose, Richard, GreenInfo Network, et. al. 2012. The Greater Los Angeles County Open Space for Habitat and Recreation Plan. Prepared for the Greater Los Angeles County Integrated Regional Water Management Plan.

Southern California Coastal Water Research Project (SCCWRP). 2007. Atmospheric Deposition in LA/LB Harbor. Southern California Coastal Water Research Program presentation to Technical Advisory Committee, September 13, 2007.

Southern California Coastal Water Research Project (SCCWRP). 2007. Southern California Bight 2003 Regional Monitoring Program.

Southern California Coastal Water Research Project (SCCWRP). 2011. Southern California Bight 2008 Regional Monitoring Program.

Saviskas, Robert with the Los Angeles County West Vector and Vector-Borne Disease Control District. June 19, 2009. Rain Barrel Study and Analysis of Los Angeles County Public Works Low-Impact Development (LID) Ordinance Standards.

Stein, Eric D. and Ackerman, Drew. April 2007. Journal of the American Water Resources Association, Vol. 43, No. 2. Dry Weather Water Quality Loading in Arid, Urban Watershed of the Los Angeles Basin, California, USA.

Storm Water Solutions. 2013. Water Remediation Media. http://www.estormwater.com/water-remediation-media.

United States Environmental Protection Agency. 1999a. Storm Water Operation and Maintenance Fact Sheet: Catch Basin Cleaning. http://water.epa.gov/scitech/wastetech/upload/2002_06_28_mtb_catchbas.pdf.

United States Environmental Protection Agency. 1999b. Storm Water Technology Fact Sheet: Hydrodynamic Separators. http://water.epa.gov/scitech/wastetech/upload/2002_06_28_mtb_hydro.pdf.

United States Environmental Protection Agency. 2000. Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program.

United States Environmental Protection Agency. Last updated April 3, 2012. National Menu of Stormwater Best Management Practices. http://cfpub.epa.gov/npdes/stormwater/menuofbmps/. Accessed February 25, 2014.

United States Environmental Protection Agency. 2013a. Green Homes: Conserving water. http://www.epa.gov/greenhomes/ConserveWater.htm.

United States Environmental Protection Agency. 2013b. Water: Class V Wells: Storm Water Drainage Wells. http://water.epa.gov/type/groundwater/uic/class5/types_stormwater.cfm.

United States Environmental Protection Agency. 2013c. Water: Low Impact Development (LID). http://water.epa.gov/polwaste/green/.

United States Environmental Protection Agency. Last updated February 3, 2014a. Environmental Indicators. http://www.epa.gov/reg3esd1/data/indicators.htm. Accessed February 24, 2014.

United States Environmental Protection Agency. Last Updated February 5, 2014b. Watershed Assessment, Tracking & Environmental Results. http://www.epa.gov/waters/ir/index.html.

Zeng, EY and D Tsukada, DW Diehl, J Peng, K Schiff, JA Noblet, KA Maruya. 2005. Distribution and Mass Inventory of Total Dichlorodiphenyldichloroethylene in the Water Column of the Southern California Bight. Environ. Sci. Technol. 39: 8170-76.

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Attachment A

Watershed Characteristics

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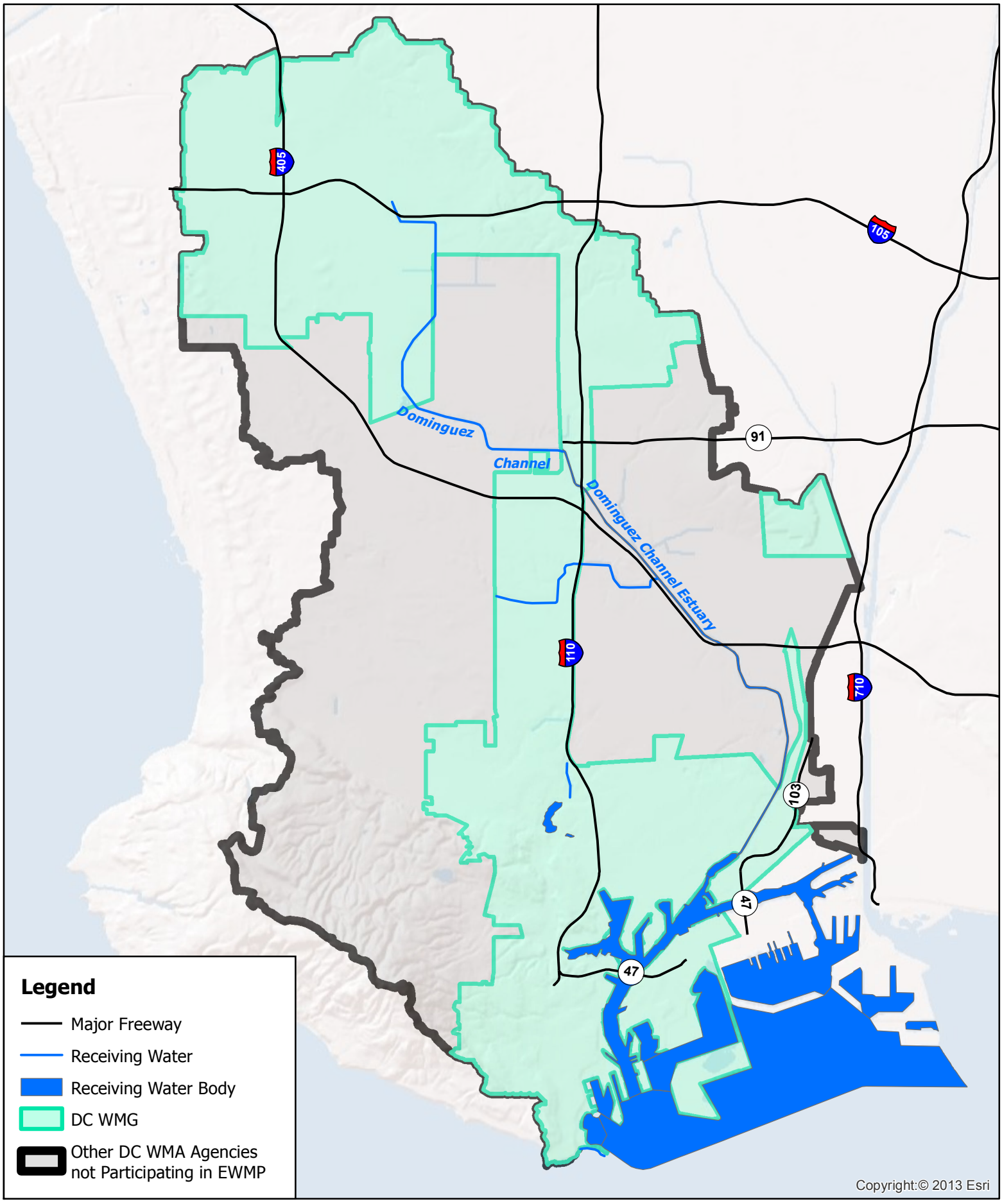

Figure A.1
Dominguez Channel Watershed Management Area
DC WMG EWMP Work Plan
June 2014

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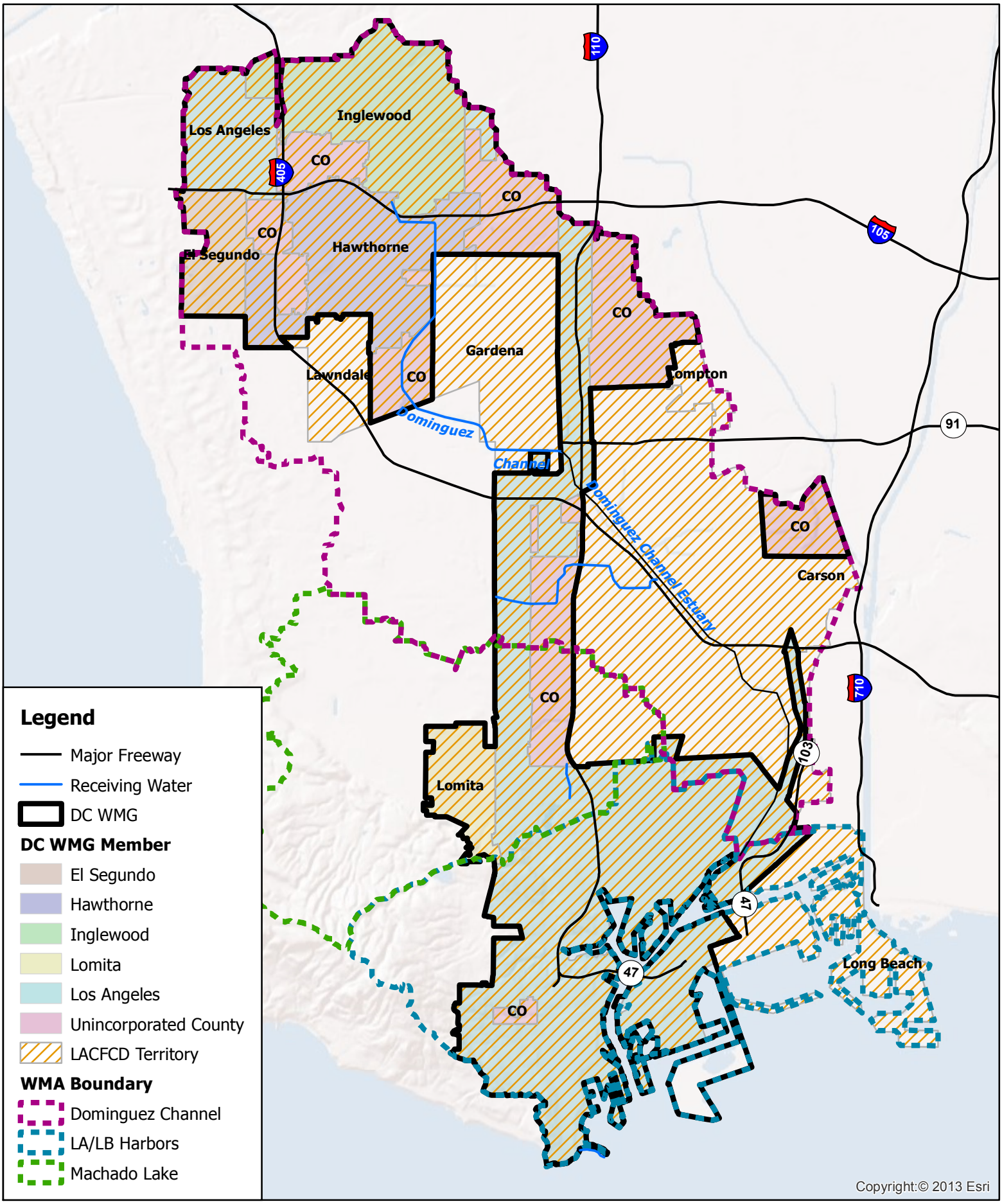

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Figure A.2
DC WMG Jurisdictions
DC WMG EWMP Work Plan
June 2014

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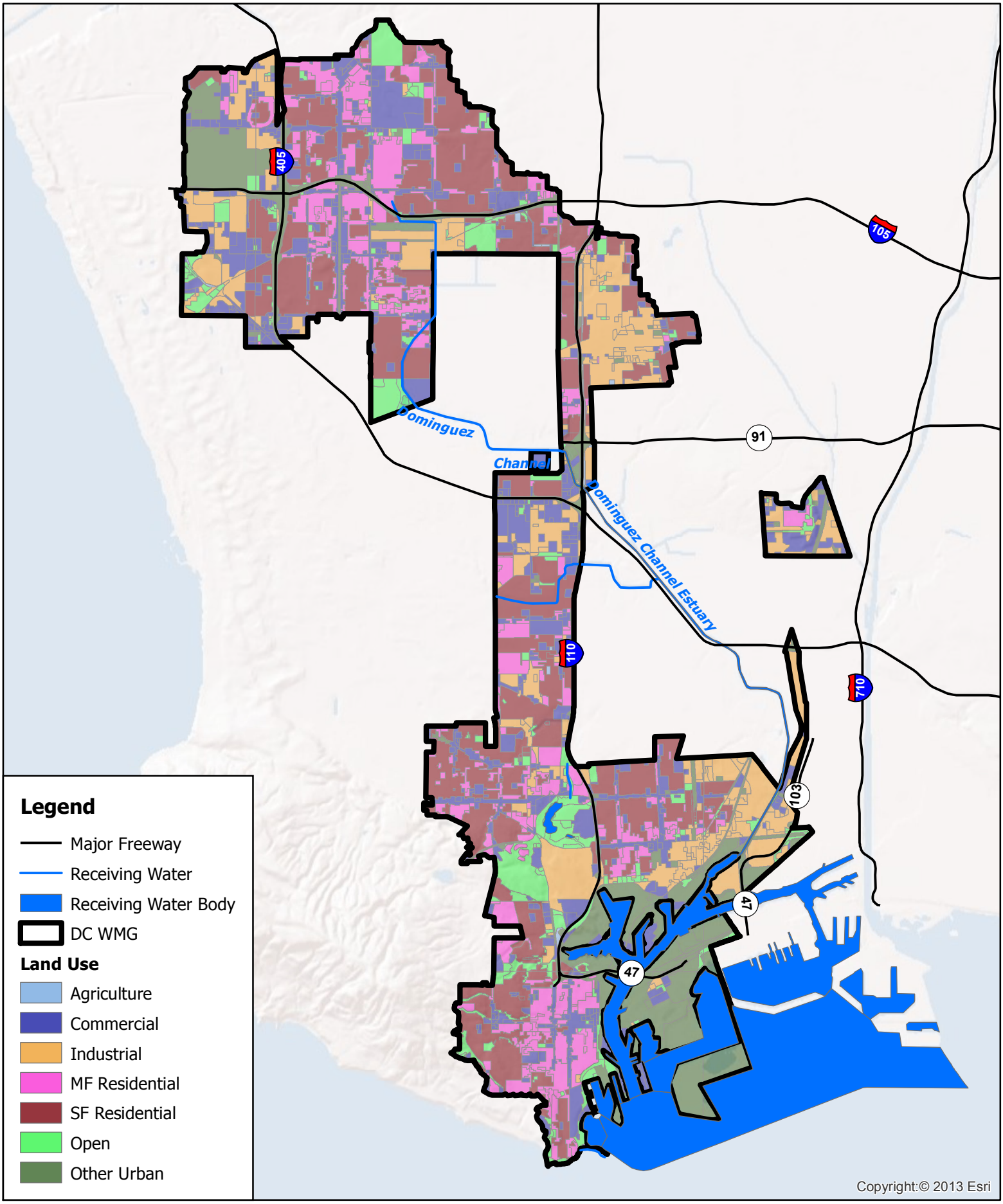

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Figure A.3
DC WMG Land Use
DC WMG EWMP Work Plan
June 2014

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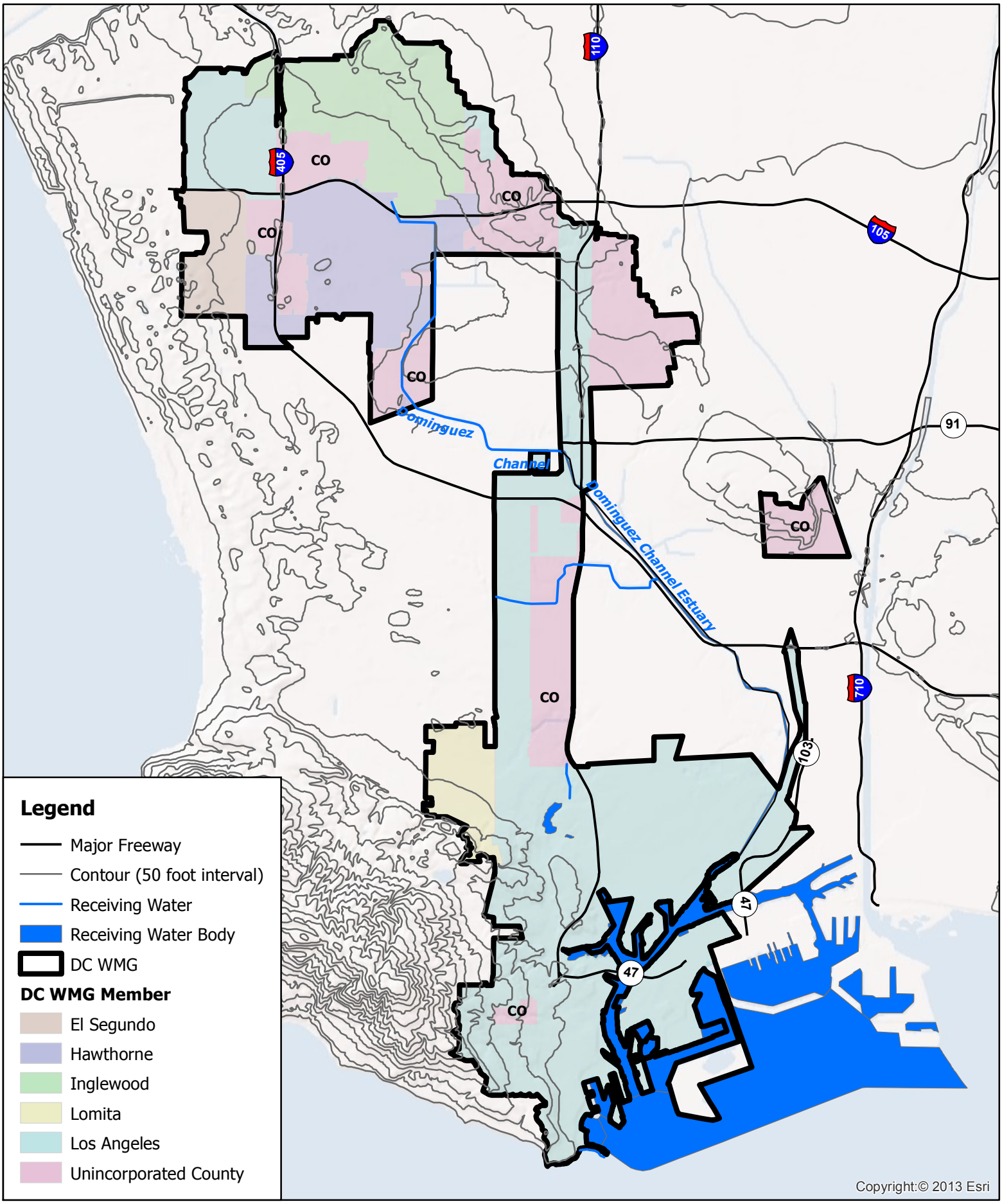

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Figure A.4
Topography
DC WMG EWMP Work Plan
June 2014

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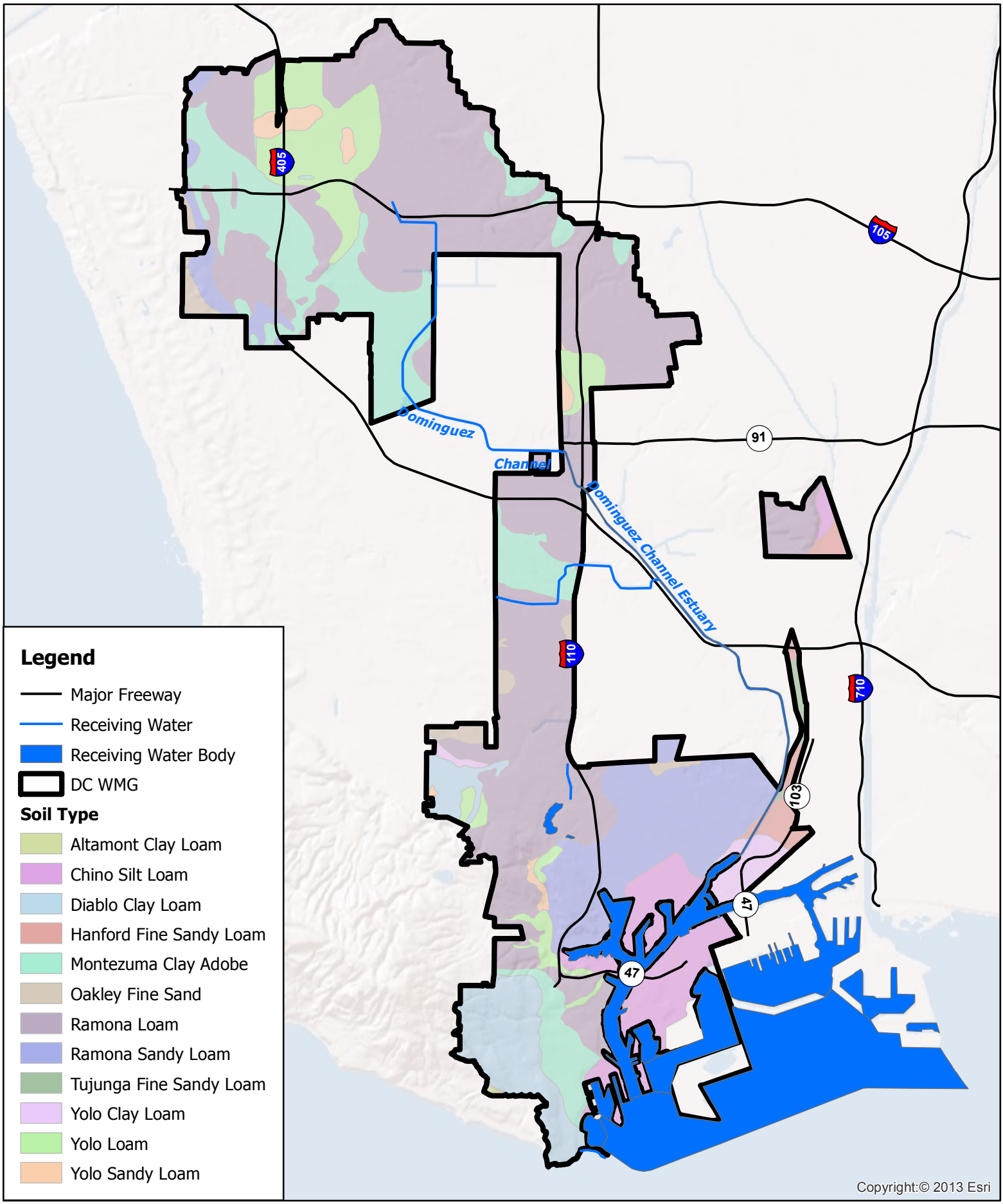

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Figure A.5
Soil Types based on the LA Hydrology Manual
DC WMG EWMP Work Plan
June 2014

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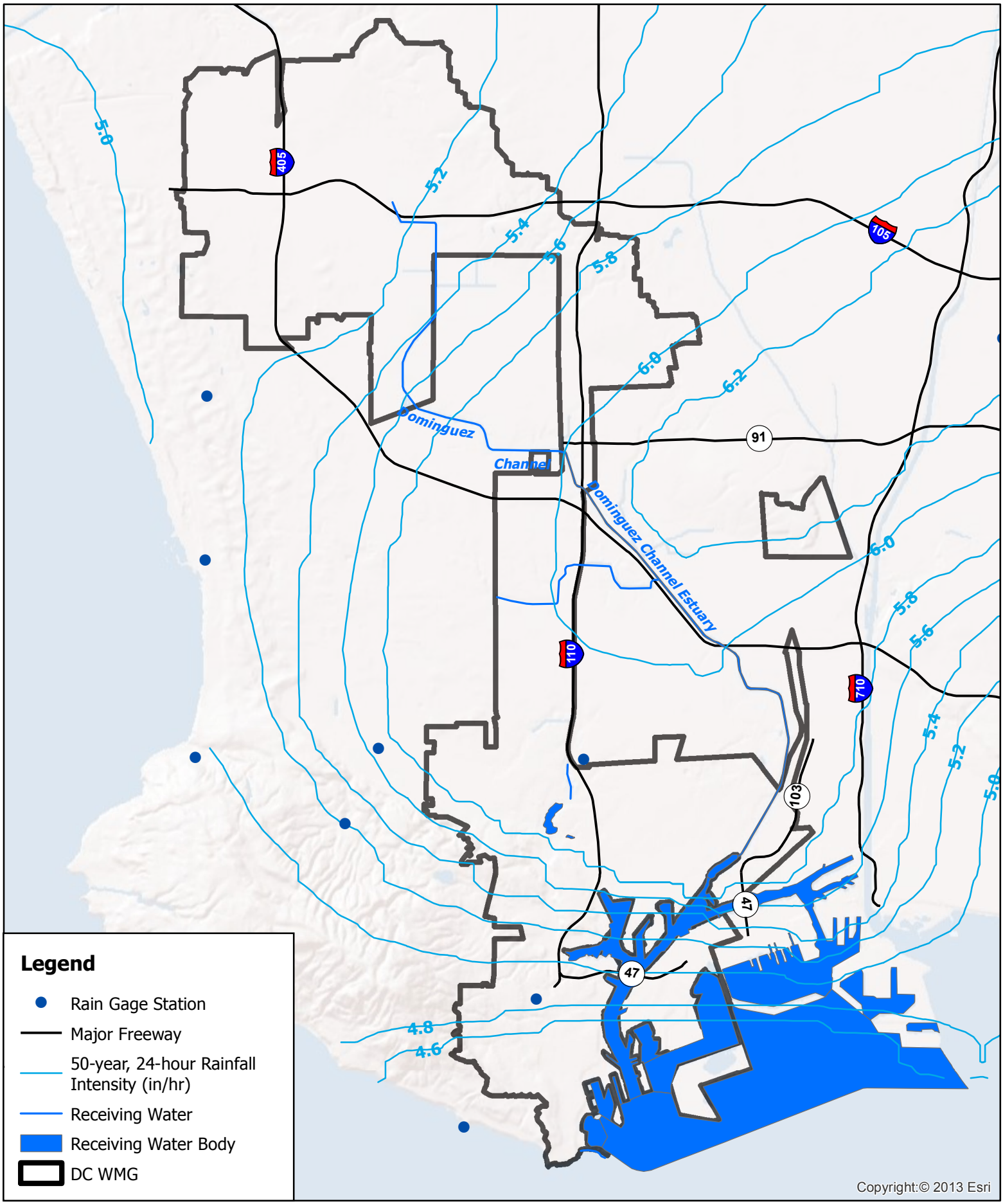

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Figure A.6
50-year, 24-hour Rainfall Intensity
DC WMG EWMP Work Plan
June 2014

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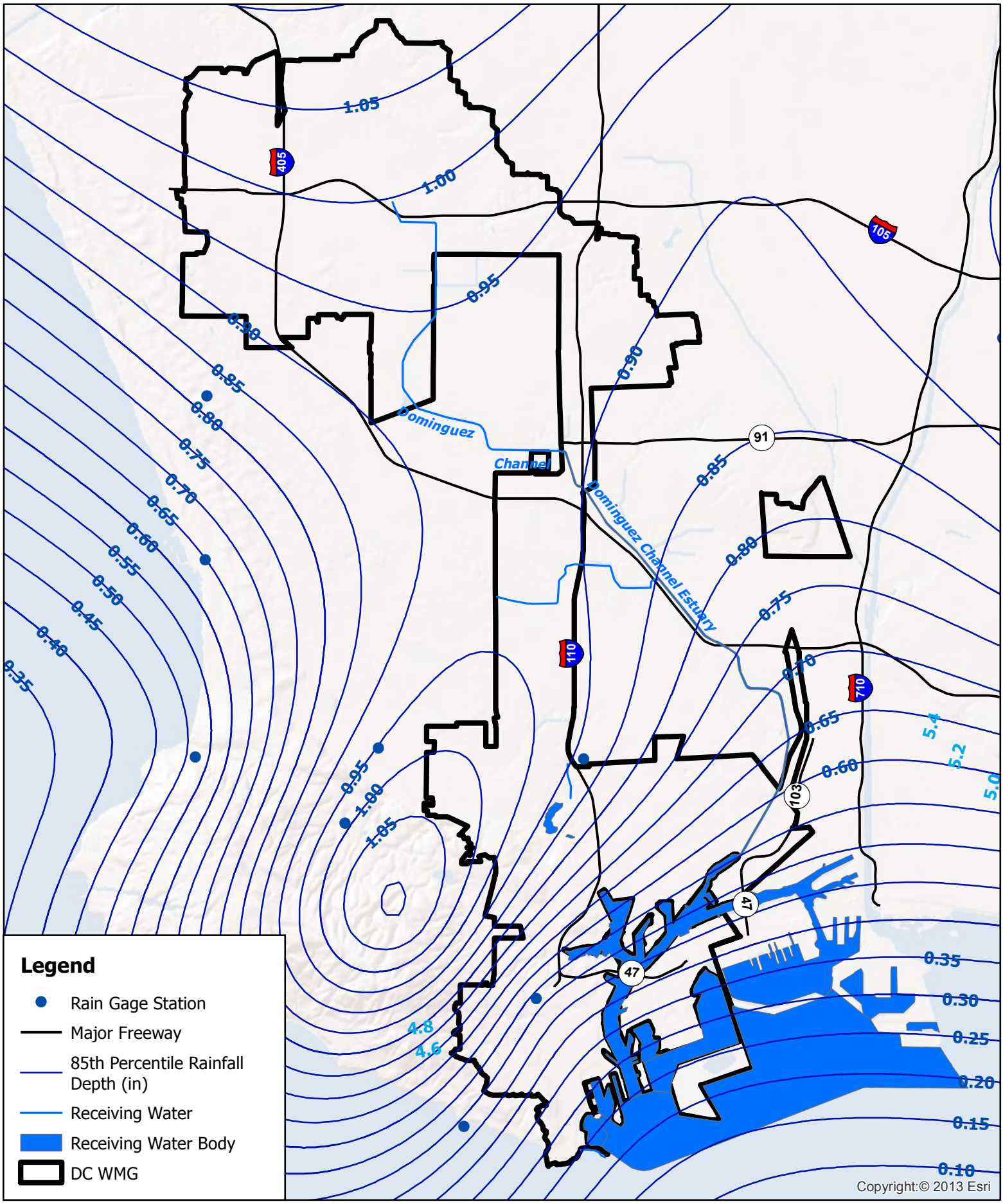

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Figure A.7
85th Percentile, 24-hour Rainfall Depth
DC WMG EWMP Work Plan
June 2014

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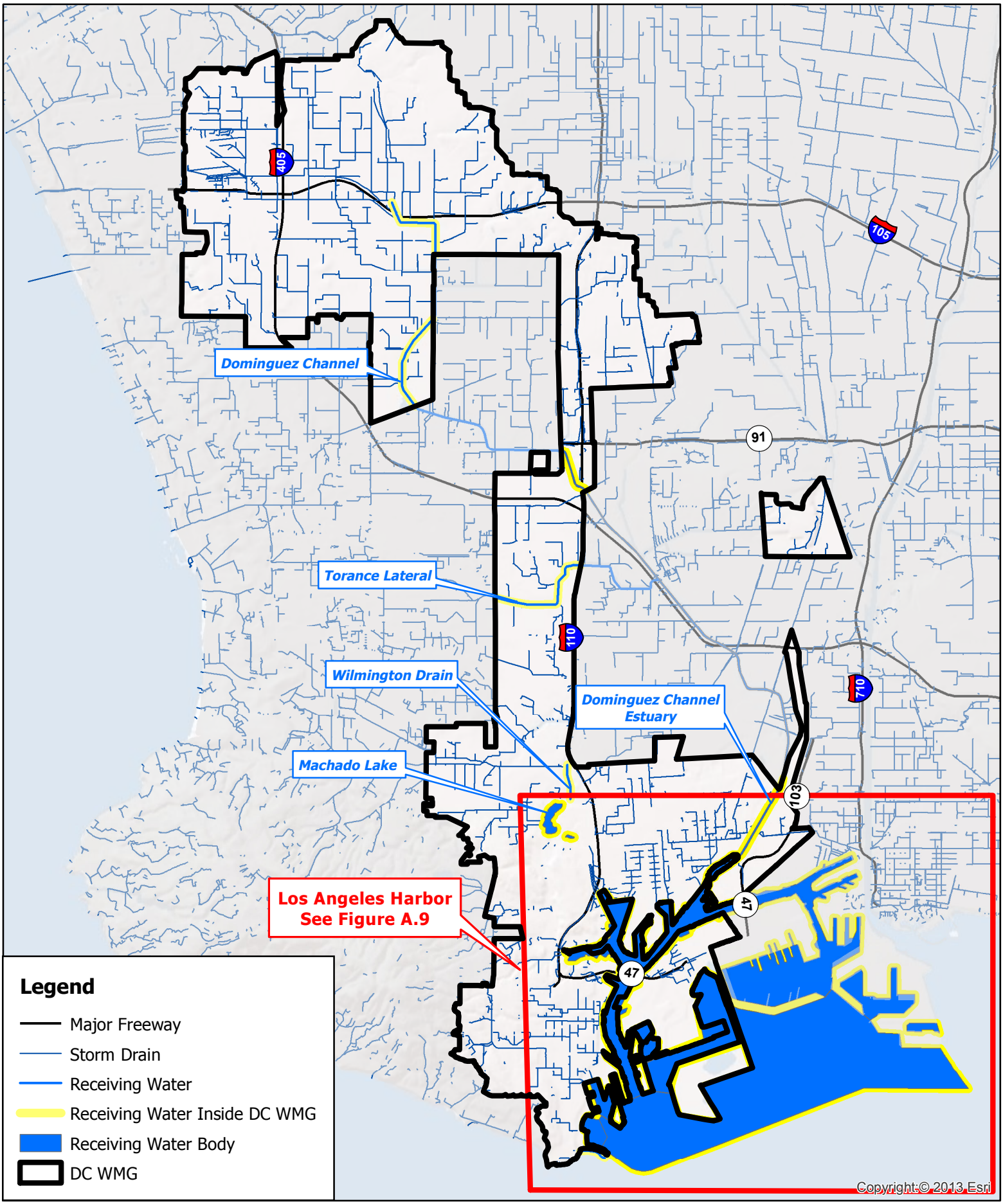

Figure A.8
DC WMG Water Bodies
DC WMG EWMP Work Plan
June 2014

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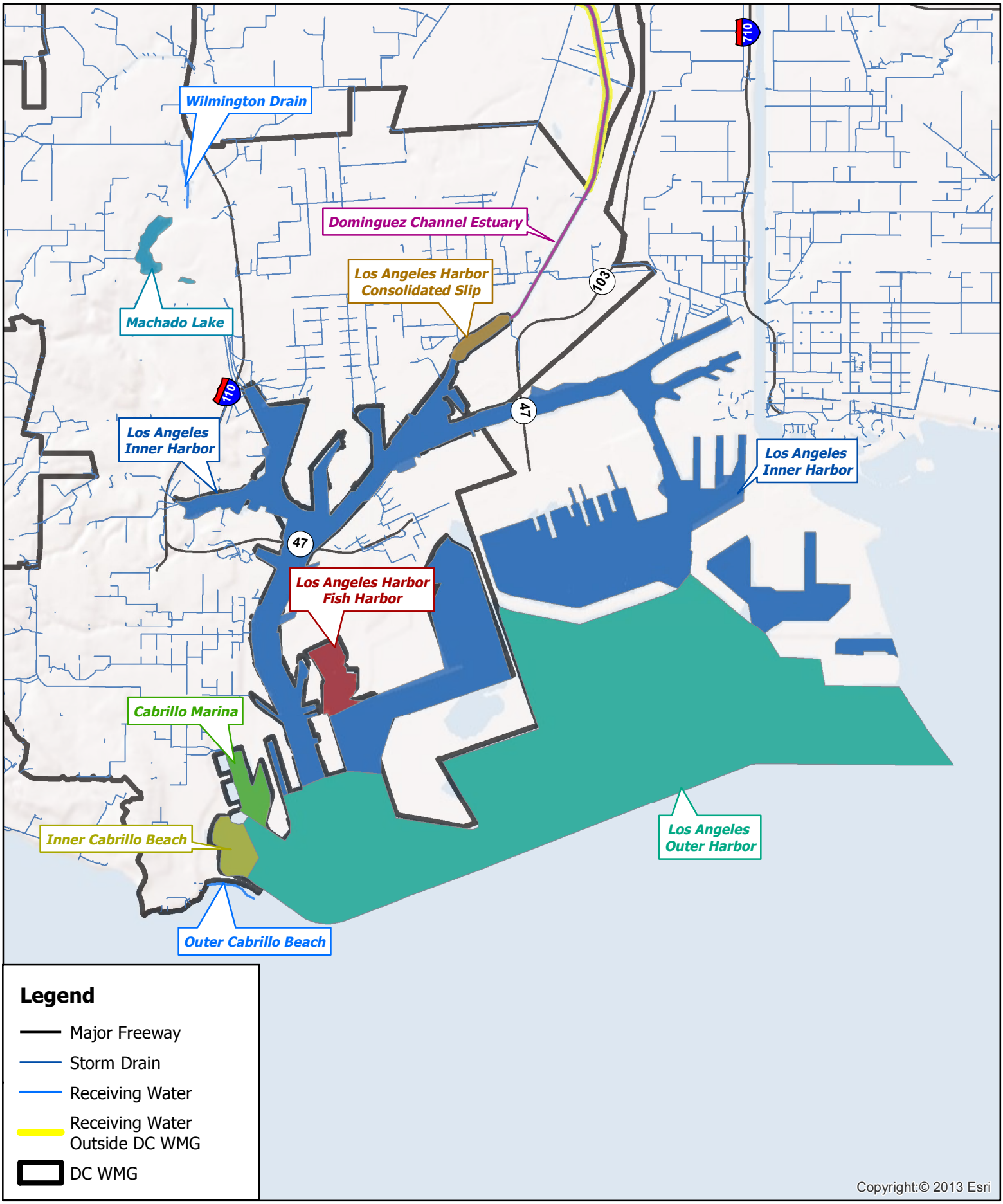

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0 0.5 1 2 Miles

Figure A.9
Los Angeles Harbor Water Bodies
DC WMG EWMP Work Plan
June 2014

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Attachment B

DC WMG TMDL Requirements

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This attachment includes tables summarizing the existing Total Maximum Daily Load (TMDL) requirements relevant to the Dominguez Channel Watershed Management Group (DC WMG), corresponding with Section 1.3.2 of the DC WMG Enhanced Watershed Management Program (EWMP) Work Plan. The following TMDL water quality objectives are outlined in this attachment:

- Los Angeles Harbor Bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel);
- Machado Lake Trash TMDL;
- Machado Lake Nutrient TMDL;
- Machado Lake Pesticides and PCBs TMDL; and
- Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL (DC and LA Harbor Toxic Pollutants TMDL).

Attachment B List of Tables

Table B.1 demonstrates which DC WMG members are affected by each of the TMDLs per Attachment K, Table K-4, of the Los Angeles County Municipal Separate Storm and Sewer System (MS4) Permit.

As recognized by the footnote in Attachment K-4 of the Permit, the County of Los Angeles, the Los Angeles County Flood Control District (LACFCD), and the Cities of El Segundo, Hawthorne, Inglewood, and Los Angeles have entered into an Amended Consent Decree with the United States and the State of California, including the Regional Board, pursuant to which the Regional Board has released the DC WMG members from responsibility for Toxic pollutants in the Dominguez Channel and the Greater Los Angeles and Long Beach Harbors. Accordingly, no inference should be drawn from the submission of this EWMP Work Plan or from any action or implementation taken pursuant to it that the DC WMG members are obligated to implement the Toxics TMDL, including this EWMP Work Plan or any of the Toxics TMDL's other obligations or plans, or that the DC WMG members have waived any rights under the Amended Consent Decree.

Table B.1: DC WMG TMDLs

DC WMG Member	Los Angeles Harbor Bacteria TMDL	Machado Lake Trash TMDL	Machado Lake Nutrient TMDL	Machado Lake Pesticides and PCBs TMDL	DC and LA Harbor Waters Toxic Pollutants TMDL
El Segundo					X
Hawthorne					X
Inglewood					X
Lomita		X	X	X	
Los Angeles	X	X	X	X	X
Los Angeles County	X	X	X	X	X
LACFCD		X	X	X	X

Los Angeles Harbor Bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel)
The Los Angeles Harbor Bacteria TMDL became effective on March 10, 2004 as Resolution No. 2004-011. Reconsideration of certain technical matters pertaining to this TMDL were approved by the State Board on March 19, 2013 as Resolution No. R12-007. In response to the Time Schedule Order (TSO) discussed below, a Pollution Prevention Plan Work Plan was submitted to the Regional Board by the Port of Los Angeles and the City of Los Angeles Department of Public Works Bureau of Sanitation Watershed Protection Division. The Work Plan for the Pollution Prevention Plan is discussed in Section 3.1.3 of the EWMP Work Plan.

Per Attachment N Part A.2 of the MS4 Permit, the Permittees subject to this TMDL, as identified in Table B.1, must comply with the final Water Quality Based Effluent Limitations (WQBELs) listed in Table B.2 for discharges to the Los Angeles Harbor Main Ship Channel, Los Angeles and Long Beach Harbor, and Inner Cabrillo Beach as of December 28, 2012, the effective date of the MS4 Permit.

Table B.2: Los Angeles Harbor Bacteria TMDL WQBELs		
Constituent	**Effluent Limitations (MPN or cfu)**	
	Daily Maximum	**Geometric Mean**
Total coliform	10,000/100 mL	1,000/100 mL
Fecal coliform	400/100 mL	200/100 mL
Enterococcus	104/100 mL	35/100 mL

[1] Total coliform density shall not exceed a daily maximum of 1,000/100 mL if the ratio of fecal-to-total coliform exceeds 0.1.

Per Attachment N Part A.3.a of the MS4 Permit, the Permittees subject to this TMDL, as identified in Table B.1, must comply with the single sample bacteria Receiving Water Limitations (RWLs) listed in Table B.3 for the Los Angeles Harbor Main Ship Channel and Inner Cabrillo Beach as of December 28, 2012, the effective date of the MS4 Permit. The RWLs in Table B.3 will only be applicable until the effective date of the revised Los Angeles Harbor Bacteria TMDL (Attachment C of Resolution No. R12-007). Upon the effective date of this revision, the Permittees must comply with the final single sample bacteria RWLs listed in Table B.4, per Attachment N Part A.3.b of the MS4 Permit. The revised Los Angeles Harbor Bacteria TMDL was approved by the State Board on March 19, 2013 and will become effective following USEPA approval.

Table B.3: Los Angeles Harbor Bacteria TMDL RWLs				
Time Period	**Receiving Water**	**Compliance Monitoring Location**	**Annual Allowable Exceedance Days of the Single Sample Objective (days)**	
			Daily Sampling	**Weekly Sampling**
Summer Dry-Weather (April 1 to October 31)	Inner Cabrillo Beach	CB1 & CB2	0	0
	Main Ship Channel	HW07	0	0
Winter Dry-Weather (November 1 to March 31)	Inner Cabrillo Beach	CB1 & CB2	0	0
	Main Ship Channel	HW07	3	1
Wet Weather[1] (Year-round)	Inner Cabrillo Beach	CB1 & CB2	0	0
	Main Ship Channel	HW07	15	3

[1] Wet weather is defined as days with 0.1-inch of rain or greater and the three days following the rain event.

Table B.4: Los Angeles Harbor Bacteria TMDL RWLs upon TMDL Revision				
Time Period	**Receiving Water**	**Compliance Monitoring Location**	**Annual Allowable Exceedance Days of the Single Sample Objective (days)**	
			Daily Sampling	**Weekly Sampling**
Summer Dry-Weather (April 1 to October 31)	Inner Cabrillo Beach	CB1 & CB2	0	0
	Main Ship Channel	HW07	0	0
Winter Dry-Weather (November 1 to March 31)	Inner Cabrillo Beach	CB1 & CB2	0	0
	Main Ship Channel	HW07	8	1
Wet Weather[1] (Year-round)	Inner Cabrillo Beach	CB1 & CB2	0	0
	Main Ship Channel	HW07	15	3

[1] Wet weather is defined as days with 0.1-inch of rain or greater and the three days following the rain event.

Per Attachment N Part A.3.c of the MS4 Permit, the Permittees subject to this TMDL, as identified in Table B.1, must comply with the geometric mean RWLs identified in Table B.5 for the Los Angeles Harbor

Main Ship Channel, Los Angeles and Long Beach Inner Harbor, and Inner Cabrillo Beach as of December 28, 2013, the effective date of the MS4 Permit.

Table B.5: Los Angeles Harbor Bacteria TMDL Geometric Mean RWLs

Constituent	Geometric Mean
Total coliform	1,000 MPN/100 mL
Fecal coliform	200 MPN/100 mL
Enterococcus	35 MPN/100 mL

On February 6, 2014, a TSO was approved for Inner Cabrillo Beach, at the boat launch ramp (Station CB1). In summary, the TSO (Order No. R4-2014-0023) states that the Permittees believe additional time is necessary to comply with the WQBELs and RWLs at Station CB1. The TSO presented monitoring data suggesting that the WQBELs and RWLs were not being met, as well as identifying the activities that have been completed with the intent of meeting the load allocations. The TSO identifies new WQBELs and RWLs, as well as an implementation schedule for additional watershed control measures such as monitoring, BMP implementation, BMP effectiveness assessments, and feasibility studies. From February 6, 2013 to December 28, 2017, the City of Los Angeles MS4 discharges to Inner Cabrillo Beach shall not exceed the WQBELs for total coliform, fecal coliform, and *enterococcus* per the allowable exceedance days presented in Table B.6 on an annual basis (November 1st - October 31st). From February 6, 2013 to December 28, 2017, the City of Los Angeles shall comply with the interim RWLs for total coliform, fecal coliform, and *enterococcus* per the allowable exceedance days presented in Table B.7 on an annual basis (November 1st - October 31st).

Table B.6: Los Angeles Harbor Bacteria TMDL WQBELs for Station CB1

Compliance Monitoring Station	Annual Allowable Exceedance Days (days)		
	Single Sample Summer Dry-Weather	Single Sample Winter Dry-Weather	Geometric Mean Year Round
Station CB1	23	18	79

Table B.7: Los Angeles Harbor Bacteria TMDL RWLs for Station CB1

Compliance Monitoring Station	Annual Allowable Exceedance Days (days)		
	Single Sample Summer Dry-Weather	Single Sample Winter Dry-Weather	Geometric Mean Year Round
Station CB1	23	18	79

Machado Lake Trash TMDL

The Machado Lake Trash TMDL became effective on March 6, 2008 as Resolution No. 2007-006.

Per Attachment N Part B of the MS4 Permit, the Permittees subject to this TMDL, as identified in Table B.1, must comply with the final WQBEL of zero trash discharged to Machado Lake no later than March 6, 2016, and every year thereafter. In addition, Permittees must comply with interim and final WQBELs as illustrated in Table B.8. If Permittees opt to derive a site specific trash generation rate through its Trash Monitoring and Reporting Plan (TMRP), the baseline limitation will be calculated by multiplying the point source area(s) by the derived trash generation rate(s).

Table B.8: Machado Lake Trash TMDL WQBELs						
DC WMG Member	**Baseline[1]**	**3/6/12 (80%)**	**3/6/13 (60%)**	**3/6/14 (40%)**	**3/6/15 (20%)**	**3/6/16 (0%)**
		Annual Trash Discharge (gallons/year)				
Lomita	9,393	7,514	5,636	3,757	1,879	0
Los Angeles	12,331	9,865	7,399	4,932	2,466	0
Los Angeles County	8,304	6,643	4,982	3,322	1,661	0
LACFCD	16	13	10	7	3	0

[1] The Regional Board calculated the baseline WQBELs for the Permittees based on the estimated trash generation rate of 5,334 gallons of uncompressed trash per square mile per year.

Machado Lake Nutrient TMDL

The Machado Lake Nutrient TMDL became effective on March 11, 2009 as Resolution No. 2008-006. Los Angeles County Unincorporated Areas has developed a Multipollutant TMDL implementation plan applicable to this TMDL. In addition, the LACFCD also completed a TMDL implementation plan addressing this TMDL. Both the implementation plans are reviewed in Section 3.1.3.

Per Attachment N Part C.2 of the MS4 Permit, the Permittees subject to this TMDL, as identified in Table B.1, must comply with the interim and final WQBELs listed in Table B.9 for discharges to Machado Lake.

Table B.9: Machado Lake Nutrient TMDL WQBELs		
Deadline	**Interim and Final Effluent Limitations**	
	Monthly Average of Total Phosphorus (mg/L)	**Monthly Average of Total Nitrogen[1] (mg/L)**
As of December 12, 2013[2]	1.25	3.50
March 11, 2014	1.25	2.45
September 11, 2018	0.10	1.00

[1] $TKN+NO_3\text{-}N+NO_2\text{-}N$

[2] Effective date of the MS4 Permit

Per Attachment N Part C.3 of the MS4 Permit, the Permittees subject to this TMDL, as identified in Table B.1, may be deemed in compliance with the WQBELs by actively participating in a Lake Water Quality Management Plan (LWQMP) and attaining RWLs. The City of Los Angeles has entered into a Memorandum of Agreement (MOA) with the Regional Board to implement the LWQMP and reduce external nutrient loading to attain the RWLs listed in Table B.10. Permittees also may be deemed in compliance with the WQBELs by demonstrating reduction of total nitrogen and total phosphorus on an annual mass basis measured at the storm drain outfall of the Permittee's drainage area where approved by the Regional Board Executive Officer based on the results of a special study. The annual mass based allocation demonstrated should be equivalent to a monthly average concentration of 0.1 mg/L total phosphorus and 1.0 mg/L total nitrogen based on approved flow conditions. The County of Los Angeles submitted a special study work plan, which was approved by the Regional Board Executive Officer, establishing the annual mass based WQBELs listed in Table B.11.

Table B.10: Machado Lake Nutrient TMDL RWLs (City of Los Angeles)		
Deadline	**Interim and Final Effluent Limitations**	
	Monthly Average of Total Phosphorus (mg/L)	**Monthly Average of Total Nitrogen (mg/L)**
As of December 12, 2013[1]	1.25	3.50
March 11, 2014	1.25	2.45
September 11, 2018	0.10	1.00

[1] Effective date of the MS4 Permit

Table B.11: Machado Lake Nutrient TMDL WQBELs (Los Angeles County)		
Deadline	**Interim and Final Effluent Limitations**	
	Annual Load Total Phosphorus (kg)	**Annual Load Total Nitrogen KN+NO3-N+NO2-N (kg)**
March 11, 2014	887	1,739
September 11, 2018	71	710

Machado Lake Pesticides and PCBs TMDL

The Machado Lake Pesticides and PCBs TMDL (also known as the Machado Lake Toxics TMDL) became effective on March 20, 2012 as Resolution No. R10-008. Los Angeles County Unincorporated Areas has developed a Multipollutant TMDL implementation plan applicable to this TMDL, which is reviewed in Section 3.1.3 of the EWMP Work Plan.

Per Attachment N Part D of the MS4 Permit, the Permittees subject to this TMDL, as identified in Table B.1, must comply with the WQBELs listed in Table B.12 for discharges of suspended sediments to Machado Lake, applied as a three year average no later than September 19, 2019.

Table B.12: Machado Lake Pesticides and PCBs TMDL WQBELs	
Pollutant	**Effluent Limitations for Suspended Sediment-Associated Contaminants (µg/kg dry weight)**
Total PCBs	59.8
DDT (all congeners)	4.16
DDE (all congeners)	3.16
DDD (all congeners)	4.88
Total DDT	5.28
Chlordane	3.24
Dieldrin	1.90

DC and LA Harbor Waters Toxic Pollutants TMDL

The DC and LA Harbor Waters Toxic Pollutants TMDL (also known as the Los Angeles and Long Beach Harbor Toxic and Metals TMDL) became effective on March 23, 2012 as Resolution No. R11-008. According to the Regional Board implementation schedule, implementation plans must be developed by the responsible parties and submitted to the Regional Board by March 23, 2014. The development of an EWMP will satisfy the implementation plan requirements.

Per Attachment N Part E.2 of the MS4 Permit, the Permittees subject to this TMDL, as identified in Table B.1, must comply with interim WQBELs for discharges to Dominguez Channel freshwater during wet-weather and concentration-based WQBELs for pollutant concentrations in the sediment discharged to the Dominguez Channel Estuary and Greater Los Angeles and Long Beach Harbor Waters by December 28, 2012, the effective date of the MS4 Permit. For discharges to Dominguez Channel freshwater during wet-weather, the freshwater toxicity interim WQBEL is 2 TUc. This interim limitation should be implemented as a trigger requiring initiation of the TRE/TIE process outlined in USEPAs "Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program" (2000). The interim metals WQBELs for the Dominguez Channel freshwater and Torrance Lateral during wet-weather are presented in Table B.13. For sediment discharges to the Dominguez Channel Estuary and Greater Los Angeles and Long Beach Harbor Waters, Permittees should comply with interim concentration-based WQBELs presented in Table B.14.

Table B.13: DC and LA Harbor Waters Toxic Pollutants TMDL Interim Freshwater Metals WQBELs for Wet-Weather

Pollutant	Interim Effluent Limitation Daily Maximum (µg/L)
Total Copper	207.51
Total Lead	122.88
Total Zinc	898.87

Table B.14: DC and LA Harbor Waters Toxic Pollutants TMDL Sediment Interim WQBELs

Water Body	Interim Effluent Limitations Daily Maximum (mg/kg sediment)					
	Copper	Lead	Zinc	DDT	PAHs	PCBs
Dominguez Channel Estuary (below Vermont Avenue)	220.0	510.0	789.0	1.727	31.60	1.490
Los Angeles Inner Harbor	154.1	145.5	362.0	0.341	90.30	2.107
Los Angeles Outer Harbor (inside breakwater)	104.1	46.7	150	0.097	4.022	0.310
Los Angeles Harbor - Cabrillo Marina	367.6	72.6	281.8	0.186	36.12	0.199
Los Angeles Harbor - Consolidated Slip	1,470.0	1,100.0	1,705.0	1.724	386.00	1.920
Los Angeles Harbor - Inner Cabrillo Beach Area	129.7	46.7	163.1	0.145	4.022	0.033
Fish Harbor	558.6	116.5	430.5	40.5	2,102.7	36.6

Per Attachment N Part E.3 of the MS4 Permit, the Permittees subject to this TMDL, as identified in Table B.1, must comply with final WQBELs for discharges to Dominguez Channel freshwater during wet-weather and concentration-based WQBELs for pollutant concentrations in the sediment discharged to the Dominguez Channel Estuary and Greater Los Angeles and Long Beach Harbor Waters by March 23, 2032 and every year thereafter. Per Attachment N Part E.3.a of the MS4 Permit, for discharges to Dominguez Channel freshwater during wet-weather, the freshwater toxicity effluent limitation should not exceed the monthly median of 1 TUc. The Permittees should also comply with the final metals WQBELs presented in Table B.15 for discharges to Dominguez Channel and all upstream reaches and tributaries of the Dominguez Channel above Vermont Avenue.

Table B.15: DC and LA Harbor Waters Toxic Pollutants TMDL Final Freshwater Metals WQBELs for Wet-Weather	
Metals	**Water Column Mass-Based Final Effluent Limitation Daily Maximum (g/day)**
Total Copper	1,300.3
Total Lead	5,733.7
Total Zinc	9,355.5

Per Attachment N Part E.3.b of the MS4 Permit, the Torrance Lateral must comply with freshwater final metals WQBELs and final concentration-based WQBELs for sediments, as shown in Table B.16 and Table B.17 respectively.

Table B.16: DC and LA Harbor Waters Toxic Pollutants TMDL Final Freshwater Metals WQBELs for Wet-Weather in Torrance Lateral	
Metals	**Water Column Effluent Limitation Daily Maximum (unfiltered, µg/L)**
Total Copper	9.7
Total Lead	42.7
Total Zinc	69.7

Table B.17: DC and LA Harbor Waters Toxic Pollutants TMDL Final Sediment Metals WQBELs for Wet-Weather in Torrance Lateral	
Metals	**Concentration-Based Effluent Limitation Daily Maximum (mg/kg dry)**
Total Copper	31.6
Total Lead	35.8
Total Zinc	121

Per Attachment N Part E.3.c of the MS4 Permit, the Dominguez Channel Estuary and Greater Los Angeles (and Long Beach) Harbor Waters must comply with final mass-based WQBELs, expressed as an annual loading of pollutants in the sediment deposited to the Dominguez Channel Estuary and the Greater Los Angeles and Long Beach Harbor Waters and final concentration-based WQBELs for sediments as shown in Table B.18. Permittees should also comply with final concentration-based WQBELs for pollutant concentrations in the sediments discharged to the Dominguez Channel Estuary, Consolidated Slip, and Fish Harbor as shown in Table B.19. Compliance with these limitations should be met by March 23, 2032 and every year thereafter.

Table B.18: DC and LA Harbor Waters Toxic Pollutants TMDL Final Sediment Metals WQBELs for DC Estuary and Los Angeles Harbor				
Water Body	**Final Effluent Limitations Annual (kg/yr)**			
	Total Cu	**Total Pb**	**Total Zn**	**Total PAHs**
Dominguez Channel Estuary	22.4	54.2	271.8	0.134
Consolidated Slip	2.73	3.63	28.7	0.0058
Inner Harbor	1.7	34.0	115.9	0.088
Outer Harbor	0.91	26.1	81.5	0.105
Fish Harbor (POLA)	0.00017	0.54	1.62	0.007
Cabrillo Marina	0.0196	0.289	0.74	0.00016

Table B.19: DC and LA Harbor Waters Toxic Pollutants TMDL Final Sediment Metals WQBELs for DC Estuary and Los Angeles Harbor			
Waterbody	**Effluent Limitations Daily Maximum (mg/kg dry sediment)**		
	Cadmium	**Chromium**	**Mercury**
Dominguez Channel Estuary	1.2	--	--
Consolidated Slip	1.2	81	0.15
Fish Harbor	--	--	0.15

Per Attachment N Part E.3.d of the MS4 Permit, Permittees must comply with final mass-based WQBELs, listed in Table B.20, expressed as an annual loading of total DDT and total PCBs in the sediment deposited to the Dominguez Channel Estuary and Greater Los Angeles (and Long Beach) Harbor Waters by March 23, 2032 and every year thereafter.

Table B.20: DC and LA Harbor Waters Toxic Pollutants TMDL Final Sediment Metals WQBELs for DC Estuary and Los Angeles Harbor		
Waterbody	**Final Effluent Limitations Annual (g/yr)**	
	Total DDTs	**Total PCBs**
Dominguez Channel Estuary	0.250	0.207
Consolidated Slip	0.009	0.004
Inner Harbor	0.051	0.059
Outer Harbor	0.005	0.020
Fish Harbor (POLA)	0.0003	0.0019
Cabrillo Marina	0.000028	0.000025
Inner Cabrillo Beach	0.0001	0.0003

Per Attachment N Part E.4, compliance with the limitations specified in Attachment N Part E.3.a-d, listed in Table B.15 to Table B.20, can be determined according to Table B.21. The table includes the MS4 Permit Section, which specifies the WQBELs associated with the DC and LA Harbor Waters Toxic Pollutants TMDL, the Table Reference for which the limitations are specified within this document and the various compliance determination methods.

Table B.21: DC and LA Harbor Waters Toxic Pollutants TMDL Compliance Determination		
MS4 Permit Section[1]	**Table Reference**	**Compliance Determination**
Part E.2.b	Table B.14	i. Demonstrate that the sediment quality condition of *Unimpacted* or *Likely Unimpacted* via the interpretation and integration of multiple lines of evidence as defined in the Sediment Quality Objectives (SQO) Part 1 is met. ii. Meet the interim WQBELs in bed sediment over a three-year averaging period. iii. Meet the interim WQBELs in the discharge over a three-year averaging period.
Parts E.3.a.ii and E.3.b.i	Table B.15 and Table B.16	i. Final metals WQBELs are met. ii. California Toxics Rule (CTR) total metals criteria are met instream. iii. CTR total metals criteria are met in the discharge.
Parts E.3.c.i and E.3.c.ii	Table B.18 and Table B.19	i. Final WQBELs for pollutants in the sediment are met ii. The qualitative sediment conditions of *Unimpacted* or *Likely Unimpacted* via the interpretation and integration of multiples lines of evidence as defined in the SQO Part 1, is met, with the exception of chromium, which is not included in the SQO Part 1. iii. Sediment numeric targets are met in the bed sediments over a three-year averaging period.
Part E.3.d	Table B.20	i. Fish tissue targets are met in species resident to the specified waterbodies[2]. ii. Final WQBELs for pollutants in the sediment are met.

[1] Attachment N of the MS4 Permit
[2] A site-specific study to determine resident species should be submitted to the Regional Board Executive Officer for approval

Attachment C

Water Quality Priorities Figures

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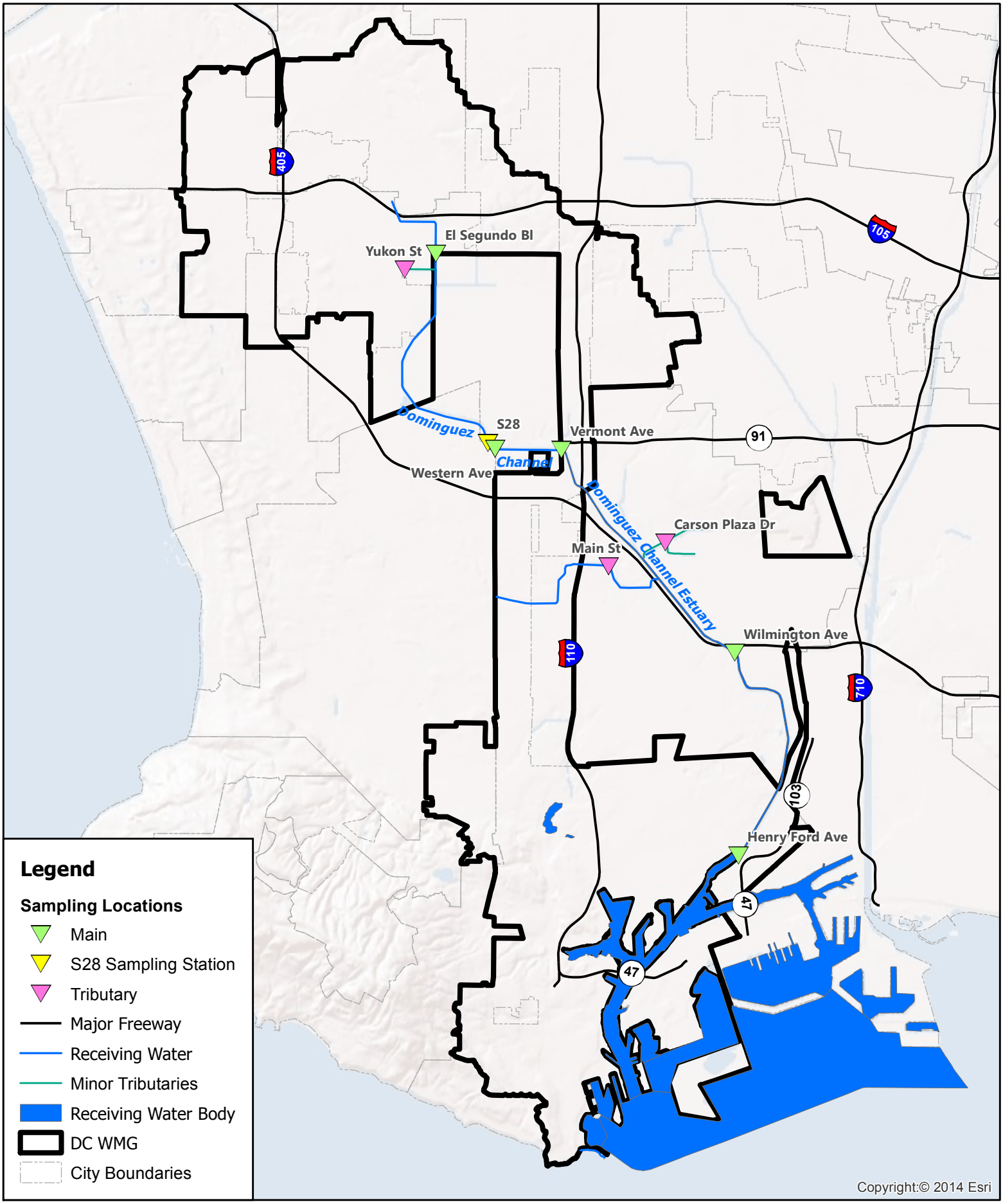

Figure C.1
Dominguez Channel Sampling Locations
DC WMG EWMP Work Plan
June 2014

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Figure C.2
Machado Lake Sampling Locations
DC WMG EWMP Work Plan
June 2014

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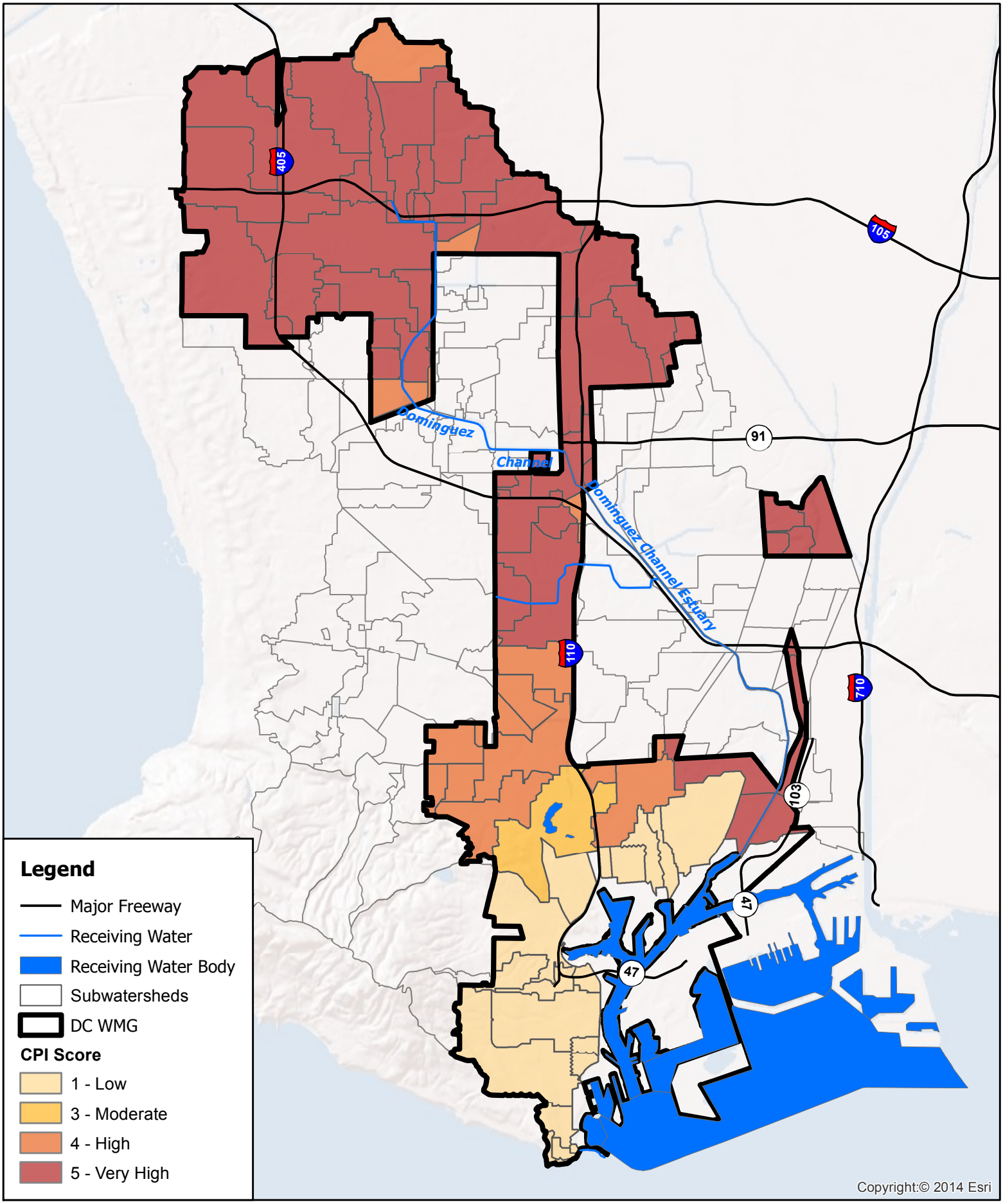

Figure C.3
Cathchment Prioritization Index (CPI) Map
DC WMG EWMP Work Plan
June 2014

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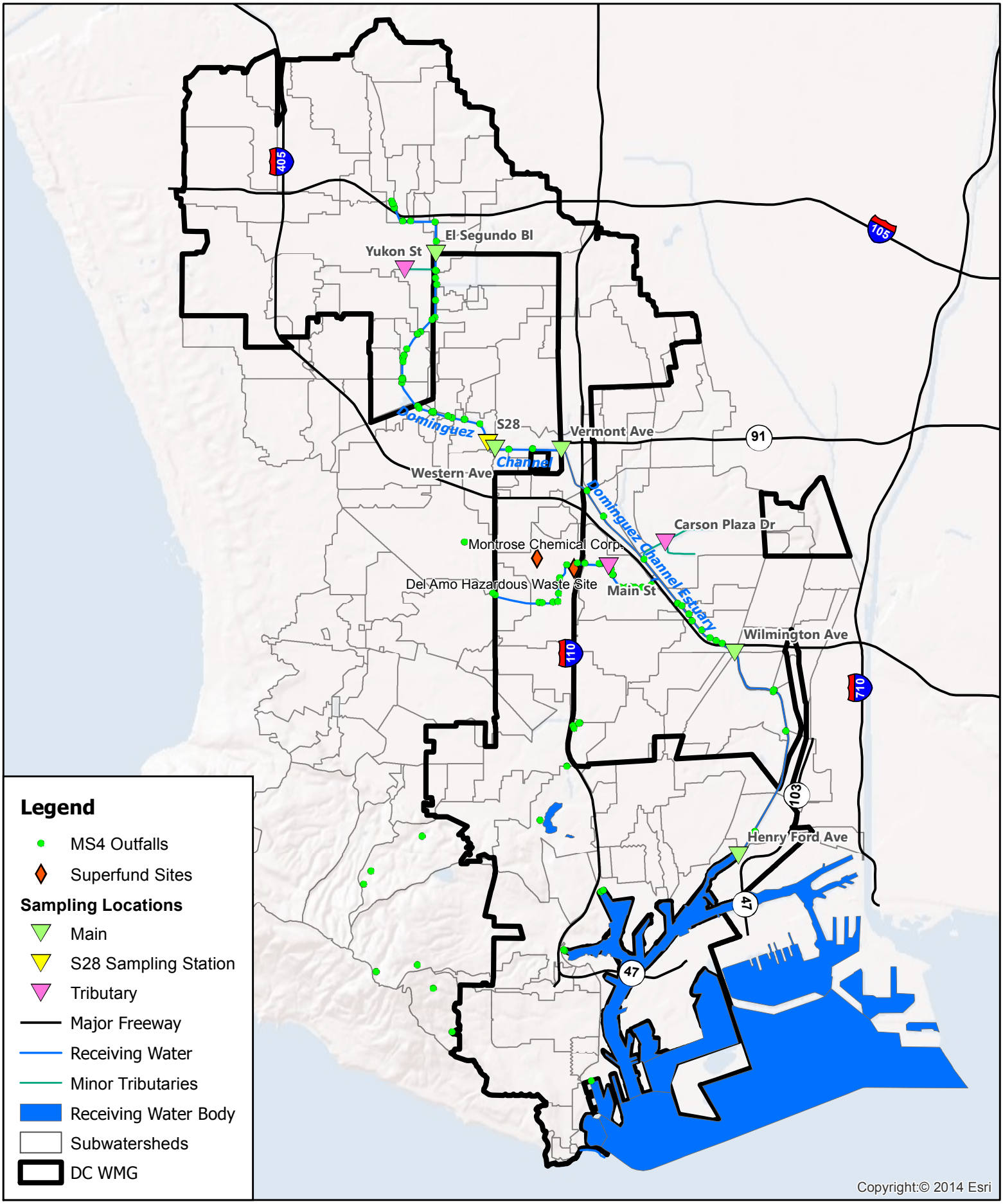

Figure C.4
MS4 Locations
DC WMG EWMP Work Plan
June 2014

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Attachment D

Data Sources and Data for Water Quality Analysis

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This attachment includes a table summarizing sources of water quality data and a table that includes the data collected and the results of the data analysis. The data analysis was used to identify water quality priorities within the Dominguez Channel Watershed Management Group (DC WMG) and is provided in support of Section 2.1 of the DC WMG Enhanced Watershed Management Program (EWMP) Work Plan. The tables are also in support of the figures in Attachment C.

Attachment D Table of Contents

Table D.1: Data Sources for Water Quality Analysis

Source	Monitoring Program	Monitoring Frequency	Sampling Location	Constituents	Date Range
LACDPW	Dominguez Channel MS4 NPDES Mass Emission Monitoring Program	Multiple samples taken before and after storm events annually.	Dominguez Channel S28 Sampling Station at Artesia Blvd.	Conventional, bacteria, general, nutrients, metals, semi-volatile organics, chlorinated pesticides, organophosphate pesticides, herbicides, polychlorinated biphenyls	2002-2013
LACDPW	Storm Master	Samples taken during storm events 10/2004 - 3/9/2005	Dominguez Channel S28 Sampling Station at Artesia Blvd.	Bacteria, nutrients, metals, semi-volatile organics, chlorinated pesticides, organophosphate pesticides, herbicides, polychlorinated biphenyls	2004-2005
POLA Study by AMEC	Artesia Pollutograph Study	Multiple samples before and after storm events at the following dates: 5/16/2005, 5/17/2005, 8/17/2005, 8/18/2005, 2/27/2006, 2/28/2006 and 3/17/2006.	Dominguez Channel S28 Sampling Station at Artesia Blvd.	Conventional, bacteria, general, nutrients, metals, chlorinated pesticides, polychlorinated biphenyls, polycyclic aromatic hydrocarbons	2005-2006

Table D.1: Data Sources for Water Quality Analysis

Source	Monitoring Program	Monitoring Frequency	Sampling Location	Constituents	Date Range
LABOS	Special Ammonia Sampling in Dominguez Channel	Samples taken weekly: 7/1/2009 - 8/13/2009	Dominguez Channel at: • El Segundo Blvd • Yukon Ave (tributary) • Western Ave • Vermont Ave • Carson Plaza Dr. (tributary) • Main St. (Torrance Lateral) Dominguez Channel Estuary at: • Wilmington Ave • Henry Ford Ave	Ammonia	2009
LABOS	Status and Trends Monitoring in Dominguez Channel	Monthly (Metals), Weekly (Bacteria)	Dominguez Channel at: • El Segundo Blvd • Yukon Ave. (tributary) • Western Ave. • Vermont Ave. • Carson Plaza Dr. (tributary) • Main St. (Torrance Lateral) Dominguez Channel Estuary at: • Wilmington Ave. • Henry Ford Ave.	Bacteria and Metals	2001-2009
LABOS	Machado Lake Nutrient TMDL Monitoring Program	Bi-monthly	Machado Lake at four locations (ML-1, ML-2, ML-3, ML-4)	General chemistry, ammonia and nutrients	2011-2012
LABOS	Machado Lake Water Quality Monitoring Program	Weekly	Machado Lake at four locations (ML-1, ML-2, ML-3, ML-4) and adjacent storm drains (Project 510, Project 77 and Wilmington Drain)	General chemistry, bacteria and nutrients	2006-2011

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Table D.2: Dominguez Channel - Metals Data Summary

Location	Weather	Type	Constituent	Unit	Dates Sampled		Total No. of Values	No. Values with/ ND	Min.	Max.	Avg.	Median		No. of exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency (# of exceed. per year)	Exceedance/Time	%Exceed
					From	To						With ND	Without ND						
Carson Plaza Dr.	Wet	Channel	Ag (sol)	µg/L	4/28/05	2/22/07	4	3	0.36	0.36	0.17	0.10	0.36	0	CTR	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Carson Plaza Dr.	Wet	Channel	Ag (tot)	µg/L	4/28/05	2/22/07	4	3	0.5	0.5	0.20	0.10	0.50						
Carson Plaza Dr.	Wet	Channel	As (sol)	µg/L	4/28/05	2/22/07	4	0	0.8	4.8	3.08	3.35	3.35	0	CTR	340	0.00	0 exceedances in 2 Year(s)	0%
Carson Plaza Dr.	Wet	Channel	As (tot)	µg/L	4/28/05	2/22/07	4	0	0.9	31.6	10.08	3.90	3.90						
Carson Plaza Dr.	Wet	Channel	Ba (sol)	µg/L	4/28/05	2/22/07	4	0	18	69	47.98	52.45	52.45						
Carson Plaza Dr.	Wet	Channel	Ba (tot)	µg/L	4/28/05	2/22/07	4	0	49.4	325	128.85	70.50	70.50						
Carson Plaza Dr.	Wet	Channel	Be (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.20	0.20	0.00						
Carson Plaza Dr.	Wet	Channel	Be (tot)	µg/L	4/28/05	8/25/05	3	3	0	0	0.20	0.20	0.00						
Carson Plaza Dr.	Wet	Channel	Cd (sol)	µg/L	4/28/05	2/22/07	4	3	0.165	0.165	0.15	0.15	0.17	0	CTR	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Carson Plaza Dr.	Wet	Channel	Cd (tot)	µg/L	4/28/05	2/22/07	4	2	0.165	0.3	0.19	0.16	0.23						
Carson Plaza Dr.	Wet	Channel	Co (sol)	µg/L	4/28/05	8/25/05	3	1	0.4	0.4	0.30	0.40	0.40						
Carson Plaza Dr.	Wet	Channel	Co (tot)	µg/L	4/28/05	8/25/05	3	0	0.4	24	8.40	0.80	0.80						
Carson Plaza Dr.	Wet	Channel	Cr (sol)	µg/L	4/28/05	2/22/07	4	0	0.34	3	1.09	0.50	0.50	0	CTR	16	0.00	0 exceedances in 2 Year(s)	0%
Carson Plaza Dr.	Wet	Channel	Cr (tot)	µg/L	4/28/05	2/22/07	4	0	0.6	70.2	18.18	0.95	0.95						
Carson Plaza Dr.	Wet	Channel	Cu (sol)	µg/L	4/28/05	2/22/07	4	0	9	11	10.25	10.50	10.50	1	TMDL	Hardness Dependent	0.14	1 exceedances in 2 Year(s)	25%
Carson Plaza Dr.	Wet	Channel	Cu (tot)	mg/L	4/28/05	2/22/07	4	0	12	74	32.50	22.00	22.00						
Carson Plaza Dr.	Wet	Channel	Hardness	µg/L	4/28/05	2/22/07	4	0	39.7	228	163.18	192.50	192.50						
Carson Plaza Dr.	Wet	Channel	Hg (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.01	0.01	0.00	0	TMDL	0.051	0.00	0 exceedances in 1 Year(s)	0%
Carson Plaza Dr.	Wet	Channel	Hg (tot)	µg/L	4/28/05	8/25/05	3	2	0.031	0.031	0.02	0.01	0.03						
Carson Plaza Dr.	Wet	Channel	Ni (sol)	µg/L	4/28/05	2/22/07	4	0	3.97	4	3.99	4.00	4.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Carson Plaza Dr.	Wet	Channel	Ni (tot)	µg/L	4/28/05	2/22/07	4	0	4.46	48	16.62	7.00	7.00						
Carson Plaza Dr.	Wet	Channel	Pb (sol)	µg/L	4/28/05	2/22/07	4	0	0.55	2	1.39	1.50	1.50	1	TMDL	Hardness Dependent	0.14	1 exceedances in 2 Year(s)	25%
Carson Plaza Dr.	Wet	Channel	Pb (tot)	µg/L	4/28/05	2/22/07	4	0	0.55	28	8.39	2.50	2.50						
Carson Plaza Dr.	Wet	Channel	Sb (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	1.00	1.00	0.00	0	CTR	4300	0.00	0 exceedances in 1 Year(s)	0%
Carson Plaza Dr.	Wet	Channel	Sb (tot)	µg/L	4/28/05	8/25/05	3	1	2	2	1.67	2.00	2.00						
Carson Plaza Dr.	Wet	Channel	Se (sol)	µg/L	4/28/05	2/22/07	4	0	0.4	0.6	0.50	0.50	0.50						
Carson Plaza Dr.	Wet	Channel	Se (tot)	µg/L	4/28/05	2/22/07	4	0	0.4	0.6	0.53	0.55	0.55						
Carson Plaza Dr.	Wet	Channel	Th (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.50	0.50	0.00	0	CTR	6.3	0.00	0 exceedances in 1 Year(s)	0%
Carson Plaza Dr.	Wet	Channel	Th (tot)	µg/L	4/28/05	8/25/05	3	3	0	0	0.50	0.50	0.00						
Carson Plaza Dr.	Wet	Channel	Zn (sol)	µg/L	4/28/05	2/22/07	4	0	8	16	11.50	11.00	11.00	0	TMDL	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Carson Plaza Dr.	Wet	Channel	Zn (tot)	µg/L	4/28/05	2/22/07	4	0	23	174	63.25	28.00	28.00						
Carson Plaza Dr.	Dry	Channel	Ag (sol)	µg/L	3/31/05	5/26/09	35	14	0.03	0.66	0.12	0.04	0.04						
Carson Plaza Dr.	Dry	Channel	Ag (tot)	µg/L	3/31/05	5/26/09	35	14	0.03	0.49	0.13	0.10	0.08						
Carson Plaza Dr.	Dry	Channel	As (sol)	µg/L	3/31/05	5/26/09	37	0	0.8	4.4	2.01	2.06	2.06	0	CTR	150	0.00	0 exceedances in 5 Year(s)	0%
Carson Plaza Dr.	Dry	Channel	As (tot)	µg/L	3/31/05	5/26/09	37	0	0.8	6.8	2.68	2.10	2.10						
Carson Plaza Dr.	Dry	Channel	Ba (sol)	µg/L	3/31/05	5/26/09	36	0	32.9	102	52.98	49.90	49.90						
Carson Plaza Dr.	Dry	Channel	Ba (tot)	µg/L	3/31/05	5/26/09	36	0	39	144	69.81	58.80	58.80						
Carson Plaza Dr.	Dry	Channel	Be (sol)	µg/L	3/31/05	2/24/06	9	9	0	0	0.20	0.20	0.00						
Carson Plaza Dr.	Dry	Channel	Be (tot)	µg/L	3/31/05	2/24/06	9	9	0	0	0.20	0.20	0.00						
Carson Plaza Dr.	Dry	Channel	Cd (sol)	µg/L	3/31/05	5/26/09	36	9	0.01	0.72	0.18	0.17	0.17	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Carson Plaza Dr.	Dry	Channel	Cd (tot)	µg/L	3/31/05	5/26/09	36	6	0.01	5.53	0.45	0.17	0.37						
Carson Plaza Dr.	Dry	Channel	Co (sol)	µg/L	3/31/05	2/24/06	9	2	0.2	1	0.40	0.40	0.40						
Carson Plaza Dr.	Dry	Channel	Co (tot)	µg/L	3/31/05	2/24/06	9	0	0.4	2.7	0.98	0.60	0.60						
Carson Plaza Dr.	Dry	Channel	Cr (sol)	µg/L	3/31/05	5/26/09	36	2	0.1	4.15	1.19	0.75	0.89	0	CTR	11	0.00	0 exceedances in 5 Year(s)	0%
Carson Plaza Dr.	Dry	Channel	Cr (tot)	µg/L	3/31/05	5/26/09	36	1	0.105	14.1	2.93	1.70	1.79						
Carson Plaza Dr.	Dry	Channel	Cu (sol)	µg/L	3/31/05	5/26/09	36	0	6	120	17.55	12.70	12.70	9	CTR	Hardness Dependent	0.06	9 exceedances in 5 Year(s)	25%
Carson Plaza Dr.	Dry	Channel	Cu (tot)	µg/L	3/31/05	5/26/09	36	0	7.7	178	30.11	18.50	18.50						
Carson Plaza Dr.	Dry	Channel	Hardness	mg/L	3/31/05	5/26/09	37	0	113	2230	532.35	199.00	199.00						
Carson Plaza Dr.	Dry	Channel	Hg (sol)	µg/L	3/31/05	2/24/06	9	9	0	0	0.01	0.01	0.00	0	TMDL	0.051	0.00	0 exceedances in 1 Year(s)	0%
Carson Plaza Dr.	Dry	Channel	Hg (tot)	µg/L	3/31/05	2/24/06	9	8	0.023	0.023	0.01	0.01	0.02						
Carson Plaza Dr.	Dry	Channel	Ni (sol)	µg/L	3/31/05	5/26/09	35	0	2	12.2	4.86	3.85	3.85	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Carson Plaza Dr.	Dry	Channel	Ni (tot)	µg/L	3/31/05	5/26/09	36	0	1.97	14.8	6.58	4.93	4.93						
Carson Plaza Dr.	Dry	Channel	Pb (sol)	µg/L	3/31/05	5/26/09	36	11	0.055	6	1.05	0.55	0.72	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Carson Plaza Dr.	Dry	Channel	Pb (tot)	µg/L	3/31/05	5/26/09	36	3	0.53	81.4	7.36	1.92	2.00						
Carson Plaza Dr.	Dry	Channel	Sb (sol)	µg/L	3/31/05	2/24/06	9	5	2	3	1.78	1.00	3.00	0	CTR	4300	0.00	0 exceedances in 1 Year(s)	0%
Carson Plaza Dr.	Dry	Channel	Sb (tot)	µg/L	3/31/05	2/24/06	9	5	2	4	1.78	1.00	2.50						
Carson Plaza Dr.	Dry	Channel	Se (sol)	µg/L	3/31/05	5/26/09	37	0	0.2	8.8	1.79	0.60	0.60						

Table D.2: Dominguez Channel - Metals Data Summary

Location	Weather	Type	Constituent	Unit	Dates Sampled		Total No. of Values	No. Values with/ ND	Min.	Max.	Avg.	Median		No. of exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency (# of exceed. per year)	Exceedance/Time	%Exceed
					From	To						With ND	Without ND						
Carson Plaza Dr.	Dry	Channel	Se (tot)	µg/L	3/31/05	5/26/09	37	0	0.2	8.7	1.86	0.60	0.60	7	CTR	5	0.05	7 exceedances in 5 Year(s)	19%
Carson Plaza Dr.	Dry	Channel	Th (sol)	µg/L	3/31/05	2/24/06	9	5	1	2	0.83	0.50	1.00	0	CTR	6.3	0.00	0 exceedances in 1 Year(s)	0%
Carson Plaza Dr.	Dry	Channel	Th (tot)	µg/L	3/31/05	2/24/06	9	7	1	2	0.72	0.50	1.50						
Carson Plaza Dr.	Dry	Channel	Zn (sol)	µg/L	3/31/05	5/26/09	36	0	7	109	24.48	18.90	18.90	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Carson Plaza Dr.	Dry	Channel	Zn (tot)	µg/L	3/31/05	5/26/09	36	0	13	326	70.63	42.55	42.55						
El Segundo Blvd.	Wet	Channel	Ag (sol)	mg/L	7/25/02	2/22/07	11	10	0.68	0.68	0.34	0.13	0.68	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
El Segundo Blvd.	Wet	Channel	Ag (tot)	µg/L	7/25/02	2/22/07	11	9	0.2	0.61	0.34	0.13	0.41						
El Segundo Blvd.	Wet	Channel	As (sol)	µg/L	7/25/02	2/22/07	11	0	1	5.6	3.05	3.20	3.20	0	CTR	340	0.00	0 exceedances in 5 Year(s)	0%
El Segundo Blvd.	Wet	Channel	As (tot)	µg/L	7/25/02	2/22/07	11	0	1.1	15.8	4.50	3.60	3.60						
El Segundo Blvd.	Wet	Channel	Ba (sol)	µg/L	7/25/02	2/22/07	11	0	15	59	38.22	41.90	41.90						
El Segundo Blvd.	Wet	Channel	Ba (tot)	µg/L	7/25/02	2/22/07	11	0	29	171	63.71	58.00	58.00						
El Segundo Blvd.	Wet	Channel	Be (sol)	µg/L	7/25/02	8/25/05	10	10	0	0	0.19	0.20	0.00						
El Segundo Blvd.	Wet	Channel	Be (tot)	µg/L	7/25/02	8/25/05	10	10	0	0	0.19	0.20	0.00						
El Segundo Blvd.	Wet	Channel	Cd (sol)	µg/L	7/25/02	2/22/07	11	8	0.165	0.9	0.28	0.17	0.30	1	CTR	Hardness Dependent	0.02	1 exceedances in 5 Year(s)	9%
El Segundo Blvd.	Wet	Channel	Cd (tot)	µg/L	7/25/02	2/22/07	11	7	0.3	0.5	0.30	0.30	0.42						
El Segundo Blvd.	Wet	Channel	Co (sol)	µg/L	7/25/02	8/25/05	10	6	0.2	1	2.24	0.25	0.35						
El Segundo Blvd.	Wet	Channel	Co (tot)	µg/L	7/25/02	8/25/05	10	3	0.3	9.37	3.39	0.75	0.70						
El Segundo Blvd.	Wet	Channel	Cr (sol)	µg/L	7/25/02	2/22/07	11	2	0.59	3.1	1.32	1.00	1.00	0	CTR	16	0.00	0 exceedances in 5 Year(s)	0%
El Segundo Blvd.	Wet	Channel	Cr (tot)	µg/L	7/25/02	2/22/07	11	0	0.7	29.8	9.20	3.90	3.90						
El Segundo Blvd.	Wet	Channel	Cu (sol)	µg/L	7/25/02	2/22/07	11	1	7.9	39	17.59	12.00	16.50	5	TMDL	Hardness Dependent	0.10	5 exceedances in 5 Year(s)	45%
El Segundo Blvd.	Wet	Channel	Cu (tot)	µg/L	7/25/02	2/22/07	11	1	6.4	65.3	27.83	24.00	28.50						
El Segundo Blvd.	Wet	Channel	Hardness	µg/L	2/26/04	2/22/07	8	0	17	188	112.56	135.00	135.00						
El Segundo Blvd.	Wet	Channel	Hg (sol)	µg/L	7/25/02	8/25/05	10	6	0.02	0.1	0.03	0.01	0.05	2	TMDL	0.051	0.06	2 exceedances in 4 Year(s)	20%
El Segundo Blvd.	Wet	Channel	Hg (tot)	µg/L	7/25/02	8/25/05	10	6	0.04	0.1	0.03	0.01	0.07						
El Segundo Blvd.	Wet	Channel	Ni (sol)	µg/L	7/25/02	2/22/07	11	2	1.39	6	3.91	4.40	5.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
El Segundo Blvd.	Wet	Channel	Ni (tot)	µg/L	7/25/02	2/22/07	11	2	2.51	19.7	6.36	6.00	6.00						
El Segundo Blvd.	Wet	Channel	Pb (sol)	µg/L	7/25/02	2/22/07	11	6	0.55	19	5.09	2.00	2.00	2	TMDL	Hardness Dependent	0.04	2 exceedances in 5 Year(s)	18%
El Segundo Blvd.	Wet	Channel	Pb (tot)	µg/L	7/25/02	2/22/07	11	3	0.55	46	9.62	5.00	5.50						
El Segundo Blvd.	Wet	Channel	Sb (sol)	µg/L	7/25/02	8/25/05	10	3	2	5	3.29	3.50	3.00	0	CTR	4300	0.00	0 exceedances in 4 Year(s)	0%
El Segundo Blvd.	Wet	Channel	Sb (tot)	µg/L	7/25/02	8/25/05	10	3	2	5	3.10	3.00	3.00						
El Segundo Blvd.	Wet	Channel	Se (sol)	µg/L	7/25/02	2/22/07	11	3	0.2	0.9	0.33	0.30	0.40						
El Segundo Blvd.	Wet	Channel	Se (tot)	µg/L	7/25/02	2/22/07	11	0	0.2	0.9	0.43	0.40	0.40						
El Segundo Blvd.	Wet	Channel	Th (sol)	µg/L	7/25/02	8/25/05	9	6	1	4	1.54	1.00	2.00	0	CTR	6.3	0.00	0 exceedances in 4 Year(s)	0%
El Segundo Blvd.	Wet	Channel	Th (tot)	µg/L	7/25/02	8/25/05	10	8	1	1	0.99	0.55	1.00						
El Segundo Blvd.	Wet	Channel	Zn (sol)	µg/L	7/25/02	2/22/07	11	2	18.5	178	44.19	32.00	32.00	3	TMDL	Hardness Dependent	0.06	3 exceedances in 5 Year(s)	27%
El Segundo Blvd.	Wet	Channel	Zn (tot)	µg/L	7/25/02	2/22/07	11	2	20.3	310	97.68	90.00	90.00						
El Segundo Blvd.	Dry	Channel	Ag (sol)	µg/L	4/26/01	5/26/09	82	50	0.03	0.8	0.44	0.13	0.09						
El Segundo Blvd.	Dry	Channel	Ag (tot)	µg/L	4/26/01	5/26/09	82	49	0.03	2.07	0.47	0.13	0.04						
El Segundo Blvd.	Dry	Channel	As (sol)	µg/L	4/26/01	5/26/09	84	6	0.4	8.38	2.60	2.15	2.10	0	CTR	150	0.00	0 exceedances in 9 Year(s)	0%
El Segundo Blvd.	Dry	Channel	As (tot)	µg/L	4/26/01	5/26/09	84	4	0.4	35.6	3.46	2.60	2.52						
El Segundo Blvd.	Dry	Channel	Ba (sol)	µg/L	4/26/01	5/26/09	83	1	18.5	97.4	47.45	41.20	41.60						
El Segundo Blvd.	Dry	Channel	Ba (tot)	µg/L	4/26/01	5/26/09	83	1	20.8	248	59.23	51.00	51.35						
El Segundo Blvd.	Dry	Channel	Be (sol)	µg/L	4/26/01	2/24/06	46	43	0.025	0.08	0.20	0.20	0.06						
El Segundo Blvd.	Dry	Channel	Be (tot)	µg/L	4/26/01	2/24/06	47	42	0.008	6.3	0.33	0.20	0.04						
El Segundo Blvd.	Dry	Channel	Cd (sol)	µg/L	4/26/01	5/26/09	82	42	0.01	1.1	0.26	0.17	0.17	0	CTR	Hardness Dependent	0.00	0 exceedances in 9 Year(s)	0%
El Segundo Blvd.	Dry	Channel	Cd (tot)	mg/L	4/26/01	5/26/09	83	35	0.01	6.2	0.38	0.30	0.30						
El Segundo Blvd.	Dry	Channel	Co (sol)	µg/L	4/26/01	2/24/06	45	35	0.2	0.6	2.88	0.25	0.30						
El Segundo Blvd.	Dry	Channel	Co (tot)	µg/L	4/26/01	2/24/06	45	30	0.2	5.2	3.12	0.60	0.60						
El Segundo Blvd.	Dry	Channel	Cr (sol)	µg/L	4/26/01	5/26/09	83	24	0.045	18	1.73	1.00	1.10	1	CTR	11	0.00	1 exceedances in 9 Year(s)	1%
El Segundo Blvd.	Dry	Channel	Cr (tot)	µg/L	4/26/01	5/26/09	83	14	0.045	33	4.86	2.07	2.51						
El Segundo Blvd.	Dry	Channel	Cu (sol)	µg/L	4/26/01	5/26/09	83	6	4	442	19.10	13.00	13.00	35	CTR	Hardness Dependent	0.05	35 exceedances in 9 Year(s)	42%
El Segundo Blvd.	Dry	Channel	Cu (tot)	µg/L	4/26/01	5/26/09	83	6	4	795	30.05	18.00	20.00						
El Segundo Blvd.	Dry	Channel	Hardness	µg/L	1/29/04	5/26/09	56	0	84.7	302	183.04	173.00	173.00						
El Segundo Blvd.	Dry	Channel	Hg (sol)	µg/L	4/26/01	2/24/06	46	35	0.03	0.17	0.05	0.01	0.07	8	TMDL	0.051	0.04	8 exceedances in 5 Year(s)	17%
El Segundo Blvd.	Dry	Channel	Hg (tot)	µg/L	4/26/01	2/24/06	46	34	0.027	0.17	0.05	0.01	0.08						
El Segundo Blvd.	Dry	Channel	Ni (sol)	µg/L	4/26/01	5/26/09	81	18	0.9	34	4.21	4.00	4.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 9 Year(s)	0%
El Segundo Blvd.	Dry	Channel	Ni (tot)	µg/L	4/26/01	5/26/09	83	15	0.9	41.1	5.74	4.68	4.59						

Table D.2: Dominguez Channel - Metals Data Summary

Location	Weather	Type	Constituent	Unit	Dates Sampled		Total No. of Values	No. Values with/ ND	Min.	Max.	Avg.	Median		No. of exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency (# of exceed. per year)	Exceedance/Time	%Exceed
					From	To						With ND	Without ND						
El Segundo Blvd.	Dry	Channel	Pb (sol)	µg/L	4/26/01	5/26/09	81	34	0.055	28	2.83	1.40	1.04	8	CTR	Hardness Dependent	0.01	8 exceedances in 9 Year(s)	10%
El Segundo Blvd.	Dry	Channel	Pb (tot)	µg/L	4/26/01	5/26/09	83	24	0.055	96	6.95	4.00	4.00						
El Segundo Blvd.	Dry	Channel	Sb (sol)	µg/L	4/26/01	2/24/06	47	33	1.3	12.3	3.01	2.50	3.00	0	CTR	4300	0.00	0 exceedances in 5 Year(s)	0%
El Segundo Blvd.	Dry	Channel	Sb (tot)	µg/L	4/26/01	2/24/06	47	34	1.8	24.6	3.45	2.50	3.00						
El Segundo Blvd.	Dry	Channel	Se (sol)	µg/L	5/31/01	5/26/09	82	11	0.1	2.2	0.83	0.40	0.40						
El Segundo Blvd.	Dry	Channel	Se (tot)	µg/L	5/31/01	5/26/09	82	10	0.1	2.28	0.87	0.50	0.50	0	CTR	5	0.00	0 exceedances in 8 Year(s)	0%
El Segundo Blvd.	Dry	Channel	Th (sol)	µg/L	4/26/01	2/24/06	47	36	1	9.5	2.70	2.00	3.00	2	CTR	6.3	0.01	2 exceedances in 5 Year(s)	4%
El Segundo Blvd.	Dry	Channel	Th (tot)	µg/L	4/26/01	2/24/06	47	38	1.2	6	2.61	2.50	4.00						
El Segundo Blvd.	Dry	Channel	Va(sol)	µg/L	4/26/01	5/31/01	2	1	6.1	6.1	4.30	4.30	6.10						
El Segundo Blvd.	Dry	Channel	Va(tot)	µg/L	4/26/01	5/31/01	2	1	6.1	6.1	4.30	4.30	6.10						
El Segundo Blvd.	Dry	Channel	Zn (sol)	µg/L	4/26/01	5/26/09	82	7	2.4	120	27.71	20.00	22.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 9 Year(s)	0%
El Segundo Blvd.	Dry	Channel	Zn (tot)	µg/L	4/26/01	5/26/09	83	6	8	445	67.93	50.00	53.40						
Main St.	Wet	Channel	Ag (sol)	µg/L	4/28/05	2/22/07	4	3	0.36	0.36	0.17	0.10	0.36	0	CTR	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Main St.	Wet	Channel	Ag (tot)	µg/L	4/28/05	2/22/07	4	3	0.48	0.48	0.20	0.10	0.48						
Main St.	Wet	Channel	As (sol)	µg/L	4/28/05	2/22/07	4	0	0.4	3.5	2.48	3.00	3.00	0	CTR	340	0.00	0 exceedances in 2 Year(s)	0%
Main St.	Wet	Channel	As (tot)	µg/L	4/28/05	2/22/07	4	0	0.5	3.7	2.58	3.05	3.05						
Main St.	Wet	Channel	Ba (sol)	µg/L	4/28/05	2/22/07	4	0	20	82	52.70	54.40	54.40						
Main St.	Wet	Channel	Ba (tot)	µg/L	4/28/05	2/22/07	4	0	27	82	56.80	59.10	59.10						
Main St.	Wet	Channel	Be (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.20	0.20	0.00						
Main St.	Wet	Channel	Be (tot)	µg/L	4/28/05	8/25/05	3	3	0	0	0.20	0.20	0.00						
Main St.	Wet	Channel	Cd (sol)	µg/L	4/28/05	2/22/07	4	1	0.165	2.1	0.68	0.23	0.30	1	CTR	Hardness Dependent	0.14	1 exceedances in 2 Year(s)	25%
Main St.	Wet	Channel	Cd (tot)	µg/L	4/28/05	2/22/07	4	1	0.165	0.5	0.30	0.28	0.40						
Main St.	Wet	Channel	Co (sol)	µg/L	4/28/05	8/25/05	3	0	0.2	0.6	0.40	0.40	0.40						
Main St.	Wet	Channel	Co (tot)	µg/L	4/28/05	8/25/05	3	0	0.3	0.5	0.40	0.40	0.40						
Main St.	Wet	Channel	Cr (sol)	µg/L	4/28/05	2/22/07	4	0	0.4	2.6	1.01	0.52	0.52	0	CTR	16	0.00	0 exceedances in 2 Year(s)	0%
Main St.	Wet	Channel	Cr (tot)	µg/L	4/28/05	2/22/07	4	0	0.08	3.9	1.33	0.66	0.66						
Main St.	Wet	Channel	Cu (sol)	µg/L	4/28/05	2/22/07	4	0	8	15	12.75	14.00	14.00	1	TMDL	Hardness Dependent	0.14	1 exceedances in 2 Year(s)	25%
Main St.	Wet	Channel	Cu (tot)	µg/L	4/28/05	2/22/07	4	0	12	36	23.75	23.50	23.50						
Main St.	Wet	Channel	Hardness	µg/L	4/28/05	2/22/07	4	0	41.7	291	181.68	197.00	197.00						
Main St.	Wet	Channel	Hg (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.01	0.01	0.00	0	TMDL	0.051	0.00	0 exceedances in 1 Year(s)	0%
Main St.	Wet	Channel	Hg (tot)	µg/L	4/28/05	8/25/05	3	2	0.022	0.022	0.01	0.01	0.02						
Main St.	Wet	Channel	Ni (sol)	µg/L	4/28/05	2/22/07	4	0	3.87	6	4.72	4.50	4.50	0	CTR	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Main St.	Wet	Channel	Ni (tot)	mg/L	4/28/05	2/22/07	4	0	3.65	6	5.16	5.50	5.50						
Main St.	Wet	Channel	Pb (sol)	µg/L	4/28/05	2/22/07	4	0	0.55	4	2.39	2.50	2.50	1	TMDL	Hardness Dependent	0.14	1 exceedances in 2 Year(s)	25%
Main St.	Wet	Channel	Pb (tot)	µg/L	4/28/05	2/22/07	4	0	0.55	6	2.89	2.50	2.50						
Main St.	Wet	Channel	Sb (sol)	µg/L	4/28/05	8/25/05	3	1	2	3	2.00	2.00	2.50	0	CTR	4300	0.00	0 exceedances in 1 Year(s)	0%
Main St.	Wet	Channel	Sb (tot)	µg/L	4/28/05	8/25/05	3	2	3	3	1.67	1.00	3.00						
Main St.	Wet	Channel	Se (sol)	µg/L	4/28/05	2/22/07	4	0	0.4	0.5	0.43	0.40	0.40						
Main St.	Wet	Channel	Se (tot)	µg/L	4/28/05	2/22/07	4	0	0.4	0.6	0.45	0.40	0.40						
Main St.	Wet	Channel	Th (sol)	µg/L	4/28/05	8/25/05	3	1	1	1	0.83	1.00	1.00	0	CTR	6.3	0.00	0 exceedances in 1 Year(s)	0%
Main St.	Wet	Channel	Th (tot)	µg/L	4/28/05	8/25/05	3	3	0	0	0.50	0.50	0.00						
Main St.	Wet	Channel	Zn (sol)	µg/L	4/28/05	2/22/07	4	0	15	72	32.50	21.50	21.50	1	TMDL	Hardness Dependent	0.14	1 exceedances in 2 Year(s)	25%
Main St.	Wet	Channel	Zn (tot)	µg/L	4/28/05	2/22/07	4	0	29	101	50.25	35.50	35.50						
Main St.	Dry	Channel	Ag (sol)	µg/L	1/27/05	5/26/09	46	17	0.03	0.87	0.12	0.04	0.04						
Main St.	Dry	Channel	Ag (tot)	µg/L	1/27/05	5/26/09	46	16	0.03	4.18	0.18	0.06	0.04						
Main St.	Dry	Channel	As (sol)	µg/L	1/27/05	5/26/09	48	0	1	7.7	2.91	2.75	2.75	0	CTR	150	0.00	0 exceedances in 5 Year(s)	0%
Main St.	Dry	Channel	As (tot)	µg/L	1/27/05	5/26/09	48	0	1.1	106	5.45	3.10	3.10						
Main St.	Dry	Channel	Ba (sol)	µg/L	1/27/05	5/26/09	47	0	23	143	68.14	65.00	65.00						
Main St.	Dry	Channel	Ba (tot)	µg/L	1/27/05	5/26/09	47	0	29	4510	180.95	74.70	74.70						
Main St.	Dry	Channel	Be (sol)	µg/L	1/27/05	2/24/06	11	11	0	0	0.20	0.20	0.00						
Main St.	Dry	Channel	Be (tot)	µg/L	1/27/05	2/24/06	11	9	0.4	0.7	0.26	0.20	0.55						
Main St.	Dry	Channel	Cd (sol)	µg/L	1/27/05	5/26/09	47	9	0.01	0.8	0.22	0.17	0.17	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Main St.	Dry	Channel	Cd (tot)	µg/L	1/27/05	5/26/09	47	4	0.01	22.5	0.79	0.17	0.29						
Main St.	Dry	Channel	Co (sol)	µg/L	1/27/05	2/24/06	11	0	0.4	1.9	0.76	0.70	0.70						
Main St.	Dry	Channel	Co (tot)	µg/L	1/27/05	2/24/06	11	0	0.2	19.9	3.23	0.80	0.80						
Main St.	Dry	Channel	Cr (sol)	µg/L	1/27/05	5/26/09	47	2	0.045	5.17	1.36	1.00	1.09	0	CTR	11	0.00	0 exceedances in 5 Year(s)	0%
Main St.	Dry	Channel	Cr (tot)	µg/L	1/27/05	5/26/09	47	2	0.045	456	13.27	1.39	1.49						

Table D.2: Dominguez Channel - Metals Data Summary

Location	Weather	Type	Constituent	Unit	Dates Sampled		Total No. of Values	No. Values with/ ND	Min.	Max.	Avg.	Median		No. of exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency (# of exceed. per year)	Exceedance/Time	%Exceed
					From	To						With ND	Without ND						
Main St.	Dry	Channel	Cu (sol)	µg/L	1/27/05	5/26/09	47	0	4.25	36	14.58	12.30	12.30	16	CTR	Hardness Dependent	0.08	16 exceedances in 5 Year(s)	34%
Main St.	Dry	Channel	Cu (tot)	µg/L	1/27/05	5/26/09	47	0	8.47	1010	43.56	16.90	16.90						
Main St.	Dry	Channel	Hardness	µg/L	1/27/05	5/26/09	48	0	65.8	446	235.20	225.00	225.00						
Main St.	Dry	Channel	Hg (sol)	µg/L	1/27/05	2/24/06	11	11	0	0	0.01	0.01	0.00	0	TMDL	0.051	0.00	0 exceedances in 2 Year(s)	0%
Main St.	Dry	Channel	Hg (tot)	µg/L	1/27/05	2/24/06	11	10	0.106	0.106	0.02	0.01	0.11						
Main St.	Dry	Channel	Ni (sol)	µg/L	1/27/05	5/26/09	47	0	0.1	9.75	5.00	5.00	5.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Main St.	Dry	Channel	Ni (tot)	µg/L	1/27/05	5/26/09	47	0	3	367	14.54	5.23	5.23						
Main St.	Dry	Channel	Pb (sol)	µg/L	1/27/05	5/26/09	47	6	0.055	27	1.83	0.93	1.00	2	CTR	Hardness Dependent	0.01	2 exceedances in 5 Year(s)	4%
Main St.	Dry	Channel	Pb (tot)	µg/L	1/27/05	5/26/09	47	2	0.055	955	25.80	2.00	2.00						
Main St.	Dry	Channel	Sb (sol)	µg/L	1/27/05	2/24/06	11	6	2	5	2.00	1.00	3.00	0	CTR	4300	0.00	0 exceedances in 2 Year(s)	0%
Main St.	Dry	Channel	Sb (tot)	µg/L	1/27/05	2/24/06	11	6	2	5	2.09	1.00	4.00						
Main St.	Dry	Channel	Se (sol)	µg/L	1/27/05	5/26/09	48	0	0.1	1.3	0.53	0.40	0.40						
Main St.	Dry	Channel	Se (tot)	µg/L	1/27/05	5/26/09	48	0	0.1	3.5	0.64	0.45	0.45	0	CTR	5	0.00	0 exceedances in 5 Year(s)	0%
Main St.	Dry	Channel	Th (sol)	mg/L	1/27/05	2/24/06	11	8	2	2	0.91	0.50	2.00	0	CTR	6.3	0.00	0 exceedances in 2 Year(s)	0%
Main St.	Dry	Channel	Th (tot)	µg/L	1/27/05	2/24/06	11	7	1	2	0.77	0.50	1.00						
Main St.	Dry	Channel	Zn (sol)	µg/L	1/27/05	5/26/09	47	0	4	95.8	27.99	24.00	24.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Main St.	Dry	Channel	Zn (tot)	µg/L	1/27/05	5/26/09	47	0	18.5	3500	138.40	40.00	40.00						
Vermont Ave.	Wet	Channel	Ag (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.10	0.10	0.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 1 Year(s)	0%
Vermont Ave.	Wet	Channel	Ag (tot)	µg/L	4/28/05	2/22/07	4	3	0.54	0.54	0.21	0.10	0.54						
Vermont Ave.	Wet	Channel	As (sol)	µg/L	4/28/05	2/22/07	4	0	0.4	1.7	1.23	1.40	1.40	0	CTR	340	0.00	0 exceedances in 2 Year(s)	0%
Vermont Ave.	Wet	Channel	As (tot)	µg/L	4/28/05	2/22/07	4	0	0.5	3.5	1.85	1.70	1.70						
Vermont Ave.	Wet	Channel	Ba (sol)	µg/L	4/28/05	2/22/07	4	0	15	91.5	62.13	71.00	71.00						
Vermont Ave.	Wet	Channel	Ba (tot)	µg/L	4/28/05	2/22/07	4	0	52	95.2	75.30	77.00	77.00						
Vermont Ave.	Wet	Channel	Be (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.20	0.20	0.00						
Vermont Ave.	Wet	Channel	Be (tot)	µg/L	4/28/05	8/25/05	3	3	0	0	0.20	0.20	0.00						
Vermont Ave.	Wet	Channel	Cd (sol)	µg/L	4/28/05	2/22/07	4	1	0.165	0.5	0.30	0.28	0.40	0	CTR	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Vermont Ave.	Wet	Channel	Cd (tot)	µg/L	4/28/05	2/22/07	4	1	0.165	0.3	0.23	0.23	0.30						
Vermont Ave.	Wet	Channel	Co (sol)	µg/L	4/28/05	8/25/05	3	2	0.2	0.2	0.13	0.10	0.20						
Vermont Ave.	Wet	Channel	Co (tot)	µg/L	4/28/05	8/25/05	3	0	0.2	2.2	0.90	0.30	0.30						
Vermont Ave.	Wet	Channel	Cr (sol)	µg/L	4/28/05	2/22/07	4	0	0.6	1.4	1.05	1.09	1.09	0	CTR	16	0.00	0 exceedances in 2 Year(s)	0%
Vermont Ave.	Wet	Channel	Cr (tot)	mg/L	4/28/05	2/22/07	4	0	0.54	6.3	2.36	1.30	1.30						
Vermont Ave.	Wet	Channel	Cu (sol)	µg/L	4/28/05	2/22/07	4	0	8	14	10.75	10.50	10.50	1	TMDL	Hardness Dependent	0.14	1 exceedances in 2 Year(s)	25%
Vermont Ave.	Wet	Channel	Cu (tot)	µg/L	4/28/05	2/22/07	4	0	9	30	17.50	15.50	15.50						
Vermont Ave.	Wet	Channel	Hardness	µg/L	4/28/05	2/22/07	4	0	32.7	351	235.93	280.00	280.00						
Vermont Ave.	Wet	Channel	Hg (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.01	0.01	0.00	0	TMDL	0.051	0.00	0 exceedances in 1 Year(s)	0%
Vermont Ave.	Wet	Channel	Hg (tot)	µg/L	4/28/05	8/25/05	3	3	0	0	0.01	0.01	0.00						
Vermont Ave.	Wet	Channel	Ni (sol)	µg/L	4/28/05	2/22/07	4	0	2	5	3.25	3.00	3.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Vermont Ave.	Wet	Channel	Ni (tot)	µg/L	4/28/05	2/22/07	4	0	3	6	4.90	5.30	5.30						
Vermont Ave.	Wet	Channel	Pb (sol)	µg/L	4/28/05	2/22/07	3	1	0.55	1	0.68	0.55	0.78	1	TMDL	Hardness Dependent	0.18	1 exceedances in 2 Year(s)	33%
Vermont Ave.	Wet	Channel	Pb (tot)	µg/L	4/28/05	2/22/07	4	0	0.55	8	2.89	1.50	1.50						
Vermont Ave.	Wet	Channel	Sb (sol)	µg/L	4/28/05	8/25/05	3	2	2	2	1.33	1.00	2.00	0	CTR	4300	0.00	0 exceedances in 1 Year(s)	0%
Vermont Ave.	Wet	Channel	Sb (tot)	µg/L	4/28/05	8/25/05	3	2	3	3	1.67	1.00	3.00						
Vermont Ave.	Wet	Channel	Se (sol)	µg/L	4/28/05	2/22/07	4	0	0.2	0.8	0.43	0.35	0.35						
Vermont Ave.	Wet	Channel	Se (tot)	µg/L	4/28/05	2/22/07	4	0	0.2	0.9	0.45	0.35	0.35						
Vermont Ave.	Wet	Channel	Th (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.50	0.50	0.00	0	CTR	6.3	0.00	0 exceedances in 1 Year(s)	0%
Vermont Ave.	Wet	Channel	Th (tot)	µg/L	4/28/05	8/25/05	3	3	0	0	0.50	0.50	0.00						
Vermont Ave.	Wet	Channel	Zn (sol)	µg/L	4/28/05	2/22/07	4	0	15	42	26.50	24.50	24.50	0	TMDL	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Vermont Ave.	Wet	Channel	Zn (tot)	µg/L	4/28/05	2/22/07	4	0	28	111	57.25	45.00	45.00						
Vermont Ave.	Dry	Channel	Ag (sol)	µg/L	1/27/05	5/26/09	46	17	0.03	0.72	0.11	0.04	0.04						
Vermont Ave.	Dry	Channel	Ag (tot)	µg/L	1/27/05	5/26/09	46	17	0.03	0.65	0.13	0.04	0.04						
Vermont Ave.	Dry	Channel	As (sol)	µg/L	1/27/05	5/26/09	48	0	0.2	8.07	1.57	1.31	1.31	0	CTR	150	0.00	0 exceedances in 5 Year(s)	0%
Vermont Ave.	Dry	Channel	As (tot)	µg/L	1/27/05	5/26/09	48	0	0.5	8.01	1.92	1.53	1.53						
Vermont Ave.	Dry	Channel	Ba (sol)	µg/L	1/27/05	5/26/09	47	0	19.8	95.5	63.88	60.50	60.50						
Vermont Ave.	Dry	Channel	Ba (tot)	µg/L	1/27/05	5/26/09	47	0	36	248	78.51	76.00	76.00						
Vermont Ave.	Dry	Channel	Be (sol)	µg/L	1/27/05	2/24/06	11	11	0	0	0.20	0.20	0.00						
Vermont Ave.	Dry	Channel	Be (tot)	µg/L	1/27/05	2/24/06	11	11	0	0	0.20	0.20	0.00						
Vermont Ave.	Dry	Channel	Cd (sol)	µg/L	1/27/05	5/26/09	47	14	0.01	1.23	0.18	0.15	0.07	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%

Table D.2: Dominguez Channel - Metals Data Summary

Location	Weather	Type	Constituent	Unit	Dates Sampled		Total No. of Values	No. Values with/ ND	Min.	Max.	Avg.	Median		No. of exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency (# of exceed. per year)	Exceedance/Time	%Exceed
					From	To						With ND	Without ND						
Vermont Ave.	Dry	Channel	Cd (tot)	µg/L	1/27/05	5/26/09	47	9	0.01	1.71	0.33	0.17	0.23						
Vermont Ave.	Dry	Channel	Co (sol)	µg/L	1/27/05	2/24/06	11	3	0.2	0.5	0.29	0.30	0.40						
Vermont Ave.	Dry	Channel	Co (tot)	µg/L	1/27/05	2/24/06	11	2	0.2	1.7	0.52	0.40	0.60						
Vermont Ave.	Dry	Channel	Cr (sol)	µg/L	1/27/05	5/26/09	47	3	0.045	12.1	1.50	1.01	1.09	1	CTR	11	0.00	1 exceedances in 5 Year(s)	2%
Vermont Ave.	Dry	Channel	Cr (tot)	µg/L	1/27/05	5/26/09	47	2	0.045	22.1	2.90	1.80	1.90						
Vermont Ave.	Dry	Channel	Cu (sol)	µg/L	1/27/05	5/26/09	47	0	2.98	29	13.20	13.00	13.00	7	CTR	Hardness Dependent	0.03	7 exceedances in 5 Year(s)	15%
Vermont Ave.	Dry	Channel	Cu (tot)	µg/L	1/27/05	5/26/09	47	0	4.07	90	20.38	16.10	16.10						
Vermont Ave.	Dry	Channel	Hardness	µg/L	1/27/05	5/26/09	48	0	87.1	2770	555.88	298.00	298.00						
Vermont Ave.	Dry	Channel	Hg (sol)	µg/L	1/27/05	2/24/06	11	10	0.03	0.03	0.01	0.01	0.03	0	TMDL	0.051	0.00	0 exceedances in 2 Year(s)	0%
Vermont Ave.	Dry	Channel	Hg (tot)	mg/L	1/27/05	2/24/06	11	9	0.022	0.035	0.01	0.01	0.03						
Vermont Ave.	Dry	Channel	Ni (sol)	µg/L	1/27/05	5/26/09	47	0	0.1	8.9	4.22	4.04	4.04	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Vermont Ave.	Dry	Channel	Ni (tot)	µg/L	1/27/05	5/26/09	47	0	2	18.5	5.58	5.05	5.05						
Vermont Ave.	Dry	Channel	Pb (sol)	µg/L	1/27/05	5/26/09	47	13	0.055	11.5	0.96	0.55	0.55	1	CTR	Hardness Dependent	0.00	1 exceedances in 5 Year(s)	2%
Vermont Ave.	Dry	Channel	Pb (tot)	µg/L	1/27/05	5/26/09	47	5	0.055	25.7	3.22	1.44	1.85						
Vermont Ave.	Dry	Channel	Sb (sol)	µg/L	1/27/05	2/24/06	11	6	2	5	1.91	1.00	2.00	0	CTR	4300	0.00	0 exceedances in 2 Year(s)	0%
Vermont Ave.	Dry	Channel	Sb (tot)	µg/L	1/27/05	2/24/06	11	8	2	4	1.64	1.00	4.00						
Vermont Ave.	Dry	Channel	Se (sol)	µg/L	1/27/05	5/26/09	48	1	0.1	1.05	0.41	0.40	0.40						
Vermont Ave.	Dry	Channel	Se (tot)	µg/L	1/27/05	5/26/09	48	0	0.1	1.1	0.44	0.40	0.40	0	CTR	5	0.00	0 exceedances in 5 Year(s)	0%
Vermont Ave.	Dry	Channel	Th (sol)	µg/L	1/27/05	2/24/06	11	6	1	5	1.36	0.50	2.00	0	CTR	6.3	0.00	0 exceedances in 2 Year(s)	0%
Vermont Ave.	Dry	Channel	Th (tot)	µg/L	1/27/05	2/24/06	11	6	1	5	1.55	0.50	2.00						
Vermont Ave.	Dry	Channel	Zn (sol)	µg/L	1/27/05	5/26/09	47	0	3.27	57	28.26	27.00	27.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Vermont Ave.	Dry	Channel	Zn (tot)	µg/L	1/27/05	5/26/09	47	0	23.5	296	67.22	48.00	48.00						
Western Ave.	Wet	Channel	Ag (sol)	µg/L	7/25/02	2/22/07	11	10	0.55	0.55	0.33	0.13	0.55	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Western Ave.	Wet	Channel	Ag (tot)	µg/L	7/25/02	2/22/07	11	10	0.93	0.93	0.36	0.13	0.93						
Western Ave.	Wet	Channel	As (sol)	mg/L	7/25/02	2/22/07	11	0	0.3	4.9	2.23	1.70	1.70	0	CTR	340	0.00	0 exceedances in 5 Year(s)	0%
Western Ave.	Wet	Channel	As (tot)	µg/L	7/25/02	2/22/07	11	0	0.3	5.3	2.57	2.20	2.20						
Western Ave.	Wet	Channel	Ba (sol)	µg/L	7/25/02	2/22/07	11	0	16	96.9	44.84	40.00	40.00						
Western Ave.	Wet	Channel	Ba (tot)	µg/L	7/25/02	2/22/07	11	0	34	104	57.67	44.90	44.90						
Western Ave.	Wet	Channel	Be (sol)	µg/L	7/25/02	8/25/05	10	10	0	0	0.19	0.20	0.00						
Western Ave.	Wet	Channel	Be (tot)	µg/L	7/25/02	8/25/05	10	9	1.1	1.1	0.25	0.20	1.10						
Western Ave.	Wet	Channel	Cd (sol)	µg/L	7/25/02	2/22/07	11	10	0.165	0.165	0.18	0.15	0.17	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Western Ave.	Wet	Channel	Cd (tot)	µg/L	7/25/02	2/22/07	11	5	0.165	1.8	0.40	0.30	0.35						
Western Ave.	Wet	Channel	Co (sol)	µg/L	7/25/02	8/25/05	10	7	0.2	1.1	2.24	0.16	0.50						
Western Ave.	Wet	Channel	Co (tot)	µg/L	7/25/02	8/25/05	10	3	0.3	2.2	2.68	0.82	0.73						
Western Ave.	Wet	Channel	Cr (sol)	µg/L	7/25/02	2/22/07	11	2	0.42	2	1.07	0.70	1.40	0	CTR	16	0.00	0 exceedances in 5 Year(s)	0%
Western Ave.	Wet	Channel	Cr (tot)	µg/L	7/25/02	2/22/07	11	0	0.5	28	7.33	3.60	3.60						
Western Ave.	Wet	Channel	Cu (sol)	µg/L	7/25/02	2/22/07	11	0	5.3	30	12.49	9.00	9.00	4	TMDL	Hardness Dependent	0.08	4 exceedances in 5 Year(s)	36%
Western Ave.	Wet	Channel	Cu (tot)	µg/L	7/25/02	2/22/07	11	0	6.5	39	17.82	15.00	15.00						
Western Ave.	Wet	Channel	Hardness	µg/L	2/26/04	2/22/07	8	0	36.6	369	172.09	170.50	170.50						
Western Ave.	Wet	Channel	Hg (sol)	µg/L	7/25/02	8/25/05	10	6	0.02	0.1	0.03	0.01	0.05	2	TMDL	0.051	0.06	2 exceedances in 4 Year(s)	20%
Western Ave.	Wet	Channel	Hg (tot)	µg/L	7/25/02	8/25/05	10	3	0.028	0.12	0.04	0.03	0.04						
Western Ave.	Wet	Channel	Ni (sol)	µg/L	7/25/02	2/22/07	11	2	1.7	5	2.82	2.68	3.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Western Ave.	Wet	Channel	Ni (tot)	µg/L	7/25/02	2/22/07	11	2	2.12	6	4.04	3.65	4.00						
Western Ave.	Wet	Channel	Pb (sol)	µg/L	7/25/02	2/22/07	11	6	0.55	16.5	3.85	1.50	2.00	3	TMDL	Hardness Dependent	0.06	3 exceedances in 5 Year(s)	27%
Western Ave.	Wet	Channel	Pb (tot)	µg/L	7/25/02	2/22/07	11	3	0.55	18.7	7.00	5.00	8.50						
Western Ave.	Wet	Channel	Sb (sol)	µg/L	7/25/02	8/25/05	10	5	2	3.3	2.39	2.00	2.00	0	CTR	4300	0.00	0 exceedances in 4 Year(s)	0%
Western Ave.	Wet	Channel	Sb (tot)	µg/L	7/25/02	8/25/05	10	6	2	4	2.39	2.00	2.90						
Western Ave.	Wet	Channel	Se (sol)	µg/L	7/25/02	2/22/07	11	2	0.2	0.9	0.39	0.30	0.40						
Western Ave.	Wet	Channel	Se (tot)	µg/L	7/25/02	2/22/07	11	0	0.2	0.9	0.46	0.40	0.40						
Western Ave.	Wet	Channel	Th (sol)	µg/L	7/25/02	8/25/05	10	10	0	0	0.90	0.55	0.00	0	CTR	6.3	0.00	0 exceedances in 4 Year(s)	0%
Western Ave.	Wet	Channel	Th (tot)	µg/L	7/25/02	8/25/05	10	10	0	0	0.90	0.55	0.00						
Western Ave.	Wet	Channel	Zn (sol)	mg/L	7/25/02	2/22/07	11	1	10.8	143	37.16	26.80	28.40	2	TMDL	Hardness Dependent	0.04	2 exceedances in 5 Year(s)	18%
Western Ave.	Wet	Channel	Zn (tot)	µg/L	7/25/02	2/22/07	11	1	19.4	155	67.84	59.00	66.20						
Western Ave.	Dry	Channel	Ag (sol)	µg/L	4/26/01	5/26/09	82	54	0.03	0.81	0.42	0.13	0.04						
Western Ave.	Dry	Channel	Ag (tot)	µg/L	4/26/01	5/26/09	82	52	0.03	1.78	0.48	0.13	0.04						
Western Ave.	Dry	Channel	As (sol)	µg/L	4/26/01	5/26/09	84	4	0.1	7.41	2.33	2.00	1.90	0	CTR	150	0.00	0 exceedances in 9 Year(s)	0%
Western Ave.	Dry	Channel	As (tot)	µg/L	4/26/01	5/26/09	84	5	0.4	6.6	2.68	2.30	2.20						

Table D.2: Dominguez Channel - Metals Data Summary

Location	Weather	Type	Constituent	Unit	Dates Sampled		Total No. of Values	No. Values with/ ND	Min.	Max.	Avg.	Median		No. of exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency (# of exceed. per year)	Exceedance/Time	%Exceed
					From	To						With ND	Without ND						
Western Ave.	Dry	Channel	Ba (sol)	µg/L	4/26/01	5/26/09	83	1	17.4	101	56.78	54.90	54.95						
Western Ave.	Dry	Channel	Ba (tot)	mg/L	4/26/01	5/26/09	83	1	23.2	270	71.40	59.70	60.35						
Western Ave.	Dry	Channel	Be (sol)	µg/L	4/26/01	2/24/06	47	43	0.03	0.3	0.20	0.20	0.07						
Western Ave.	Dry	Channel	Be (tot)	µg/L	4/26/01	2/24/06	46	41	0.048	0.6	0.22	0.20	0.08						
Western Ave.	Dry	Channel	Cd (sol)	µg/L	4/26/01	5/26/09	82	46	0.01	6.54	0.31	0.17	0.17	1	CTR	Hardness Dependent	0.00	1 exceedances in 9 Year(s)	1%
Western Ave.	Dry	Channel	Cd (tot)	µg/L	4/26/01	5/26/09	83	44	0.01	7.71	0.42	0.25	0.30						
Western Ave.	Dry	Channel	Co (sol)	µg/L	4/26/01	2/24/06	45	37	0.2	0.7	2.87	0.25	0.35						
Western Ave.	Dry	Channel	Co (tot)	µg/L	4/26/01	2/24/06	45	34	0.3	5.6	3.03	0.40	0.40						
Western Ave.	Dry	Channel	Cr (sol)	µg/L	4/26/01	5/26/09	83	25	0.045	5.44	1.58	1.06	1.14	0	CTR	11	0.00	0 exceedances in 9 Year(s)	0%
Western Ave.	Dry	Channel	Cr (tot)	µg/L	4/26/01	5/26/09	83	11	0.045	36	4.87	1.60	1.90						
Western Ave.	Dry	Channel	Cu (sol)	µg/L	4/26/01	5/26/09	82	6	4.2	32	12.88	11.25	11.95	16	CTR	Hardness Dependent	0.02	16 exceedances in 9 Year(s)	20%
Western Ave.	Dry	Channel	Cu (tot)	µg/L	4/26/01	5/26/09	83	4	4.47	204	22.14	16.30	18.00						
Western Ave.	Dry	Channel	Hardness	µg/L	1/29/04	5/26/09	56	0	87.5	393	257.83	269.50	269.50						
Western Ave.	Dry	Channel	Hg (sol)	µg/L	4/26/01	2/24/06	46	35	0.026	0.23	0.05	0.01	0.09	7	TMDL	0.051	0.03	7 exceedances in 5 Year(s)	15%
Western Ave.	Dry	Channel	Hg (tot)	µg/L	4/26/01	2/24/06	46	33	0.022	0.23	0.06	0.01	0.08						
Western Ave.	Dry	Channel	Ni (sol)	µg/L	4/26/01	5/26/09	80	16	0.88	27	4.12	3.30	3.30	0	CTR	Hardness Dependent	0.00	0 exceedances in 9 Year(s)	0%
Western Ave.	Dry	Channel	Ni (tot)	µg/L	4/26/01	5/26/09	83	16	1.08	23.1	5.61	4.62	4.62						
Western Ave.	Dry	Channel	Pb (sol)	µg/L	4/26/01	5/26/09	81	36	0.055	21.6	2.32	1.09	1.00	2	CTR	Hardness Dependent	0.00	2 exceedances in 9 Year(s)	2%
Western Ave.	Dry	Channel	Pb (tot)	µg/L	4/26/01	5/26/09	83	28	0.055	70.4	5.54	2.80	2.90						
Western Ave.	Dry	Channel	Sb (sol)	µg/L	4/26/01	2/24/06	47	37	1.4	3	2.48	2.00	2.00	0	CTR	4300	0.00	0 exceedances in 5 Year(s)	0%
Western Ave.	Dry	Channel	Sb (tot)	µg/L	4/26/01	2/24/06	47	32	1.3	13.7	2.81	2.00	2.00						
Western Ave.	Dry	Channel	Se (sol)	µg/L	5/31/01	5/26/09	82	6	0.2	2.12	0.87	0.50	0.50						
Western Ave.	Dry	Channel	Se (tot)	µg/L	5/31/01	5/26/09	82	5	0.1	2.16	0.94	0.50	0.50	0	CTR	5	0.00	0 exceedances in 8 Year(s)	0%
Western Ave.	Dry	Channel	Th (sol)	µg/L	4/26/01	2/24/06	47	42	1	6.4	2.11	0.55	1.20	1	CTR	6.3	0.00	1 exceedances in 5 Year(s)	2%
Western Ave.	Dry	Channel	Th (tot)	µg/L	4/26/01	2/24/06	47	40	1	6.4	2.16	0.55	1.20						
Western Ave.	Dry	Channel	Va(sol)	µg/L	4/26/01	5/31/01	2	2	0	0	2.50	2.50	0.00						
Western Ave.	Dry	Channel	Va(tot)	µg/L	4/26/01	5/31/01	2	2	0	0	2.50	2.50	0.00						
Western Ave.	Dry	Channel	Zn (sol)	µg/L	4/26/01	5/26/09	82	4	4.2	88.4	23.74	21.80	22.45	0	CTR	Hardness Dependent	0.00	0 exceedances in 9 Year(s)	0%
Western Ave.	Dry	Channel	Zn (tot)	µg/L	4/26/01	5/26/09	83	3	11	876	67.81	37.00	38.10						
Yukon Ave.	Wet	Channel	Ag (sol)	µg/L	4/28/05	2/22/07	4	3	0.58	0.58	0.22	0.10	0.58	0	CTR	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Yukon Ave.	Wet	Channel	Ag (tot)	µg/L	4/28/05	2/22/07	4	3	0.73	0.73	0.26	0.10	0.73						
Yukon Ave.	Wet	Channel	As (sol)	µg/L	4/28/05	2/22/07	4	0	0.05	2.8	1.41	1.40	1.40	0	CTR	340	0.00	0 exceedances in 2 Year(s)	0%
Yukon Ave.	Wet	Channel	As (tot)	µg/L	4/28/05	2/22/07	4	0	0.1	3.6	2.10	2.35	2.35						
Yukon Ave.	Wet	Channel	Ba (sol)	µg/L	4/28/05	2/22/07	4	0	57.8	102	73.70	67.50	67.50						
Yukon Ave.	Wet	Channel	Ba (tot)	µg/L	4/28/05	2/22/07	4	0	70.6	270	139.65	109.00	109.00						
Yukon Ave.	Wet	Channel	Be (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.20	0.20	0.00						
Yukon Ave.	Wet	Channel	Be (tot)	µg/L	4/28/05	8/25/05	3	3	0	0	0.20	0.20	0.00						
Yukon Ave.	Wet	Channel	Cd (sol)	µg/L	4/28/05	2/22/07	4	0	0.165	0.8	0.54	0.60	0.60	0	CTR	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Yukon Ave.	Wet	Channel	Cd (tot)	µg/L	4/28/05	2/22/07	4	0	0.165	1.8	1.09	1.20	1.20						
Yukon Ave.	Wet	Channel	Co (sol)	µg/L	4/28/05	8/25/05	3	2	0.8	0.8	0.33	0.10	0.80						
Yukon Ave.	Wet	Channel	Co (tot)	µg/L	4/28/05	8/25/05	3	0	0.5	3.4	2.07	2.30	2.30						
Yukon Ave.	Wet	Channel	Cr (sol)	µg/L	4/28/05	2/22/07	4	0	0.105	15.6	4.60	1.35	1.35	0	CTR	16	0.00	0 exceedances in 2 Year(s)	0%
Yukon Ave.	Wet	Channel	Cr (tot)	µg/L	4/28/05	2/22/07	4	0	0.47	33.2	10.89	4.95	4.95						
Yukon Ave.	Wet	Channel	Cu (sol)	µg/L	4/28/05	2/22/07	4	0	4	69	41.50	46.50	46.50	3	TMDL	Hardness Dependent	0.41	3 exceedances in 2 Year(s)	75%
Yukon Ave.	Wet	Channel	Cu (tot)	µg/L	4/28/05	2/22/07	4	0	6	171	106.00	123.50	123.50						
Yukon Ave.	Wet	Channel	Hardness	µg/L	4/28/05	2/22/07	4	0	52.4	298	209.85	244.50	244.50						
Yukon Ave.	Wet	Channel	Hg (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.01	0.01	0.00	0	TMDL	0.051	0.00	0 exceedances in 1 Year(s)	0%
Yukon Ave.	Wet	Channel	Hg (tot)	µg/L	4/28/05	8/25/05	3	1	0.024	0.034	0.02	0.02	0.03						
Yukon Ave.	Wet	Channel	Ni (sol)	µg/L	4/28/05	2/22/07	4	0	1.98	12	7.00	7.00	7.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 2 Year(s)	0%
Yukon Ave.	Wet	Channel	Ni (tot)	mg/L	4/28/05	2/22/07	4	0	2.89	17	11.72	13.50	13.50						
Yukon Ave.	Wet	Channel	Pb (sol)	µg/L	4/28/05	2/22/07	4	2	0.55	2	0.89	0.53	1.28	1	TMDL	Hardness Dependent	0.14	1 exceedances in 2 Year(s)	25%
Yukon Ave.	Wet	Channel	Pb (tot)	µg/L	4/28/05	2/22/07	4	0	0.55	49	25.14	25.50	25.50						
Yukon Ave.	Wet	Channel	Sb (sol)	µg/L	4/28/05	8/25/05	3	2	9	9	3.67	1.00	9.00	0	CTR	4300	0.00	0 exceedances in 1 Year(s)	0%
Yukon Ave.	Wet	Channel	Sb (tot)	µg/L	4/28/05	8/25/05	3	2	35	35	12.33	1.00	35.00						
Yukon Ave.	Wet	Channel	Se (sol)	µg/L	4/28/05	2/22/07	4	0	0.1	0.5	0.33	0.35	0.35						
Yukon Ave.	Wet	Channel	Se (tot)	µg/L	4/28/05	2/22/07	4	0	0.1	0.6	0.38	0.40	0.40						
Yukon Ave.	Wet	Channel	Th (sol)	µg/L	4/28/05	8/25/05	3	3	0	0	0.50	0.50	0.00	0	CTR	6.3	0.00	0 exceedances in 1 Year(s)	0%

Table D.2: Dominguez Channel - Metals Data Summary

Location	Weather	Type	Constituent	Unit	Dates Sampled		Total No. of Values	No. Values with/ ND	Min.	Max.	Avg.	Median		No. of exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency (# of exceed. per year)	Exceedance/Time	%Exceed
					From	To						With ND	Without ND						
Yukon Ave.	Wet	Channel	Th (tot)	µg/L	4/28/05	8/25/05	3	3	0	0	0.50	0.50	0.00						
Yukon Ave.	Wet	Channel	Zn (sol)	µg/L	4/28/05	2/22/07	4	0	8	94	61.50	72.00	72.00	1	TMDL	Hardness Dependent	0.14	1 exceedances in 2 Year(s)	25%
Yukon Ave.	Wet	Channel	Zn (tot)	µg/L	4/28/05	2/22/07	4	0	15	376	221.50	247.50	247.50						
Yukon Ave.	Dry	Channel	Ag (sol)	µg/L	1/27/05	5/26/09	45	18	0.03	0.5	0.09	0.04	0.04						
Yukon Ave.	Dry	Channel	Ag (tot)	µg/L	1/27/05	5/26/09	45	18	0.03	0.66	0.11	0.04	0.04						
Yukon Ave.	Dry	Channel	As (sol)	µg/L	1/27/05	5/26/09	47	4	0.05	8.4	1.24	1.00	1.10	0	CTR	150	0.00	0 exceedances in 5 Year(s)	0%
Yukon Ave.	Dry	Channel	As (tot)	µg/L	1/27/05	5/26/09	47	3	0.05	22.2	1.90	1.20	1.30						
Yukon Ave.	Dry	Channel	Ba (sol)	µg/L	1/27/05	5/26/09	46	0	32.2	134	60.12	53.70	53.70						
Yukon Ave.	Dry	Channel	Ba (tot)	µg/L	1/27/05	5/26/09	46	0	40	719	88.52	62.35	62.35						
Yukon Ave.	Dry	Channel	Be (sol)	µg/L	1/27/05	2/24/06	11	11	0	0	0.20	0.20	0.00						
Yukon Ave.	Dry	Channel	Be (tot)	µg/L	1/27/05	2/24/06	11	11	0	0	0.20	0.20	0.00						
Yukon Ave.	Dry	Channel	Cd (sol)	µg/L	1/27/05	5/26/09	46	9	0.01	1.6	0.29	0.17	0.17	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Yukon Ave.	Dry	Channel	Cd (tot)	µg/L	1/27/05	5/26/09	46	5	0.01	16.6	0.85	0.35	0.41						
Yukon Ave.	Dry	Channel	Co (sol)	µg/L	1/27/05	2/24/06	11	5	0.2	0.4	0.18	0.20	0.20						
Yukon Ave.	Dry	Channel	Co (tot)	µg/L	1/27/05	2/24/06	11	3	0.2	11.5	1.75	0.30	0.75						
Yukon Ave.	Dry	Channel	Cr (sol)	µg/L	1/27/05	5/26/09	46	2	0.045	23.8	2.28	1.06	1.14	2	CTR	11	0.01	2 exceedances in 5 Year(s)	4%
Yukon Ave.	Dry	Channel	Cr (tot)	µg/L	1/27/05	5/26/09	46	1	0.045	118	6.61	1.83	1.86						
Yukon Ave.	Dry	Channel	Cu (sol)	µg/L	1/27/05	5/26/09	45	1	2.91	141	16.70	11.00	11.00	14	CTR	Hardness Dependent	0.07	14 exceedances in 5 Year(s)	31%
Yukon Ave.	Dry	Channel	Cu (tot)	µg/L	1/27/05	5/26/09	46	1	4.27	166	33.62	16.50	17.00						
Yukon Ave.	Dry	Channel	Hardness	µg/L	1/27/05	5/26/09	47	0	79.5	332	197.07	192.00	192.00						
Yukon Ave.	Dry	Channel	Hg (sol)	µg/L	1/27/05	2/24/06	11	9	0.026	0.026	0.01	0.01	0.03	0	TMDL	0.051	0.00	0 exceedances in 2 Year(s)	0%
Yukon Ave.	Dry	Channel	Hg (tot)	µg/L	1/27/05	2/24/06	11	5	0.024	0.133	0.03	0.02	0.03						
Yukon Ave.	Dry	Channel	Ni (sol)	µg/L	1/27/05	5/26/09	46	1	0.17	12.1	3.61	2.92	3.00	0	CTR	Hardness Dependent	0.00	0 exceedances in 5 Year(s)	0%
Yukon Ave.	Dry	Channel	Ni (tot)	µg/L	1/27/05	5/26/09	46	1	1.01	80	7.03	4.19	4.30						
Yukon Ave.	Dry	Channel	Pb (sol)	mg/L	1/27/05	5/26/09	46	7	0.055	15.9	1.62	0.88	1.00	2	CTR	Hardness Dependent	0.01	2 exceedances in 5 Year(s)	4%
Yukon Ave.	Dry	Channel	Pb (tot)	µg/L	1/27/05	5/26/09	46	3	0.055	113	11.40	4.25	4.73						
Yukon Ave.	Dry	Channel	Sb (sol)	µg/L	1/27/05	2/24/06	11	9	3	3	1.36	1.00	3.00	0	CTR	4300	0.00	0 exceedances in 2 Year(s)	0%
Yukon Ave.	Dry	Channel	Sb (tot)	µg/L	1/27/05	2/24/06	11	5	2	6	2.18	2.00	2.50						
Yukon Ave.	Dry	Channel	Se (sol)	µg/L	1/27/05	5/26/09	47	3	0.05	1.03	0.31	0.20	0.20						
Yukon Ave.	Dry	Channel	Se (tot)	µg/L	1/27/05	5/26/09	47	2	0.05	2.2	0.38	0.20	0.29	0	CTR	5	0.00	0 exceedances in 5 Year(s)	0%
Yukon Ave.	Dry	Channel	Th (sol)	µg/L	1/27/05	2/24/06	11	7	1	4	1.05	0.50	1.50	0	CTR	6.3	0.00	0 exceedances in 2 Year(s)	0%
Yukon Ave.	Dry	Channel	Th (tot)	µg/L	1/27/05	2/24/06	11	8	1	4	0.91	0.50	1.00						
Yukon Ave.	Dry	Channel	Zn (sol)	µg/L	1/27/05	5/26/09	46	0	5	171	48.91	31.50	31.50	1	CTR	Hardness Dependent	0.01	1 exceedances in 5 Year(s)	2%
Yukon Ave.	Dry	Channel	Zn (tot)	µg/L	1/27/05	5/26/09	46	0	12	669	121.62	72.85	72.85						
Henry Ford Ave.	Wet	Estuary	Ag (sol)	µg/L	7/25/02	2/22/07	11	10	0.03	0.03	0.28	0.13	0.03	0	CTR	1.9	0.00	0 exceedances in 5 Year(s)	0%
Henry Ford Ave.	Wet	Estuary	Ag (tot)	µg/L	7/25/02	2/22/07	11	9	0.09	2.48	0.50	0.13	1.29						
Henry Ford Ave.	Wet	Estuary	As (sol)	µg/L	7/25/02	2/22/07	11	0	1	2.9	1.79	1.80	1.80	0	CTR	150	0.00	0 exceedances in 5 Year(s)	0%
Henry Ford Ave.	Wet	Estuary	As (tot)	µg/L	7/25/02	2/22/07	11	0	1	4	2.14	2.00	2.00						
Henry Ford Ave.	Wet	Estuary	Ba (sol)	µg/L	7/25/02	2/22/07	11	0	6	22	10.12	10.00	10.00						
Henry Ford Ave.	Wet	Estuary	Ba (tot)	µg/L	7/25/02	2/22/07	11	0	6	56	15.88	11.00	11.00						
Henry Ford Ave.	Wet	Estuary	Be (sol)	mg/L	7/25/02	8/25/05	10	10	0	0	0.19	0.20	0.00						
Henry Ford Ave.	Wet	Estuary	Be (tot)	µg/L	7/25/02	8/25/05	10	10	0	0	0.19	0.20	0.00						
Henry Ford Ave.	Wet	Estuary	Cd (sol)	µg/L	7/25/02	2/22/07	11	6	0.2	1	0.41	0.40	0.69	0	CTR	Hardness Dependent*	0.00	0 exceedances in 5 Year(s)	0%
Henry Ford Ave.	Wet	Estuary	Cd (tot)	µg/L	7/25/02	2/22/07	11	4	0.165	0.8	0.41	0.31	0.31						
Henry Ford Ave.	Wet	Estuary	Co (sol)	µg/L	7/25/02	8/25/05	10	5	0.3	1.5	2.37	0.40	0.40						
Henry Ford Ave.	Wet	Estuary	Co (tot)	µg/L	7/25/02	8/25/05	10	3	0.4	2.4	2.84	1.30	1.10						
Henry Ford Ave.	Wet	Estuary	Cr (sol)	µg/L	7/25/02	2/22/07	10	5	0.1	3	0.75	0.50	0.60						
Henry Ford Ave.	Wet	Estuary	Cr (tot)	µg/L	7/25/02	2/22/07	11	2	0.39	27.6	7.31	1.50	2.60						
Henry Ford Ave.	Wet	Estuary	Cu (sol)	µg/L	7/25/02	2/22/07	10	4	2.3	17	5.52	3.15	7.50	5	TMDL	Hardness Dependent*	0.11	5 exceedances in 5 Year(s)	50%
Henry Ford Ave.	Wet	Estuary	Cu (tot)	µg/L	7/25/02	2/22/07	11	5	1	55	10.35	2.00	10.00						
Henry Ford Ave.	Wet	Estuary	Hardness	µg/L	2/26/04	2/22/07	8	0	25.9	5390	3,499.86	4,490.00	4,490.00						
Henry Ford Ave.	Wet	Estuary	Hg (sol)	µg/L	7/25/02	8/25/05	10	3	0.03	0.136	0.05	0.04	0.04						
Henry Ford Ave.	Wet	Estuary	Hg (tot)	µg/L	7/25/02	8/25/05	10	2	0.022	0.165	0.05	0.04	0.04						
Henry Ford Ave.	Wet	Estuary	Ni (sol)	µg/L	7/25/02	2/22/07	11	2	1.94	12.8	5.03	3.00	3.32	1	CTR	Hardness Dependent*	0.02	1 exceedances in 5 Year(s)	9%
Henry Ford Ave.	Wet	Estuary	Ni (tot)	µg/L	7/25/02	2/22/07	11	2	3	12.1	5.24	3.10	5.45						
Henry Ford Ave.	Wet	Estuary	Pb (sol)	µg/L	7/25/02	2/22/07	11	5	0.55	12.6	4.45	5.00	6.00	2	TMDL	Hardness Dependent*	0.04	2 exceedances in 5 Year(s)	18%
Henry Ford Ave.	Wet	Estuary	Pb (tot)	µg/L	7/25/02	2/22/07	11	3	0.55	36.4	10.81	6.00	9.50						

Table D.2: Dominguez Channel - Metals Data Summary

Location	Weather	Type	Constituent	Unit	Dates Sampled		Total No. of Values	No. Values with/ ND	Min.	Max.	Avg.	Median		No. of exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency (# of exceed. per year)	Exceedance/Time	%Exceed
					From	To						With ND	Without ND						
Henry Ford Ave.	Wet	Estuary	Sb (sol)	µg/L	7/25/02	8/25/05	10	5	2	13	3.70	2.90	4.00						
Henry Ford Ave.	Wet	Estuary	Sb (tot)	µg/L	7/25/02	8/25/05	10	5	3	13	3.86	3.00	4.40						
Henry Ford Ave.	Wet	Estuary	Se (sol)	µg/L	7/25/02	2/22/07	11	5	0.2	2.1	0.36	0.20	0.20						
Henry Ford Ave.	Wet	Estuary	Se (tot)	µg/L	7/25/02	2/22/07	11	4	0.2	2.5	0.43	0.20	0.20	0	CTR	290	0.00	0 exceedances in 5 Year(s)	0%
Henry Ford Ave.	Wet	Estuary	Th (sol)	µg/L	7/25/02	8/25/05	9	4	0.7	16	3.24	1.40	1.40	1	CTR	6.3	0.04	1 exceedances in 4 Year(s)	11%
Henry Ford Ave.	Wet	Estuary	Th (tot)	µg/L	7/25/02	8/25/05	10	5	0.7	12	3.03	1.00	1.00						
Henry Ford Ave.	Wet	Estuary	Zn (sol)	µg/L	7/25/02	2/22/07	11	2	12	61	25.15	18.00	20.00	1	TMDL	90	0.02	1 exceedances in 5 Year(s)	9%
Henry Ford Ave.	Wet	Estuary	Zn (tot)	µg/L	7/25/02	2/22/07	11	2	24	243	54.13	28.20	31.00						
Henry Ford Ave.	Dry	Estuary	Ag (sol)	µg/L	4/26/01	5/26/09	75	52	0.03	4	0.58	0.13	0.04	3	CTR	Hardness Dependent*	0.00	3 exceedances in 9 Year(s)	4%
Henry Ford Ave.	Dry	Estuary	Ag (tot)	µg/L	4/26/01	5/26/09	75	52	0.03	10.5	0.84	0.13	0.30						
Henry Ford Ave.	Dry	Estuary	As (sol)	µg/L	4/26/01	5/26/09	78	4	0.3	3.2	1.62	1.50	1.40	0	CTR	36	0.00	0 exceedances in 9 Year(s)	0%
Henry Ford Ave.	Dry	Estuary	As (tot)	µg/L	4/26/01	5/26/09	79	4	0.3	3.4	1.75	1.60	1.60						
Henry Ford Ave.	Dry	Estuary	Ba (sol)	µg/L	4/26/01	5/26/09	76	3	2.46	41.1	13.22	10.50	12.00						
Henry Ford Ave.	Dry	Estuary	Ba (tot)	µg/L	4/26/01	5/26/09	76	2	2.69	45.6	14.26	12.60	13.00						
Henry Ford Ave.	Dry	Estuary	Be (sol)	µg/L	4/26/01	2/24/06	47	37	0.043	2.4	0.32	0.20	0.50						
Henry Ford Ave.	Dry	Estuary	Be (tot)	µg/L	4/26/01	2/24/06	47	34	0.022	2.3	0.33	0.25	0.40						
Henry Ford Ave.	Dry	Estuary	Cd (sol)	µg/L	4/26/01	5/26/09	76	34	0.01	5.6	0.47	0.33	0.33	0	CTR	Hardness Dependent*	0.00	0 exceedances in 9 Year(s)	0%
Henry Ford Ave.	Dry	Estuary	Cd (tot)	µg/L	4/26/01	5/26/09	76	34	0.01	5.8	0.56	0.29	0.29						
Henry Ford Ave.	Dry	Estuary	Co (sol)	µg/L	4/26/01	2/24/06	44	19	0.2	2.5	3.25	0.85	0.60						
Henry Ford Ave.	Dry	Estuary	Co (tot)	µg/L	4/26/01	2/24/06	45	20	0.38	12	3.52	0.90	0.70						
Henry Ford Ave.	Dry	Estuary	Cr (sol)	µg/L	4/26/01	5/26/09	76	46	0.045	42.5	2.83	0.50	1.61						
Henry Ford Ave.	Dry	Estuary	Cr (tot)	µg/L	4/26/01	5/26/09	76	27	0.045	31.3	4.47	1.16	2.40						
Henry Ford Ave.	Dry	Estuary	Cu (sol)	µg/L	4/26/01	5/26/09	73	21	1.3	75	10.74	6.00	11.50	43	TMDL	Hardness Dependent*	0.07	43 exceedances in 9 Year(s)	59%
Henry Ford Ave.	Dry	Estuary	Cu (tot)	mg/L	4/26/01	5/26/09	76	16	1.3	83	13.32	7.40	11.50						
Henry Ford Ave.	Dry	Estuary	Hardness	µg/L	4/29/04	5/26/09	49	0	986	6260	4,689.92	5,120.00	5,120.00						
Henry Ford Ave.	Dry	Estuary	Hg (sol)	µg/L	4/26/01	2/24/06	45	23	0.025	0.17	0.06	0.04	0.04	8	TMDL	0.051	0.04	8 exceedances in 5 Year(s)	18%
Henry Ford Ave.	Dry	Estuary	Hg (tot)	µg/L	4/26/01	2/24/06	46	22	0.023	0.17	0.06	0.04	0.05						
Henry Ford Ave.	Dry	Estuary	Ni (sol)	µg/L	4/26/01	5/26/09	74	15	0.1	23.3	7.20	5.45	6.43	19	CTR	Hardness Dependent*	0.03	19 exceedances in 9 Year(s)	26%
Henry Ford Ave.	Dry	Estuary	Ni (tot)	µg/L	4/26/01	5/26/09	76	14	0.1	37.3	7.77	5.75	6.90						
Henry Ford Ave.	Dry	Estuary	Pb (sol)	µg/L	4/26/01	5/26/09	75	31	0.055	42	5.82	5.00	5.75	14	TMDL	Hardness Dependent*	0.02	14 exceedances in 9 Year(s)	19%
Henry Ford Ave.	Dry	Estuary	Pb (tot)	µg/L	4/26/01	5/26/09	76	27	0.055	60.2	7.40	5.00	7.00						
Henry Ford Ave.	Dry	Estuary	Sb (sol)	µg/L	4/26/01	2/24/06	46	41	2.3	12.8	2.71	1.00	4.90	0	CTR	4300	0.00	0 exceedances in 5 Year(s)	0%
Henry Ford Ave.	Dry	Estuary	Sb (tot)	µg/L	4/26/01	2/24/06	47	37	1.1	23.2	3.40	2.00	3.65						
Henry Ford Ave.	Dry	Estuary	Se (sol)	µg/L	5/31/01	5/26/09	75	18	0.05	2.4	0.67	0.20	0.20						
Henry Ford Ave.	Dry	Estuary	Se (tot)	µg/L	5/31/01	5/26/09	77	15	0.05	2.4	0.72	0.20	0.20	0	CTR	5	0.00	0 exceedances in 8 Year(s)	0%
Henry Ford Ave.	Dry	Estuary	Th (sol)	µg/L	4/26/01	1/26/06	46	34	2	12	3.41	2.50	5.15	5	CTR	6.3	0.02	5 exceedances in 5 Year(s)	11%
Henry Ford Ave.	Dry	Estuary	Th (tot)	µg/L	4/26/01	1/26/06	46	33	0.669	12	3.39	2.50	4.00						
Henry Ford Ave.	Dry	Estuary	Va(sol)	µg/L	4/26/01	5/31/01	2	2	0	0	2.50	2.50	0.00						
Henry Ford Ave.	Dry	Estuary	Va(tot)	µg/L	4/26/01	5/31/01	2	2	0	0	2.50	2.50	0.00						
Henry Ford Ave.	Dry	Estuary	Zn (sol)	µg/L	4/26/01	5/26/09	74	13	2	78	21.19	16.05	19.00	0	TMDL	Hardness Dependent*	0.00	0 exceedances in 9 Year(s)	0%
Henry Ford Ave.	Dry	Estuary	Zn (tot)	µg/L	4/26/01	5/26/09	76	10	2	145	29.86	26.00	28.85						
Wilmington Ave.	Wet	Estuary	Ag (sol)	µg/L	7/25/02	2/22/07	11	10	0.03	0.03	0.28	0.13	0.03	0	CTR	1.9	0.00	0 exceedances in 5 Year(s)	0%
Wilmington Ave.	Wet	Estuary	Ag (tot)	µg/L	7/25/02	2/22/07	11	10	0.03	0.03	0.28	0.13	0.03						
Wilmington Ave.	Wet	Estuary	As (sol)	µg/L	7/25/02	2/22/07	11	0	1	2.7	1.76	1.80	1.80	0	CTR	150	0.00	0 exceedances in 5 Year(s)	0%
Wilmington Ave.	Wet	Estuary	As (tot)	µg/L	7/25/02	2/22/07	11	0	1	2.8	2.04	2.10	2.10						
Wilmington Ave.	Wet	Estuary	Ba (sol)	µg/L	7/25/02	8/25/05	10	0	9.1	32	20.47	20.80	20.80						
Wilmington Ave.	Wet	Estuary	Ba (tot)	µg/L	7/25/02	2/22/07	11	0	14	39	26.32	26.60	26.60						
Wilmington Ave.	Wet	Estuary	Be (sol)	µg/L	7/25/02	8/25/05	10	10	0	0	0.19	0.20	0.00						
Wilmington Ave.	Wet	Estuary	Be (tot)	µg/L	7/25/02	8/25/05	10	10	0	0	0.19	0.20	0.00						
Wilmington Ave.	Wet	Estuary	Cd (sol)	µg/L	7/25/02	2/22/07	11	7	0.16	1.2	0.32	0.17	0.33	0	CTR	Hardness Dependent*	0.00	0 exceedances in 5 Year(s)	0%
Wilmington Ave.	Wet	Estuary	Cd (tot)	µg/L	7/25/02	2/22/07	11	5	0.165	1	0.39	0.29	0.40						
Wilmington Ave.	Wet	Estuary	Co (sol)	µg/L	7/25/02	8/25/05	10	5	0.3	0.6	2.23	0.30	0.30						
Wilmington Ave.	Wet	Estuary	Co (tot)	µg/L	7/25/02	8/25/05	10	3	0.28	1.5	2.59	0.85	0.80						
Wilmington Ave.	Wet	Estuary	Cr (sol)	µg/L	7/25/02	2/22/07	11	5	0.3	2.4	0.78	0.50	0.80						
Wilmington Ave.	Wet	Estuary	Cr (tot)	µg/L	7/25/02	2/22/07	11	2	0.5	24.7	5.92	1.70	2.30						
Wilmington Ave.	Wet	Estuary	Cu (sol)	µg/L	7/25/02	2/22/07	11	1	3.9	78	13.86	8.70	9.35	10	TMDL	Hardness Dependent*	0.20	10 exceedances in 5 Year(s)	91%
Wilmington Ave.	Wet	Estuary	Cu (tot)	µg/L	7/25/02	2/22/07	11	1	4.1	78	16.61	11.00	11.00						

Table D.2: Dominguez Channel - Metals Data Summary

Location	Weather	Type	Constituent	Unit	Dates Sampled		Total No. of Values	No. Values with/ ND	Min.	Max.	Avg.	Median		No. of exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency (# of exceed. per year)	Exceedance/Time	%Exceed
					From	To						With ND	Without ND						
Wilmington Ave.	Wet	Estuary	Hardness	µg/L	2/26/04	2/22/07	8	0	19	4590	2,394.03	2,645.00	2,645.00						
Wilmington Ave.	Wet	Estuary	Hg (sol)	µg/L	7/25/02	8/25/05	10	3	0.03	0.07	0.03	0.03	0.04						
Wilmington Ave.	Wet	Estuary	Hg (tot)	µg/L	7/25/02	8/25/05	10	2	0.026	0.1	0.04	0.04	0.04						
Wilmington Ave.	Wet	Estuary	Ni (sol)	µg/L	7/25/02	2/22/07	11	2	1.54	9.1	4.32	3.00	3.00	1	CTR	Hardness Dependent*	0.02	1 exceedances in 5 Year(s)	9%
Wilmington Ave.	Wet	Estuary	Ni (tot)	µg/L	7/25/02	2/22/07	11	2	3	10.1	4.99	3.42	4.00						
Wilmington Ave.	Wet	Estuary	Pb (sol)	µg/L	7/25/02	2/22/07	11	6	0.55	8	3.38	4.00	5.60	0	TMDL	Hardness Dependent*	0.00	0 exceedances in 5 Year(s)	0%
Wilmington Ave.	Wet	Estuary	Pb (tot)	mg/L	7/25/02	2/22/07	11	3	0.55	11.4	5.90	6.00	7.50						
Wilmington Ave.	Wet	Estuary	Sb (sol)	µg/L	7/25/02	8/25/05	10	8	3.1	4	2.08	1.00	3.55						
Wilmington Ave.	Wet	Estuary	Sb (tot)	µg/L	7/25/02	8/25/05	10	6	1.1	5	2.48	2.05	3.50						
Wilmington Ave.	Wet	Estuary	Se (sol)	µg/L	7/25/02	2/22/07	11	5	0.2	2.3	0.45	0.20	0.45						
Wilmington Ave.	Wet	Estuary	Se (tot)	µg/L	7/25/02	2/22/07	11	2	0.2	2.5	0.53	0.30	0.40	0	CTR	290	0.00	0 exceedances in 5 Year(s)	0%
Wilmington Ave.	Wet	Estuary	Th (sol)	µg/L	7/25/02	8/25/05	10	8	2	14	2.40	0.55	8.00	1	CTR	6.3	0.03	1 exceedances in 4 Year(s)	10%
Wilmington Ave.	Wet	Estuary	Th (tot)	µg/L	7/25/02	8/25/05	10	7	1	10	2.62	0.55	9.80						
Wilmington Ave.	Wet	Estuary	Zn (sol)	µg/L	7/25/02	8/25/05	10	2	13.2	97	33.83	37.00	38.00	2	TMDL	90	0.06	2 exceedances in 4 Year(s)	20%
Wilmington Ave.	Wet	Estuary	Zn (tot)	µg/L	7/25/02	2/22/07	11	2	22.2	124	51.62	47.00	48.00						
Wilmington Ave.	Dry	Estuary	Ag (sol)	µg/L	4/26/01	5/26/09	75	55	0.03	2.94	0.49	0.13	0.04	1	CTR	Hardness Dependent*	0.00	1 exceedances in 9 Year(s)	1%
Wilmington Ave.	Dry	Estuary	Ag (tot)	µg/L	4/26/01	5/26/09	75	54	0.03	19.5	0.76	0.13	0.04						
Wilmington Ave.	Dry	Estuary	As (sol)	µg/L	4/26/01	5/26/09	79	4	0.2	3.9	1.77	1.50	1.49	0	CTR	36	0.00	0 exceedances in 9 Year(s)	0%
Wilmington Ave.	Dry	Estuary	As (tot)	µg/L	4/26/01	5/26/09	79	4	0.3	5.9	1.99	1.80	1.70						
Wilmington Ave.	Dry	Estuary	Ba (sol)	mg/L	4/26/01	5/26/09	76	1	4.8	69.7	25.52	23.00	23.00						
Wilmington Ave.	Dry	Estuary	Ba (tot)	µg/L	4/26/01	5/26/09	76	1	4.36	75.5	27.08	23.75	24.00						
Wilmington Ave.	Dry	Estuary	Be (sol)	µg/L	4/26/01	2/24/06	47	38	0.07	2.2	0.30	0.25	0.40						
Wilmington Ave.	Dry	Estuary	Be (tot)	µg/L	4/26/01	2/24/06	47	38	0.044	2.4	0.31	0.20	0.40						
Wilmington Ave.	Dry	Estuary	Cd (sol)	µg/L	4/26/01	5/26/09	76	39	0.01	3.52	0.45	0.25	0.35	0	CTR	Hardness Dependent*	0.00	0 exceedances in 9 Year(s)	0%
Wilmington Ave.	Dry	Estuary	Cd (tot)	µg/L	4/26/01	5/26/09	76	35	0.01	5.2	0.49	0.27	0.28						
Wilmington Ave.	Dry	Estuary	Co (sol)	µg/L	4/26/01	2/24/06	45	26	0.28	7.2	3.32	0.80	0.60						
Wilmington Ave.	Dry	Estuary	Co (tot)	µg/L	4/26/01	2/24/06	45	24	0.3	10.5	3.48	1.00	0.71						
Wilmington Ave.	Dry	Estuary	Cr (sol)	µg/L	4/26/01	5/26/09	76	37	0.045	43.1	2.67	0.50	0.99						
Wilmington Ave.	Dry	Estuary	Cr (tot)	µg/L	4/26/01	5/26/09	76	23	0.045	33.2	4.80	1.40	2.85						
Wilmington Ave.	Dry	Estuary	Cu (sol)	µg/L	4/26/01	5/26/09	72	22	0.5	56	10.70	6.00	11.10	44	TMDL	Hardness Dependent*	0.08	44 exceedances in 9 Year(s)	61%
Wilmington Ave.	Dry	Estuary	Cu (tot)	µg/L	4/26/01	5/26/09	75	17	0.5	69	13.99	9.89	13.00						
Wilmington Ave.	Dry	Estuary	Hardness	µg/L	4/29/04	5/26/09	49	0	65.2	5390	3,614.37	4,020.00	4,020.00						
Wilmington Ave.	Dry	Estuary	Hg (sol)	µg/L	4/26/01	2/24/06	46	26	0.0008	0.2	0.06	0.04	0.05	10	TMDL	0.051	0.04	10 exceedances in 5 Year(s)	22%
Wilmington Ave.	Dry	Estuary	Hg (tot)	µg/L	4/26/01	2/24/06	46	23	0.026	0.2	0.06	0.04	0.06						
Wilmington Ave.	Dry	Estuary	Ni (sol)	µg/L	4/26/01	5/26/09	75	16	0.1	36.7	7.20	5.00	5.87	16	CTR	Hardness Dependent*	0.03	16 exceedances in 9 Year(s)	21%
Wilmington Ave.	Dry	Estuary	Ni (tot)	µg/L	4/26/01	5/26/09	76	15	0.1	37.5	7.65	6.00	6.42						
Wilmington Ave.	Dry	Estuary	Pb (sol)	µg/L	4/26/01	5/26/09	72	28	0.055	32.2	5.70	5.00	5.50	12	TMDL	Hardness Dependent*	0.02	12 exceedances in 9 Year(s)	17%
Wilmington Ave.	Dry	Estuary	Pb (tot)	µg/L	4/26/01	5/26/09	76	27	0.055	46.5	6.38	5.00	6.00						
Wilmington Ave.	Dry	Estuary	Sb (sol)	µg/L	4/26/01	2/24/06	46	38	1.3	18	2.93	1.55	4.00	0	CTR	4300	0.00	0 exceedances in 5 Year(s)	0%
Wilmington Ave.	Dry	Estuary	Sb (tot)	µg/L	4/26/01	2/24/06	47	39	1.1	18	2.90	1.00	4.00						
Wilmington Ave.	Dry	Estuary	Se (sol)	µg/L	5/31/01	5/26/09	77	10	0.05	3.9	0.76	0.30	0.24						
Wilmington Ave.	Dry	Estuary	Se (tot)	µg/L	5/31/01	5/26/09	77	7	0.05	3.9	0.78	0.30	0.25	0	CTR	5	0.00	0 exceedances in 8 Year(s)	0%
Wilmington Ave.	Dry	Estuary	Th (sol)	µg/L	4/26/01	2/24/06	47	36	1.3	14	3.04	2.40	3.00	4	CTR	6.3	0.02	4 exceedances in 5 Year(s)	9%
Wilmington Ave.	Dry	Estuary	Th (tot)	µg/L	4/26/01	2/24/06	47	34	0.519	13	3.05	2.50	3.00						
Wilmington Ave.	Dry	Estuary	Va(sol)	µg/L	4/26/01	5/31/01	2	2	0	0	2.50	2.50	0.00						
Wilmington Ave.	Dry	Estuary	Va(tot)	µg/L	4/26/01	5/31/01	2	2	0	0	2.50	2.50	0.00						
Wilmington Ave.	Dry	Estuary	Zn (sol)	mg/L	4/26/01	5/26/09	75	10	2	143	29.74	25.40	27.00	4	TMDL	Hardness Dependent*	0.01	4 exceedances in 9 Year(s)	5%
Wilmington Ave.	Dry	Estuary	Zn (tot)	µg/L	4/26/01	5/26/09	76	9	2	179	38.80	32.00	33.00						

Notes:
Water quality data available but no screening criteria was determined.
Source:
Dominguez Channel Status and Trends (Metals, 2001-2009)

Table D.3: Dominguez Channel - At Station S-28 Data Summary

Weather	Constituent	Unit	Dates Sampled		Total No. of Values	No. with/ ND	Min.	Max.	Avg.	Median		No of Exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency(# of exceed. per year)	Exceedance/Time	%Exceed
			From	To						With ND	Without ND						
Dry	1,2 Benzanthracene	µg/L	10/31/06	11/25/07	6	6	0.05	-	-	0.05	-						
Dry	1,2,4-Trichlorobenzene	µg/L	10/31/06	06/12/13	28	28	0.46	-	-	0.50	-						
Dry	1,2-Dichlorobenzene	µg/L	10/31/06	06/12/13	28	28	0.39	-	-	0.50	-	0	CTR	17,000.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	1,3-Dichlorobenzene	µg/L	10/31/06	06/12/13	28	28	0.39	-	-	0.50	-	0	CTR	2,600.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	1,4-Dichlorobenzene	µg/L	10/31/06	06/12/13	28	28	0.39	-	-	0.50	-	0	CTR	2,600.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	2- Chlorophenol	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-	0	CTR	400.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	2,4,5-TP-SILVEX	µg/L	10/31/06	06/12/13	28	28	1.49	-	-	0.10	-						
Dry	2,4-D	µg/L	10/31/06	06/12/13	28	27	0.74	-	0.553	0.01	0.553						
Dry	2,4-dichlorophenol	µg/L	10/31/06	06/12/13	30	30	0.68	-	-	0.50	-	0	CTR	790.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	2,6-Dinitrotoluene	µg/L	10/31/06	06/12/13	28	28	2.32	-	-	2.50	-						
Dry	2-Chloroethyl vinyl ether	µg/L	04/02/07	04/09/13	27	27	0.89	-	-	1.25	-						
Dry	2-Chloronaphthalene	µg/L	10/31/06	06/12/13	28	28	4.64	-	-	5.00	-	0	CTR	4,300.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	2-nitrophenol	µg/L	10/31/06	06/12/13	30	30	2.92	-	-	1.50	-						
Dry	3,3-Dichlorobenzidine	µg/L	10/31/06	06/12/13	28	28	2.32	-	-	2.50	-	0	CTR	0.08	0.00	0 exceedances in 7 Year(s)	0%
Dry	4,4'-DDD	µg/L	07/13/09	06/12/13	17	17	0.03	-	-	0.03	-	0	CTR	0.00084	0.00	0 exceedances in 4 Year(s)	0%
Dry	4,4'-DDE	µg/L	07/13/09	06/12/13	17	17	0.03	-	-	0.03	-	0	CTR	0.00059	0.00	0 exceedances in 4 Year(s)	0%
Dry	4,4'-DDT	µg/L	07/13/09	06/12/13	17	17	0.01	-	-	0.01	-	0	TMDL	0.00100	0.00	0 exceedances in 4 Year(s)	0%
Dry	4-Bromophenyl phenyl ether	µg/L	10/31/06	06/12/13	28	28	1.54	-	-	2.50	-						
Dry	4-Chlorophenyl phenyl ether	µg/L	10/31/06	06/12/13	28	28	1.36	-	-	2.50	-						
Dry	4-nitrophenol	µg/L	10/31/06	06/12/13	30	30	1.90	-	-	2.00	-						
Dry	Acenaphthene	µg/L	10/31/06	06/12/13	28	28	0.46	-	-	0.50	-	0	CTR	2,700.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Acenaphthylene	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-						
Dry	Aldrin	µg/L	10/31/06	06/12/13	28	28	0.01	-	-	0.00	-	0	CTR	0.00014	0.00	0 exceedances in 7 Year(s)	0%
Dry	Alkalinity	mg/L	10/10/02	04/25/06	5		127.58	55	178	118.00	118						
Dry	alpha-BHC	µg/L	10/31/06	06/12/13	28	28	0.01	-	-	0.01	-	0	CTR	0.01	0.00	0 exceedances in 7 Year(s)	0%
Dry	alpha-chlordane	µg/L	10/31/06	06/12/13	27	27	0.04	-	-	0.05	-						
Dry	Anthracene	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-	0	CTR	110,000.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Atrazine	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-						
Dry	Benzidine	µg/L	10/31/06	06/12/13	28	28	2.32	-	-	2.50	-	0	CTR	0.00054	0.00	0 exceedances in 7 Year(s)	0%
Dry	Benzo(a)pyrene	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Dry	Benzo(k)flouranthene	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Dry	beta-BHC	µg/L	10/31/06	06/12/13	28	28	0.01	-	-	0.00	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Dry	BOD	mg/L	10/10/02	06/12/13	33	4	10.14	-	45.9	7.77	8.78						
Dry	Butyl benzyl phthalate	µg/L	10/31/06	06/12/13	28	28	2.74	-	-	5.00	-	0	CTR	5,200.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Chlordane	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.03	-	0	CTR	0.00059	0.00	0 exceedances in 7 Year(s)	0%
Dry	Chloride	mg/L	10/10/02	06/12/13	33	3	119.69	-	314	151.00	156						
Dry	Chlorpyrifos	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.03	-						
Dry	Chrysene	µg/L	10/31/06	06/12/13	28	28	2.32	-	-	2.50	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Dry	Cyanazine	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-						
Dry	Cyanide	mg/L	04/02/07	04/09/13	20	10	0.01	-	0.049	0.00	0.0095	0	Basin Plan	5.20	0.00	0 exceedances in 7 Year(s)	0%
Dry	delta-BHC	µg/L	10/31/06	06/12/13	28	28	0.01	-	-	0.00	-						
Dry	Diazinon	µg/L	10/31/06	06/12/13	28	28	0.00	-	-	0.01	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Dry	Dieldrin	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.01	-	0	CTR	0.00014	0.00	0 exceedances in 7 Year(s)	0%
Dry	Diethyl phthalate	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-	0	CTR	120,000.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Dimethyl phthalate	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-	0	CTR	2,900,000.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	di-n-Butyl phthalate	µg/L	10/28/03	06/12/13	26	25	4.59	-	4.3	5.00	4.3	0	CTR	12,000.00	0.00	0 exceedances in 10 Year(s)	0%
Dry	di-n-Octyl phthalate	µg/L	10/31/06	06/12/13	25	25	4.60	-	-	5.00	-						
Dry	Dissolved Aluminum	µg/L	10/31/06	06/12/13	28	20	119.78	-	780	50.00	258						
Dry	Dissolved Antimony	µg/L	10/10/02	06/12/13	31	7	1.93	-	5.94	1.84	1.815	0	CTR	4,300.00	0.00	0 exceedances in 11 Year(s)	0%
Dry	Dissolved Arsenic	µg/L	10/10/02	06/12/13	31	11	1.67	-	3.55	1.63	1.775	0	CTR	150.00	0.00	0 exceedances in 11 Year(s)	0%
Dry	Dissolved Barium	µg/L	01/24/06	06/12/13	30	7	53.84	-	91.2	57.15	60.1						
Dry	Dissolved Cadmium	µg/L	10/31/06	06/12/13	28	21	0.21	-	0.494	0.13	0.339	0	CTR	Hardness Dependent	0.00	0 exceedances in 7 Year(s)	0%
Dry	Dissolved Chromium	µg/L	10/10/02	06/12/13	33	7	2.51	-	6.65	1.90	1.855						
Dry	Dissolved Chromium +6	µg/L	10/31/06	06/12/13	28	21	1.16	-	1.27	0.63	0.46	0	CTR	11.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Dissolved Copper	µg/L	10/10/02	06/12/13	33	7	16.45	-	64.4	12.00	11.9	7	CTR	Hardness Dependent	0.02	7 exceedances in 11 Year(s)	21%
Dry	Dissolved Iron	µg/L	10/31/06	06/12/13	28	16	211.32	-	1260	66.35	281.5						
Dry	Dissolved Lead	µg/L	04/30/03	06/12/13	30	11	2.40	-	21.8	0.65	1.18	1	TMDL	Hardness Dependent	0.00	1 exceedances in 11 Year(s)	3%
Dry	Dissolved Mercury	µg/L	10/31/06	06/12/13	28	28	0.19	-	-	0.25	-	0	Basin Plan	0.05	0.00	0 exceedances in 7 Year(s)	0%

Table D.3: Dominguez Channel - At Station S-28 Data Summary

Weather	Constituent	Unit	Dates Sampled		Total No. of Values	No. with/ ND	Min.	Max.	Avg.	Median		No of Exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency(# of exceed. per year)	Exceedance/Time	%Exceed
			From	To						With ND	Without ND						
Dry	Dissolved Nickel	µg/L	10/10/02	06/12/13	33	7	3.90	-	6.64	4.03	3.7	0	CTR	Hardness Dependent	0.00	0 exceedances in 11 Year(s)	0%
Dry	Dissolved Oxygen	mg/L	10/10/02	04/09/13	25		14.82	7.8	24.9	14.18	14.18	0	Basin Plan	5.00	0.00	0 exceedances in 11 Year(s)	0%
Dry	Dissolved Phosphorus	mg/L	10/10/02	06/12/13	33	5	0.21	-	0.89	0.16	0.19						
Dry	Dissolved Selenium	µg/L	10/10/02	06/12/13	32	12	1.93	-	5.98	2.00	2.155						
Dry	Dissolved Silver	µg/L	10/31/06	06/12/13	28	28	0.64	-	-	0.13	-						
Dry	Dissolved Thallium	µg/L	10/31/06	06/12/13	28	28	0.39	-	-	0.50	-						
Dry	Dissolved Zinc	µg/L	10/10/02	06/12/13	33	3	63.59	-	368	35.80	37.4	2	CTR	Hardness Dependent	0.01	2 exceedances in 11 Year(s)	6%
Dry	Endosulfan sulfate	µg/L	10/31/06	06/12/13	28	28	0.03	-	-	0.03	-	0	CTR	240.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Endrin	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.01	-	0	CTR	0.81	0.00	0 exceedances in 7 Year(s)	0%
Dry	Endrin aldehyde	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.01	-	0	CTR	0.81	0.00	0 exceedances in 7 Year(s)	0%
Dry	Fecal Coliform	MPN/100mL	10/10/02	04/09/13	27		24,415.56	20	240000	1,300.00	1300	19	Basin Plan	400.00	0.07	19 exceedances in 11 Year(s)	70%
Dry	Fecal Enterococcus	MPN/100ml	10/10/02	04/09/13	27	2	21,893.33	-	240000	500.00	500						
Dry	Fecal Streptococcus	MPN/100ml	10/10/02	04/09/13	27	1	24,537.04	-	240000	500.00	500						
Dry	Fluoranthene	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.03	-	0	CTR	370.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Fluorene	µg/L	10/31/06	06/12/13	28	28	0.05	-	-	0.05	-	0	CTR	14,000.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	gamma-BHC (lindane)	µg/L	10/31/06	06/12/13	28	28	0.01	-	0.0109	0.01	-	0	CTR	0.06	0.00	0 exceedances in 7 Year(s)	0%
Dry	gamma-chlordane	µg/L	10/31/06	06/12/13	27	27	0.04	-	-	0.05	-						
Dry	Glyphosate	µg/L	10/31/06	06/12/13	28	25	7.44	-	53.5	2.50	9.07						
Dry	Hardness	mg/L	10/10/02	04/25/06	26		285.38	170	430	270.00	270						
Dry	Heptachlor	µg/L	10/31/06	06/12/13	28	28	0.01	-	-	0.01	-	0	CTR	0.00021	0.00	0 exceedances in 7 Year(s)	0%
Dry	Heptachlor Epoxide	µg/L	10/31/06	06/12/13	28	28	0.01	-	-	0.01	-	0	CTR	0.00011	0.00	0 exceedances in 7 Year(s)	0%
Dry	Hexachlorobenzene	µg/L	10/31/06	06/12/13	28	28	0.46	-	-	0.50	-	0	CTR	0.00077	0.00	0 exceedances in 7 Year(s)	0%
Dry	Hexachlorobutadiene	µg/L	10/31/06	06/12/13	28	28	0.46	-	-	0.50	-	0	CTR	50.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Hexachloro-cyclopentadiene	µg/L	10/31/06	06/12/13	28	28	2.32	-	-	2.50	-	0	CTR	17,000.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Hexachloroethane	µg/L	10/31/06	06/12/13	28	28	0.46	-	-	0.50	-	0	CTR	8.90	0.00	0 exceedances in 7 Year(s)	0%
Dry	Isophorone	µg/L	04/25/06	06/12/13	29	28	0.46	-	0.24	0.50	0.24	0	CTR	600.00	0.00	0 exceedances in 8 Year(s)	0%
Dry	Kjeldahl-N	mg/L	10/10/02	06/12/13	33		1.68	0.1	8.4	1.24	1.24						
Dry	Malathion	µg/L	10/31/06	06/12/13	28	28	0.66	-	-	0.50	-						
Dry	MBAS	mg/L	01/24/06	04/25/06	2		0.10	0.076	0.131	0.10	0.1035						
Dry	Methyl Tertiary Butyl Ether	µg/L	04/02/07	04/09/13	20	20	0.50	-	-	0.50	-						
Dry	Naphthalene	µg/L	10/31/06	06/12/13	28	28	0.09	-	-	0.10	-						
Dry	NH3-N	mg/L	10/10/02	06/12/13	31	8	0.29	-	1.48	0.21	0.27						
Dry	Nitrate	mg/L	10/10/02	04/25/06	5		5.82	2.47	13.9	3.70	3.7	0	Basin Plan	45.00	0.00	0 exceedances in 4 Year(s)	0%
Dry	Nitrate-N	mg/L	10/10/02	06/12/13	28	3	1.66	-	3.19	1.77	1.975	0	Basin Plan	10.00	0.00	0 exceedances in 11 Year(s)	0%
Dry	Nitrite-N	mg/L	10/10/02	06/12/13	31	21	0.05	-	0.457	0.02	0.064	0	Basin Plan	1.00	0.00	0 exceedances in 11 Year(s)	0%
Dry	Nitrobenzene	µg/L	10/31/06	06/12/13	28	28	0.46	-	-	0.50	-	0	CTR	1,900.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	N-Nitroso-dimethyl amine	µg/L	10/31/06	07/20/09	13	13	2.12	-	-	2.50	-						
Dry	N-Nitroso-di-n-propyl amine	µg/L	10/31/06	06/12/13	28	28	2.32	-	-	2.50	-	0	CTR	1.40	0.00	0 exceedances in 7 Year(s)	0%
Dry	N-Nitroso-diphenyl amine	µg/L	10/31/06	07/20/09	13	13	0.42	-	-	0.50	-						
Dry	Oil and Grease	mg/L	04/02/07	04/09/13	20	18	3.28	-	28.2	2.50	14.75						
Dry	Pentachlorophenol	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-	0	CTR	8.20	0.00	0 exceedances in 7 Year(s)	0%
Dry	pH	0.00	10/10/02	06/12/13	33		8.05	6.19	9.62	8.22	8.22	9	Basin Plan	8.50	0.03	9 exceedances in 11 Year(s)	27%
Dry	Phenanthrene	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.03	-						
Dry	Phenol	µg/L	10/31/06	06/12/13	27	27	0.49	-	-	0.50	-	0	CTR	4,600,000.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Prometryn	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-						
Dry	Pyrene	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.03	-	0	CTR	11,000.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Ratio Fecal Coliform/Total Coliform	0.00	10/10/02	04/25/06	5		0.15	0.02	0.43	0.10	0.10						
Dry	Simazine	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-						
Dry	Specific Conductance	umhos/cm	10/10/02	06/12/13	33		809.23	1.2	1670	1,025.00	1025						
Dry	Sulfate	mg/L	10/10/02	06/12/13	33	3	76.04	-	186	84.00	89.2						
Dry	Total Aluminum	µg/L	04/30/03	04/25/06	3		140.67	100	218	104.00	104						
Dry	Total Antimony	µg/L	10/10/02	04/25/06	4		0.90	0.54	1.23	0.91	0.91						
Dry	Total Arsenic	µg/L	10/10/02	04/25/06	4		2.16	1.17	3.55	1.97	1.965						
Dry	Total Barium	µg/L	10/19/05	04/25/06	4		72.10	14.2	161	56.60	56.6						
Dry	Total Chromium	µg/L	10/10/02	04/25/06	5		7.82	2.08	12.4	7.29	7.29						
Dry	Total Coliform	MPN/100ml	10/10/02	04/09/13	27		100,848.15	300	900000	16,000.00	16000						
Dry	Total Copper	µg/L	10/10/02	04/25/06	5		15.41	6.36	26.2	13.80	13.8						

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Weather	Constituent	Unit	Dates Sampled		Total No. of Values	No. with/ ND	Min.	Max.	Avg.	Median		No of Exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency(# of exceed. per year)	Exceedance/Time	%Exceed
			From	To						With ND	Without ND						
Dry	Total Dissolved Solids	mg/L	10/10/02	06/12/13	33	3	500.35	-	1080	622.00	674						
Dry	Total Iron	µg/L	10/10/02	04/25/06	4		225.00	133	398	184.50	184.5						
Dry	Total Lead	µg/L	10/10/02	04/25/06	5		1.26	0.59	2.54	0.85	0.85						
Dry	Total Nickel	µg/L	10/10/02	04/25/06	5		10.40	2.32	26	2.87	2.87						
Dry	Total Organic Carbon	mg/L	10/10/02	06/12/13	54	3	11.25	-	47.5	10.25	11						
Dry	Total Phosphorus	mg/L	10/10/02	04/25/06	5		0.16	0.094	0.258	0.15	0.148						
Dry	Total Selenium	µg/L	10/10/02	04/25/06	4		2.00	1.29	3.09	1.80	1.8	0	CTR	5.00	0.00	0 exceedances in 4 Year(s)	0%
Dry	Total Suspended Solids	mg/L	10/10/02	06/12/13	64	9	52.19	-	252	24.00	27						
Dry	Total Zinc	µg/L	10/10/02	04/25/06	5		33.07	9.15	83	27.70	27.7						
Dry	Toxaphene	µg/L	10/31/06	06/12/13	28	28	0.33	-	-	0.25	-	0	CTR	0.00075	0.00	0 exceedances in 7 Year(s)	0%
Dry	Turbidity	NTU	10/10/02	06/12/13	33	1	4.22	-	28.3	2.41	2.505						
Dry	Volatile Suspended Solids	mg/L	10/10/02	06/12/13	33	2	24.58	-	91	14.00	17						
Dry	Bis(2-Chloroethoxy) methane	µg/L	10/31/06	06/12/13	28	28	2.32	-	-	2.50	-						
Dry	Bis(2-Chloroisopropyl) ether	µg/L	10/31/06	06/12/13	28	28	0.93	-	-	1.00	-	0	CTR	170,000.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	4-chloro-3-methylphenol	µg/L	10/31/06	06/12/13	30	30	0.90	-	-	0.50	-						
Dry	Bis(2-Chloroethyl) ether	µg/L	10/31/06	06/12/13	28	28	0.46	-	-	0.50	-	0	CTR	1.40	0.00	0 exceedances in 7 Year(s)	0%
Dry	Bis(2-Ethylhexl) phthalate	µg/L	10/28/03	06/12/13	30	29	7.12	-	146	2.50	146	1	CTR	5.90	0.00	1 exceedances in 10 Year(s)	3%
Dry	4-6-Dinitro-2-methylphenol	µg/L	10/31/06	06/12/13	28	28	2.04	-	-	2.50	-						
Dry	Indeno (1,2,3-cd) pyrene	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.03	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Dry	Chemical Oxygen Demand	mg/L	10/10/02	06/12/13	33	4	63.64	-	328	58.30	62.2						
Dry	Fluoride	mg/L	10/10/02	06/12/13	33	3	0.44	-	0.863	0.43	0.513						
Dry	Dissolved Beryllium	µg/L	10/31/06	06/12/13	28	28	0.26	-	-	0.25	-						
Dry	2-4-dinitrophenol	µg/L	10/31/06	06/12/13	30	30	1.83	-	-	1.50	-	0	CTR	14,000.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Endosulfan I (alpha)	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.01	-						
Dry	Endosulfan II (beta)	µg/L	10/31/06	06/12/13	28	28	0.02	-	-	0.01	-						
Dry	Cadmium	µg/L	05/16/05	06/12/13	65	30	0.52	-	2.16	0.16	0.255						
Dry	Chromium	µg/L	05/16/05	06/12/13	65	6	2.72	-	16.8	1.56	1.55						
Dry	Nickel	µg/L	05/16/05	06/12/13	65	13	3.87	-	23.2	3.61	3.43						
Dry	1-2-Diphenylhydrazine	µg/L	10/31/06	06/12/13	28	28	0.46	-	-	0.50	-	0	CTR	0.54	0.00	0 exceedances in 7 Year(s)	0%
Dry	2-4'-DDD	µg/L	10/31/06	07/20/09	13	13	0.02	-	-	0.03	-						
Dry	2-4'-DDE	µg/L	10/31/06	07/20/09	13	13	0.02	-	-	0.03	-						
Dry	2-4'-DDT	µg/L	10/31/06	07/20/09	13	13	0.00	-	-	0.00	-						
Dry	2-4-6-trichlophenol	µg/L	10/31/06	07/13/09	12	12	0.42	-	-	0.50	-						
Dry	2-4-Dinitrotoluene	µg/L	10/31/06	06/12/13	28	28	2.32	-	-	2.50	-						
Dry	2-4-dimethylphenol	µg/L	10/31/06	06/12/13	30	30	0.93	-	-	1.00	-						
Dry	Benzo[b]fluoranthene	µg/L	10/31/06	06/12/13	28	28	2.70	-	-	5.00	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Dry	Benzo[g-h-i]perylene	µg/L	10/31/06	06/12/13	28	28	1.44	-	-	2.50	-						
Dry	Beryllium	µg/L	05/16/05	06/12/13	65	65	0.43	-	-	0.25	-						
Dry	Dibenzo(a-h)anthracene	µg/L	10/31/06	06/12/13	28	28	0.05	-	-	0.05	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Dry	Endrin ketone	µg/L	10/31/06	07/20/09	13	13	0.42	-	-	0.50	-						
Dry	Mercury	µg/L	05/16/05	06/12/13	65	51	0.12	-	0.235	0.05	0.013	1	Basin Plan	0.05	0.00	1 exceedances in 9 Year(s)	2%
Dry	Methoxychlor	µg/L	10/31/06	06/12/13	28	28	0.23	-	-	0.25	-						
Dry	Methylene Blue Active Substances (MBAS)	mg/L	10/31/06	06/12/13	28	15	0.30	-	1.4	0.18	0.23						
Dry	PCB-1016 (Aroclor 1016)	µg/L	10/31/06	06/12/13	28	28	0.17	-	-	0.25	-						
Dry	PCB-1221 (Aroclor 1221)	µg/L	10/31/06	06/12/13	31	31	0.18	-	-	0.25	-						
Dry	PCB-1232 (Aroclor 1232)	µg/L	10/31/06	06/12/13	28	28	0.17	-	-	0.25	-						
Dry	PCB-1242 (Aroclor 1242)	µg/L	10/31/06	06/12/13	28	28	0.17	-	-	0.25	-						
Dry	PCB-1248 (Aroclor 1248)	µg/L	10/31/06	06/12/13	28	28	0.17	-	-	0.25	-						
Dry	PCB-1254 (Aroclor 1254)	µg/L	10/31/06	06/12/13	28	28	0.17	-	-	0.25	-						
Dry	PCB-1260 (Aroclor 1260)	µg/L	10/31/06	06/12/13	28	28	0.17	-	-	0.25	-						
Dry	Thallium	µg/L	05/16/05	06/12/13	65	65	0.39	-	-	0.50	-						
Dry	Phenolics- Total recoverable	mg/L	04/02/07	04/09/13	20	18	0.06	-	0.17	0.05	0.15						
Dry	Total Petroleum Hydrocarbons	mg/L	04/02/07	04/09/13	20	19	2.03	-	6.02	2.50	6.02						
Dry	Phosphorus- Total (as P)	mg/L	10/31/06	06/12/13	28	3	0.35	-	1.26	0.28	0.32						
Dry	Nitrate (NO3)	mg/L	10/31/06	06/12/13	23	3	7.57	-	14.1	8.75	9.69	0	Basin Plan	45.00	0.00	0 exceedances in 7 Year(s)	0%
Dry	Ammonia	mg/l	03/17/06	06/12/13	33	9	0.37	-	1.79	0.11	0.285	5	Basin Plan	0.66	0.02	5 exceedances in 8 Year(s)	15%

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Weather	Constituent	Unit	Dates Sampled		Total No. of Values	No. with/ ND	Min.	Max.	Avg.	Median		No of Exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency(# of exceed. per year)	Exceedance/Time	%Exceed
			From	To						With ND	Without ND						
Dry	Selenium	µg/L	05/16/05	06/12/13	65	29	1.62	-	6.62	1.62	1.735	0			0.00		
Dry	Carbofuran	µg/L	10/12/07	04/09/08	3	3	2.50	-	-	2.50	-						
Dry	1-2-Benzanthracene	µg/L	04/09/08	06/12/13	22	22	1.72	-	-	2.50	-						
Dry	2-4-6-Trichlorophenol	µg/L	07/13/09	06/12/13	19	19	4.05	-	-	5.00	-						
Dry	N-Nitrosodimethylamine	µg/L	07/13/09	06/12/13	17	17	2.50	-	-	2.50	-	0	CTR	8.10	0.00	0 exceedances in 4 Year(s)	0%
Dry	N-Nitrosodiphenylamine	µg/L	07/13/09	06/12/13	17	17	0.50	-	-	0.50	-	0	CTR	16.00	0.00	0 exceedances in 4 Year(s)	0%
Dry	Aluminum	µg/L	05/16/05	06/12/13	65	19	491.28	-	6780	19.70	15.25						
Dry	Arsenic	µg/L	05/16/05	06/12/13	65	14	1.46	-	4.31	1.54	1.56	0	CTR	150.00	0.00	0 exceedances in 9 Year(s)	0%
Dry	Barium	µg/L	10/31/06	06/12/13	28	7	77.77	-	181	78.65	82.4	0			0.00		
Dry	Silver	µg/L	05/16/05	06/12/13	65	64	0.69	-	1.3	0.13	1.3						
Dry	Copper	µg/L	05/16/05	06/12/13	65	5	21.47	-	245	12.90	9.045						
Dry	Iron	µg/L	05/16/05	06/12/13	65	5	730.17	-	9710	92.70	94.5						
Dry	Lead	µg/L	05/16/05	06/12/13	65	6	4.49	-	79.6	0.83	0.71						
Dry	Zinc	µg/L	05/16/05	06/12/13	65	3	82.24	-	1300	21.50	20.65						
Dry	Alkalinity as CaCO3	mg/L	10/31/06	06/12/13	28	2	129.81	-	264	176.45	178.5						
Dry	Hardness as CaCO3	mg/L	10/31/06	06/12/13	28		207.93	2	390	270.00	270						
Dry	Chromium +6	µg/L	10/31/06	06/12/13	28	20	1.26	-	1.27	0.71	0.465						
Dry	Alkalinity as Bicarbonate	mg/L	09/21/10	09/22/11	5	1	117.54	-	193	152.00	165.5						
Dry	E. Coli	MPN/100mL	10/10/12	04/09/13	4		8,239.85	393	21870	5,348.20	5348.2	4	Basin Plan	235.00	2.02	4 exceedances in 1 Year(s)	100%
Dry	Antimony	µg/L	05/16/05	06/12/13	65	16	1.90	-	9.53	1.36	1.36	0	CTR	4,300.00	0.00	0 exceedances in 9 Year(s)	0%
Dry	Benzioic Acid	µG/L	11/16/04	03/09/05	2	2		-	-	0.00	-						
Dry	Benzyl alcohol	µG/L	11/16/04	03/09/05	2	2		-	-	0.00	-						
Dry	Alkalinity (mg/L as CaCO3)	mg/L as CaCO3	05/16/05	03/17/06	21		194.76	110	270	180.00	180						
Dry	Baryium	µg/L	08/17/05	03/17/06	21		42.73	0.09	97.4	0.10	53.09999847						
Dry	Cobalt	µg/L	05/16/05	03/17/06	37	11	0.16	0.011	0.32	0.22	0.216						
Dry	Detectable DDTs (µg/L)	µg/L	05/16/05	03/17/06	21	20	-	-	-	-	-						
Dry	Dissolved Organic Carbon	mg/L	05/16/05	03/17/06	21		10.90	5.3	15	12.00	12						
Dry	Manganese	µg/L	05/16/05	03/17/06	37		6.25	0.356	31.3	4.00	4						
Dry	Molybdenum	µg/L	05/16/05	03/17/06	37	14	12.37	0.03	49.9	8.20	8.2						
Dry	Other Pesticides (µg/L)	µg/L	05/16/05	03/17/06	21	21	#DIV/0!	0	0	#NUM!	-						
Dry	Strontium	µg/L	08/17/05	03/17/06	21		447.23	0.06	988	0.07	551.00						
Dry	Tin	µg/L	05/16/05	03/17/06	37	25	0.07	0.016	0.230000004	0.02	0.0205						
Dry	Titanium	µg/L	05/16/05	03/17/06	37		0.54	0.05	3.150000095	0.37	0.373						
Dry	Total Aroclors	µg/L	05/16/05	03/17/06	21	21	-	-	-	-	-						
Dry	Total PAHs (ng/L)	ng/L	05/16/05	03/17/06	21		45.36	14.1	117.1999969	43.00	43						
Dry	Vanadium	µg/L	05/16/05	03/17/06	37	7	3.15	0.02	6.86	3.89	3.885						
Wet	1,2 Benzanthracene	µg/L	12/9/2006	12/18/2007	7	7	0.05	-	-	0.05	-						
Wet	1,2,4-Trichlorobenzene	µg/L	12/9/2006	1/24/2013	27	27	0.44	-	-	0.50	-						
Wet	1,2-Dichlorobenzene	µg/L	12/9/2006	1/24/2013	27	27	0.39	-	-	0.50	-	0	CTR	17,000.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	1,3-Dichlorobenzene	µg/L	12/9/2006	1/24/2013	27	27	0.39	-	-	0.50	-	0	CTR	2,600.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	1,4-Dichlorobenzene	µg/L	12/9/2006	1/24/2013	27	27	0.39	-	-	0.50	-	0	CTR	2,600.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	2- Chlorophenol	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-	0	CTR	400.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	2,4,5-TP-SILVEX	µg/L	12/9/2006	1/24/2013	27	27	1.54	-	-	0.10	-						
Wet	2,4-D	µg/L	12/9/2006	1/24/2013	27	27	0.75	-	-	0.01	-						
Wet	2,4-dichlorophenol	µg/L	12/9/2006	1/24/2013	28	28	0.61	-	-	0.50	-	0	CTR	790.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	2,6-Dinitrotoluene	µg/L	12/9/2006	1/24/2013	27	27	2.22	-	-	2.50	-						
Wet	2-Chloroethyl vinyl ether	µg/L	12/9/2006	1/24/2013	36	36	1.00	-	-	1.25	-						
Wet	2-Chloronaphthalene	µg/L	12/9/2006	1/24/2013	27	27	4.44	-	-	5.00	-	0	CTR	4,300.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	2-nitrophenol	µg/L	12/9/2006	1/24/2013	28	28	3.34	-	-	5.00	-						
Wet	3,3-Dichlorobenzidine	µg/L	12/9/2006	1/24/2013	27	27	2.22	-	-	2.50	-						
Wet	4,4'-DDD	µg/L	11/4/2008	1/24/2013	17	17	0.03	-	-	0.03	-	0	CTR	0.00084	0.00	0 exceedances in 5 Year(s)	0%
Wet	4,4'-DDE	µg/L	11/4/2008	1/24/2013	17	17	0.03	-	-	0.03	-	0	CTR	0.00059	0.00	0 exceedances in 5 Year(s)	0%

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			From	To						With ND	Without ND						
Wet	4,4'-DDT	µg/L	11/4/2008	1/24/2013	17	17	0.00	-	-	0.01	-	0	TMDL	1.10	0.00	0 exceedances in 5 Year(s)	0%
Wet	4-Bromophenyl phenyl ether	µg/L	12/9/2006	1/24/2013	27	27	1.63	-	-	2.50	-						
Wet	4-Chlorophenyl phenyl ether	µg/L	12/9/2006	1/24/2013	27	27	1.50	-	-	2.50	-						
Wet	4-nitrophenol	µg/L	12/9/2006	1/24/2013	28	28	1.91	-	-	2.50	-						
Wet	Acenaphthene	µg/L	12/9/2006	1/24/2013	27	27	0.44	-	-	0.50	-	0	CTR	2,700.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Acenaphthylene	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-						
Wet	Aldrin	µg/L	12/9/2006	1/24/2013	27	27	0.01	-	-	0.00	-	0	CTR	0.00014	0.00	0 exceedances in 7 Year(s)	0%
Wet	Alkalinity	mg/L	11/8/2002	2/27/2006	12		49.77	11	113.3	32.45	32.45						
Wet	alpha-BHC	µg/L	12/9/2006	1/24/2013	27	27	0.01	-	-	0.01	-	0	CTR	0.01	0.00	0 exceedances in 7 Year(s)	0%
Wet	alpha-chlordane	µg/L	12/9/2006	1/24/2013	27	27	0.04	-	-	0.05	-						
Wet	Anthracene	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-	0	CTR	110,000.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Atrazine	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-						
Wet	Benzidine	µg/L	12/9/2006	1/24/2013	27	27	2.22	-	-	2.50	-	0	CTR	0.00054	0.00	0 exceedances in 7 Year(s)	0%
Wet	Benzo(a)pyrene	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Wet	Benzo(k)flouranthene	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Wet	beta-BHC	µg/L	12/9/2006	1/24/2013	27	27	0.01	-	-	0.00	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Wet	BOD	mg/L	11/8/2002	1/24/2013	40		19.20	3.39	146	12.65	12.65						
Wet	Butyl benzyl phthalate	µg/L	12/9/2006	1/24/2013	27	27	2.96	-	3.66	5.00	-	0	CTR	5,200.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Chlordane	µg/L	12/9/2006	1/24/2013	27	27	0.02	-	-	0.03	-	0	CTR	0.00059	0.00	0 exceedances in 7 Year(s)	0%
Wet	Chloride	mg/L	11/8/2002	1/24/2013	39		27.45	2.58	96.7	15.80	15.8						
Wet	Chlorpyrifos	µg/L	10/17/2005	1/24/2013	28	27	0.05	-	0.91	0.03	0.91						
Wet	Chrysene	µg/L	12/9/2006	1/24/2013	27	27	2.22	-	-	2.50	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Wet	Cyanazine	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-						
Wet	Cyanide	mg/L	12/25/2003	1/24/2013	34	15	0.02	-	0.338	0.01	0.009	0	Basin Plan	22.00	0.00	0 exceedances in 10 Year(s)	0%
Wet	delta-BHC	µg/L	12/9/2006	1/24/2013	27	27	0.01	-	-	0.00	-						
Wet	Diazinon	µg/L	2/11/2003	1/24/2013	31	27	0.05	-	0.96	0.01	0.271	3	CTR	0.08	0.01	3 exceedances in 10 Year(s)	10%
Wet	Dieldrin	µg/L	12/9/2006	1/24/2013	27	27	0.02	-	-	0.01	-	0	CTR	0.00014	0.00	0 exceedances in 7 Year(s)	0%
Wet	Diethyl phthalate	µg/L	1/1/2004	1/24/2013	28	27	0.90	-	1.2	1.00	1.2	0	CTR	120,000.00	0.00	0 exceedances in 10 Year(s)	0%
Wet	Dimethyl phthalate	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-	0	CTR	2,900,000.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	di-n-Butyl phthalate	µg/L	12/9/2006	1/24/2013	23	23	4.35	-	-	5.00	-	0	CTR	12,000.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	di-n-Octyl phthalate	µg/L	12/9/2006	1/24/2013	23	23	4.35	-	-	5.00	-						
Wet	Dissolved Aluminum	µg/L	10/17/2005	1/24/2013	28	13	387.71	-	1790	133.00	516.5						
Wet	Dissolved Antimony	µg/L	11/8/2002	1/24/2013	38	3	2.81	-	7.33	2.55	2.33	0	CTR	4,300.00	0.00	0 exceedances in 11 Year(s)	0%
Wet	Dissolved Arsenic	µg/L	11/8/2002	1/24/2013	36	2	1.81	-	3.03	1.64	1.67	0	CTR	340.00	0.00	0 exceedances in 11 Year(s)	0%
Wet	Dissolved Barium	µg/L	10/18/2005	1/24/2013	31	3	42.72	-	177	27.70	26.15						
Wet	Dissolved Cadmium	µg/L	12/16/2002	1/24/2013	28	19	0.37	-	2.59	0.13	0.522	0	CTR	Hardness Dependent	0.00	0 exceedances in 11 Year(s)	0%
Wet	Dissolved Chromium	µg/L	11/8/2002	1/24/2013	39	3	2.66	-	8.16	2.11	2.04						
Wet	Dissolved Chromium +6	µg/L	12/9/2006	1/24/2013	27	20	1.20	-	0.88	0.71	0.46	0	CTR	11.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Dissolved Copper	µg/L	11/8/2002	1/24/2013	39	1	32.60	-	163	18.80	18.75	21	TMDL	Hardness Dependent	0.05	21 exceedances in 11 Year(s)	54%
Wet	Dissolved Iron	µg/L	11/8/2002	1/24/2013	34	5	590.94	-	3220	206.00	435						
Wet	Dissolved Lead	µg/L	11/8/2002	1/24/2013	34	1	8.69	-	59	2.40	2.4	5	TMDL	Hardness Dependent	0.01	5 exceedances in 11 Year(s)	15%
Wet	Dissolved Mercury	µg/L	12/9/2006	1/24/2013	27	27	0.18	-	-	0.25	-	0	Basin Plan	0.05	0.00	0 exceedances in 7 Year(s)	0%
Wet	Dissolved Nickel	µg/L	11/8/2002	1/24/2013	39	3	5.82	-	27	4.49	3.9	0	CTR	Hardness Dependent	0.00	0 exceedances in 11 Year(s)	0%
Wet	Dissolved Oxygen	mg/L	11/8/2002	1/24/2013	42	1	9.73	-	13.47	9.86	9.92	1	Basin Plan	5.00	0.00	1 exceedances in 11 Year(s)	2%
Wet	Dissolved Phosphorus	mg/L	11/8/2002	1/24/2013	38	1	0.27	-	0.742	0.21	0.21						
Wet	Dissolved Selenium	µg/L	11/8/2002	1/24/2013	30	24	0.82	-	1.66	0.50	1.33						
Wet	Dissolved Silver	µg/L	12/9/2006	1/24/2013	27	27	0.65	-	-	0.13	-	0	CTR	Hardness Dependent	0.00	0 exceedances in 7 Year(s)	0%
Wet	Dissolved Thallium	µg/L	12/9/2006	1/24/2013	27	27	0.37	-	-	0.50	-						
Wet	Dissolved Zinc	µg/L	11/8/2002	1/24/2013	39		213.56	19	1510	107.00	107	18	TMDL	Hardness Dependent	0.05	18 exceedances in 11 Year(s)	46%
Wet	Endosulfan sulfate	µg/L	12/9/2006	1/24/2013	27	27	0.03	-	-	0.03	-	0	CTR	240.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Endrin	µg/L	12/9/2006	1/24/2013	27	27	0	-	-	0.01	-	0	CTR	0.81	0.00	0 exceedances in 7 Year(s)	0%
Wet	Endrin aldehyde	µg/L	12/9/2006	1/24/2013	27	27	0.02	-	-	0.01	-	0	CTR	0.81	0.00	0 exceedances in 7 Year(s)	0%
Wet	Fecal Coliform	MPN/100mL	11/8/2002	1/24/2013	46		194,961.09	110	1700000	32,500.00	32500	44	Basin Plan	400.00	0.09	44 exceedances in 11 Year(s)	96%
Wet	Fecal Enterococcus	MPN/100ml	11/8/2002	1/24/2013	46		196,259.35	130	900000	90,000.00	90000						
Wet	Fecal Streptococcus	MPN/100ml	11/8/2002	1/24/2013	46		217,172.39	130	900000	160,000.0	160000						
Wet	Fluoranthene	µg/L	12/9/2006	1/24/2013	27	27	0.02	-	-	0.03	-	0	CTR	370.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Fluorene	µg/L	12/9/2006	1/24/2013	27	27	0.04	-	-	0.05	-	0	CTR	14,000.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	gamma-BHC (lindane)	µg/L	12/9/2006	1/24/2013	27	27	0.01	-	-	0.01	-	0	CTR	0.06	0.00	0 exceedances in 7 Year(s)	0%

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Weather	Constituent	Unit	Dates Sampled		Total No. of Values	No. with/ ND	Min.	Max.	Avg.	Median		No of Exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency(# of exceed. per year)	Exceedance/Time	%Exceed
			From	To						With ND	Without ND						
Wet	gamma-chlordane	µg/L	12/9/2006	1/24/2013	27	27	0.04	-	-	0.05	-						
Wet	Glyphosate	µg/L	12/9/2006	1/24/2013	27	20	7.86	-	17.5	8.80	12.3						
Wet	Hardness	mg/L	11/8/2002	2/28/2006	22	5	103.17	15.2	300	70.00	70						
Wet	Heptachlor	µg/L	12/9/2006	1/24/2013	27	27	0.01	-	-	0.01	-	0	CTR	0.00021	0.00	0 exceedances in 7 Year(s)	0%
Wet	Heptachlor Epoxide	µg/L	12/9/2006	1/24/2013	27	27	0.01	-	-	0.01	-	0	CTR	0.00011	0.00	0 exceedances in 7 Year(s)	0%
Wet	Hexachlorobenzene	µg/L	12/9/2006	1/24/2013	27	27	0.44	-	-	0.50	-	0	CTR	0.00077	0.00	0 exceedances in 7 Year(s)	0%
Wet	Hexachlorobutadiene	µg/L	12/9/2006	1/24/2013	27	27	0.44	-	-	0.50	-	0	CTR	50.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Hexachloro-cyclopentadiene	µg/L	12/9/2006	1/24/2013	27	27	2.22	-	-	2.50	-	0	CTR	17,000.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Hexachloroethane	µg/L	12/9/2006	1/24/2013	27	27	0.44	-	-	0.50	-	0	CTR	8.90	0.00	0 exceedances in 7 Year(s)	0%
Wet	Isophorone	µg/L	12/9/2006	1/24/2013	27	27	0.44	-	-	0.50	-	0	CTR	600.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Kjeldahl-N	mg/L	11/8/2002	1/24/2013	39		3.22	0.193	16.2	1.72	1.72						
Wet	Malathion	µg/L	12/9/2006	1/24/2013	26	26	0.60	-	-	0.50	-						
Wet	MBAS	mg/L	11/8/2002	2/27/2006	9		0.22	0.071	0.5998	0.18	0.184						
Wet	Methyl Tertiary Butyl Ether (MTBE)	µg/L	11/1/2006	1/24/2013	30	29	0.50	-	-	0.50	-						
Wet	Naphthalene	µg/L	12/9/2006	1/24/2013	27	27	0.09	-	-	0.10	-						
Wet	NH3-N	mg/L	11/8/2002	1/24/2013	35	2	0.79	-	3.26	0.42	0.55						
Wet	Nitrate	mg/L	12/16/2002	2/27/2006	11		4.50	2.28	9.69	4.02	4.02	0	Basin Plan	45.00	0.00	0 exceedances in 4 Year(s)	0%
Wet	Nitrate-N	mg/L	12/16/2002	1/24/2013	32		1.06	0.504	3.35	0.84	0.8365	0	Basin Plan	10.00	0.00	0 exceedances in 11 Year(s)	0%
Wet	Nitrite-N	mg/L	2/11/2003	1/24/2013	33	22	0.06	-	0.514	0.02	0.085	0	Basin Plan	1.00	0.00	0 exceedances in 10 Year(s)	0%
Wet	Nitrobenzene	µg/L	12/9/2006	1/24/2013	27	27	0.44	-	-	0.50	-	0	CTR	1,900.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	N-Nitroso-dimethyl amine	µg/L	12/9/2006	2/13/2009	11	11	1.82	-	-	2.50	-						
Wet	N-Nitroso-di-n-propyl amine	µg/L	12/9/2006	1/24/2013	27	27	2.22	-	-	2.50	-	0	CTR	1.40	0.00	0 exceedances in 7 Year(s)	0%
Wet	N-Nitroso-diphenyl amine	µg/L	12/9/2006	2/13/2009	11	11	0.36	-	-	0.50	-						
Wet	Oil and Grease	mg/L	11/8/2002	1/24/2013	38	20	2.37	-	5.8	2.28	1.95						
Wet	Pentachlorophenol	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-	0	CTR	8.20	0.00	0 exceedances in 7 Year(s)	0%
Wet	pH	0.00	11/8/2002	1/24/2013	39		7.10	5.99	8.26	6.96	6.96	5	Basin Plan	8.50	0.01	5 exceedances in 11 Year(s)	13%
Wet	Phenanthrene	µg/L	12/9/2006	1/24/2013	27	27	0.02	-	-	0.03	-						
Wet	Phenol	µg/L	12/9/2006	1/24/2013	27	27	0.48	-	-	0.50	-	0	CTR	4,600,000.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Prometryn	µg/L	12/9/2006	1/24/2013	27	27	1	-	-	1.00	-						
Wet	Pyrene	µg/L	12/9/2006	1/24/2013	27	27	0.02	-	-	0.03	-	0	CTR	11,000.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Ratio Fecal Coliform/Total Coliform	0.00	11/8/2002	2/27/2006	12		0.80	0.34	1.02	0.99	0.98622549						
Wet	Simazine	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-						
Wet	Specific Conductance	umhos/cm	11/8/2002	1/24/2013	39		237.88	47.6	735	162.00	162						
Wet	Sulfate	mg/L	11/8/2002	1/24/2013	39		19.80	2.89	50.8	12.80	12.8						
Wet	Total Aluminum	µg/L	11/8/2002	2/27/2006	9		769.22	134	2270	560.00	560						
Wet	Total Antimony	µg/L	11/8/2002	2/27/2006	11		2.84	1.11	7.42	1.75	1.75						
Wet	Total Arsenic	µg/L	11/8/2002	2/27/2006	11		5.29	1.04	34.7	1.80	1.8						
Wet	Total Barium	µg/L	1/14/2006	2/27/2006	2		26.55	17.8	35.3	26.55	26.55						
Wet	Total Cadmium	µg/L	11/8/2002	10/17/2005	4		0.84	0.37	1.55	0.73	0.725						
Wet	Total Chromium	µg/L	11/8/2002	2/27/2006	12		6.15	1.56	12.3	5.28	5.275						
Wet	Total Coliform	MPN/100ml	11/8/2002	1/24/2013	46		559,293.48	500	3000000	240,000.00	240000						
Wet	Total Copper	µg/L	11/8/2002	2/27/2006	12		30.90	6.33	115	22.70	22.7						
Wet	Total Dissolved Solids	mg/L	11/8/2002	1/24/2013	39		152.82	28	446	106.00	106						
Wet	Total Iron	µg/L	11/8/2002	2/27/2006	11		975.18	191	3780	438.00	438						
Wet	Total Lead	µg/L	11/8/2002	2/27/2006	12		8.24	0.82	39.2	2.78	2.775						
Wet	Total Mercury	µg/L	1/1/2004	1/1/2004	1		0.21	0.209	0.209	0.21	0.209						
Wet	Total Nickel	µg/L	11/8/2002	2/27/2006	12		8.17	3.48	18.9	5.53	5.525						
Wet	Total Organic Carbon	mg/L	11/8/2002	1/24/2013	49		17.83	3.72	70.6	9.90	9.9						
Wet	Total Phosphorus	mg/L	11/8/2002	2/27/2006	11		0.34	0.12	0.874	0.29	0.29						
Wet	Total Selenium	µg/L	11/8/2002	1/14/2006	4		8.32	1.31	28.1	1.94	1.94						
Wet	Total Suspended Solids	mg/L	11/8/2002	5/6/2013	83	2	175.44	11	1123	123.00	123						
Wet	Total Zinc	µg/L	11/8/2002	2/27/2006	12		160.96	55	667	114.00	114						
Wet	Toxaphene	µg/L	12/9/2006	1/24/2013	27	27	0.30	-	-	0.25	-	0	CTR	0.00075	0.00	0 exceedances in 7 Year(s)	0%
Wet	TPH	mg/L	12/16/2002	10/17/200	7		1.90	1.1	3.3	2.00	2						

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Weather	Constituent	Unit	Dates Sampled		Total No. of Values	No. with/ ND	Min.	Max.	Avg.	Median		No of Exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency(# of exceed. per year)	Exceedance/Time	%Exceed
			From	To						With ND	Without ND						
				5													
Wet	Turbidity	NTU	11/8/2002	1/24/2013	40		16.82	1.01	75.7	11.85	11.85						
Wet	Volatile Suspended Solids	mg/L	11/8/2002	1/24/2013	40		71.04	1.3	257	55.50	55.5						
Wet	Bis(2-Chloroethoxy) methane	µg/L	12/9/2006	1/24/2013	27	27	2.22	-	-	2.50	-						
Wet	Bis(2-Chloroisopropyl) ether	µg/L	12/9/2006	1/24/2013	27	27	0.89	-	-	1.00	-	0	CTR	170,000.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	4-chloro-3-methylphenol	µg/L	12/9/2006	1/24/2013	28	28	0.77	-	-	0.50	-						
Wet	Bis(2-Chloroethyl) ether	µg/L	12/9/2006	1/24/2013	27	27	0.44	-	-	0.50	-	0	CTR	1.40	0.00	0 exceedances in 7 Year(s)	0%
Wet	Bis(2-Ethylhexl) phthalate	µg/L	10/31/2003	1/24/2013	31	28	3.34	-	19.7	2.50	15	3	CTR	5.90	0.01	3 exceedances in 10 Year(s)	10%
Wet	4-6-Dinitro-2-methylphenol	µg/L	1/1/2004	1/24/2013	28	27	2.00	-	4.1	2.50	4.1						
Wet	Indeno (1,2,3-cd) pyrene	µg/L	12/9/2006	1/24/2013	27	27	0.02	-	-	0.03	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Wet	Chemical Oxygen Demand	mg/L	11/8/2002	1/24/2013	38	1	61.75	16.9	241	43.14	43.4						
Wet	Fluoride	mg/L	11/8/2002	1/24/2013	35	2	0.25	-	0.904	0.22	0.223						
Wet	Total Silver	µg/L	10/17/2005	10/17/2005	1		0.25	0.25	0.25	0.25	0.25						
Wet	Dissolved Beryllium	µg/L	12/9/2006	1/24/2013	27	27	0.24	-	0.154	0.25	-						
Wet	2-4-dinitrophenol	µg/L	12/9/2006	1/24/2013	28	28	1.91	-	-	2.50	-	0	CTR	14,000.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Endosulfan I (alpha)	µg/L	12/9/2006	1/24/2013	27	27	0.02	-	-	0.01	-						
Wet	Endosulfan II (beta)	µg/L	12/9/2006	1/24/2013	27	27	0.02	-	-	0.01	-						
Wet	Cadmium	µg/L	2/27/2006	1/24/2013	37	10	0.96	-	6.4	0.50	0.51						
Wet	Chromium	µg/L	2/27/2006	1/24/2013	37		8.74	0.96	43.3	6.26	6.26						
Wet	Nickel	µg/L	2/27/2006	1/24/2013	37	1	10.40	-	47.8	7.03	7.05						
Wet	1-2-Diphenylhydrazine	µg/L	12/9/2006	1/24/2013	27	27	0.44	-	-	0.50	-	0	CTR	0.54	0.00	0 exceedances in 7 Year(s)	0%
Wet	2-4'-DDD	µg/L	12/9/2006	2/13/2009	11	11	0.02	-	-	0.03	-						
Wet	2-4'-DDE	µg/L	12/9/2006	2/13/2009	11	11	0.02	-	-	0.03	-						
Wet	2-4'-DDT	µg/L	12/9/2006	2/13/2009	11	11	0.00	-	-	0.00	-						
Wet	2-4-6-trichlophenol	µg/L	12/9/2006	2/13/2009	11	11	0.36	-	-	0.50	-						
Wet	2-4-Dinitrotoluene	µg/L	12/9/2006	1/24/2013	27	27	2.22	-	-	2.50	-	0			0.00		
Wet	2-4-dimethylphenol	µg/L	12/9/2006	1/24/2013	28	28	0.89	-	-	1.00	-						
Wet	Benzo[b]fluoranthene	µg/L	12/9/2006	1/24/2013	27	27	2.98	-	-	5.00	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Wet	Benzo[g-h-i]perylene	µg/L	12/9/2006	1/24/2013	27	27	1.56	-	-	2.50	-						
Wet	Beryllium	µg/L	2/27/2006	1/24/2013	37	35	0.26	-	0.416	0.25	0.155						
Wet	Dibenzo(a-h)anthracene	µg/L	12/9/2006	1/24/2013	27	27	0.04	-	-	0.05	-	0	CTR	0.05	0.00	0 exceedances in 7 Year(s)	0%
Wet	Endrin ketone	µg/L	12/9/2006	2/13/2009	11	11	0.36	-	-	0.50	-						
Wet	Mercury	µg/L	2/27/2006	1/24/2013	37	32	0.16	-	0.177	0.25	0.08	0	0.00	0.05	0.00	0 exceedances in 7 Year(s)	0%
Wet	Methoxychlor	µg/L	12/9/2006	1/24/2013	27	27	0.22	-	-	0.25	-						
Wet	Methylene Blue Active Substances (MBAS)	mg/L	12/9/2006	1/24/2013	27	5	0.74	0.183	3.96	0.46	0.57						
Wet	PCB-1016 (Aroclor 1016)	µg/L	12/9/2006	1/24/2013	27	27	0.16	-	-	0.25	-						
Wet	PCB-1221 (Aroclor 1221)	µg/L	12/9/2006	1/24/2013	29	29	0.17	-	-	0.25	-						
Wet	PCB-1232 (Aroclor 1232)	µg/L	12/9/2006	1/24/2013	27	27	0.16	-	-	0.25	-						
Wet	PCB-1242 (Aroclor 1242)	µg/L	12/9/2006	1/24/2013	27	27	0.16	-	-	0.25	-						
Wet	PCB-1248 (Aroclor 1248)	µg/L	12/9/2006	1/24/2013	27	27	0.16	-	-	0.25	-						
Wet	PCB-1254 (Aroclor 1254)	µg/L	12/9/2006	1/24/2013	27	27	0.16	-	-	0.25	-						
Wet	PCB-1260 (Aroclor 1260)	µg/L	12/9/2006	1/24/2013	27	27	0.16	-	-	0.25	-						
Wet	Thallium	µg/L	2/27/2006	1/24/2013	37	37	0.36	-	0.179	0.50	-						
Wet	Phenolics- Total recoverable	mg/L	11/1/2006	1/24/2013	30	27	0.06	-	0.235	0.05	0.13						
Wet	Total Petroleum Hydrocarbons	mg/L	11/1/2006	1/24/2013	30	21	2.48	-	5.9	2.50	2.3						
Wet	Phosphorus- Total (as P)	mg/L	12/9/2006	1/24/2013	27		0.45	0.2	1.25	0.34	0.34						
Wet	Nitrate (NO3)	mg/L	12/9/2006	1/24/2013	21		4.77	2.23	14.8	3.55	3.55	0	Basin Plan	45.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Ammonia	mg/l	2/27/2006	1/24/2013	37	4	0.78	-	3.35	0.48	0.508	0	Basin Plan	3.74	0.00	0 exceedances in 7 Year(s)	0%
Wet	Selenium	µg/L	2/27/2006	1/24/2013	37	23	0.79	-	2.10	0.50	0.78						
Wet	Carbofuran	µg/L	9/21/2007	12/18/2007	4	4	2.50	-	-	2.50	-						
Wet	1-2-Benzanthracene	µg/L	11/4/2008	1/24/2013	20	20	2.00	-	-	2.50	-						
Wet	2-4-6-Trichlorophenol	µg/L	11/4/2008	1/24/2013	17	17	4.74	-	-	5.00	-						
Wet	N-Nitrosodimethylamine	µg/L	11/4/2008	1/24/2013	17	17	2.50	-	-	2.50	-	0	CTR	8.10	0.00	0 exceedances in 5 Year(s)	0%
Wet	N-Nitrosodiphenylamine	µg/L	11/4/2008	1/24/2013	17	17	0.50	-	-	0.50	-	0	CTR	16.00	0.00	0 exceedances in 5 Year(s)	0%

Table D.3: Dominguez Channel - At Station S-28 Data Summary

Weather	Constituent	Unit	Dates Sampled		Total No. of Values	No. with/ ND	Min.	Max.	Avg.	Median		No of Exceed.	Regulatory Source	Regulatory Threshold	Exceed. Frequency(# of exceed. per year)	Exceedance/Time	%Exceed
			From	To						With ND	Without ND						
Wet	Aluminum	µg/L	2/27/2006	1/24/2013	37		2,381.31	20.90	14,200.00	1,500.00	1,500.00						
Wet	Arsenic	µg/L	2/27/2006	1/24/2013	37	1	2.46	-	7.88	2.17	2.18	0	CTR	350.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Barium	µg/L	12/9/2006	1/24/2013	27	2	107.39	-	389.00	66.60	76.80						
Wet	Silver	µg/L	2/27/2006	1/24/2013	37	29	0.82	-	1.91	0.14	0.49						
Wet	Copper	µg/L	2/27/2006	1/24/2013	37	1	89.86	-	565.00	49.20	50.30						
Wet	Iron	µg/L	2/27/2006	1/24/2013	37		3,676.65	118.00	24,800.00	2,550.00	2,550.00						
Wet	Lead	µg/L	2/27/2006	1/24/2013	37		46.52	0.88	806.00	18.50	18.50						
Wet	Zinc	µg/L	2/27/2006	1/24/2013	37		419.63	27.40	2,250.00	237.00	237.00						
Wet	Alkalinity as CaCO3	mg/L	12/9/2006	1/24/2013	26		44.45	14.30	124.30	28.00	28.00						
Wet	Hardness as CaCO3	mg/L	12/9/2006	1/24/2013	27		73.89	30	190	50.00	50						
Wet	Chromium +6	µg/L	12/9/2006	1/24/2013	28	18	1.25	-	1.8	0.71	0.54						
Wet	Alkalinity as Bicarbonate	mg/L	10/6/2010	11/20/2011	5	1	31.98	-	83	16.50	30.8						
Wet	E. Coli	MPN/100mL	10/11/2012	1/24/2013	5		12,578.84	2419.2	34500	7,915.00	7915	5	Basin Plan	235.00	3.48	5 exceedances in 1 Year(s)	100%
Wet	Antimony	µg/L	2/27/2006	1/24/2013	37	1	5.10	-	18.6	3.80	3.85	0	CTR	4,300.00	0.00	0 exceedances in 7 Year(s)	0%
Wet	Benzioic Acid	µG/L	10/17/2004	1/7/2005	4	4	-	-	-	-	-						
Wet	Benzyl alcohol	µG/L	10/17/2004	1/7/2005	4	4	-	-	-	-	-						
Wet	Alkalinity (mg/L as CaCO3)	mg/L as CaCO3	2/27/2006	2/28/2006	10		69.60	14	220	22.00	22						
Wet	Baryium	µg/L	2/27/2006	2/28/2006	10		41.55	13.20	82.60	25.65	25.65						
Wet	Cobalt	µg/L	2/27/2006	2/28/2006	10		0.82	0.27	2.34	0.65	0.65						
Wet	Detectable DDTs (µg/L)	µg/L	2/27/2006	2/28/2006	10	10	#DIV/0!	0.00	0.00	#NUM!	-						
Wet	Dissolved Organic Carbon	mg/L	2/27/2006	2/28/2006	10		10.84	5.60	25.00	8.35	8.35						
Wet	Manganese	µg/L	2/27/2006	2/28/2006	10		37.74	11.40	137.00	20.40	20.40						
Wet	Molybdenum	µg/L	2/27/2006	2/28/2006	10		2.99	0.45	8.97	1.36	1.36						
Wet	Other Pesticides (µg/L)	µg/L	2/27/2006	2/28/2006	10	10	-	-	-	-	-						
Wet	Strontium	µg/L	2/27/2006	2/28/2006	10		248.06	30.70	826.00	62.55	62.55						
Wet	Tin	µg/L	2/27/2006	2/28/2006	10		0.21	0.13	0.34	0.21	0.21						
Wet	Titanium	µg/L	2/27/2006	2/28/2006	10		11.76	1.60	23.60	11.15	11.15						
Wet	Total Aroclors	µg/L	2/27/2006	2/28/2006	10	10	-	-	-	-	-						
Wet	Total PAHs (ng/L)	ng/L	2/27/2006	2/28/2006	10		986.83	53.70	3,652.60	614.30	614.30						
Wet	Vanadium	µg/L	2/27/2006	2/28/2006	10		3.77	2.15	8.36	3.16	3.16						

Notes:
Water quality data available but no screening criteria was determined.
Source:
Mass Emissions Monitoring.
Appendix B 2002-2006 Sampling Results for Dominguez Channel

Table D.4: Dominguez Channel - Bacteria Data Summary

Waterbody	Weather	Location	Constituent	Dates Sampled		Total No. of Values	Min.	Max.	Avg.	Median	No. of Exceed.	Regulatory Threshold	Regulatory Source	Exceed. Frequency (# exceed. per year)	Exceedance/Time	%Exceed
				From	To											
Dominguez Channel	Dry	El Segundo Blvd.	E. coli (MPN/100 mL)	4/3/2001	5/26/2009	246	100	240,000	3,192	310	22	235	Basin Plan	0.01	22 exceedances in 9 Year(s)	9%
Dominguez Channel	Dry	El Segundo Blvd.	Enterococcus (MPN/100 mL)	4/3/2001	5/26/2009	244	10	12,000	456	310						
Dominguez Channel	Dry	El Segundo Blvd.	Total Coliform (MPN/100 mL)	4/3/2001	5/26/2009	246	100	240,000	59,819	310						
Dominguez Channel	Dry	"Tributary @ Carson Plaza Dr.	E. coli (MPN/100 mL)	1/17/2002	5/26/2009	63	100	73,000	4,047	2,800	11	235	Basin Plan	0.02	11 exceedances in 8 Year(s)	17%
Dominguez Channel	Dry	"Tributary @ Carson Plaza Dr.	Enterococcus (MPN/100 mL)	1/17/2002	5/26/2009	63	31	24,000	3,896	2,800						
Dominguez Channel	Dry	"Tributary @ Carson Plaza Dr.	Total Coliform (MPN/100 mL)	1/17/2002	5/26/2009	63	1,600	240,000	141,392	2,800						
Dominguez Channel	Dry	Tributary @ Main St.	E. coli (MPN/100 mL)	3/31/2005	5/26/2009	44	100	240,000	10,298	3,950	12	235	Basin Plan	0.07	12 exceedances in 5 Year(s)	27%
Dominguez Channel	Dry	Tributary @ Main St.	Enterococcus (MPN/100 mL)	3/31/2005	5/26/2009	44	20	24,000	2,832	3,950						
Dominguez Channel	Dry	Tributary @ Main St.	Total Coliform (MPN/100 mL)	3/31/2005	5/26/2009	44	19,000	240,000	146,750	3,950						
Dominguez Channel	Dry	Vermont Ave.	E. coli (MPN/100 mL)	1/20/2005	5/26/2009	127	100	77,000	3,553	1,500	20	235	Basin Plan	0.04	20 exceedances in 5 Year(s)	16%
Dominguez Channel	Dry	Vermont Ave.	Enterococcus (MPN/100 mL)	1/20/2005	5/26/2009	127	10	6,500	518	1,500						
Dominguez Channel	Dry	Vermont Ave.	Total Coliform (MPN/100 mL)	1/20/2005	5/26/2009	127	5,900	240,000	125,484	1,500						
Dominguez Channel	Dry	Western Ave.	E. coli (MPN/100 mL)	4/3/2001	5/26/2009	246	100	120,000	2,571	1,100	25	235	Basin Plan	0.01	25 exceedances in 9 Year(s)	10%
Dominguez Channel	Dry	Western Ave.	Enterococcus (MPN/100 mL)	4/3/2001	5/26/2009	244	10	16,000	656	1,100						
Dominguez Channel	Dry	Western Ave.	Total Coliform (MPN/100 mL)	4/3/2001	5/26/2009	246	100	240,000	82,327	1,100						
Dominguez Channel	Dry	Yukon Ave.	E. coli (MPN/100 mL)	1/17/2002	5/26/2009	76	100	46,000	3,827	1,250	13	235	Basin Plan	0.02	13 exceedances in 8 Year(s)	17%
Dominguez Channel	Dry	Yukon Ave.	Enterococcus (MPN/100 mL)	1/17/2002	5/26/2009	76	10	24,000	4,010	1,250						
Dominguez Channel	Dry	Yukon Ave.	Total Coliform (MPN/100 mL)	1/17/2002	5/26/2009	76	100	240,000	83,370	1,250						
Dominguez Channel	Wet	El Segundo Blvd.	E. coli (MPN/100 mL)	2/19/2002	12/23/2008	37	100	19,000	3,714	980	9	235	Basin Plan	0.04	9 exceedances in 7 Year(s)	24%
Dominguez Channel	Wet	El Segundo Blvd.	Enterococcus (MPN/100 mL)	2/19/2002	12/23/2008	37	10	17,000	1,761	980						
Dominguez Channel	Wet	El Segundo Blvd.	Total Coliform (MPN/100 mL)	2/19/2002	12/23/2008	37	100	240,000	88,609	980						
Dominguez Channel	Wet	"Tributary @ Carson Plaza Dr.	E. coli (MPN/100 mL)	2/27/2003	1/31/2008	11	100	41,000	8,631	14,000	5	235	Basin Plan	0.09	5 exceedances in 5 Year(s)	45%
Dominguez Channel	Wet	"Tributary @ Carson Plaza Dr.	Enterococcus (MPN/100 mL)	2/27/2003	1/31/2008	11	52	24,000	10,497	14,000						
Dominguez Channel	Wet	"Tributary @ Carson Plaza Dr.	Total Coliform (MPN/100 mL)	2/27/2003	1/31/2008	11	14,000	240,000	157,364	14,000						
Dominguez Channel	Wet	Tributary @ Main St.	E. coli (MPN/100 mL)	1/27/2005	12/23/2008	7	410	160,000	26,197	8,200	4	235	Basin Plan	0.15	4 exceedances in 4 Year(s)	57%
Dominguez Channel	Wet	Tributary @ Main St.	Enterococcus (MPN/100 mL)	1/27/2005	12/23/2008	7	200	24,000	5,624	8,200						
Dominguez Channel	Wet	Tributary @ Main St.	Total Coliform (MPN/100 mL)	1/27/2005	12/23/2008	7	40,000	240,000	167,286	8,200						
Dominguez Channel	Wet	Vermont Ave.	E. coli (MPN/100 mL)	1/6/2005	12/23/2008	21	100	240,000	15,481	4,100	8	235	Basin Plan	0.10	8 exceedances in 4 Year(s)	38%
Dominguez Channel	Wet	Vermont Ave.	Enterococcus (MPN/100 mL)	1/6/2005	12/23/2008	21	10	24,000	2,479	4,100						
Dominguez Channel	Wet	Vermont Ave.	Total Coliform (MPN/100 mL)	1/6/2005	12/23/2008	21	1,100	240,000	128,319	4,100						
Dominguez Channel	Wet	Western Ave.	E. coli (MPN/100 mL)	2/19/2002	12/23/2008	37	100	110,000	6,326	1,600	6	235	Basin Plan	0.02	6 exceedances in 7 Year(s)	16%
Dominguez Channel	Wet	Western Ave.	Enterococcus (MPN/100 mL)	2/19/2002	12/23/2008	37	10	24,000	1,952	1,600						
Dominguez Channel	Wet	Western Ave.	Total Coliform (MPN/100 mL)	2/19/2002	12/23/2008	37	100	240,000	85,251	1,600						
Dominguez Channel	Wet	Yukon Ave.	E. coli (MPN/100 mL)	2/27/2003	12/23/2008	12	100	16,000	3,588	5,950	3	235	Basin Plan	0.04	3 exceedances in 6 Year(s)	25%
Dominguez Channel	Wet	Yukon Ave.	Enterococcus (MPN/100 mL)	2/27/2003	12/23/2008	12	10	24,000	7,173	5,950						
Dominguez Channel	Wet	Yukon Ave.	Total Coliform (MPN/100 mL)	2/27/2003	12/23/2008	12	740	240,000	108,762	5,950						
Dominguez Channel (Estuary)	Dry	Henry Ford Ave.	E. coli (MPN/100 mL)	4/3/2001	5/26/2009	242	100	240,000	1,698	100						
Dominguez Channel (Estuary)	Dry	Henry Ford Ave.	Enterococcus (MPN/100 mL)	4/3/2001	5/26/2009	240	10	24,000	263	100	12	104	Basin Plan Amendment	0.01	12 exceedances in 9 Year(s)	5%
Dominguez Channel (Estuary)	Dry	Wilmington Ave.	Enterococcus (MPN/100 mL)	4/3/2001	5/26/2009	244	10	24,000	238	185	31	104	Basin Plan Amendment	0.02	31 exceedances in 9 Year(s)	13%
Dominguez Channel (Estuary)	Dry	Wilmington Ave.	E. coli (MPN/100 mL)	4/3/2001	5/26/2009	246	100	46,000	697	185						

Notes:
Water quality data available but no screening criteria was determined.
Source:
City of Los Angeles Department of Public Works Bureau of Sanitation
Watershed Protection Division - Pollutant Assessment Section
Status and Trends Monitoring in Dominguez Channel (Main Stem)
Fecal Indicator Bacteria

Table D.5: Machado Lake - Water Quality Data Summary

Location	Weather	Constituent	Units	Total No. of Values	No. Values with ND	Dates Sampled		Min.	Max.	Avg.	Median		No. of Exceed.	Regulatory Threshold	Regulatory Source	Exceed. Frequency (# exceed. per year)
						From	To				w/o ND	w/ND				
ML-1	Undefined	E. Coli	(MPN/100mL)	56	0	12/20/2007	9/29/2008	100	1,400	278	150.00	150.00	25	235	Basin Plan	0.35
ML-1	Undefined	Ent.	(MPN/100mL)	56	0	12/20/2007	9/29/2008	10	3,600	148	67.50	67.50				
ML-1	Undefined	Tot. Coli.	(MPN/100mL)	55	0	12/20/2007	9/29/2008	520	240,000	58,179	28,000.00	28,000.00				
ML-1	Dry	(EMD Lab) Chlorophyll-a	µg/L	55	0	5/19/2008	2/7/2011	6	234	52	53.00	47.00	43	20	TMDL	2.13
ML-1	Dry	Alkalinity	mg/L	32	0	10/25/2007	5/4/2009	60	254	145	136.00	136.00				
ML-1	Dry	Hardness	mg/L	27	0	10/25/2007	5/4/2009	91.4	473	252	241.00	241.00				
ML-1	Dry	Inorganic Nitrogen	mg/L	105	0	6/16/2006	2/7/2011	0.04	0.68	0	0.16	0.05				
ML-1	Dry	Kjeldhal-N	mg/L	92	0	10/25/2007	2/7/2011	0.16	5	2	1.55	1.55				
ML-1	Dry	NH3-N	mg/L	106	0	6/16/2006	2/7/2011	0.05	0.53	0	0.08	0.05				
ML-1	Dry	NO2	mg/L	106	0	6/16/2006	2/7/2011	0.046	0.14	0	0.07	0.02				
ML-1	Dry	NO3	mg/L	106	0	6/16/2006	2/7/2011	0.04	0.33	0	0.10	0.02	0	45	Basin Plan	0.00
ML-1	Dry	Organic-N	mg/L	92	0	10/25/2007	2/7/2011	0.11	5	2	1.50	1.50				
ML-1	Dry	Ortho-Phosphorus	mg/L	106	0	6/16/2006	2/7/2011	0.13	1.61	1	0.64	0.64				
ML-1	Dry	TDS	mg/L	67	0	6/16/2006	2/7/2011	84	1108	527	508.00	492.00				
ML-1	Dry	Total Nitrogen	mg/L	106	0	6/16/2006	2/7/2011	0.3	5	2	1.82	1.82	89	1	TMDL	3.90
ML-1	Dry	Total Phosphate	mg/L	106	0	6/16/2006	2/7/2011	0.31	1.91	1	0.81	0.81				
ML-1	Dry	TSS	mg/L	103	0	6/16/2006	2/7/2011	2.4	148	31	29.50	29.00				
ML-1	Wet	(EMD Lab) Chlorophyll-a	µg/L	2	0	5/23/2008	2/17/2009	74.3	74.3	40	74.30	40.15	1	20	TMDL	0.37
ML-1	Wet	Alkalinity	mg/L	4	0	12/20/2007	2/17/2009	16	42	31	33.00	33.00				
ML-1	Wet	Hardness	mg/L	4	0	12/20/2007	2/17/2009	45.4	74	60	59.60	59.60				
ML-1	Wet	Inorganic Nitrogen	mg/L	6	0	4/17/2007	2/17/2009	0.46	0.64	0	0.57	0.52				
ML-1	Wet	Kjeldhal-N	mg/L	5	0	12/20/2007	2/17/2009	0.4	2.5	1	0.70	0.70				
ML-1	Wet	NH3-N	mg/L	6	0	4/17/2007	2/17/2009	0.1	0.2	0	0.10	0.10				
ML-1	Wet	NO2	mg/L	6	0	4/17/2007	2/17/2009	0	0	0	0.02	0.02				
ML-1	Wet	NO3	mg/L	6	0	4/17/2007	2/17/2009	0.39	0.49	0	0.45	0.42	0	45	Basin Plan	0.00
ML-1	Wet	Organic-N	mg/L	5	0	12/20/2007	2/17/2009	0.4	2.4	1	0.60	0.60				
ML-1	Wet	Ortho-Phosphorus	mg/L	6	0	4/17/2007	2/17/2009	0.29	0.71	0	0.43	0.43				
ML-1	Wet	TDS	mg/L	5	0	4/17/2007	2/17/2009	120	612	237	146.00	146.00				
ML-1	Wet	Total Nitrogen	mg/L	6	0	4/17/2007	2/17/2009	0.86	3.26	2	1.35	1.35	5	1	TMDL	1.53
ML-1	Wet	Total Phosphate	mg/L	6	0	4/17/2007	2/17/2009	0.39	1.13	1	0.43	0.43				
ML-1	Wet	TSS	mg/L	6	0	4/17/2007	2/17/2009	11	72	27	20.00	20.00				
ML-1	Undefined	ALGAL BIOMASS	µg/L(mg/M3)	41	8	4/4/2011	12/10/2012	10	166	32	31.00	26.00				
ML-1	Undefined	AMMONIA-N	mg/L	39	35	4/4/2011	12/26/2012	0.1	0.21	0	0.14	0.03	0	2.15	TMDL	0.00
ML-1	Undefined	LAKE DEPTH	ft	46	0	4/4/2011	12/26/2012	2	4.58	3	3.50	3.50				
ML-1	Undefined	NITRATE-N	mg/L	35	30	4/4/2011	12/26/2012	0.13	0.68	0	0.38	0.01	0	10	Basin Plan	0.00
ML-1	Undefined	NITRITE-N	mg/L	43	43	4/4/2011	12/26/2012	0	0	0	0.00	0.01	0	1	Basin Plan	0.00
ML-1	Undefined	ORGANIC-N	mg/L	46	1	4/4/2011	12/26/2012	0.17	3.48	1	0.91	0.86				
ML-1	Undefined	OXYGEN (DISSOLVED)	mg/L	46	0	4/4/2011	12/26/2012	0.17	8.5	4	3.50	3.50	38	5	TMDL	1.43
ML-1	Undefined	PHOSPHORUS (ORTHO)	mg/L	46	0	4/4/2011	12/26/2012	0.29	1.2	1	0.66	0.66				
ML-1	Undefined	PHOSPHORUS (TOTAL)	mg/L	46	0	4/4/2011	12/26/2012	0.33	1.39	1	0.77	0.77	46	0.1	TMDL	1.73
ML-1	Undefined	SECCHI DEPTH	in	46	0	4/4/2011	12/26/2012	10	45	25	25.00	25.00				
ML-1	Undefined	SUSPENDED SOLIDS	mg/L	46	0	4/4/2011	12/26/2012	2.3	117	18	9.50	9.50				
ML-1	Undefined	TOTAL DISSOLVED SOLIDS	mg/L	46	0	4/4/2011	12/26/2012	80	668	357	334.00	334.00				
ML-1	Undefined	TURBIDITY	NTU	46	0	4/4/2011	12/26/2012	1.4	51.9	9	6.45	6.45				
ML-2	Undefined	E. Coli	(MPN/100mL)	56	0	12/20/2007	9/29/2008	100	1,100	237	200.00	200.00	19	235	Basin Plan	0.26
ML-2	Undefined	Ent.	(MPN/100mL)	56	0	12/20/2007	9/29/2008	10	4,300	148	63.00	63.00				
ML-2	Undefined	Tot. Coli.	(MPN/100mL)	55	0	12/20/2007	9/29/2008	410	240,000	55,284	25,000.00	25,000.00				
ML-2	Dry	(EMD Lab) Chlorophyll-a	µg/L	55	0	5/19/2008	2/7/2011	7	170	51	50.00	50.00	46	20	TMDL	2.28
ML-2	Dry	Alkalinity	mg/L	32	0	10/25/2007	5/4/2009	58	250	143	136.00	136.00				
ML-2	Dry	Hardness	mg/L	27	0	10/25/2007	5/4/2009	85	466	250	247.00	247.00				
ML-2	Dry	Inorganic Nitrogen	mg/L	106	0	6/16/2006	2/7/2011	0.03	0.7	0	0.16	0.05				
ML-2	Dry	Kjeldhal-N	mg/L	92	0	10/25/2007	2/7/2011	0.3	3.3	2	1.69	1.69				
ML-2	Dry	NH3-N	mg/L	106	0	6/16/2006	2/7/2011	0.05	0.58	0	0.09	0.05				
ML-2	Dry	NO2	mg/L	106	0	6/16/2006	2/7/2011	0.04	0.28	0	0.07	0.02				
ML-2	Dry	NO3	mg/L	106	0	6/16/2006	2/7/2011	0.03	0.34	0	0.12	0.02	0	45	Basin Plan	0.00
ML-2	Dry	Organic-N	mg/L	92	0	10/25/2007	2/7/2011	0.3	3.3	2	1.62	1.62				
ML-2	Dry	Ortho-Phosphorus	mg/L	106	0	6/16/2006	2/7/2011	0.2	1.44	1	0.64	0.64				
ML-2	Dry	TDS	mg/L	67	0	6/16/2006	2/7/2011	32	1090	526	480.00	480.00				

Table D.5: Machado Lake - Water Quality Data Summary

Location	Weather	Constituent	Units	Total No. of Values	No. Values with ND	Dates Sampled		Min.	Max.	Avg.	Median		No. of Exceed.	Regulatory Threshold	Regulatory Source	Exceed. Frequency (# exceed. per year)
						From	To				w/o ND	w/ND				
ML-2	Dry	Total Nitrogen	mg/L	106	0	6/16/2006	2/7/2011	0.3	4.62	2	1.79	1.79	92	1	TMDL	4.04
ML-2	Dry	Total Phosphate	mg/L	106	0	6/16/2006	2/7/2011	0.33	1.51	1	0.80	0.80				
ML-2	Dry	TSS	mg/L	104	0	6/16/2006	2/7/2011	3.2	91	29	27.50	27.50				
ML-2	Wet	(EMD Lab) Chlorophyll-a	µg/L	2	0	5/23/2008	2/17/2009	60.8	60.80	33.40	60.80	33.40	1	20	TMDL	0.37
ML-2	Wet	Alkalinity	mg/L	4	0	12/20/2007	2/17/2009	22	54.00	35.50	33.00	33.00				
ML-2	Wet	Hardness	mg/L	4	0	12/20/2007	2/17/2009	31.1	83.50	53.38	49.45	49.45				
ML-2	Wet	Inorganic Nitrogen	mg/L	5	0	12/20/2007	2/17/2009	0.41	0.60	0.43	0.52	0.47				
ML-2	Wet	Kjeldhal-N	mg/L	5	0	12/20/2007	2/17/2009	0.48	1.60	0.96	0.87	0.87				
ML-2	Wet	NH3-N	mg/L	5	0	12/20/2007	2/17/2009	0.07	0.18	0.11	0.13	0.09				
ML-2	Wet	NO2	mg/L	5	0	12/20/2007	2/17/2009	0	0.00	0.02	0.02	0.02				
ML-2	Wet	NO3	mg/L	5	0	12/20/2007	2/17/2009	0.34	0.42	0.30	0.37	0.36	0	45	Basin Plan	0.00
ML-2	Wet	Organic-N	mg/L	5	0	12/20/2007	2/17/2009	0.3	1.60	0.86	0.70	0.70				
ML-2	Wet	Ortho-Phosphorus	mg/L	5	0	12/20/2007	2/17/2009	0.32	0.58	0.44	0.46	0.46				
ML-2	Wet	TDS	mg/L	4	0	12/20/2007	2/17/2009	93	160.00	128.25	130.00	130.00				
ML-2	Wet	Total Nitrogen	mg/L	5	0	12/20/2007	2/17/2009	0.9	1.60	1.30	1.27	1.27	4	1	TMDL	0.93
ML-2	Wet	Total Phosphate	mg/L	5	0	12/20/2007	2/17/2009	0.38	0.78	0.51	0.45	0.45				
ML-2	Wet	TSS	mg/L	5	0	12/20/2007	2/17/2009	13	44.00	23.40	17.00	17.00				
ML-2	Undefined	ALGAL BIOMASS	µg/L(mg/M3)	42	9	4/4/2011	12/10/2012	12	103	32	29.00	26.50				
ML-2	Undefined	AMMONIA-N	mg/L	39	35	4/4/2011	12/26/2012	0.15	0.35	0	0.15	0.03	0	2.15	TMDL	0.00
ML-2	Undefined	LAKE DEPTH	ft	46	0	4/4/2011	12/26/2012	3.08	4.83	4	4.25	4.25				
ML-2	Undefined	NITRATE-N	mg/L	38	33	5/2/2011	12/26/2012	0.12	0.63	0	0.27	0.01	0	10	Basin Plan	0.00
ML-2	Undefined	NITRITE-N	mg/L	44	44	4/4/2011	12/26/2012	0	0	0	0.00	0.01	0	1	Basin Plan	0.00
ML-2	Undefined	ORGANIC-N	mg/L	46	0	4/4/2011	12/26/2012	0.27	3.87	1	1.00	1.00				
ML-2	Undefined	OXYGEN (DISSOLVED)	mg/L	46	0	4/4/2011	12/26/2012	0.08	8.17	3	2.57	2.57	42	5	TMDL	1.58
ML-2	Undefined	PHOSPHORUS (ORTHO)	mg/L	46	0	4/4/2011	12/26/2012	0.3	1.23	1	0.61	0.61				
ML-2	Undefined	PHOSPHORUS (TOTAL)	mg/L	46	0	4/4/2011	12/26/2012	0.33	1.37	1	0.71	0.71	46	0.1	TMDL	1.73
ML-2	Undefined	SECCHI DEPTH	in	46	0	4/4/2011	12/26/2012	11	52	26	25.00	25.00				
ML-2	Undefined	SUSPENDED SOLIDS	mg/L	46	0	4/4/2011	12/26/2012	1.4	35.5	13	9.10	9.10				
ML-2	Undefined	TOTAL DISSOLVED SOLIDS	mg/L	46	0	4/4/2011	12/26/2012	80	672	356	344.00	344.00				
ML-2	Undefined	TURBIDITY	NTU	46	0	4/4/2011	12/26/2012	1.3	17.7	7	5.80	5.80				
ML-3	Undefined	E. Coli	(MPN/100mL)	56	0	12/20/2007	9/29/2008	100	2,300	604	515.00	515.00	44	235	Basin Plan	0.61
ML-3	Undefined	Ent.	(MPN/100mL)	56	0	12/20/2007	9/29/2008	10	3,500	325	255.00	255.00				
ML-3	Undefined	Tot. Coli.	(MPN/100mL)	55	0	12/20/2007	9/29/2008	1,200	240,000	57,104	28,000.00	28,000.00				
ML-3	Dry	(EMD Lab) Chlorophyll-a	µg/L	20	0	5/19/2008	9/29/2008	40	88	61	60.50	60.50	20	20	TMDL	0.36
ML-3	Dry	Inorganic Nitrogen	mg/L	47	0	5/19/2008	9/29/2008	0.05	0.19	0	0.12	0.05				
ML-3	Dry	Kjeldhal-N	mg/L	47	0	5/19/2008	9/29/2008	0.3	3.3	2	1.75	1.70				
ML-3	Dry	NH3-N	mg/L	47	0	5/19/2008	9/29/2008	0.05	0.09	0	0.06	0.05				
ML-3	Dry	NO2	mg/L	47	0	5/19/2008	9/29/2008	0.14	0.19	0	0.17	0.02				
ML-3	Dry	NO3	mg/L	47	0	5/19/2008	9/29/2008	0	0	0	0.02	0.02	0	45	Basin Plan	0.00
ML-3	Dry	Organic-N	mg/L	47	0	5/19/2008	9/29/2008	0.3	3.3	2	1.80	1.80				
ML-3	Dry	Ortho-Phosphorus	mg/L	47	0	5/19/2008	9/29/2008	0.33	1	1	0.68	0.68				
ML-3	Dry	Total Nitrogen	mg/L	47	0	5/19/2008	9/29/2008	0.3	3.3	2	1.89	1.89	45	1	TMDL	0.35
ML-3	Dry	Total Phosphate	mg/L	47	0	5/19/2008	9/29/2008	0.52	1.22	1	0.81	0.81				
ML-3	Dry	TSS	mg/L	47	0	5/19/2008	9/29/2008	22	70	39	38.00	38.00				
ML-3	Wet	(EMD Lab) Chlorophyll-a	µg/L	1	0	5/23/2008	5/23/2008	73.90	73.90	73.90	73.90	73.90	1	20	TMDL	0.00
ML-3	Wet	Inorganic Nitrogen	mg/L	1	0	5/23/2008	5/23/2008	0.00	0.00	0.05	0.05	0.05				
ML-3	Wet	Kjeldhal-N	mg/L	1	0	5/23/2008	5/23/2008	1.47	1.47	1.47	1.47	1.47				
ML-3	Wet	NH3-N	mg/L	1	0	5/23/2008	5/23/2008	0.00	0.00	0.05	0.05	0.05				
ML-3	Wet	NO2	mg/L	1	0	5/23/2008	5/23/2008	0.00	0.00	0.02	0.02	0.02				
ML-3	Wet	NO3	mg/L	1	0	5/23/2008	5/23/2008	0.00	0.00	0.02	0.02	0.02	0	45	Basin Plan	0.00
ML-3	Wet	Organic-N	mg/L	1	0	5/23/2008	5/23/2008	1.47	1.47	1.47	1.47	1.47				
ML-3	Wet	Ortho-Phosphorus	mg/L	1	0	5/23/2008	5/23/2008	0.57	0.57	0.57	0.57	0.57				
ML-3	Wet	Total Nitrogen	mg/L	1	0	5/23/2008	5/23/2008	1.47	1.47	1.56	1.56	1.56	1	1	TMDL	0.00
ML-3	Wet	Total Phosphate	mg/L	1	0	5/23/2008	5/23/2008	0.76	0.76	0.76	0.76	0.76				
ML-3	Wet	TSS	mg/L	1	0	5/23/2008	5/23/2008	52.00	52.00	52.00	52.00	52.00				
ML-4	Undefined	E. Coli	(MPN/100mL)	47	0	5/19/2008	9/29/2008	100	520	157	100.00	100.00	8	235	Basin Plan	0.06
ML-4	Undefined	Ent.	(MPN/100mL)	47	0	5/19/2008	9/29/2008	10	270	43	30.00	30.00				
ML-4	Undefined	Tot. Coli.	(MPN/100mL)	46	0	5/19/2008	9/29/2008	2,200	240,000	54,120	25,000.00	25,000.00				

Table D.5: Machado Lake - Water Quality Data Summary

Location	Weather	Constituent	Units	Total No. of Values	No. Values with ND	Dates Sampled		Min.	Max.	Avg.	Median		No. of Exceed.	Regulatory Threshold	Regulatory Source	Exceed. Frequency (# exceed. per year)
						From	To				w/o ND	w/ND				
ML-4	Dry	(EMD Lab) Chlorophyll-a	µg/L	19	0	5/19/2008	9/26/2008	30.4	86.4	57	60.00	60.00	19	20	TMDL	0.36
ML-4	Dry	Inorganic Nitrogen	mg/L	47	0	5/19/2008	9/29/2008	0.05	0.14	0	0.15	0.05				
ML-4	Dry	Kjeldhal-N	mg/L	47	0	5/19/2008	9/29/2008	0.3	2.8	2	1.70	1.70				
ML-4	Dry	NH3-N	mg/L	47	0	5/19/2008	9/29/2008	0.05	0.11	0	0.09	0.05				
ML-4	Dry	NO2	mg/L	47	0	5/19/2008	9/29/2008	0.087	0.14	0	0.11	0.02				
ML-4	Dry	NO3	mg/L	47	0	5/19/2008	9/29/2008	0	0	0	0.02	0.02	0	45	Basin Plan	0.00
ML-4	Dry	Organic-N	mg/L	47	0	5/19/2008	9/29/2008	0.3	2.8	2	1.70	1.70				
ML-4	Dry	Ortho-Phosphorus	mg/L	47	0	5/19/2008	9/29/2008	0.33	0.96	1	0.68	0.68				
ML-4	Dry	Total Nitrogen	mg/L	47	0	5/19/2008	9/29/2008	0.3	2.8	2	1.79	1.79	44	1	TMDL	0.34
ML-4	Dry	Total Phosphate	mg/L	47	0	5/19/2008	9/29/2008	0.47	1.1	1	0.79	0.79				
ML-4	Dry	TSS	mg/L	47	0	5/19/2008	9/29/2008	14	58	34	34.00	34.00				
ML-4	Wet	(EMD Lab) Chlorophyll-a	µg/L	1	0	5/23/2008	5/23/2008	58.20	58.20	58.20	58.20	58.20	1	20	TMDL	0.00
ML-4	Wet	Inorganic Nitrogen	mg/L	1	0	5/23/2008	5/23/2008	0.00	0.00	0.05	0.05	0.05				
ML-4	Wet	Kjeldhal-N	mg/L	1	0	5/23/2008	5/23/2008	1.30	1.30	1.30	1.30	1.30				
ML-4	Wet	NH3-N	mg/L	1	0	5/23/2008	5/23/2008	0.00	0.00	0.05	0.05	0.05				
ML-4	Wet	NO2	mg/L	1	0	5/23/2008	5/23/2008	0.00	0.00	0.02	0.02	0.02				
ML-4	Wet	NO3	mg/L	1	0	5/23/2008	5/23/2008	0.00	0.00	0.02	0.02	0.02	0	45	Basin Plan	0.00
ML-4	Wet	Organic-N	mg/L	1	0	5/23/2008	5/23/2008	1.30	1.30	1.30	1.30	1.30				
ML-4	Wet	Ortho-Phosphorus	mg/L	1	0	5/23/2008	5/23/2008	0.61	0.61	0.61	0.61	0.61				
ML-4	Wet	Total Nitrogen	mg/L	1	0	5/23/2008	5/23/2008	1.30	1.30	1.39	1.39	1.39	1	1	TMDL	0.00
ML-4	Wet	Total Phosphate	mg/L	1	0	5/23/2008	5/23/2008	0.82	0.82	0.82	0.82	0.82				
ML-4	Wet	TSS	mg/L	1	0	5/23/2008	5/23/2008	43	43	43	43.00	43.00				
ML-4	Undefined	ALGAL BIOMASS	µg/L(mg/M3)	45	45	4/4/2011	12/10/2012	0	0	3	0.00	3.00				
ML-4	Undefined	AMMONIA-N	mg/L	45	45	4/4/2011	12/26/2012	0	0	0	0.00	0.03	0	2.15	TMDL	0.00
ML-4	Undefined	NITRATE-N	mg/L	45	45	4/4/2011	12/26/2012	0	0	0	0.00	0.01	0	10	Basin Plan	0.00
ML-4	Undefined	NITRITE-N	mg/L	46	46	4/4/2011	12/26/2012	0	0	0	0.00	0.01	0	1	Basin Plan	0.00
ML-4	Undefined	ORGANIC-N	mg/L	46	45	4/4/2011	12/26/2012	0.84	0.84	0	0.84	0.05				
ML-4	Undefined	PHOSPHORUS (ORTHO)	mg/L	45	45	4/4/2011	12/26/2012	0	0	0	0.00	0.03				
ML-4	Undefined	PHOSPHORUS (TOTAL)	mg/L	46	46	4/4/2011	12/26/2012	0	0	0	0.00	0.03	0	0.1	TMDL	0.00
ML-4	Undefined	SUSPENDED SOLIDS	mg/L	46	42	4/4/2011	12/26/2012	1	1.9	1	1.10	0.50				
ML-4	Undefined	TOTAL DISSOLVED SOLIDS	mg/L	45	44	4/4/2011	12/26/2012	40	40	15	40.00	14.00				
ML-4	Undefined	TURBIDITY	NTU	46	10	4/4/2011	12/26/2012	0.1	0.6	0	0.10	0.10				
ML-4	Undefined	ALGAL BIOMASS	µg/L(mg/M3)	42	9	4/4/2011	12/10/2012	10	167	34	31.00	26.00				
ML-4	Undefined	AMMONIA-N	mg/L	39	34	4/4/2011	12/26/2012	0.1	0.21	0	0.11	0.03	0	2.15	TMDL	0.00
ML-4	Undefined	NITRATE-N	mg/L	40	35	4/4/2011	12/26/2012	0.12	0.63	0	0.24	0.01	0	10	Basin Plan	0.00
ML-4	Undefined	NITRITE-N	mg/L	44	44	4/4/2011	12/26/2012	0	0	0	0.00	0.01	0	1	Basin Plan	0.00
ML-4	Undefined	ORGANIC-N	mg/L	46	0	4/4/2011	12/26/2012	0.32	2.55	1	0.97	0.97				
ML-4	Undefined	PHOSPHORUS (ORTHO)	mg/L	46	0	4/4/2011	12/26/2012	0.3	1.19	1	0.65	0.65				
ML-4	Undefined	PHOSPHORUS (TOTAL)	mg/L	46	0	4/4/2011	12/26/2012	0.33	1.37	1	0.75	0.75	46	0.1	TMDL	1.73
ML-4	Undefined	SUSPENDED SOLIDS	mg/L	46	0	4/4/2011	12/26/2012	1.7	64.7	15	11.40	11.40				
ML-4	Undefined	TOTAL DISSOLVED SOLIDS	mg/L	46	0	4/4/2011	12/26/2012	80	696	363	348.00	348.00				
ML-4	Undefined	TURBIDITY	NTU	46	0	4/4/2011	12/26/2012	1.5	29.7	8	5.50	5.50				
Project 510 Drain	Undefined	E. Coli	(MPN/100mL)	1	0	12/26/2007	12/26/2007	100	100	100	100.00	100.00	0	235	Basin Plan	0.00
Project 510 Drain	Undefined	Ent.	(MPN/100mL)	1	0	12/26/2007	12/26/2007	10	10	10	10.00	10.00				
Project 510 Drain	Undefined	Tot. Coli.	(MPN/100mL)	1	0	12/26/2007	12/26/2007	100	100	100	100.00	100.00				
Project 510 Drain	Dry	Alkalinity	mg/L	27	0	10/19/2007	5/4/2009	84	144	113	114.00	114.00				
Project 510 Drain	Dry	Hardness	mg/L	23	0	10/19/2007	5/4/2009	189	340	256	254.00	254.00				
Project 510 Drain	Dry	Inorganic Nitrogen	mg/L	31	0	10/19/2007	6/29/2009	0.29	2.53	1	0.97	0.91				
Project 510 Drain	Dry	Kjeldhal-N	mg/L	31	0	10/19/2007	6/29/2009	0.3	7.51	2	1.40	1.40				
Project 510 Drain	Dry	NH3-N	mg/L	31	0	10/19/2007	6/29/2009	0.07	0.61	0	0.34	0.32				
Project 510 Drain	Dry	NO2	mg/L	31	0	10/19/2007	6/29/2009	0.04	0.31	0	0.08	0.02				
Project 510 Drain	Dry	NO3	mg/L	31	0	10/19/2007	6/29/2009	0.29	2.45	1	0.63	0.63	0	45	Basin Plan	0.00
Project 510 Drain	Dry	Organic-N	mg/L	31	0	10/19/2007	6/29/2009	0.2	7	1	1.10	1.10				
Project 510 Drain	Dry	Ortho-Phosphorus	mg/L	30	0	10/19/2007	6/29/2009	0.06	1.09	0	0.28	0.26				
Project 510 Drain	Dry	TDS	mg/L	29	0	10/19/2007	6/29/2009	456	804	619	636.00	636.00				
Project 510 Drain	Dry	Total Nitrogen	mg/L	31	0	10/19/2007	6/29/2009	0.71	8	3	2.18	2.18	29	1	TMDL	1.59
Project 510 Drain	Dry	Total Phosphate	mg/L	30	0	10/19/2007	6/29/2009	0.06	1.24	0	0.33	0.33				
Project 510 Drain	Dry	TSS	mg/L	30	0	10/19/2007	6/29/2009	1	864	36	4.00	3.15				

Table D.5: Machado Lake - Water Quality Data Summary

Location	Weather	Constituent	Units	Total No. of Values	No. Values with ND	Dates Sampled		Min.	Max.	Avg.	Median		No. of Exceed.	Regulatory Threshold	Regulatory Source	Exceed. Frequency (# exceed. per year)
						From	To				w/o ND	w/ND				
Project 510 Drain	Wet	Alkalinity	mg/L	1	0	11/30/2007	11/30/2007	14	14	14	14.00	14.00				
Project 510 Drain	Wet	Hardness	mg/L	1	0	11/30/2007	11/30/2007	15.1	15.1	15	15.10	15.10				
Project 510 Drain	Wet	Inorganic Nitrogen	mg/L	1	0	11/30/2007	11/30/2007	1.43	1.43	1	1.45	1.45				
Project 510 Drain	Wet	Kjeldhal-N	mg/L	1	0	11/30/2007	11/30/2007	1.39	1.39	1	1.39	1.39				
Project 510 Drain	Wet	NH3-N	mg/L	1	0	11/30/2007	11/30/2007	0.66	0.66	1	0.66	0.66				
Project 510 Drain	Wet	NO2	mg/L	1	0	11/30/2007	11/30/2007	0	0	0	0.02	0.02				
Project 510 Drain	Wet	NO3	mg/L	1	0	11/30/2007	11/30/2007	0.77	0.77	1	0.77	0.77	0	45	Basin Plan	0.00
Project 510 Drain	Wet	Organic-N	mg/L	1	0	11/30/2007	11/30/2007	0.73	0.73	1	0.73	0.73				
Project 510 Drain	Wet	Ortho-Phosphorus	mg/L	1	0	11/30/2007	11/30/2007	0.78	0.78	1	0.78	0.78				
Project 510 Drain	Wet	TDS	mg/L	1	0	11/30/2007	11/30/2007	36	36	36	36.00	36.00				
Project 510 Drain	Wet	Total Nitrogen	mg/L	1	0	11/30/2007	11/30/2007	2.16	2.16	2	2.18	2.18	1	1	TMDL	0.00
Project 510 Drain	Wet	Total Phosphate	mg/L	1	0	11/30/2007	11/30/2007	0.8	0.8	1	0.80	0.80				
Project 510 Drain	Wet	TSS	mg/L	1	0	11/30/2007	11/30/2007	130	130	130	130.00	130.00				
Project 77 Drain	Undefined	E. Coli	(MPN/100mL)	4	0	12/26/2007	2/27/2008	100	4600	1,278	205.00	205.00	2	235	Basin Plan	0.09
Project 77 Drain	Undefined	Ent.	(MPN/100mL)	4	0	12/26/2007	2/27/2008	10	480	128	10.00	10.00				
Project 77 Drain	Undefined	Tot. Coli.	(MPN/100mL)	4	0	12/26/2007	2/27/2008	100	29000	9,750	4,950.00	4,950.00				
Project 77 Drain	Dry	Alkalinity	mg/L	35	0	10/19/2007	5/4/2009	58	198	116	112.00	112.00				
Project 77 Drain	Dry	Hardness	mg/L	30	0	10/19/2007	5/4/2009	178	363	269	265.00	265.00				
Project 77 Drain	Dry	Inorganic Nitrogen	mg/L	41	0	10/19/2007	6/29/2009	0.53	2.79	1	1.02	1.02				
Project 77 Drain	Dry	Kjeldhal-N	mg/L	41	0	10/19/2007	6/29/2009	0.19	23.41	2	1.59	1.59				
Project 77 Drain	Dry	NH3-N	mg/L	41	0	10/19/2007	6/29/2009	0.05	0.83	0	0.16	0.13				
Project 77 Drain	Dry	NO2	mg/L	41	0	10/19/2007	6/29/2009	0.06	0.72	0	0.12	0.02				
Project 77 Drain	Dry	NO3	mg/L	41	0	10/19/2007	6/29/2009	0.37	2.48	1	0.86	0.85	0	45	Basin Plan	0.00
Project 77 Drain	Dry	Organic-N	mg/L	41	0	10/19/2007	6/29/2009	0.1	23.1	2	1.50	1.50				
Project 77 Drain	Dry	Ortho-Phosphorus	mg/L	41	0	10/19/2007	6/29/2009	0.1	1.15	0	0.35	0.35				
Project 77 Drain	Dry	TDS	mg/L	39	0	10/19/2007	6/29/2009	500	2980	715	628.00	628.00				
Project 77 Drain	Dry	Total Nitrogen	mg/L	41	0	10/19/2007	6/29/2009	0.88	25.89	3	2.60	2.60	40	1	TMDL	1.65
Project 77 Drain	Dry	Total Phosphate	mg/L	41	0	10/19/2007	6/29/2009	0.16	4.18	1	0.42	0.42				
Project 77 Drain	Dry	TSS	mg/L	40	0	10/19/2007	6/29/2009	1.6	181	12	4.00	4.00				
Project 77 Drain	Wet	Alkalinity	mg/L	6	0	11/30/2007	2/17/2009	28	124	83	88.00	88.00				
Project 77 Drain	Wet	Hardness	mg/L	6	0	11/30/2007	2/17/2009	30.4	264	147	130.50	130.50				
Project 77 Drain	Wet	Inorganic Nitrogen	mg/L	6	0	11/30/2007	2/17/2009	1.01	3.41	2	1.77	1.77				
Project 77 Drain	Wet	Kjeldhal-N	mg/L	6	0	11/30/2007	2/17/2009	0.74	2.83	2	2.61	2.61				
Project 77 Drain	Wet	NH3-N	mg/L	6	0	11/30/2007	2/17/2009	0.14	0.76	0	0.50	0.50				
Project 77 Drain	Wet	NO2	mg/L	6	0	11/30/2007	2/17/2009	0.1	0.56	0	0.14	0.06				
Project 77 Drain	Wet	NO3	mg/L	6	0	11/30/2007	2/17/2009	0.74	2.42	1	1.12	1.12	0	45	Basin Plan	0.00
Project 77 Drain	Wet	Organic-N	mg/L	6	0	11/30/2007	2/17/2009	0.6	2.3	2	1.95	1.95				
Project 77 Drain	Wet	Ortho-Phosphorus	mg/L	6	0	11/30/2007	2/17/2009	0.06	2.01	1	0.52	0.52				
Project 77 Drain	Wet	TDS	mg/L	6	0	11/30/2007	2/17/2009	92	620	386	378.00	378.00				
Project 77 Drain	Wet	Total Nitrogen	mg/L	6	0	11/30/2007	2/17/2009	1.77	5.71	4	3.92	3.92	6	1	TMDL	1.22
Project 77 Drain	Wet	Total Phosphate	mg/L	6	0	11/30/2007	2/17/2009	0.2	1.99	1	0.64	0.64				
Project 77 Drain	Wet	TSS	mg/L	6	0	11/30/2007	2/17/2009	3	311	93	31.50	31.50				
Wilmington Drain	Undefined	E. Coli	(MPN/100mL)	4	0	12/26/2007	2/27/2008	100	1400	450	150.00	150.00	1	235	Basin Plan	0.04
Wilmington Drain	Undefined	Ent.	(MPN/100mL)	4	0	12/26/2007	2/27/2008	10	1200	310	15.00	15.00				
Wilmington Drain	Undefined	Tot. Coli.	(MPN/100mL)	4	0	12/26/2007	2/27/2008	5400	19000	10,675	9,150.00	9,150.00				
Wilmington Drain	Dry	Alkalinity	mg/L	29	0	10/19/2007	2/2/2009	108	238	169	164.00	164.00				
Wilmington Drain	Dry	Hardness	mg/L	31	0	10/19/2007	6/15/2009	137	1000	554	573.00	573.00				
Wilmington Drain	Dry	Inorganic Nitrogen	mg/L	30	0	10/19/2007	2/2/2009	0.29	1.97	1	0.91	0.89				
Wilmington Drain	Dry	Kjeldhal-N	mg/L	30	0	10/19/2007	2/2/2009	0.85	16.33	2	1.91	1.91				
Wilmington Drain	Dry	NH3-N	mg/L	39	0	10/19/2007	2/2/2009	0.15	1.44	1	0.52	0.52				
Wilmington Drain	Dry	NO2	mg/L	30	0	10/19/2007	2/2/2009	0.05	0.35	0	0.12	0.02				
Wilmington Drain	Dry	NO3	mg/L	30	0	10/19/2007	2/2/2009	0.1	2.09	1	0.37	0.37	0	45	Basin Plan	0.00
Wilmington Drain	Dry	Organic-N	mg/L	30	0	10/19/2007	2/2/2009	0.6	15.4	2	1.30	1.30				
Wilmington Drain	Dry	Ortho-Phosphorus	mg/L	30	0	10/19/2007	2/2/2009	0.21	4.42	1	0.40	0.39				
Wilmington Drain	Dry	TDS	mg/L	29	0	10/19/2007	2/2/2009	580	1760	1,217	1,240.00	1,240.00				
Wilmington Drain	Dry	Total Nitrogen	mg/L	30	0	10/19/2007	2/2/2009	1.29	18.42	3	2.31	2.31	30	1	TMDL	1.29
Wilmington Drain	Dry	Total Phosphate	mg/L	30	0	10/19/2007	2/2/2009	0.11	4.66	1	0.51	0.51				
Wilmington Drain	Dry	TSS	mg/L	30	0	10/19/2007	2/2/2009	2	38	12	8.00	8.00				

Table D.5: Machado Lake - Water Quality Data Summary

Location	Weather	Constituent	Units	Total No. of Values	No. Values with ND	Dates Sampled		Min.	Max.	Avg.	Median		No. of Exceed.	Regulatory Threshold	Regulatory Source	Exceed. Frequency (# exceed. per year)
						From	To				w/o ND	w/ND				
Wilmington Drain	Wet	Alkalinity	mg/L	6	0	11/30/2007	2/17/2009	14	158	85	84.00	84.00				
Wilmington Drain	Wet	Hardness	mg/L	6	0	11/30/2007	2/17/2009	22.8	442	190	204.50	204.50				
Wilmington Drain	Wet	Inorganic Nitrogen	mg/L	6	0	11/30/2007	2/17/2009	0.61	1.67	1	1.35	1.35				
Wilmington Drain	Wet	Kjeldhal-N	mg/L	6	0	11/30/2007	2/17/2009	0.89	1.76	1	1.26	1.26				
Wilmington Drain	Wet	NH3-N	mg/L	7	0	11/30/2007	2/17/2009	0.16	0.86	0	0.50	0.50				
Wilmington Drain	Wet	NO2	mg/L	6	0	11/30/2007	2/17/2009	0.06	0.06	0	0.06	0.02				
Wilmington Drain	Wet	NO3	mg/L	6	0	11/30/2007	2/17/2009	0.45	1.17	1	0.85	0.85	0	45	Basin Plan	0.00
Wilmington Drain	Wet	Organic-N	mg/L	6	0	11/30/2007	2/17/2009	0.6	0.94	1	0.90	0.90				
Wilmington Drain	Wet	Ortho-Phosphorus	mg/L	6	0	11/30/2007	2/17/2009	0.07	0.9	0	0.45	0.45				
Wilmington Drain	Wet	TDS	mg/L	6	0	11/30/2007	2/17/2009	52	820	421	374.00	374.00				
Wilmington Drain	Wet	Total Nitrogen	mg/L	6	0	11/30/2007	2/17/2009	1.51	2.57	2	2.13	2.13	6	1	TMDL	1.22
Wilmington Drain	Wet	Total Phosphate	mg/L	6	0	11/30/2007	2/17/2009	0.13	0.93	0	0.50	0.50				
Wilmington Drain	Wet	TSS	mg/L	6	0	11/30/2007	2/17/2009	4	88	40	39.50	39.50				

Notes:
Water quality data available but no screening criteria was determined.
Source:
City of Los Angeles Department of Public Works Bureau of Sanitation
Watershed Protection Division - Pollutant Assessment Section
Machado Lake Nutrient TMDL Monitoring Program

Table D.6: Dominguez Channel - Ammonia Study Data Summary

Date	Sampling Site	Waterbody	Sample ID EMD	Sample ID WPD	MDL (mg/L)	ML (mg/L)	Total Ammonia Concentration (mg/L NH_3-N)	pH	Temperature (˚C)	Unionized Ammonia (mg/L)	Weather	Basin Plan Amendment (2002, 2004) Criteria		Exceed.
												Total Ammonia (NH_3-N) (mg/L)	Unionized Ammonia (NH_3-N) (mg/L)	
7/1/2009	190th St. @ Figueroa St.	Estuary	HT132614-4	DC-E-190	0.05	0.1	ND	7.56	24.90		Dry			
7/8/2009	190th St. @ Figueroa St.	Estuary	HT132877-4	DC-E-190	0.05	0.1	ND	7.53	24.30		Dry			
7/15/2009	190th St. @ Figueroa St.	Estuary	HT133123-4	DC-E-190	0.05	0.1	ND	7.68	26.90		Dry			
7/22/2009	190th St. @ Figueroa St.	Estuary	HT133363-4	DC-E-190	0.05	0.1	ND	7.66	27.90		Dry			
7/29/2009	190th St. @ Figueroa St.	Estuary	HT133594-4	DC-E-190	0.05	0.1	0.23	7.61	26.80	0.006	Dry	1.783	0.029	No
8/5/2009	190th St. @ Figueroa St.	Estuary	HT133830-4	DC-E-190	0.05	0.1	ND	7.78	26.90		Dry			
8/13/2009	190th St. @ Figueroa St.	Estuary	HT134118-4	DC-E-190	0.05	0.1	ND	7.82	25.30		Dry			
7/1/2009	223rd St. @ Wilmington Ave.	Estuary	HT132614-3	DC-E-223	0.05	0.1	ND	7.65	24.10		Dry			
7/8/2009	223rd St. @ Wilmington Ave.	Estuary	HT132877-3	DC-E-223	0.05	0.1	ND	7.69	24.30		Dry			
7/15/2009	223rd St. @ Wilmington Ave.	Estuary	HT133123-3	DC-E-223	0.05	0.1	ND	7.81	25.30		Dry			
7/22/2009	223rd St. @ Wilmington Ave.	Estuary	HT133363-3	DC-E-223	0.05	0.1	ND	7.62	25.00		Dry			No
7/29/2009	223rd St. @ Wilmington Ave.	Estuary	HT133594-3	DC-E-223	0.05	0.1	0.16	7.73	26.00	0.005	Dry	1.650	0.029	
8/5/2009	223rd St. @ Wilmington Ave.	Estuary	HT133830-3	DC-E-223	0.05	0.1	ND	7.71	25.20		Dry			
8/13/2009	223rd St. @ Wilmington Ave.	Estuary	HT134118-3	DC-E-223	0.05	0.1	ND	7.84	24.50		Dry			
7/1/2009	Henry Ford Ave.	Estuary	HT132614-1	DC-E-HFD	0.05	0.1	ND	7.60	25.30		Dry			
7/8/2009	Henry Ford Ave.	Estuary	HT132877-1	DC-E-HFD	0.05	0.1	ND	7.72	24.30		Dry			
7/15/2009	Henry Ford Ave.	Estuary	HT133123-1	DC-E-HFD	0.05	0.1	ND	7.74	25.10		Dry			
7/22/2009	Henry Ford Ave.	Estuary	HT133363-1	DC-E-HFD	0.05	0.1	ND	7.76	25.30		Dry			
7/29/2009	Henry Ford Ave.	Estuary	HT133594-1	DC-E-HFD	0.05	0.1	0.16	7.75	21.00	0.004	Dry	2.225	0.029	No
8/5/2009	Henry Ford Ave.	Estuary	HT133830-1	DC-E-HFD	0.05	0.1	ND	7.75	21.90		Dry			
8/13/2009	Henry Ford Ave.	Estuary	HT134118-1	DC-E-HFD	0.05	0.1	ND	7.74	25.50		Dry			
7/1/2009	Sepulveda Blvd. @ Alameda St.	Estuary	HT132614-2	DC-E-SPV	0.05	0.1	ND	7.63	23.30		Dry			
7/8/2009	Sepulveda Blvd. @ Alameda St.	Estuary	HT132877-2	DC-E-SPV	0.05	0.1	ND	7.71	24.30		Dry			
7/15/2009	Sepulveda Blvd. @ Alameda St.	Estuary	HT133123-2	DC-E-SPV	0.05	0.1	ND	7.75	24.90		Dry			
7/22/2009	Sepulveda Blvd. @ Alameda St.	Estuary	HT133363-2	DC-E-SPV	0.05	0.1	ND	7.73	25.40		Dry			
7/29/2009	Sepulveda Blvd. @ Alameda St.	Estuary	HT133594-2	DC-E-SPV	0.05	0.1	0.16	7.62	24.50	0.004	Dry	2.047	0.288	No
8/5/2009	Sepulveda Blvd. @ Alameda St.	Estuary	HT133830-2	DC-E-SPV	0.05	0.1	ND	7.69	22.40		Dry			
8/13/2009	Sepulveda Blvd. @ Alameda St.	Estuary	HT134118-2	DC-E-SPV	0.05	0.1	ND	7.76	23.60		Dry			
7/1/2009	Artesia Blvd. @ Western Ave.	Freshwater	HT132614-6	DC-F-ART	0.05	0.1	ND	8.77	24.30		Dry			
7/8/2009	Artesia Blvd. @ Western Ave.	Freshwater	HT132877-6	DC-F-ART	0.05	0.1	DNQ (0.08)	8.42	24.30		Dry			
7/15/2009	Artesia Blvd. @ Western Ave.	Freshwater	HT133123-6	DC-F-ART	0.05	0.1	ND	8.56	29.50		Dry			
7/22/2009	Artesia Blvd. @ Western Ave.	Freshwater	HT133363-6	DC-F-ART	0.05	0.1	ND	9.04	31.20		Dry			
7/29/2009	Artesia Blvd. @ Western Ave.	Freshwater	HT133594-6	DC-F-ART	0.05	0.1	0.12	8.81	25.50	0.033	Dry	0.320	-	No
8/5/2009	Artesia Blvd. @ Western Ave.	Freshwater	HT133830-6	DC-F-ART	0.05	0.1	ND	9.16	29.40		Dry			
8/13/2009	Artesia Blvd. @ Western Ave.	Freshwater	HT134118-6	DC-F-ART	0.05	0.1	ND	9.01	26.80		Dry			
7/1/2009	El Segundo Blvd.	Freshwater	HT132614-8	DC-F-ELS	0.05	0.1	ND	9.76	24.30		Dry			
7/8/2009	El Segundo Blvd.	Freshwater	HT132877-8	DC-F-ELS	0.05	0.1	ND	9.88	24.70		Dry			
7/15/2009	El Segundo Blvd.	Freshwater	HT133123-8	DC-F-ELS	0.05	0.1	ND	10.12	32.00		Dry			
7/22/2009	El Segundo Blvd.	Freshwater	HT133363-8	DC-F-ELS	0.05	0.1	ND	8.99	31.50		Dry			
7/29/2009	El Segundo Blvd.	Freshwater	HT133594-8	DC-F-ELS	0.05	0.1	0.18	10.14	30.00	0.165	Dry	0.070	-	Yes
8/5/2009	El Segundo Blvd.	Freshwater	HT133830-8	DC-F-ELS	0.05	0.1	ND	9.57	30.70		Dry			
8/13/2009	El Segundo Blvd.	Freshwater	HT134118-8	DC-F-ELS	0.05	0.1	ND	9.69	27.80		Dry			
7/1/2009	Manhattan Beach Blvd.	Freshwater	HT132614-7	DC-F-MAN	0.05	0.1	ND	8.84	24.30		Dry			
7/8/2009	Manhattan Beach Blvd.	Freshwater	HT132877-7	DC-F-MAN	0.05	0.1	ND	8.60	24.50		Dry			
7/15/2009	Manhattan Beach Blvd.	Freshwater	HT133123-7	DC-F-MAN	0.05	0.1	ND	8.62	25.70		Dry			
7/22/2009	Manhattan Beach Blvd.	Freshwater	HT133363-7	DC-F-MAN	0.05	0.1	ND	8.79	26.90		Dry			
7/29/2009	Manhattan Beach Blvd.	Freshwater	HT133594-7	DC-F-MAN	0.05	0.1	1.50	8.93	26.00	0.513	Dry	0.257	-	Yes
8/5/2009	Manhattan Beach Blvd.	Freshwater	HT133830-7	DC-F-MAN	0.05	0.1	ND	8.41	25.40		Dry			
8/13/2009	Manhattan Beach Blvd.	Freshwater	HT134118-7	DC-F-MAN	0.05	0.1	ND	8.48	24.60		Dry			
7/1/2009	Vermont Ave.	Freshwater	HT132614-5	DC-F-VER	0.05	0.1	ND	8.71	24.30		Dry			
7/8/2009	Vermont Ave.	Freshwater	HT132877-5	DC-F-VER	0.05	0.1	ND	8.57	24.40		Dry			
7/15/2009	Vermont Ave.	Freshwater	HT133123-5	DC-F-VER	0.05	0.1	ND	8.89	29.50		Dry			
7/22/2009	Vermont Ave.	Freshwater	HT133363-5	DC-F-VER	0.05	0.1	0.15	7.96	28.70	0.009	Dry	1.033	-	No
7/29/2009	Vermont Ave.	Freshwater	HT133594-5	DC-F-VER	0.05	0.1	0.17	8.70	25.10	0.038	Dry	0.3933	-	No
8/5/2009	Vermont Ave.	Freshwater	HT133830-5	DC-F-VER	0.05	0.1	ND	8.69	27.40		Dry			
8/13/2009	Vermont Ave.	Freshwater	HT134118-5	DC-F-VER	0.05	0.1	ND	8.91	26.50		Dry			

Notes:
MDL = Method Detection Limit (the concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR Part 136 Appendix B).

Table D.6: Dominguez Channel - Ammonia Study Data Summary

Date	Sampling Site	Waterbody	Sample ID EMD	Sample ID WPD	MDL (mg/L)	ML (mg/L)	Total Ammonia Concentration (mg/L NH_3-N)	pH	Temperature (˚C)	Unionized Ammonia (mg/L)	Weather	Basin Plan Amendment (2002, 2004) Criteria		Exceed.
												Total Ammonia (NH_3-N) (mg/L)	Unionized Ammonia (NH_3-N) (mg/L)	

ML = Minimum Level (the concentration of a substance equivalent to the lowest calibration standard).
ND = Not Detected (concentration below MDL).
DNQ = Detected, NOT Quantified (concentration falls below the ML, but above the MDL). Estimated values shown in parentheses.
AE = Analysis Error (no value to report)
pH/Temperature were measured using a temperature-compensated pH probe, calibrated daily prior to use.
Source:
City of Los Angeles, Department of Public Works, Bureau of Sanitation, Watershed Protection Division, Pollution Assessment Section
Special Ammonia Sampling at Dominguez Channel
4 Freshwater, 4 Estuary Stations

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Attachment E

Watershed Control Measures Figures

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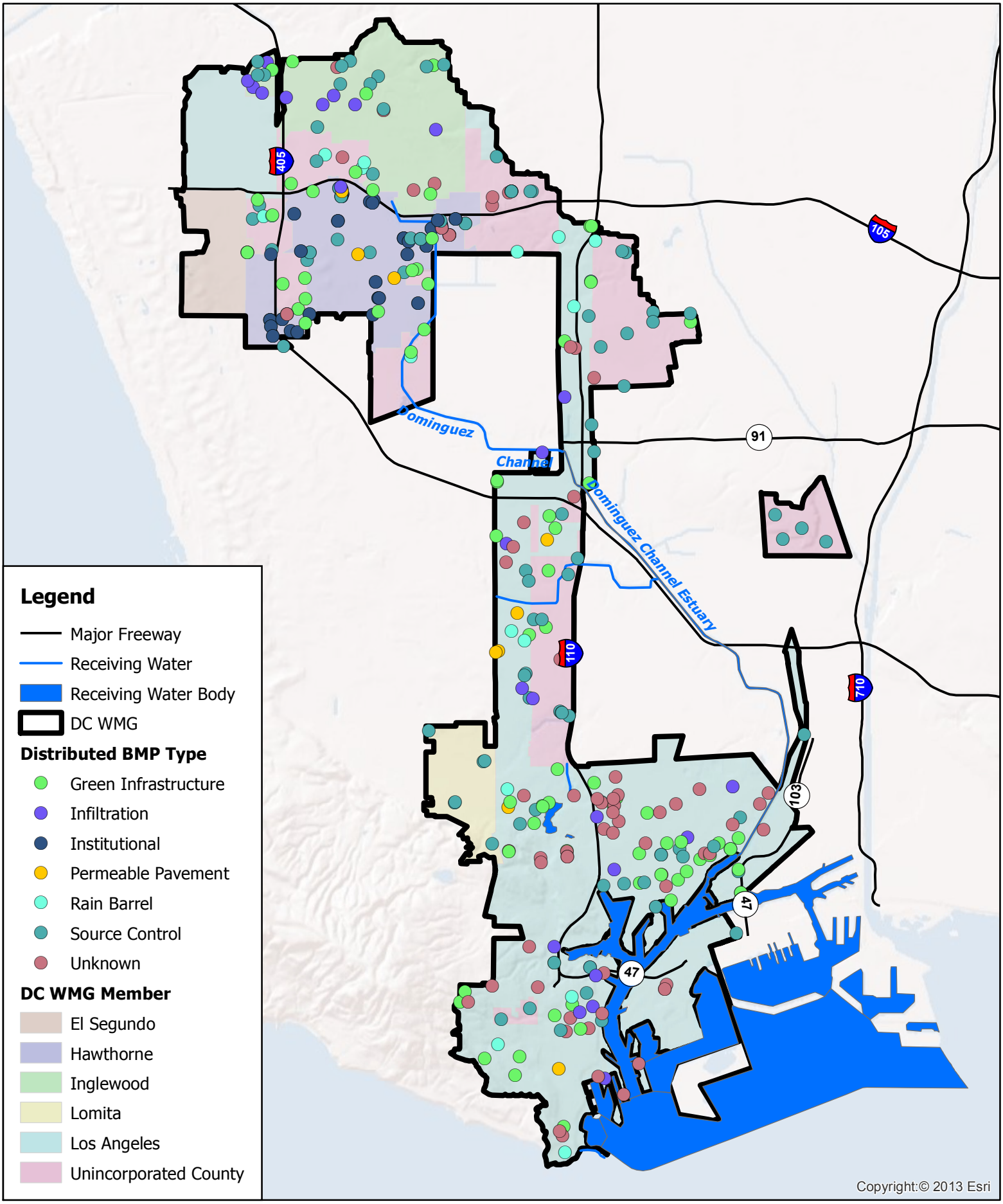

Figure E.1
Existing Distributed BMPs
DC WMG EWMP Work Plan
June 2014

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Attachment F

Regional and Distributed BMP Types

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This attachment includes a variety of regional and distributed Best Management Practices (BMPs) and regional BMPs that could potentially be implemented in the future by the Dominguez Channel Watershed Management Group (DC WMG), corresponding with Section 3.1.1 of the DC WMG Enhanced Watershed Management Program (EWMP) Work Plan.

Regional BMPs

Regional BMPs are large scale runoff treatment and retention systems that accept runoff from tens to hundreds of acres of development. For reference, a 0.75-inch storm falling over a typical hundred acre urban area can generate five acre-feet of runoff or over 1.6 million gallons (City of Los Angeles, 2013). They are generally owned by agencies with dedicated funding support for their maintenance or where the facilities support multiple beneficial uses such as groundwater recharge and recreation to achieve Integrated Regional Water Management Program objectives. Typically the first flush of runoff, which carries the pollutants of concern and debris at high concentrations, receives solids removal pretreatment. In most areas, after the runoff is captured and stored it can be treated and discharged, used for non-potable purposes, infiltrated into the soil, or a combination of the three.

Surface Infiltration Basins

Surface infiltration basins make an important contribution towards regional groundwater management. A key characteristic of these basins is placement over alluvial soils that allow rapid drawdown following the storm event. The DC WMG has limited areas suitable for rapid infiltration, therefore careful planning, along with multiple infiltration tests, should be conducted to verify site specific infiltration capabilities.

Underground Cisterns

For areas where infiltration is deemed infeasible, the 2012 Municipal Separate Storm and Sewer System (MS4) Permit directs the implementation of water capture and use projects which can be supported using underground cisterns that temporarily store the runoff until needed for use such as for irrigation. These systems can take many forms such as below grade water tanks, medium sized modular precast concrete units, or very large precast bridge or arch structures. Modular units are installed over a water proof geotextile to retain the water within the cistern. Holding times are a concern with underground cisterns and vector control measures should be implemented if holding times are greater than seventy-two hours. Additionally, the Department of Health has specific criteria for blended irrigation systems which should be reviewed during the preliminary design period. A recently constructed example of this technology is Garvanza Park in the City of Los Angeles. Modular units were installed under an existing park to accept stormwater runoff. Flows beyond the cistern capacity are bypassed down the existing storm drain. The stored water is used for park irrigation during the early morning hours when the park is closed and the risk of bodily contact is least.

Subsurface Infiltration Basins

In areas where infiltration is favorable, a similar cistern design can be used, except the geotextile is omitted so that the runoff may infiltrate into the ground below the cistern and be naturally filtered before recharging the regional groundwater table. One example of a subsurface infiltration basin is the City of Downey Discovery Park. The Park utilizes cisterns, which provides 3.3 acre-feet of infiltration storage and an additional 4.8 acre-feet of peak flow detention to reduce regional flooding. Systems for this size warrant multiple entry points and a vent system to allow air to escape during periods of peak runoff inflow, which has been estimated at one-hundred cubic feet per second.

Extended Retention Wetlands

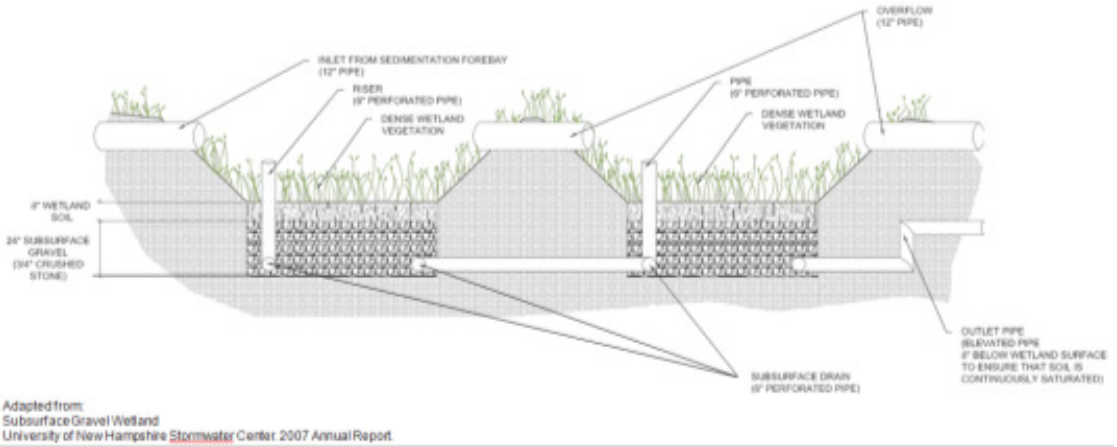
Extended retention wetlands are favored where rainfall or runoff is present year round so that replenishment water is available to maintain the wetland and aquatic life. They must also discharge when large storm events or storm event series are encountered. Water depths in extended retention wetlands are greater than depths seen in subsurface flow wetlands, therefore the area requirements are lessened and there is a significant risk of the water becoming stagnant and overgrown with algae mats. Extended retention wetlands are expected to function for retention. Depending on the anticipated rainfall depth, the volume required for retention could be excessively large, demanding a large wetland area.

Seasonal Dry Detention Ponds

Seasonal detention ponds are an effective method for detaining runoff so that it can be metered out through secondary treatment, such as a bioswale, sand filter, or media filter. They are also effective in avoiding damage associated with hydromodification or flooding due to limited downstream conveyance capacity.

Constructed/Subsurface Flow Wetlands

Unless extensive land area and substrate is available, subsurface flow wetlands are generally reserved as a tertiary treatment or polish for the effluent from wastewater treatment facilities, but can be utilized in relatively small catchments where nutrients are a significant issue. The design is generally based on either a relatively dependable and consistent inflow or the ability to primarily function in detention rather than extended retention. They may also be practical for remediation of dry-weather and very low first flush runoff drainage systems, so long as higher flows may be diverted away. They are impractical where water depths of over a few feet would be present for more than seventy-two hours.



Adapted from:
Subsurface Gravel Wetland
University of New Hampshire Stormwater Center 2007 Annual Report

Low Flow Diversion Pump Stations

Low flow diversion pump stations are operationally straight forward, but connection to the sanitary sewer system can be problematic due to capacity issues, connection limitations, treatment costs and unexpected prohibitions due to changes in the water quality. Low flow diversion pump stations are very effective at diverting dry-weather flows. Typically, they are constructed adjacent to manholes and are slightly deeper than the adjacent drainage channels such that low flow runoff is diverted from the peak flow. It is possible to use the low flow diversion in connection with a detention basin where larger flows can be held during a peak event and slowly discharged to the sanitary sewers for treatment.

Sand and Media Filters

Surface, or Austin sand filters, are at ground-level and typically earthen. They are easy to maintain, but have a large footprint. Perimeter, or Delaware, sand filters consist of two parallel trench chambers located in concrete vaults below an impervious surface, such as a parking lot. Sand filters are estimated to remove 80 percent of total suspended solids, 50 percent of total phosphorus, 25 percent of total nitrogen, 40 percent of fecal coliform, and 50 percent of heavy metals from typical stormwater runoff (San Francisco, 2010). Media filters detain and treat stormwater through filtration and absorption of pollutants to the filter media. Media filters containing both organic and mineral filtration materials generally have greater ion exchange capacity than sand filters, and therefore can more effectively remove soluble metals and other dissolved pollutants. This renders media filters particularly effective for roadways and highly industrial sites that contribute higher concentrations of metals to stormwater runoff, particularly zinc and copper. These filters have been shown to consistently remove over 85 percent of oil and grease, 82 percent of heavy metals, and around 40 percent of total phosphorus (San Francisco, 2010). While media filters are generally better at removing metals and organics, new media types may have the capabilities to reduce nutrients and sulfate in the future.

Membrane Filtration Systems

Membrane Filtration water treatment systems use semi-permeable membranes under high pressure to exude clean water, leaving behind a brine with the pollutants. The higher pressure membrane types such as reverse osmosis or ultrafiltration are highly effective at removing dissolved contaminants, while lower pressure systems filter bacteria and viruses. These systems usually require pre-treatment as particulate matter can foul the ion selective membrane and reduce performance. Operation and maintenance costs associated with membrane filtration are high due to the large consumption of energy required for filtration. In addition, membrane filtration systems are very expensive to operate and treatment volumes are relatively small.

Ion Exchange Systems

Ion exchange is a polishing step that specifically targets polar dissolved constituents, such as sulfate. Pretreatment is required prior to ion exchange as suspended solids will clog the exchange columns. Ion exchange systems can be used to treat stormwater from pollution generating impervious surfaces at the end of pipe using a pump system; they are also commonly used to treat contaminated groundwater. Operation and maintenance costs associated with ion exchange are high due to the large consumption of energy required to run an exchange system.

Distributed BMPs

Generally, distributed BMPs are installed and constructed during the development/redevelopment process or at construction sites as part of the various Minimum Control Measure (MCM) programs required by the MS4 Permit as discussed in greater detail in Section 3.2 of the DC WMG EWMP Work Plan. Distributed BMPs are implemented at the street-scale level for parcels typically less than one acre. They are generally owned by agencies with dedicated funding support for their maintenance or by private developments. Typically, distributed BMPs are sized to treat the first flush of runoff, which carries the pollutants of concern and debris at high concentrations.

Bioretention Planters and Rain Gardens

Bioretention is a BMP that relies on inundation tolerant vegetation and native or engineered soils with high organic content, to capture, infiltrate, and transpire runoff, while retaining pollutants. If designed properly, especially where native soils are sufficiently permeable and without other constraints to infiltration, rain gardens and larger bioretention facilities can be aesthetic amenities in addition to being cost effective. The planters should be flat and require maintenance such as weeding, trimming, and the replacement of dead plants (San Francisco, 2010).

Rain Barrels

Rain barrels hold roof runoff, usually delivered by rain gutters and downspouts, and store the water for later use. Screen installations at the downspout inlets prevent sediment, leaves, debris and mosquitoes from entering the rain barrel. Rain barrels are easily constructed for aesthetic purposes to compliment adjacent structures. Overall, maintenance requirements are minimal and include frequent visual inspections during the storm season and removal of accumulated sediment or debris. When effectively designed to capture and contain the runoff from a rooftop structure, a rain barrel can prevent runoff from small frequency storm events from leaving the property. This will reduce onsite water usage and the amount of pollutants that may potentially be carried offsite. This Low Impact Development (LID) BMP can be implemented throughout residential areas, as approved by the Los Angeles County West Vector and Vector-Borne Disease Control District (Saviskas, 2009).

Cisterns

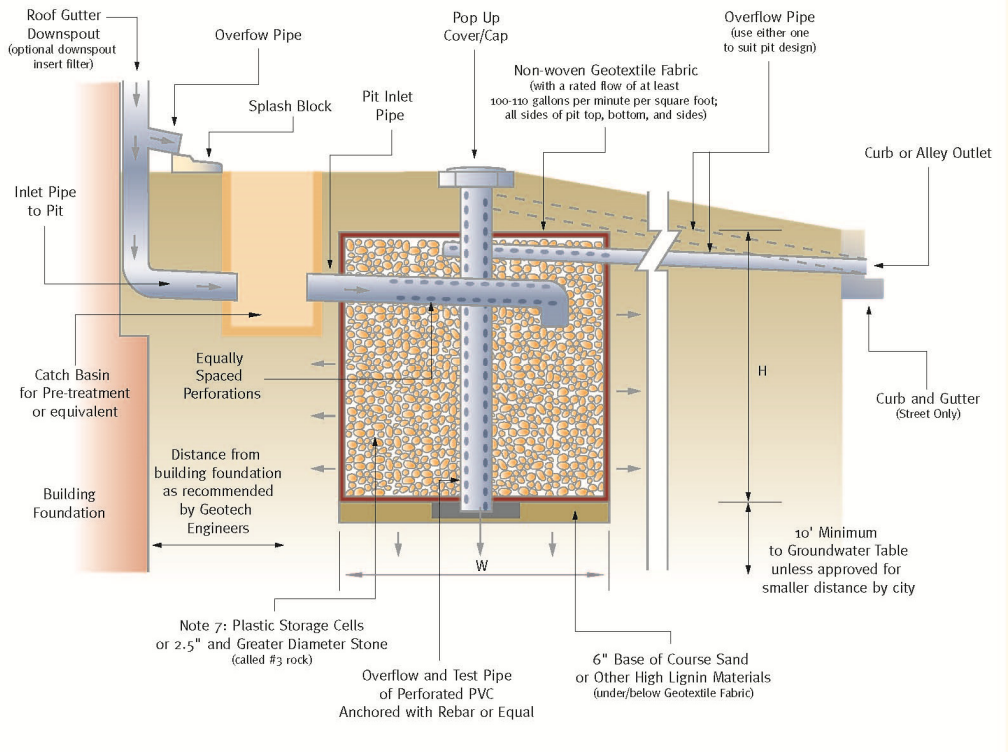
Cisterns provide retention storage in above or below ground storage tanks that accept diverted roof runoff and distribute it for later use, usually by pump to adjacent landscaped areas. Runoff collected in the cistern tank is often used for onsite landscape irrigation since outdoor irrigation can account for 40% of water consumption during spring and summer (USEPA, 2013a). Cisterns can be constructed using nearly any impervious water retaining material and are distinguishable from rain barrels only by their larger sizes and different shapes. Cisterns are an effective onsite retrofit option for treating rooftop runoff from selected residential, commercial, industrial, institutional, and municipal sites. By using cisterns, a quantifiable amount of stormwater runoff from impervious surfaces such as rooftops, parking structures, and elevated walkways can be captured and stored onsite to reduce the runoff volume and peak runoff flow rates. For smaller storm events, this captured runoff will reduce pollutant loads to the MS4 by preventing the first flush of contaminants over the source site. Stored rainwater may also conserve potable water supplies and reduce water utility bills. Cisterns can be utilized on both a large and small scale for regional or distributed projects.

Infiltration Pits and Drywells

Infiltration pits are among the first BMPs used in the Los Angeles region and are typically constructed by digging pits sized to accommodate the runoff source and design storm, lined with geotextile filter fabric, and filled with gravel or aggregate. The retention volume can be increased using various open retention systems or large diameter plastic half pipes in addition to the aggregate. The surface can be either open to accept incoming runoff or receive the downspout from a rain gutter and then covered with vegetation.

A dry well is operationally similar to an infiltration pit, but larger and more formally constructed. Pretreatment techniques, such as grass filter strips, a sand layer, clean aggregates, or a small settling chamber, are recommended to prevent clogging and maintain infiltration. It is recommended that dry wells maintain a minimum clearance of ten feet from the surface of the seasonal high water table and any foundations. Dry wells are lined with geotextile filter fabric to prevent soil intrusion and filled with clean graded aggregate or volume enhancing structures, such as open plastic half pipes (San Francisco, 2010).

When designed properly, a dry well can serve small impervious areas such as residential rooftops, however if they are bored, drilled, driven shaft, or a dug hole that is deeper than its widest surface dimension, it may be classified as a Class V injection well and requires permitting through the United States Environmental Protection Agency (USEPA). This LID BMP has high pollutant removal efficiencies for sediments, nutrients, trash, metals, bacteria, oil, grease, and organics.



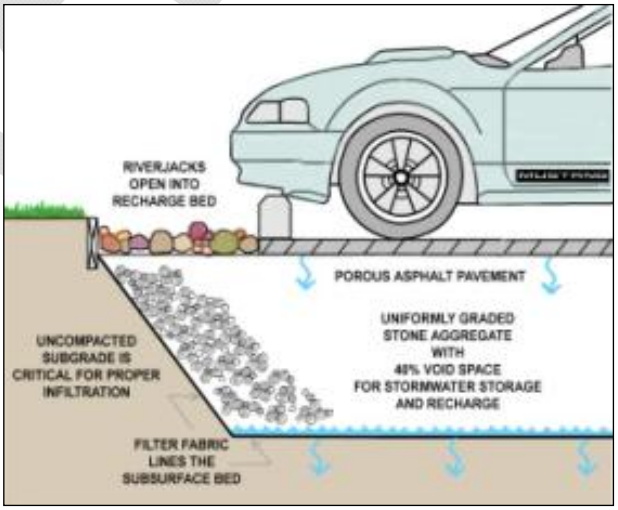
Infiltration Basins, Swales, and Trenches

An infiltration basin or trench is a shallow impoundment over permeable soil that holds and stores runoff until infiltration can occur, using the natural filtering ability of the soil to filter out pollutants. This LID BMP is effective at retaining sediment associated pollutants, but can become clogged, requiring removal of the upper soil. Use of a vegetated swale, or settling forebay, will extend the basin's longevity and reduce maintenance costs. Infiltration basins are best constructed over soils with infiltration rates of half an inch per hour or greater and they should have at least a four foot separation from basin bottom to groundwater table (San Francisco, 2010).

If adequate space is available, infiltration basins are cost-effective measures, even for regional scale projects, because little infrastructure is needed for their construction. However, site-specific conditions can cause significant variations in cost. California Stormwater Quality Association (CASQA) (2003) cites costs ranging from approximately three to eighteen dollars per cubic foot of storage. Annual maintenance costs are estimated to be approximately five to ten percent of construction costs (USEPA, 2013b).

Porous/Pervious Pavements

Pervious pavement allows rainfall to drain into an aggregate bed or structural retention unit where it is stored until infiltration can occur. There are many pervious pavements including porous concrete, plastic grid system, interlocking paving stones, brick, grass pavers, gravel pavers, and crushed stones. These materials allow for onsite infiltration that efficiently filters out pollutants such as bacteria, nutrients, and metals. Infiltration rates of the native soil are a key element to the overall design. Pervious pavements can be designed with a perforated underdrain system to redirect stormwater to a storm drain in areas where infiltration is infeasible. Using an underdrain system still results in improved water quality since stormwater will have passed through the BMP and undergone natural filtration and treatment processes. This type of BMP can also be used to disconnect directly connected impervious areas such as rooftops and parking lots. Vegetated runoff should not drain onto the pervious pavement as it may clog the system and require more frequent maintenance. Permeable pavements may be used in many locations where conventional pavements are used, such as parking lots, driveways, and walkways. Areas with the potential for spills, such as gas stations, should be avoided. Using proper maintenance techniques, pervious pavement can remove a significant portion of pollutants in stormwater runoff and reduce pavement ponding.



Green Roofs

Green Roofs are commonly recommended BMPs that are appropriate in some climates, but may be challenging to maintain or support in areas with a risk of brush fires and little annual rainfall. Intensive systems have large depths and cover much of the roof while extensive systems feature minimal plantings that require little maintenance. Green roofs enhance water quality, reduce runoff and are visually appealing as a rest area above office buildings. The amount of stormwater that a green roof can contain is proportional to the area of coverage, types of plants, slope, and many other factors. Green roofs can be constructed during the building's construction phase or included as a retrofit. When retrofitting, it must be noted that the building needs to support the weight of the green roof under fully saturated conditions. A waterproof membrane should be laid over the building to protect it from structural damage and overflow should be addressed through a drainage layer. Green roofs also provide insulation, help reduce building temperatures during summer months, and counter the heat island effect.

Green Streets

Like LID, Green Street design is strongly encouraged by the 2012 MS4 Permit and all of the Permittees within the DC WMG have developed or adopted green streets policies. They can take many forms such as an inverted street cross section with a vegetated low center median, vegetated curb extensions, parkways that trap and hold gutter flows, or planter boxes connected to the gutter and filled with highly porous soil and appropriate vegetation. In areas were sediment generation is limited or can be accommodated by pretreatment through a bioswale, porous concrete may be used to construct gutters so that flows may infiltrate. The City of Santa Monica is currently investigating the construction of large infiltration systems within the parkway that may be designed to accept dry-weather or design storm flows for small residential catchments. When properly designed, these structural BMPs can alleviate many of the types of pollutants that are of particular concern to the City.

Connector Pipe Screens

While several devices have been certified as meeting the definition of full capture, the most commonly installed device in Los Angeles County is a Connector Pipe Screen (CPS). Generically, CPSs are made from stainless steel mesh, with five millimeter openings, that stretch in front of the lateral or outlet from a catch basin and are secured to the walls and floor of the catch basin, with an opening above the screen that is greater in area than the outlet. During most events, runoff will flow through the screen leaving the trash upstream of, or on, the screen. During high intensity storms or if the mesh becomes occluded runoff can still flow over the screen and out of the catch basin to prevent flooding. Based on experience in other jurisdictions, 75-90 percent or more of the catch basins can be retrofitted with this device (Gateway Cities Council of Governments Trash Implementation, 2013). While regular maintenance to remove debris trapped on the upstream side of the screen is required, the intensity of maintenance is correlated with the amount of trash and debris collected. Many jurisdictions are familiar with the device and assessing compliance through their use, so it is expected that implementation should be relatively straight forward. In locations were the trash load results in excessive maintenance costs or to provide additional efforts to reduce trash, many jurisdictions also install Automatic Retracting Screens (ARS).

The only trash TMDL that is currently applicable to the DC WMG is the Machado Lake Trash TMDL. Areas tributary to Machado Lake are planning on installing CPS devices within each catch basin by 2016.

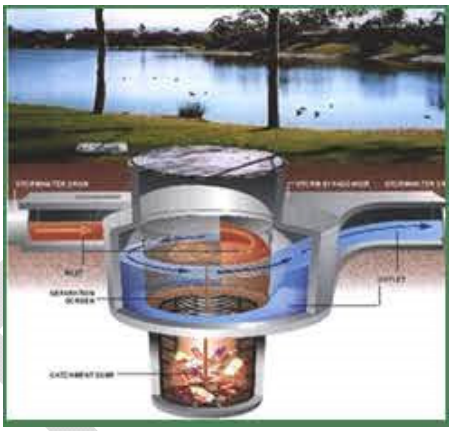
Automatic Retracting Screens

An ARS extends across the opening or "mouth" of the catch basin and traps trash and debris at street level where street sweepers or hand crews may remove the trash before it can enter into the catch basin or drain. However, in order to avoid flooding and reduce maintenance costs, the ARS will open or retract to allow trash to enter the catch basin and be trapped on the CPS. Areas that generate sufficient trash and debris to warrant the use of ARS in combination with a CPS are usually also subject to enhanced street sweeping on a weekly or even more frequent basis.

Hydrodynamic Separation Devices

While the DC WMG has several trash BMPs in place, more can be installed to help the Permittees reach zero trash in compliance with the Machado Lake Trash TMDL and other MS4 Permit requirements. Hydrodynamic Separation Devices effectively screen, separate, and trap debris, sediment, oil, and grease from stormwater and urban runoff. The indirect screening capability of the system allows for up to 100 percent removal of floatables and neutrally buoyant materials, without binding. These systems utilize the natural motion of water to separate and trap sediments by indirect filtration. As the storm water flows through the system, a very fine screen deflects the pollutants, which are captured in a litter sump in the center of the system. Hydrodynamic Separation Devices generally have screens that are self-cleaning. The water velocities within the swirl chamber continually shear debris off the screen to keep it clean. Hydrodynamic Separation Device systems are ineffective in removing soluble pollutants and smaller, less-settleable solids. They can provide effective pretreatment when paired with filtration devices, such as media filters or bioretention areas, covered in sections above to achieve higher removals of nutrient,

metals, and organics. Between storms, the CDS system can have standing water that could raise mosquito breeding concerns, which increase the concerns of vector control (San Francisco, 2010).



One Hydrodynamic Separation Devices is the Continuous Deflective Separation (CDS) system. The processing capacities of a CDS unit vary from three to three-hundred cubic feet per second, depending on the application. Precast modules are available for flows up to sixty-two cubic feet per second, while higher flow processing requires cast-in-place construction. Every unit requires a detailed hydraulic analysis before it is installed to ensure that it achieves optimum solids separation. The cost per unit (including installation) ranges from 2,300 to 7,200 dollars per cubic feet per second capacity, depending on site specific conditions and does not include any required maintenance (Hydrodynamic Separators, EPA).

Maintenance of the CDS system is site-specific but the manufacturer recommends that the unit be checked after every runoff event for the first thirty days after installation. During this initial installation period, the unit should be visually inspected and the amount of deposition should be measured to give the operator an idea of the expected rate of sediment deposition. After the initial operational period, it is recommended that the CDS system be inspected at least once, thirty days after the wet season. During these inspections, the floatables should be removed and the sump cleaned out. It is also recommended that the CDS systems be pumped out and the screen inspected for damage at least once per year.

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Attachment G

Summary of Existing Structural BMPs in DC WMG

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This attachment includes tables summarizing the existing Best Management Practices (BMPs) implemented by the Dominguez Channel Watershed Management Group (DC WMG), corresponding with Section 3.1 of the DC WMG Enhanced Watershed Management Program (EWMP) Work Plan.

Attachment G List of Tables

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Table G.1: Number of Reported BMPs Maintained during 2010-2011 by the DC WMG

BMP Type			El Segundo	Hawthorne	Inglewood	Lomita	Los Angeles	County of Los Angeles	Total
Structural BMPs									
Category	**Subcategory**	**BMPs**							
Regional	**Infiltration**	Infiltration Basin		3					**3**
	Detention								
	Constructed Wetland								
	Treatment Facilities								
	Low Flow Diversions	Diversion Structure						4	**4**
Distributed	**Site-Scale Detention**								
	Green Infrastructure	Biofilters		2					**2**
		Geo Block Porous Pavement					12		**12**
		Infiltration Trenches		1			42		**43**
	Flow-through Treatment BMPs								
	Source Control Structural BMPs	Abtech Ultra Urban Catch Basin Insert					82		**82**
		Automatic Retractable Screen Catch Basin (ARS)						179	**179**
		CDS Gross Pollutant Separators		1			14		**15**
		Clean Screen Catch Basin Inserts	15					60	**75**
		Connector Pipe Screens Catch Basin (CPS)						179	**179**
		Covered Material Bunkers	12						**12**
		Covered Trash Bins	15	1				2	**18**

Table G.1: Number of Reported BMPs Maintained during 2010-2011 by the DC WMG

BMP Type			El Segundo	Hawthorne	Inglewood	Lomita	Los Angeles	County of Los Angeles	Total
Distributed	Source Control Structural BMPs (Continued)	Drain Pac Catch Basin Inserts					352		**352**
		Extra Trash Cans	62					159	**221**
		Floating Trash Booms						1	**1**
		Fossil Filter Catch Basin Inserts	1	43			198	4	**246**
		Grate Plate - Entrance						2	**2**
		Restaurant Vent Traps	44						**44**
		Sand Bag						800	**800**
		Sand Filter		3					**3**
		Signage & Stenciling		65					**65**
		Silt Fence						1	**1**
		Stormceptor Gross Pollutant Separators	6				9		**15**
		Straw Mulch						5	**5**
Institutional BMPs									
		Dog Parks	2				7		**9**
		Enhanced Street Sweeping	2					1	**3**

Table G.2: Number of Reported BMPs Maintained during 2011-2012 by the DC WMG

BMP Type			El Segundo	Hawthorne	Inglewood	Lomita	Los Angeles	County of Los Angeles	Total
Structural BMPs									
Category	**Subcategory**	**BMPs**							
Regional	**Infiltration**	Infiltration Basin / Chamber		4					**4**
	Detention								
	Constructed Wetland								
	Treatment Facilities								
	Low Flow Diversions								
Distributed	**Site-Scale Detention**								
	Green Infrastructure	Bioretention Facility(planter box)					144		**144**
		Bioswale		4					**4**
		Filterra Biofiltration Unit						4	**4**
		Geo Block Porous Pavement					12		**12**
		Green Roof					1		**1**
		Infiltration Trenches		1			44	3	**48**
		Vegetated Swale/Strip					29		**29**
	Flow-through Treatment BMPs								
	Source Control Structural BMPs	Abtech Ultra Urban Catch Basin Insert					82		**82**
		Automatically Retractable Screens (ARS)						160	**160**
		Catch Basin Connector Pipe Full Capture(CPS)						193	**193**
Distributed	**Source Control Structural**	Catch Basin Insert					2		**2**

Table G.2: Number of Reported BMPs Maintained during 2011-2012 by the DC WMG

BMP Type			El Segundo	Hawthorne	Inglewood	Lomita	Los Angeles	County of Los Angeles	Total
	BMPs (Continued)	Catch Basin Opening Screen					3460		**3460**
		CDS Gross Pollutant Separators		1			17		**18**
		Check Dam						3	**3**
		Clean Screen Catch Basin Inserts	15					15	**30**
		Concrete Washout Containers						3	**3**
		Covered Material Bunkers	12					59	**71**
		Covered Trash Bins	15	1				12	**28**
		Covered Waste Fuel Tanks						1	**1**
		Drain Pac Catch Basin Inserts					352		**352**
		Extra Trash Cans	62					182	**244**
		Fiber Rolls						6	**6**
		Fossil Filter Catch Basin Inserts	1	43			237	18	**299**
		Gravel Bag Berm						4	**4**
		Jensen					1		**1**
		Potable Water / Irrigation						4	**4**
		Restaurant Vent Traps	44						**44**
		Sand Filter		4			1		**5**
		Sandbags						821	**821**
Distributed	**Source Control Structural BMPs (Continued)**	Secondary Containment for Waste Oil Tanks						1	**1**
		Sediment Trap						5	**5**

Table G.2: Number of Reported BMPs Maintained during 2011-2012 by the DC WMG

BMP Type			El Segundo	Hawthorne	Inglewood	Lomita	Los Angeles	County of Los Angeles	Total
		Shakers						2	**2**
		Signage & Stenciling		73					**73**
		Slope Stabilization						2	**2**
		Soil Stabilizer Tracking Control						2	**2**
		Spill Containment-Temp. Hazardous Material Storage						4	**4**
		Spill Prevention & Control						4	**4**
		Stabilized Construction Entrance/Exit						35	**35**
		Steel Plate						30	**30**
		Stormceptor Gross Pollutant Separators	6				9	6	**21**
		Storm Drain Inlet Protection						26	**26**
		Trench Drain Inlet						2	**2**
		Upgraded Fuel System with Canopy						2	**2**
Institutional BMPs									
		Concrete Curing			38				**38**
		Concrete Finishing			38				**38**
		Concrete Waste Management			15				**15**
		Dog Parks	2	7					**9**
		Dust Control			2				**2**
		Erosion Control			4				**4**

Table G.2: Number of Reported BMPs Maintained during 2011-2012 by the DC WMG

BMP Type			El Segundo	Hawthorne	Inglewood	Lomita	Los Angeles	County of Los Angeles	Total
		Enhanced Street Sweeping	2					61	**63**
		Hazardous Waste Management						3	**3**
		Liquid Waste Management			1				**1**
		Material Delivery & Storage			4				**4**
		Off-site Vehicle & Equipment Fueling			7				**7**
		Paving & Grinding Operations			8				**8**
		Preservation of Existing Vegetation			4				**4**
		Sanitary Septic Waste Management			4				**4**
		Scheduling			1				**1**
		Solid Waste Management						7	**7**
		Stockpile Management			12				**12**
		Vehicle & Equipment Maintenance			4				**4**
		Water Conservation Practices			4				**4**
		Water Trucks			2				**2**
		Wind Erosion Control			7				**7**

Table G.3: Number of Reported BMPs Installed during 2010-2011 by the DC WMG									
BMP Type			**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**City of Los Angeles**	**County of Los Angeles**	**Total**
Structural BMPs									
Category	**Subcategory**	**BMPs**							
Regional	**Infiltration**	Infiltration Basin, Chamber, Pit		2					**2**
	Detention								
	Constructed Wetland								
	Treatment Facilities								
	Low Flow Diversions								
Distributed	**Site-Scale Detention**								
	Green Infrastructure	Bioswale		1					**1**
		Infiltration Trenches					5		**5**
	Flow-through Treatment BMPs								
	Source Control Structural BMPs	Abtech Ultra Urban Catch Basin Insert					16		**16**
		Automatic Retractable Screens Catch Basin (ARS)			179				**179**
		Clean Screen Catch Basin Inserts						1	**1**
		Connector Pipe Screens Catch Basin (CPS)			179				**179**
		Covered Trash Bins						2	**2**
		Fossil Filter Catch Basin Inserts					25		**25**
		Grate Plate Entrance			2				**2**
		Sand Filter		1					**1**

Table G.3: Number of Reported BMPs Installed during 2010-2011 by the DC WMG

BMP Type			El Segundo	Hawthorne	Inglewood	Lomita	City of Los Angeles	County of Los Angeles	Total
	Source Control Structural BMPs (Continued)	Sandbag			300				**300**
		Signage & Stenciling		10					**10**
		Silt Fence			1				**1**
		Straw Mulch			5				**5**
Institutional BMPs									
		Enhanced Street Sweeping						1	**1**

Table G.4: Number of Reported BMPs Installed during 2011-2012 by the DC WMG

BMP Type			El Segundo	Hawthorne	Inglewood	Lomita	Los Angeles	County of Los Angeles	Total
Structural BMPs									
Category	**Subcategory**	**BMPs**							
Regional BMPs	**Infiltration**	Infiltration Basin, Chamber, Pit, Trench		1	3				**4**
	Detention	Detention Basin							**1**
	Constructed Wetland								
	Treatment Facilities								
	Low Flow Diversions								
Distributed BMPs	**Site-Scale Detention**								
	Green Infrastructure	Bio-retention Facility					15		**15**
		Bioswale		2	1				**3**
		Dry Well			1				**1**
		Filterra Biofiltration Unit						4	**4**
		Green Roof					1		**1**
		Infiltration Trenches			2		2	1	**5**
		Vegetated Swales			1		3		**4**
	Flow-through Treatment BMPs								
	Source Control Structural BMPs	Abtech Ultra Urban Catch Basin Insert					16		**16**
		Catch Basin Inserts (various)			21	2	3		**26**
		Catch Basin Opening Screen					502		**502**
Distributed	**Source Control Structural BMPs**	CDS Gross Pollutant Separators					3		**3**

Table G.4: Number of Reported BMPs Installed during 2011-2012 by the DC WMG

BMP Type			El Segundo	Hawthorne	Inglewood	Lomita	Los Angeles	County of Los Angeles	Total
	(Continued)	Check Dams						3	**3**
		Clean Screen Catch Basin Inserts						4	**4**
		Covered Trash Bins			5				**5**
		Fossil Filter Catch Basin Inserts					39		**39**
		Fueling Area Control				1			**1**
		Gravel Bag Berm						4	**4**
		Jensen					1		**1**
		Rooftop Runoff Control				1			**1**
		Sand Filter		1			1		**2**
		Signage & Stenciling		8		3			**11**
		Silt Fence						4	**4**
		Stabilized Construction Entrance/Exit						6	**6**
		Storm Drain Inlet Protection						12	**12**
		StormFilter			3				**3**
		Trash Storage Area				1			**1**
		Vertex Separator				1			**1**
Institutional BMPs									
		Concrete Curing						15	**15**
		Concrete Finishing						5	**5**
		Concrete Waste Management						5	**5**

Table G.4: Number of Reported BMPs Installed during 2011-2012 by the DC WMG

BMP Type			El Segundo	Hawthorne	Inglewood	Lomita	Los Angeles	County of Los Angeles	Total
		Enhanced Street Sweeping						3	**3**
		Hazardous Waste Management						3	**3**
		Offsite Vehicle & Equipment Fueling						2	**2**
		Paving & Grinding Operations						2	**2**
		Potable Water/ Irrigation						2	**2**
		Preservation of Existing Vegetation						4	**4**
		Sanitary Septic Waste Management						3	**3**
		Scheduling						1	**1**
		Solid Waste Management						4	**4**
		Spill Prevention & Control						3	**3**
		Stockpile Management						8	**8**
		Vehicle & Equipment Maintenance						2	**2**
		Water Conservation Practices						3	**3**
		Wind Erosion Control						3	**3**

Table G.5: City of Los Angeles/Inglewood BMPs in the DC WMG

BMP Type			Inglewood	Los Angeles	Total
Structural BMPs					
Category	**Subcategory**	**BMPs**			
Regional	**Infiltration**	Infiltration System Peck Park Canyon Stormwater Enhancement Rosecrans Recreational Center Stormwater Enhancements Wilmington Drain Rehabilitation		3	**3**
	Detention	Detention System Peck Park Canyon Stormwater Enhancement Rosecrans Recreational Center Stormwater Enhancements Wilmington Drain Rehabilitation		3	**3**
	Constructed Wetland				
	Treatment Facilities	Carson Regional Water Recycling Project	1		**1**
	Low Flow Diversions				
Distributed	**Site-Scale Detention**				
	Green Infrastructure	Bio-retention Planters Peck Park Canyon Stormwater Enhancement Rosecrans Recreational Center Stormwater Enhancements Wilmington Drain Rehabilitation		3	**3**
		Drought Tolerant Plants Peck Park Canyon Stormwater Enhancement Rosecrans Recreational Center Stormwater Enhancements Wilmington Drain Rehabilitation		3	**3**
	Flow-through Treatment BMPs				
	Source Control Structural BMPs				
Institutional BMPs					

Table G.5: City of Los Angeles/Inglewood BMPs in the DC WMG				
BMP Type		**Inglewood**	**Los Angeles**	**Total**
	Stormwater Re-use Carson Regional Water Recycling Project Peck Park Canyon Stormwater Enhancement Rosecrans Recreational Center Stormwater Enhancements Wilmington Drain Rehabilitation Well 7	1	4	**5**

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Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
Hawthorne							
1	SUSMP	Institutional	Storm Drain Stencil and Signage	1 Northrop Ave	33.920038	-118.334708	12/7/2005
2	SUSMP	Source Control	7 Filter Inserts	1 Northrop Ave	33.920038	-118.334708	12/7/2005
3	SUSMP	Institutional	Storm Drain Stencil and Signage	10320 Cerise Ave	33.919236	-118.333397	
4	SUSMP	Source Control	Clarifier	10320 Cerise Ave	33.919236	-118.333397	
5	SUSMP	Institutional	Storm Drain Stencil and Signage	11330 Hawthorne Blvd	33.931214	-118.352108	9/22/2004
6	SUSMP	Source Control	3 Filter Inserts	11330 Hawthorne Blvd	33.931214	-118.352108	9/22/2004
7	SUSMP	Green Infrastructure	Vegetated Swale	11436 Hawthorne Blvd	33.930169	-118.351858	4/30/2007
8	SUSMP	Institutional	Storm Drain Stencil and Signage	11436 Hawthorne Blvd	33.930169	-118.351858	4/30/2007
9	SUSMP	Source Control	3 Filter Inserts	11436 Hawthorne Blvd	33.930169	-118.351858	4/30/2007
10	SUSMP	Institutional	Storm Drain Stencil and Signage	11540 Hawthorne Blvd	33.929622	-118.352097	
11	SUSMP	Source Control	1 Filter Insert	11540 Hawthorne Blvd	33.929622	-118.352097	
12	SUSMP	Institutional	Storm Drain Stencil and Signage	11604 Prairie Ave	33.928614	-118.343183	10/21/2002
13	SUSMP	Source Control	1 Filter Insert	11604 Prairie Ave	33.928614	-118.343183	10/21/2002
14	SUSMP	Institutional	Oil-Water Separator	11643 S Prairie Ave	33.928367	-118.344144	
15	SUSMP	Institutional	Storm Drain Stencil and Signage	11643 S Prairie Ave	33.928367	-118.344144	
16	SUSMP	Institutional	Storm Drain Stencil and Signage	11646 Prairie Ave	33.928158	-118.343464	10/21/2002
17	SUSMP	Source Control	1 Filter Insert	11646 Prairie Ave	33.928158	-118.343464	10/21/2002
18	SUSMP	Green Infrastructure	33 Filterra Biotreatment System	12013 S Van Ness Ave	33.923447	-118.317603	6/25/2007
19	SUSMP	Source Control	Oil-Sediment Separator	12013 S Van Ness Ave	33.923447	-118.317603	6/25/2007
20	SUSMP	Institutional	Storm Drain Stencil and Signage	12101 Crenshaw Blvd	33.922183	-118.326969	7/17/2008
21	SUSMP	Source Control	4 Filter Inserts	12101 Crenshaw Blvd	33.922183	-118.326969	7/17/2008
22	SUSMP	Source Control	1 Sand Filter	12101 Crenshaw Blvd	33.922183	-118.326969	7/17/2008
23	SUSMP	Institutional	Storm Drain Stencil and Signage	12200 Wilkie Way	33.920656	-118.322111	
24	SUSMP	Source Control	6 Filter Inserts	12200 Wilkie Way	33.920656	-118.322111	
25	SUSMP	Source Control	3 Filter Inserts	12501 S Hawthorne Blvd	33.919569	-118.353169	6/21/2002
26	SUSMP	Source Control	3 Filter Inserts	12923 Inglewood Ave	33.9149	-118.361669	
27	SUSMP	Institutional	Storm Drain Stencil and Signage	13436 Roselle Ave	33.909836	-118.342533	
28	SUSMP	Source Control	4 Filter Inserts	13436 Roselle Ave	33.909836	-118.342533	
29	SUSMP	Institutional	Storm Drain Stencil and Signage	13811 Cordary Ave	33.906167	-118.34175	4/20/2006
30	SUSMP	Source Control	1 Filter Insert	13811 Cordary Ave	33.906167	-118.34175	4/20/2006
31	SUSMP	Institutional	Storm Drain Stencil and Signage	13914-13928 Lemoli Ave	33.904964	-118.33065	8/15/2006
32	SUSMP	Source Control	2 Filter Insert	13914-13928 Lemoli Ave	33.904964	-118.33065	8/15/2006
33	SUSMP	Institutional	Storm Drain Stencil and Signage	14250 S Prairie Ave	33.902242	-118.343269	2/10/2005
34	SUSMP	Source Control	2 Filter Insert	14250 S Prairie Ave	33.902242	-118.343269	2/10/2005
35	SUSMP	Green Infrastructure	3 Grass Swales	1440 Hindry Ave	33.900886	-118.371842	
36	SUSMP	Green Infrastructure	3 Dry Wells	1440 Hindry Ave	33.900886	-118.371842	
37	SUSMP	Institutional	Storm Drain Stencil and Signage	1440 Hindry Ave	33.900886	-118.371842	
38	SUSMP	Source Control	1 Filter Insert	1440 Hindry Ave	33.900886	-118.371842	
39	SUSMP	Institutional	Storm Drain Stencil and Signage	14600 Ocean Gate Ave	33.898469	-118.366183	
40	SUSMP	Source Control	3 Filter Inserts	14600 Ocean Gate Ave	33.898469	-118.366183	
41	SUSMP	Institutional	Storm Drain Stencil and Signage	14610 Hindry Ave	33.900886	-118.371592	
42	SUSMP	Source Control	(# Unknown) Filter Inserts	14610 Hindry Ave	33.900886	-118.371592	
43	SUSMP	Institutional	Storm Drain Stencil and Signage	14900 Hindry Ave	33.897167	-118.371086	
44	SUSMP	Source Control	9 Filter Inserts	14900 Hindry Ave	33.897167	-118.371086	
45	SUSMP	Green Infrastructure	9 Filterra Biotreatment System	2301 W 120th St	33.924389	-118.320328	7/24/2007
46	SUSMP	Institutional	Storm Drain Stencil and Signage	2301 W 120th St	33.924389	-118.320328	7/24/2007
47	SUSMP	Source Control	9 Filter Inserts	2301 W 120th St	33.924389	-118.320328	7/24/2007
48	SUSMP	Source Control	1 Vortex Separator	2301 W 120th St	33.924389	-118.320328	7/24/2007
49	SUSMP	Green Infrastructure	9 Filterra Biotreatment System	2400 El Segundo Blvd	33.916225	-118.319208	3/6/2007
50	SUSMP	Infiltration	4 Infiltration Systems	2400 El Segundo Blvd	33.916225	-118.319208	3/6/2007
51	SUSMP	Institutional	Storm Drain Stencil and Signage	2400 El Segundo Blvd	33.916225	-118.319208	3/6/2007

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
52	SUSMP	Source Control	35 Filter Inserts	2400 El Segundo Blvd	33.916225	-118.319208	3/6/2007
53	SUSMP	Institutional	Storm Drain Stencil and Signage	2750 W 120th St	33.916225	-118.324339	
54	SUSMP	Source Control	1 Filter Insert	2750 W 120th St	33.916225	-118.324339	
55	SUSMP	Source Control	1 Vortex Separator	2750 W 120th St	33.916225	-118.324339	
56	SUSMP	Institutional	Storm Drain Stencil and Signage	2800 W 120th St	33.922392	-118.324128	
57	SUSMP	Source Control	11 Filter Insert	2800 W 120th St	33.922392	-118.324128	
58	SUSMP	Institutional	Storm Drain Stencil and Signage	2808, 2815 El Segundo Blvd	33.9182	-118.328461	
59	SUSMP	Source Control	3 Filter Inserts	2808, 2815 El Segundo Blvd	33.9182	-118.328461	
60	SUSMP	Source Control	1 CDS Unit	2808, 2815 El Segundo Blvd	33.9182	-118.328461	
61	SUSMP	Source Control	5 Filter Inserts	2831-2909 W 120th St	33.924075	-118.324422	
62	SUSMP	Institutional	Storm Drain Stencil and Signage	2891 W 120th St	33.924247	-118.325311	
63	SUSMP	Source Control	2 Filter Inserts	2891 W 120th St	33.924247	-118.325311	
64	SUSMP	Source Control	21 Filter Inserts	3329-3525 Jack Northrop Ave	33.919906	-118.332789	12/21/2006
65	SUSMP	Institutional	Storm Drain Stencil and Signage	3440 W El Segundo Blvd	33.916169	-118.333742	10/17/2003
66	SUSMP	Source Control	1 CDS Unit	3440 W El Segundo Blvd	33.916169	-118.333742	10/17/2003
67	SUSMP	Institutional	Landscape Design	4569 El Segundo Blvd	33.916169	-118.371753	4/9/2002
68	SUSMP	Source Control	4 Filter Inserts	4773 W El Segundo Blvd	33.916603	-118.360833	2/23/2006
69	SUSMP	Source Control	1 Oil-Water Separator	4773 W El Segundo Blvd	33.916603	-118.360833	2/23/2006
70	SUSMP	Institutional	Storm Drain Stencil and Signage	4775 Rosecrans Ave	33.90225	-118.360906	
71	SUSMP	Source Control	4 Filter Inserts	4775 Rosecrans Ave	33.90225	-118.360906	
72	SUSMP	Institutional	Storm Drain Stencil and Signage	4859 W El Segundo	33.916836	-118.363317	10/10/2005
73	SUSMP	Source Control	2 Filter Inserts	4859 W El Segundo	33.916836	-118.363317	10/10/2005
74	SUSMP	Institutional	Storm Drain Stencil and Signage	4917 W 147th St	33.898028	-118.364358	
75	SUSMP	Source Control	3 Filter Inserts	4917 W 147th St	33.898028	-118.364358	
76	SUSMP	Institutional	Storm Drain Stencil and Signage	4951 W 119th St	33.925528	-118.365189	
77	SUSMP	Source Control	15 Filter Inserts	4951 W 119th St	33.925528	-118.365189	
78	SUSMP	Institutional	Storm Drain Stencil and Signage	5100 Rosecrans Ave	33.901086	-118.36845	
79	SUSMP	Source Control	6 Filter Inserts	5100 Rosecrans Ave	33.901086	-118.36845	
80	SUSMP	Source Control	Clarifier	5100 Rosecrans Ave	33.901086	-118.36845	
81	SUSMP	Source Control	1 Filter Insert	5105 W Rosecrans Ave	33.902253	-118.367225	8/13/2007
82	SUSMP	Source Control	1 Clarifier	5105 W Rosecrans Ave	33.902253	-118.367225	8/13/2007
83	SUSMP	Source Control	1 Filter Insert	5111 Marine Ave	33.894806	-118.368011	
84	SUSMP	Source Control	1 CDS Unit	Aviation Blvd. and Marine Ave	33.894511	-118.378467	11/29/2004
85	SUSMP	Infiltration	1 Cultec Infiltration System	NWC Hawthorne and 120th St	33.923914	-118.353072	3/13/2007
86	SUSMP	Institutional	Storm Drain Stencil and Signage	NWC Hawthorne and 120th St	33.923914	-118.353072	3/13/2007
87	SUSMP	Source Control	2 Filter Inserts	NWC Hawthorne and 120th St	33.923914	-118.353072	3/13/2007
88	SUSMP	Source Control	3 Filter Inserts	11524 Hawthorne Blvd	33.929597	-118.352144	9/14/2005
89	SUSMP	Green Infrastructure	Filterra Biotreatment System	NEC Aviation Blvd And El Segundo Blvd	33.916572	-118.3782	3/6/2007
90	SUSMP	Infiltration	3 Infiltration Systems	NEC Aviation Blvd And El Segundo Blvd	33.916572	-118.3782	3/6/2007
91	SUSMP	Source Control	1 Filter Insert	NEC Aviation Blvd And El Segundo Blvd	33.916572	-118.3782	3/6/2007
92	SUSMP	Institutional	Storm Drain Stencil and Signage	13812 Cordary Ave	33.906139	-118.341575	4/19/2006
93	SUSMP	Source Control	1 Filter Insert	13812 Cordary Ave	33.906139	-118.341575	4/19/2006
94	SUSMP	Source Control	Sand Filter	4150 W El Segundo Blvd	33.916625	-118.344144	
95	SUSMP	Source Control	Filter Inserts	4150 W El Segundo Blvd	33.916625	-118.344144	
96	SUSMP	Infiltration	Infiltration Gravel Basin	11300 Hawthorne Blvd	33.931572	-118.352778	
97	SUSMP	Source Control	1 C.B. Filter Insert	11300 Hawthorne Blvd	33.931572	-118.352778	
98	SUSMP	Green Infrastructure	Bio-Retention Boxes	4730 Imperial Hwy	33.930783	-118.360114	
99	SUSMP	Infiltration	Infiltration Trench	3211 Northrop Ave	33.919853	-118.330044	
100	SUSMP	Source Control	2 CB Filter Inserts	3211 Northrop Ave	33.919853	-118.330044	
101	SUSMP	Source Control	Sand Filter	3211 Northrop Ave	33.919853	-118.330044	
102	SUSMP	Permeable Pavement	Permeable Unit Paver	4160 W El Segundo Blvd	33.916244	-118.347406	
103	SUSMP	Permeable Pavement	Permeable Unit Paver	4320 Imperial Hw	33.930756	-118.352006	
104	SUSMP	Green Infrastructure	Drywell	1 Rocket Rd	33.919981	-118.326825	

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG							
ID	**Data Source**	**BMP Category**	**Project Description**	**Address**	**Latitude**	**Longitude**	**Date Active**
105	SUSMP	Green Infrastructure	Vegetated Swale	1 Rocket Rd	33.919981	-118.326825	
106	SUSMP	Green Infrastructure	Bio-Retention Box	14441 Inglewood Ave	33.900197	-118.362019	
107	SUSMP	Source Control	4 C.B. Filter Inserts	14441 Inglewood Ave	33.900197	-118.362019	
108	SUSMP	Permeable Pavement	Permeable Unit Paver	13403 Kornblum Ave	33.910772	-118.337406	
109	SUSMP	Infiltration	Infiltration Chamber	11300 Hawthorne Blvd	33.931828	-118.352364	
110	SUSMP	Source Control	Filter Inserts	11300 Hawthorne Blvd	33.931828	-118.352364	
111	SUSMP	Permeable Pavement	Permeable Unit Paver	Various			
112	SUSMP	Infiltration	Infiltration Chambers	On Hawthorne Blvd from El Segundo Blvd to Rosecrans Ave			
Inglewood							
1	SUSMP	Source Control	Grease Interceptor	401 E Hillcrest Blvd	33.961078	-118.349833	4/4/2013
2	SUSMP	Infiltration	Infiltration System	1155 W Arbor Vitae St	33.954914	-118.376772	2/8/2006
3	SUSMP	Source Control	Filter Inserts	1155 W Arbor Vitae St	33.954914	-118.376772	2/8/2006
4	SUSMP	Institutional	Storm Drain Stencils	1155 W Arbor Vitae St	33.954914	-118.376772	2/8/2006
5	SUSMP	Source Control	Grease Interceptor	3900 W Manchester Blvd	33.957556	-118.341972	5/17/2013
6	SUSMP	Source Control	Filter Inserts	3900 W Manchester Blvd	33.957556	-118.341972	5/17/2013
7	SUSMP	Infiltration	Infiltration System	3000 W Century Blvd	33.945136	-118.32595	5/28/2013
8	SUSMP	Source Control	Inlet Filters	3000 W Century Blvd	33.945136	-118.32595	5/28/2013
9	SUSMP	Source Control	Trench Filters	3000 W Century Blvd	33.945136	-118.32595	5/28/2013
10	SUSMP	Infiltration	Infiltration System	215 W 94th St	33.950933	-118.35745	7/9/2013
11	SUSMP	Source Control	Inlet Filters	215 W 94th St	33.950933	-118.35745	7/9/2013
12	SUSMP	Source Control	Trench Filters	215 W 94th St	33.950933	-118.35745	7/9/2013
13	SUSMP	Green Infrastructure	Dry Well	8090 S Crenshaw Blvd	33.960119	-118.326706	7/16/2013
14	SUSMP	Source Control	Inlet Filters	8090 S Crenshaw Blvd	33.960119	-118.326706	7/16/2013
15	SUSMP	Source Control	Trench Filters	8090 S Crenshaw Blvd	33.960119	-118.326706	7/16/2013
16	SUSMP	Source Control	Trash Enclosure	8090 S Crenshaw Blvd	33.960119	-118.326706	7/16/2013
17	SUSMP	Infiltration	Infiltration System	927 W Manchester Blvd	33.960619	-118.372944	9/26/3013
18	SUSMP	Source Control	Inlet Filter	927 W Manchester Blvd	33.960619	-118.372944	9/26/3013
19	SUSMP	Source Control	Sump Area	927 W Manchester Blvd	33.960619	-118.372944	9/26/3013
20	SUSMP	Unknown		1050 S Prairie Ave	33.949536	-118.340478	
21	SUSMP	Unknown		317 S La Brea Ave	33.959569	-118.353519	
22	SUSMP	Unknown		3405 W Imperial Hwy	33.931094	-118.3321	
23	SUSMP	Infiltration	Infiltration System	555 E Hardty St	33.950825	-118.348367	4/24/2012
24	SUSMP	Source Control	6 Flogard Plus C.B. Inserts	555 E Hardty St	33.950825	-118.348367	4/24/2012
25	SUSMP	Green Infrastructure	Dry Well	335 S Glasgow Ave	33.958922	-118.371544	4/25/2012
26	SUSMP		Cudo SW Tank	335 S Glasgow Ave	33.958922	-118.371544	4/25/2012
27	SUSMP		Detention Area	335 S Glasgow Ave	33.958922	-118.371544	4/25/2012
28	SUSMP	Source Control	Trash Enclosure	335 S Glasgow Ave	33.958922	-118.371544	4/25/2012
29	SUSMP	Source control	Filters	740 Centinela Ave	33.9757	-118.352183	5/14/2012
30	SUSMP	Green Infrastructure	Landscape	740 Centinela Ave	33.9757	-118.352183	5/14/2012
31	SUSMP	Source Control	Trash Enclosure	740 Centinela Ave	33.9757	-118.352183	5/14/2012
32	SUSMP	Infiltration	Infiltration System	225 N La Brea Ave	33.965794	-118.353778	1/30/2013
33	SUSMP	Source Control	Filters	225 N La Brea Ave	33.965794	-118.353778	1/30/2013
34	SUSMP	Source Control	Sump Pump	225 N La Brea Ave	33.965794	-118.353778	1/30/2013
35	SUSMP	Source Control	Trash Enclosure	225 N La Brea Ave	33.965794	-118.353778	1/30/2013
36	SUSMP	Infiltration	Infiltration System	8831 Aviation Blvd	33.956392	-118.378289	12/13/2012
37	SUSMP	Green Infrastructure	Bioswales	8831 Aviation Blvd	33.956392	-118.378289	12/13/2012
38	SUSMP	Source Control	Inlet Filters	8831 Aviation Blvd	33.956392	-118.378289	12/13/2012
39	SUSMP	Source Control	Wastewater Interceptor w/ Sump Pump	427 S Hindry Ave	33.957681	-118.373778	6/14/2011
40	SUSMP	Source Control	Grease Interceptor	424 S Isis Ave	33.957778	-118.375536	7/21/2011
41	SUSMP	Source Control	Trash Enclosure	424 S Isis Ave	33.957778	-118.375536	7/21/2011
42	SUSMP	Green Infrastructure	Dry Well	527 Regent St	33.964778	-118.365394	8/23/2011
43	SUSMP	Source Control	Grease Interceptor	675 S La Brea Ave	33.9556	-118.352564	12/13/2011
44	SUSMP	Source Control	Trash Enclosure	675 S La Brea Ave	33.9556	-118.352564	12/13/2011
45	SUSMP	Source Control	Grease Interceptor	1100 W Florence Ave	33.960839	-118.375539	2/4/2010
46	SUSMP	Source Control	Trash Enclosure	1100 W Florence Ave	33.960839	-118.375539	2/4/2010
47	SUSMP	Infiltration	Vegetated Swale	670 W Arbor Vitae St	33.952408	-118.367669	6/29/2010
48	SUSMP	Infiltration	Infiltration System	670 W Arbor Vitae St	33.952408	-118.367669	6/29/2010
49	SUSMP	Infiltration	Infiltration System with Filters	151 N Locust St	33.963792	-118.350808	11/3/2010
50	SUSMP	Source Control	Grease Interceptor	621 W Manchester Blvd	33.961797	-118.367297	10/21/2010
51	SUSMP	Source Control	Trash Enclosure	621 W Manchester Blvd	33.961797	-118.367297	10/21/2010

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
52	SUSMP	Institutional	Storm Drain Stencils	621 W Manchester Blvd	33.961797	-118.367297	10/21/2010
53	SUSMP	Source Control	Grease Interceptor	2323 W Manchester Blvd	33.960164	-118.319478	11/23/2010
54	SUSMP	Source Control	Trash Enclosure	2323 W Manchester Blvd	33.960164	-118.319478	11/23/2010
55	SUSMP	Source Control	Drain Filters	619 S Prairie Ave	33.955778	-118.344169	2/2/2009
56	SUSMP	Source Control	Trash Enclosure	619 S Prairie Ave	33.955778	-118.344169	2/2/2009
57	SUSMP			527 W Regent St	33.964831	-118.3654	
58	SUSMP	Detention	Detention System	701 Grace Ave	33.968622	-118.345239	4/17/2009
59	SUSMP	Institutional	Storm Drain Stencils	701 Grace Ave	33.968622	-118.345239	4/17/2009
60	SUSMP	Source Control	Filter	610 N Eucalyptus Ave	33.970386	-118.358778	8/3/2009
61	SUSMP	Institutional	Storm Drain Stencils	610 N Eucalyptus Ave	33.970386	-118.358778	8/3/2009
62	SUSMP	Source Control	Trash Enclosure	610 N Eucalyptus Ave	33.970386	-118.358778	8/3/2009
63	SUSMP	Source Control	Grease Interceptor	3236 W Manchester Blvd	33.959697	-118.328539	10/2/2009
64	SUSMP	Source Control	Trash Enclosure	3236 W Manchester Blvd	33.959697	-118.328539	10/2/2009
65	SUSMP	Institutional	Storm Drain Stencils	3236 W Manchester Blvd	33.959697	-118.328539	10/2/2009
66	SUSMP	Green Infrastructure	Retention System	447 N Prairie Ave	33.970272	-118.344367	10/7/2009
67	SUSMP	Source Control	Trash Enclosure	447 N Prairie Ave	33.970272	-118.344367	10/7/2009
68	SUSMP	Institutional	Storm Drain Stencils	447 N Prairie Ave	33.970272	-118.344367	10/7/2009
69	SUSMP	Source Control	Grease Interceptor	315 S Market St	33.959892	-118.352172	12/21/2009
70	SUSMP	Institutional	Storm Drain Stencils	315 S Market St	33.959892	-118.352172	12/21/2009
71	SUSMP	Infiltration	Infiltration System	733 S Hindry Ave	33.953461	-118.374311	4/8/2010
72	SUSMP	Source Control	Filters	733 S Hindry Ave	33.953461	-118.374311	4/8/2010
73	SUSMP	Source Control	Trash Enclosure	733 S Hindry Ave	33.953461	-118.374311	4/8/2010
74	SUSMP	Institutional	Storm Drain Stencils	733 S Hindry Ave	33.953461	-118.374311	4/8/2010
75	SUSMP	Source Control	Grease Interceptor	4656 W Century Blvd	33.945667	-118.358897	12/31/2009
76	SUSMP	Institutional	Storm Drain Stencils	4656 W Century Blvd	33.945667	-118.358897	12/31/2009
77	SUSMP	Green Infrastructure	Dry Well	812 S Osage Ave	33.953444	-118.345322	8/22/2008
78	SUSMP	Source Control	Filters	812 S Osage Ave	33.953444	-118.345322	8/22/2008
79	SUSMP	Source Control	Trash Enclosure	812 S Osage Ave	33.953444	-118.345322	8/22/2008
80	SUSMP		Sump Pump	812 S Osage Ave	33.953444	-118.345322	8/22/2008
81	SUSMP	Source Control	Grease Interceptor	3949 W 111th St	33.93485	-118.343428	9/23/2008
82	SUSMP	Source Control	Inlet Filters	3949 W 111th St	33.93485	-118.343428	9/23/2008
83	SUSMP	Source Control	Trash Enclosure	3949 W 111th St	33.93485	-118.343428	9/23/2008
84	SUSMP	Source Control	Grease Interceptor	739 E Hyde Park Blvd	33.977461	-118.344758	10/9/2008
85	SUSMP	Source Control	Inlet Filters	739 E Hyde Park Blvd	33.977461	-118.344758	10/9/2008
86	SUSMP	Source Control	Trash Enclosure	739 E Hyde Park Blvd	33.977461	-118.344758	10/9/2008
87	SUSMP	Green Infrastructure	Retention System	546 W Olive St	33.960872	-118.365825	2/14/2007
88	SUSMP	Source Control	Inlet Filters	546 W Olive St	33.960872	-118.365825	2/14/2007
89	SUSMP	Source Control	Trash Enclosure	546 W Olive St	33.960872	-118.365825	2/14/2007
90	SUSMP	Green Infrastructure	Retention System	1300 Centinela Ave	33.976767	-118.361761	3/8/2007
91	SUSMP	Source Control	Inlet Filters	1300 Centinela Ave	33.976767	-118.361761	3/8/2007
92	SUSMP	Source Control	Trash Enclosure	1300 Centinela Ave	33.976767	-118.361761	3/8/2007
93	SUSMP	Green Infrastructure	Retention System	3945-3947 W Imperial Hwy	33.931147	-118.343444	3/23/2007
94	SUSMP	Source Control	Inlet Filters	3945-3947 W Imperial Hwy	33.931147	-118.343444	3/23/2007
95	SUSMP	Source Control	Trash Enclosure	3945-3947 W Imperial Hwy	33.931147	-118.343444	3/23/2007
96	SUSMP	Source control	Bioclean Hydrocarbon Filter	1114 Centinela Ave	33.9765	-118.358247	5/2/2007
97	SUSMP	Detention	Detention System w/ Sump Pump	303 W Manchester Blvd	33.961875	-118.359922	7/19/2007
98	SUSMP	Source Control	Trash Enclosure	303 W Manchester Blvd	33.961875	-118.359922	7/19/2007
99	SUSMP	Source control	Secondary Containment w/ Overhead Cover	1050 S Prairie Ave	33.949939	-118.340517	7/26/2007
100	SUSMP	Unknown		11222 S Crenshaw Blvd	33.932717	-118.326283	
101	SUSMP	Source control	Trash Enclosure	2717 W Manchester Blvd	33.960214	-118.323703	9/13/2007
102	SUSMP	Green Infrastructure	Retention System	3150-3188 W Imperial Hwy	33.93035	-118.327397	9/25/2007
103	SUSMP	Source Control	Inlet Filters	3150-3188 W Imperial Hwy	33.93035	-118.327397	9/25/2007
104	SUSMP	Source Control	Trash Enclosure	3150-3188 W Imperial Hwy	33.93035	-118.327397	9/25/2007
105	SUSMP	Infiltration	Infiltration System	109 E Arbor Vitae St	33.953036	-118.354383	12/12/2007
106	SUSMP	Source Control	Inlet Filters	109 E Arbor Vitae St	33.953036	-118.354383	12/12/2007
107	SUSMP	Source Control	Trash Enclosure	109 E Arbor Vitae St	33.953036	-118.354383	12/12/2007
108	SUSMP	Detention	Detention System	830 N Acacia St	33.973761	-118.363428	12/7/2007
109	SUSMP	Source Control	Inlet Filter	830 N Acacia St	33.973761	-118.363428	12/7/2007
110	SUSMP	Source control	Grease Interceptor	212 E Regent St	33.964392	-118.352539	1/2/2008
111	SUSMP	Source Control	Trash Enclosure	212 E Regent St	33.964392	-118.352539	1/2/2008
112	SUSMP	Detention	Detention System	606 Centinela Ave	33.973886	-118.350267	12/21/2007

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG							
ID	**Data Source**	**BMP Category**	**Project Description**	**Address**	**Latitude**	**Longitude**	**Date Active**
113	SUSMP	Source Control	Trench Drain with Filter	606 Centinela Ave	33.973886	-118.350267	12/21/2007
Lomita							
1	SUSMP	Source Control	Catch basin and trench drain filter	24925 Walnut St	33.798697	-118.312091	1/3/2011
2	SUSMP	Source Control	Ultra-Draingard	1886 Lomita Blvd	33.798769	-118.311756	1/14/2008
3	SUSMP	Source Control	Catch basin and trench drain filter	25829 Narbonne Ave	33.789051	-118.320053	1/18/2006
4	SUSMP	Source Control	Kristar Swalegard	26607 S. Western Ave	33.779493	-118.309638	3/1/2010
5	SUSMP	Source Control	4 catch basin filters	2477 Lomita Blvd	33.805675	-118.327301	4/19/2011
6	SUSMP	Source Control	3 trench drain filters	25808 Narbonne Ave	33.789362	-118.319920	8/31/2009
Los Angeles (City)							
1	LID	Rain Barrel	4 Rain Barrels	5125 N North Maywood Ave	34.139953	-118.211814	9/30/2013
2	LID	Green Infrastructure	2 Planter Boxes	478 & 480 W 2nd St	33.742389	-118.287281	9/30/2013
3	LID	Permeable Pavement	Permeable Pavers	478 & 480 W 2nd St	33.742389	-118.287281	10/1/2013
4	LID	Rain Barrel	8 Rain Barrels	555 San Juan Ave	33.992931	-118.467567	9/26/2013
5	LID	Permeable Pavement	Permeable Pavers	555 San Juan Ave	33.992931	-118.467567	9/27/2013
6	LID	Green Infrastructure	3 Planter Boxes	1552 W 220th St	33.828131	-118.299531	9/25/2013
7	LID	Permeable Pavement	Permeable Pavers	1552 W 220th St	33.828131	-118.299531	9/25/2013
8	LID	Rain Barrel	8 Rain Barrels	870 E. Rose Ave	34.002417	-118.465192	9/23/2013
9	LID	Rain Barrel	6 Rain Barrels	733 1/2 E 48th St	33.999808	-118.262219	9/18/2013
10	LID	Permeable Pavement	Permeable Pavers	733 1/2 E 48th St	33.999808	-118.262219	9/18/2013
11	LID	Green Infrastructure	Dry Well	845 E Warren Ave	34.002639	-118.467353	9/17/2013
12	LID	Source Control	2 Pretreatment Settling Catch Basins	845 E Warren Ave	34.002639	-118.467353	9/17/2013
13	LID	Permeable Pavement	4 Permeable Pavers	845 E Warren Ave	34.002639	-118.467353	9/17/2013
14	LID	Green Infrastructure	3 Planter Boxes	1813 E Imperial Hwy	33.929669	-118.240378	9/17/2013
15	LID	Permeable Pavement	Permeable Paver	1813 E Imperial Hwy	33.929669	-118.240378	9/17/2013
16	LID	Rain Barrel	2 Rain Garden	1233 E Vienna Wy	34.000553	-118.454094	9/12/2013
17	LID	Permeable Pavement	2 Permeable Pavers	1233 E Vienna Wy	34.000553	-118.454094	9/12/2013
18	LID	Rain Barrel	8 Rain Barrels	881 E Warren Ave	34.003169	-118.466347	9/11/2013
19	LID	Green Infrastructure	Green Roof	881 E Warren Ave	34.003169	-118.466347	9/11/2013
20	LID	Unknown	Unknown	221 E 58th St	33.989756	-118.271028	9/10/2013
21	LID	Green Infrastructure	Planter Box	1630 N Amalfi Dr	34.060861	-118.501833	9/9/2013
22	LID	Rain Barrel	Rain Garden	1147 N Hartzell St	34.050681	-118.520947	9/4/2013
23	LID	Permeable Pavement	Permeable Paver	1147 N Hartzell St	34.050681	-118.520947	9/4/2013
24	LID	Rain Barrel	4 Rain Barrels	1041 E Nowita Pl	33.997947	-118.457425	8/29/2013
25	LID	Rain Barrel	4 Rain Barrels	3602 S Meyler St	33.714078	-118.299769	8/29/2013
26	LID	Rain Barrel	4 Rain Barrels	1242 W Maurentania St	33.789383	-118.279278	8/29/2013
27	LID	Green Infrastructure	5 Planter Boxes	1601 N San Onofre Dr	34.061919	-118.504622	8/29/2013
28	LID	Permeable Pavement	Permeable Pavers	3026 Kelton Ave	34.029114	-118.422081	8/28/2013
29	LID	Green Infrastructure	2 Planter Boxes	3026 Kelton Ave	34.029114	-118.422081	8/28/2013
30	LID	Permeable Pavement	Permeable Pavers	208 S Ruth Ave	34.000839	-118.472492	8/23/2013
31	LID	Infiltration	Infiltration Trenches	1490 W 7th St	34.053083	-118.269369	8/22/2013
32	LID	Source Control	Drain Filter	1490 W 7th St	34.053083	-118.269369	8/22/2013
33	LID	Source Control	3 Fossil Filter CB Insert	1490 W 7th St	34.053083	-118.269369	8/22/2013
34	LID	Rain Barrel	4 Rain Barrels	620 55th St	33.992439	-118.264400	8/20/2013
35	LID	Green Infrastructure	2 Dry Wells	739 E California Ave	33.994139	-118.463864	8/13/2013
36	LID	Permeable Pavement	Permeable Pavers	15460 W Albright St	34.050436	-118.527389	8/8/2013
37	LID	Green Infrastructure	Planter Box	15460 W Albright St	34.050436	-118.527389	8/8/2013
38	LID	Rain Barrel	14 Rain Barrel	211 S Pacific Ave	33.996114	-118.479061	8/5/2013
39	LID	Permeable Pavement	2 Permeable Pavers	211 S Pacific Ave	33.996114	-118.479061	8/5/2013
40	LID	Permeable Pavement	2 Permeable Pavers	1626 W 259th St	33.788161	-118.305200	8/5/2013
41	LID	Rain Barrel	2 Rain Barrels	1626 W 259th St	33.788161	-118.305200	8/5/2013
42	LID	Infiltration	Infiltration Trench	10615 Anzac Ave	33.939278	-118.237994	8/1/2013

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
43	LID	Green Infrastructure	Capture and Use	901 E E St	33.776261	-118.251764	7/30/2013
44	LID	Green Infrastructure	5 Planter Boxes	624 E Millwood Ave	33.991336	-118.463933	7/25/2013
45	LID	Permeable Pavement	Permeable Paver	624 E Millwood Ave	33.991336	-118.463933	7/25/2013
46	LID	Green Infrastructure	Vegetated Swale/Strip	19600 Magellan Dr	33.852853	-118.292347	7/24/2013
47	LID	Infiltration	Infiltration Trench	19600 Magellan Dr	33.852853	-118.292347	7/24/2013
48	LID	Green Infrastructure	3 Planter Boxes	666 Flower Ct	33.998725	-118.469344	7/11/2013
49	LID	Permeable Pavement	Permeable Paver	635 W 18th St	33.727469	-118.291000	7/11/2013
50	LID	Infiltration	Infiltration Trench	1 World Wy	33.944511	-118.398367	7/10/2013
51	LID	Rain Barrel	8 Rain Barrels	326 Brooks Ave	33.993239	-118.472331	7/10/2013
52	LID	Green Infrastructure	2 Planter Boxes	1026 W M St	33.788625	-118.275950	7/5/2013
53	LID	Rain Barrel	2 Rain Barrel	1026 W M St	33.788625	-118.275950	7/5/2013
54	LID	Green Infrastructure	Planter Box	3012 Yale Ave	33.988544	-118.448839	7/3/2013
55	LID	Green Infrastructure	8 Planter Boxes	1202 N Island Ave	33.786925	-118.266547	6/21/2013
56	LID	Permeable Pavement	2 Permeable Pavers	1202 N Island Ave	33.786925	-118.266547	6/21/2013
57	LID	Rain Barrel	Rain Garden	1334 W 221st St	33.826778	-118.300736	6/21/2013
58	LID	Unknown	Unknown	7609 S Main	33.970481	-118.274000	6/21/2013
59	LID	Green Infrastructure	2 Planter Boxes	3113 S Yale Ave	33.987653	-118.448553	6/20/2013
60	LID	Permeable Pavement	Permeable Paver	327 E 107th St	33.939433	-118.268533	6/19/2013
61	LID	Green Infrastructure	Planter Box	327 E 107th St	33.939433	-118.268533	6/19/2013
62	LID	Permeable Pavement	Permeable Paver	1664 W 223rd St	33.824411	-118.308139	6/18/2013
63	LID	Permeable Pavement	Permeable Paver	22340 S Western Ave	33.823950	-118.308800	6/18/2013
64	LID	Permeable Pavement	Porous Pavement	22340 S Western Ave	33.823950	-118.308800	6/18/2013
65	LID	Infiltration	2 Underground Detention/ Infiltration Chamber System	1501 W L ST	33.785942	-118.280578	6/17/2013
66	LID	Infiltration	Infiltration Trench	4143 Glencoe Ave	33.988636	-118.441986	6/6/2013
67	LID	Source Control	CB Trash Screens	4143 Glencoe Ave	33.988636	-118.441986	6/6/2013
68	LID	Green Infrastructure	4 Planter Boxes	1518 S Dodson Ave	33.729825	-118.311542	6/6/2013
69	LID	Infiltration	Infiltration Trench	2309 E 108th St	33.937128	-118.230761	6/6/2013
70	LID	Infiltration	Infiltration Trench	2311 E 108th St	33.937114	-118.230711	6/6/2013
71	LID	Green Infrastructure	2 Planter Boxes	1000 W. Paseo Del Mar	33.711542	-118.301500	6/5/2013
72	LID	Green Infrastructure	2 Planter Boxes	1479 Via Cresta	34.056797	-118.536878	5/29/2013
73	LID	Green Infrastructure	2 Planter Boxes	14747 W Oracle Pl	34.055664	-118.520278	5/28/2013
74	LID	Permeable Pavement	Permeable Paver	14747 W Oracle Pl	34.055664	-118.520278	5/28/2013
75	LID	Infiltration	Infiltration Trench	3306 W 71st St	33.975292	-118.329731	5/23/2013
76	LID	Green Infrastructure	Planter Box	7912 83rd St	33.960628	-118.435028	5/22/2013
77	LID	Green Infrastructure	3 Planter Boxes	615 N Bienveneda	34.047278	-118.540289	5/22/2013
78	SUSMP	Source Control	Slope Vegetation	14705 W Oracle Pl	34.055800	-118.518592	5/16/2013
79	LID	Unknown	Unknown	438 E Altair Pl	33.989686	-118.467431	5/15/2013
80	LID	Green Infrastructure	Dry Well	748 N Amalfi Dr	34.042450	-118.511114	5/13/2013
81	LID	Rain Barrel	4 Rain Barrels	1207 Averill Ave	33.733169	-118.307886	5/13/2013
82	LID	Rain Barrel	4 Rain Barrels	702 W 140th St	33.904294	-118.287372	5/7/2013
83	LID	Permeable Pavement	2 Permeable Pavers	630 W Woodlawn Ave	33.989125	-118.456850	5/6/2013
84	LID	Unknown	Unknown	560 N Western Ave	33.746753	-118.309503	5/2/2013
85	LID	Green Infrastructure	6 Planter Boxes	2337 Clement Ave	33.986389	-118.461367	5/2/2013
86	LID	Green Infrastructure	3 Planter Boxes	546 Vernon	33.996192	-118.470611	5/1/2013
87	LID	Green Infrastructure	Planter Box	10350 S Croesus Ave	33.941647	-118.233550	4/30/2013
88	LID	Rain Barrel	4 Rain Barrels	2000 N Kenilworth Ave	34.096394	-118.268417	4/30/2013
89	LID	Green Infrastructure	4 Planter Boxes	1054 Fiske St	34.048789	-118.522339	4/29/2013
90	LID	Unknown	Unknown	1242 W Maurentania St	33.789108	-118.279297	4/29/2013
91	LID	Unknown	Unknown	557 N Lucero Ave	34.046250	-118.554664	4/24/2013

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
92	LID	Unknown	Unknown	777 W 190th St	33.860208	-118.287164	4/24/2013
93	LID	Green Infrastructure	2 Planter Boxes	1680 E 108th St	33.936986	-118.230183	4/23/2013
94	LID	Permeable Pavement	Permeable Pavers	1680 E 108th St	33.936986	-118.230183	4/23/2013
95	LID	Infiltration	2 Infiltration Trenches	16300 Ainsworth St	33.883158	-118.289922	4/17/2013
96	LID	Source Control	4 Fossil Filter CB Inserts	16300 Ainsworth St	33.883158	-118.289922	4/17/2013
97	LID	Permeable Pavement	4 Planter Boxes	760 N Hartzell St	34.042917	-118.518875	4/15/2013
98	LID	Permeable Pavement	Permeable Pavers	1627 S Crescent Pl	33.990769	-118.462133	4/12/2013
99	LID	Rain Barrel	4 Rain Barrels	1627 S Crescent Pl	33.990769	-118.462133	4/12/2013
100	LID	Rain Barrel	4 Rain Barrels	550 W 40th St	33.708050	-118.289169	4/9/2013
101	LID	Green Infrastructure	2 Planter Boxes	1518 S Oakwood Ave	33.994000	-118.461308	4/9/2013
102	LID	Rain Barrel	6 Rain Barrels	1518 S Oakwood Ave	33.994000	-118.461308	4/9/2013
103	LID	Permeable Pavement	3 Permeable Pavers	1518 S Oakwood Ave	33.994000	-118.461308	4/9/2013
104	LID	Permeable Pavement	Permeable Paver	1434 W 215 St	33.833200	-118.302853	4/9/2013
105	LID	Green Infrastructure	6 Planter Boxes	249 N Bellino Dr	34.042103	-118.560300	4/3/2013
106	LID	Green Infrastructure	2 Planter Boxes	1660 W Anaheim St	33.777958	-118.288886	4/2/2013
107	LID	Rain Barrel	4 Rain Barrels	705 W Boccaccio Ave	33.990358	-118.457119	3/28/2013
108	SUSMP	Infiltration	7 Infiltration Trenches	1302 W 177th St	33.870408	-118.296017	3/27/2013
109	SUSMP	Green Infrastructure	Planter Box	1302 W 177th St	33.870408	-118.296017	3/27/2013
110	SUSMP	Source Control	7 Fossil Filter CB Inserts	1302 W 177th St	33.870408	-118.296017	3/27/2013
111	LID	Green Infrastructure	2 Planter Boxes	11241 W Lucerene	33.999533	-118.403528	3/19/2013
112	LID	Green Infrastructure	2 Planter Boxes	3300 S Kerckoff Ave	33.714017	-118.289533	3/11/2013
113	LID	Permeable Pavement	Permeable Paver	3300 S Kerckoff Ave	33.714017	-118.289533	3/11/2013
114	LID	Unknown	Unknown	445 S Ferr St	33.746042	-118.261556	3/11/2013
115	LID	Permeable Pavement	Permeable Paver	1011 W Francisco St	33.850111	-118.294558	3/4/2013
116	LID	Rain Barrel	Rain Garden	846 E 87th St	33.958950	-118.259139	2/27/2013
117	LID	Permeable Pavement	2 Permeable Pavers	211 W 109th Pl	33.936636	-118.276636	2/27/2013
118	LID	Green Infrastructure	Planter Box	211 W 109th Pl	33.936636	-118.276636	2/27/2013
119	LID	Permeable Pavement	2 Permeable Pavers	635 E Milwood Ave	33.991722	-118.464064	2/26/2013
120	LID	Green Infrastructure	2 Planter Boxes	635 E Milwood Ave	33.991722	-118.464064	2/26/2013
121	LID	Green Infrastructure	2 Planter Boxes	9410 S Compton Ave	33.951208	-118.246044	2/15/2013
122	LID	Infiltration	Infiltration Trench	16957 W Sunset Blvd	34.042244	-118.548072	2/14/2013
123	LID	Source Control	2 Pretreatment Settling Catch Basin	16957 W Sunset Blvd	34.042244	-118.548072	2/14/2013
124	LID	Green Infrastructure	2 Planter Boxes	3670 N Holboro Dr	34.117911	-118.275497	2/7/2013
125	LID	Permeable Pavement	Permeable Paver	3670 N Holboro Dr	34.117911	-118.275497	2/7/2013
126	LID	Rain Barrel	14 Rain Barrel	1628 W 255th St	33.792350	-118.305469	2/6/2013
127	LID	Permeable Pavement	Permeable Paver	1628 W 255th St	33.792350	-118.305469	2/6/2013
128	LID	Rain Barrel	8 Rain Barrel	1157 Rosalind Ave	34.025789	-118.212833	2/6/2013
129	LID	Green Infrastructure	3 Planter Boxes	3130 N Verdugo Rd	34.107411	-118.237681	2/6/2013
130	LID	Green Infrastructure	3 Planter Boxes	532 W Imperial Hwy	33.930542	-118.283956	2/5/2013
131	LID	Rain Barrel	4 Rain Barrels	476 W Santa Cruz St	33.744231	-118.287300	2/4/2013
132	LID	Rain Barrel	2 Rain Garden	5744 N Allott Ave	34.175117	-118.427653	2/1/2013
133	LID	Permeable Pavement	Permeable Paver	5937 S Madden Ave	33.986036	-118.325583	1/31/2013
134	LID	Rain Barrel	8 Rain Barrel	5937 S Madden Ave	33.986036	-118.325583	1/31/2013
135	LID	Permeable Pavement	Permeable Paver	314 E 76th St	33.971017	-118.268933	1/24/2013
136	LID	Green Infrastructure	Planter Box	314 E 76th St	33.971017	-118.268933	1/24/2013
137	LID	Unknown	Unknown	452 W Carroll Cl	33.986092	-118.464597	1/23/2013
138	LID	Green Infrastructure	2 Planter Boxes	935 W 60th St	33.985603	-118.290500	1/9/2013
139	LID	Unknown	Unknown	25706 S Belle Porte Ave	33.790772	-118.300847	1/9/2013
140	LID	Rain Barrel	4 Rain Barrels	14707 W Sunset Blvd	34.041472	-118.518275	1/2/2013
141	LID	Rain Barrel	4 Rain Barrels	861 W 124th St	33.920253	-118.291664	12/27/2012
142	LID	Rain Barrel	Rain Garden	861 W 124th St	33.920253	-118.291664	12/27/2012

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
143	LID	Green Infrastructure	3 Planter Boxes	1178 W 20th St	33.725972	-118.303039	12/26/2012
144	LID	Green Infrastructure	2 Planter Boxes	1127 W 15th St	33.730319	-118.301825	12/14/2012
145	LID	Green Infrastructure	Planter Box	398 Alma Real Dr	34.035514	-118.522500	12/13/2012
146	LID	Green Infrastructure	Cistern	520 N Swarthmore Ave	34.038764	-118.528050	12/7/2012
147	SUSMP	Source Control	4 Katchall Kleerstream Vaults	960 W Harry Bridges Blvd	33.770489	-118.272983	11/28/2012
148	SUSMP	Source Control	11 Sand Filter	960 W Harry Bridges Blvd	33.770489	-118.272983	11/28/2012
149	SUSMP	Unknown	Unknown	637 N Sanford Ave	33.777589	-118.250525	11/1/2012
150	LID	Infiltration	Underground Detention/ Infiltration Chamber System	625 E Anaheim St	33.781175	-118.255381	10/23/2012
151	LID	Infiltration	Underground Detention/ Infiltration Chamber System	1305 W Sepulveda Blvd	33.813303	-118.298450	10/9/2012
152	LID	Source Control	CDS	1305 W Sepulveda Blvd	33.813303	-118.298450	10/9/2012
153	LID	Infiltration	Infiltration Trench	710 N Front St	33.751097	-118.282389	10/9/2012
154	SUSMP	Source Control	10 Abtech Ultra Urban CB Inserts	710 N Front St	33.751097	-118.282389	10/9/2012
155	LID	Unknown	Unknown	1327 W Silvius Ave	33.715419	-118.307136	10/3/2012
156	LID	Unknown	Unknown	909 E Colon St	33.792458	-118.252150	9/5/2012
157	LID	Permeable Pavement	3 Permeable Pavers	10314 S Lou-Dillon Ave	33.942553	-118.234558	8/31/2012
158	SUSMP	Source Control	5 Hydrodynamic Separators	600 S Sampson Wy	33.738708	-118.279025	8/31/2012
159	SUSMP	Source Control	2 CB Inserts	600 S Sampson Wy	33.738708	-118.279025	8/31/2012
160	SUSMP	Infiltration	2 Infiltration Trenches	600 S Sampson Wy	33.738708	-118.279025	8/31/2012
161	LID	Green Infrastructure	Planter Box	8741 Dalton Ave	33.957644	-118.303850	8/24/2012
162	LID	Rain Barrel	Rain Garden	1515 219th St	33.828997	-118.304489	8/13/2012
163	LID	Permeable Pavement	Permeable Paver	1515 219th St	33.828997	-118.304489	8/13/2012
164	LID	Green Infrastructure	2 Planter Boxes	1942 W 1st St	33.742994	-118.318428	8/9/2012
165	SUSMP	Green Infrastructure	Planter Box	630 W Harry Bridges Blvd	33.770700	-118.268633	7/12/2012
166	SUSMP	Source Control	Bioretention Facility	630 W Harry Bridges Blvd	33.770700	-118.268633	7/12/2012
167	SUSMP	Source Control	Abtech Ultra Urban CB Inserts	630 W Harry Bridges Blvd	33.770700	-118.268633	7/12/2012
168	SUSMP	Source Control	Slope Vegetation	3127 S Alma St	33.717275	-118.299717	5/31/2012
169	Site Specific	Unknown	Unknown	470 E Swinford St	33.749642	-118.278483	5/21/2012
170	SUSMP	Green Infrastructure	6 Planter Boxes	19310 S Pacific Gateway Dr	33.855575	-118.293978	5/10/2012
171	SUSMP	Permeable Pavement	2 Porous Pavements	19310 S Pacific Gateway Dr	33.855575	-118.293978	5/10/2012
172	SUSMP	Source Control	5 Fossil Filter CB Inserts	19310 S Pacific Gateway Dr	33.855575	-118.293978	5/10/2012
173	SUSMP	Infiltration	Infiltration Trench	1351 W Sepulveda Blvd	33.815675	-118.301436	3/28/2012
174	SUSMP	Source Control	Fossil Filter CB Insert	1351 W Sepulveda Blvd	33.815675	-118.301436	3/28/2012
175	SUSMP	Unknown	Unknown	7916 W 83rd St	33.960358	-118.435194	2/28/2012
176	SUSMP	Unknown	Unknown	1600 W Palos Verdes Dr	33.777931	-118.304961	2/23/2012
177	SUSMP	Unknown	Unknown	1112 N Via La Paz	33.755661	-118.299256	2/15/2012
178	Site Specific	Unknown	Unknown	120 W C St	33.772594	-118.262592	1/23/2012
179	SUSMP	Green Infrastructure	2 Planter Boxes	124 N Udine Wy	34.078103	-118.443711	1/12/2012
180	Site Specific	Unknown	Unknown	1451 W Knox St	33.854139	-118.301111	1/9/2012
181	SUSMP	Green Infrastructure	Green Roof	1406 Kenter Ave	34.080819	-118.492356	12/15/2011
182	SUSMP	Green Infrastructure	2 Planter Boxes	1406 Kenter Ave	34.080819	-118.492356	12/15/2011
183	SUSMP	Source Control	Vortechnics	710 N Front St	33.751069	-118.282369	11/30/2011
184	SUSMP	Source Control	2 Katchall Kleerstream Trench Filter	710 N Front St	33.751069	-118.282369	11/30/2011
185	SUSMP	Unknown	Unknown	401 E M St	33.789039	-118.258631	11/17/2011
186	SUSMP	Infiltration	Infiltration Basin	1305 N Gaffey St	33.755733	-118.292314	11/8/2011
187	SUSMP	Unknown	Unknown	1211 N Avalon Bl	33.786997	-118.262992	10/26/2011
188	SUSMP	Unknown	Unknown	1811 N Micheltorena	34.093317	-118.272269	9/8/2011
189	SUSMP	Unknown	Unknown	14931 Bestor Blvd	34.051692	-118.522956	9/7/2011
190	SUSMP	Source Control	3 Katchall Kleerstream Vaults	705 N. Henry Ford Ave	33.778567	-118.243422	9/1/2011
191	SUSMP	Green Infrastructure	3 Planter Boxes	300 E Water St	33.766542	-118.259847	9/1/2011
192	SUSMP	Source Control	2 CDS	530 W Harry Bridges Blvd	33.770797	-118.267389	8/19/2011
193	SUSMP	Source Control	32 Fossil Filter CB Inserts	530 W Harry Bridges Blvd	33.770797	-118.267389	8/19/2011
194	SUSMP	Unknown	Unknown	100 S Barrington Pl	34.065697	-118.468961	8/18/2011

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
195	SUSMP	Green Infrastructure	Planter Box	200 W. Manchester Ave	33.959553	-118.276258	8/4/2011
196	SUSMP	Source Control	Fossil Filter CB Insert	200 W. Manchester Ave	33.959553	-118.276258	8/4/2011
197	SUSMP	Green Infrastructure	3 Vegetated Swale/Strips	20000 S. Western Ave	33.851003	-118.308806	8/4/2011
198	SUSMP	Source Control	Sand Filter	20000 S. Western Ave	33.851003	-118.308806	8/4/2011
199	SUSMP	Green Infrastructure	Bioretention Facility	1603 W 25th St	33.723003	-118.313536	7/25/2011
200	SUSMP	Unknown	Unknown	2100 E Pacific Cost Hwy	33.789075	-118.235250	7/21/2011
201	SUSMP	Unknown	Unknown	100 N Avalon	33.769781	-118.261306	7/5/2011
202	SUSMP	Green Infrastructure	2 Vegetated Swale/Strips	705 N Henry Ford Ave	33.778550	-118.243342	6/16/2011
203	SUSMP	Unknown	Unknown	3100 N Gaffey St	33.776328	-118.296131	5/24/2011
204	SUSMP	Unknown	Unknown	3000 N Gaffey St	33.775378	-118.296042	5/24/2011
205	SUSMP	Unknown	Unknown	1601 N Wilmington Blvd	33.795136	-118.275442	5/9/2011
206	SUSMP	Green Infrastructure	2 Planter Boxes	1651 N Belair Rd	34.100703	-118.446883	4/25/2011
207	SUSMP	Green Infrastructure	Vegetated Swale/Strip	1651 N Belair Rd	34.100703	-118.446883	4/25/2011
208	SUSMP	Unknown	Unknown	1120 N. Wilmington Blvd	33.784908	-118.274475	4/19/2011
209	Site Specific	Unknown	Unknown	621 W 152nd St	33.894664	-118.286994	4/14/2011
210	SUSMP	Unknown	Unknown	6000 W Santa Monica	34.088089	-118.316706	4/7/2011
211	SUSMP	Green Infrastructure	2 Vegetated Swale/Strips	840 W 149th St	33.896292	-118.289917	3/22/2011
212	SUSMP	Infiltration	Infiltration Trench	840 W 149th St	33.896292	-118.289917	3/22/2011
213	SUSMP	Permeable Pavement	Porous Pavement	840 W 149th St	33.896292	-118.289917	3/22/2011
214	SUSMP	Green Infrastructure	Planter Box	964 Hilgard Ave	34.061947	-118.441242	2/16/2011
215	SUSMP	Unknown	Unknown	1602 W 25th St	33.723406	-118.312531	2/3/2011
216	SUSMP	Unknown	Unknown	6517 S Vista Del Mar	33.961533	-118.449919	1/4/2011
217	SUSMP	Source Control	Slope Vegetation	8451 W Hillside Ave	34.100519	-118.372603	12/30/2010
218	SUSMP	Unknown	Unknown	557 N Lucero Ave	34.046172	-118.554708	12/28/2010
219	SUSMP	Unknown	Unknown	701 N San Lorenzo St	34.037833	-118.509992	12/20/2010
220	SUSMP	Infiltration	3 Underground Detention/ Infiltration Chamber System	1521 W Francisco St	33.849281	-118.305842	12/10/2010
221	SUSMP	Source Control	13 Fossil Filter CB Insert	1521 W Francisco St	33.849281	-118.305842	12/10/2010
222	SUSMP	Green Infrastructure	3 Vegetated Swale/Strips	18320 S Western Ave	33.863614	-118.308608	11/12/2010
223	SUSMP	Green Infrastructure	29 Planter Box	25825 S Vermont Ave	33.788417	-118.295683	11/4/2010
224	SUSMP	Source Control	7 Fossil Filter CB Insert	25825 S Vermont Ave	33.788417	-118.295683	11/4/2010
225	SUSMP	Unknown	Unknown	556 W 9th St	33.736161	-118.288914	11/2/2010
226	SUSMP	Unknown	Unknown	2500 S Signal St	33.721503	-118.272839	9/13/2010
227	SUSMP	Unknown	Unknown	631 N Haverford Ave	34.041733	-118.529772	8/20/2010
228	SUSMP	Green Infrastructure	4 Planter Boxes	15323 Whitfield Ave	34.051967	-118.526425	8/20/2010
229	SUSMP	Source Control	2 Fossil Filter CB Insert	15323 Whitfield Ave	34.051967	-118.526425	8/20/2010
230	SUSMP	Green Infrastructure	Planter Box	25621 Normandie Ave	33.784439	-118.298042	8/5/2010
231	SUSMP	Unknown	Unknown	2209 E I St	33.783036	-118.234250	7/28/2010
232	SUSMP	Unknown	Unknown	2100 E Pacific Coast Hwy	33.791514	-118.232881	5/17/2010
233	SUSMP	Infiltration	Underground Detention/ Infiltration Chamber System	201 N Palos Verdes St	33.741903	-118.281531	5/7/2010
234	SUSMP	Green Infrastructure	Dry Well	201 N Palos Verdes St	33.741903	-118.281531	5/7/2010
235	SUSMP	Green Infrastructure	2 Planter Boxes	10704 Wilmington	33.938642	-118.239014	4/28/2010
236	SUSMP/OWTS	Unknown	Unknown	1500 W Francisco St	33.848450	-118.304022	4/22/2010
237	SUSMP	Unknown	Unknown	545 S Fries Ave	33.765022	-118.264103	4/1/2010
238	SUSMP	Green Infrastructure	Planter Box	1600 Palos Verdes Dr	33.777872	-118.304936	3/23/2010
239	SUSMP	Source Control	6 Fossil Filter CB Insert	1327 W 228th St	33.819139	-118.300458	3/18/2010
240	Site Specific	Unknown	Unknown	1660 W. Anaheim St	33.777889	-118.288883	1/14/2010
241	SUSMP	Unknown	Unknown	6209 Ocean Front Walk	33.961839	-118.453528	1/12/2010
242	SUSMP	Infiltration	Underground Detention/ Infiltration Chamber System	410 N Hawaiian	33.773700	-118.275661	12/18/2009
243	SUSMP	Source Control	2 Contech CB Inserts	410 N Hawaiian	33.773700	-118.275661	12/18/2009
244	SUSMP	Source Control	Fossil Filter CB Insert	1425 West Carson St	33.830950	-118.356942	11/20/2009
245	SUSMP	Source Control	3 Fossil Filter CB Insert	14221 S Figueroa St	33.902075	-118.283208	11/19/2009
246	SUSMP	Green Infrastructure	Bioretention Facility	14221 S Figueroa St	33.902075	-118.283208	11/19/2009
247	SUSMP	Source Control	Fossil Filter CB Insert	428 E G St	33.778642	-118.257533	11/12/2009
248	SUSMP	Green Infrastructure	21 Bioretention Facilities	25821 S Vermont Ave	33.789178	-118.293914	11/3/2009

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
249	SUSMP	Green Infrastructure	6 Planter Boxes	25821 S Vermont Ave	33.789178	-118.293914	11/3/2009
250	Site Specific	Unknown	Unknown	799 S Seaside Ave	33.728772	-118.268719	11/3/2009
251	SUSMP	Unknown	Unknown	3525 S Kerckoff Ave	33.711967	-118.289842	10/20/2009
252	SUSMP	Unknown	Unknown	1138 N Las Pulgas	34.053475	-118.539883	9/22/2009
253	SUSMP	Source Control	Slope Vegetation	1426 W 37th St	33.715589	-118.309219	7/7/2009
254	SUSMP	Infiltration	2 Infiltration Trenches	710 N Front St	33.749144	-118.280722	5/28/2009
255	SUSMP	Source Control	Vortechnics	710 N Front St	33.749144	-118.280722	5/28/2009
256	SUSMP	Source Control	6 Abtech Ultra Urban CB Inserts	710 N Front St	33.749144	-118.280722	5/28/2009
257	SUSMP	Unknown	Unknown	3411 S Carolina St	33.713014	-118.290728	5/28/2009
258	SUSMP	Source Control	Sedimentation Basin	401 N Henry Ford Ave	33.773403	-118.241156	5/15/2009
259	SUSMP	Source Control	Vortechnics	920 W Harry Bridges Blvd	33.769942	-118.278692	5/7/2009
260	SUSMP	Source Control	10 Abtech Ultra Urban CB Inserts	920 W Harry Bridges Blvd	33.769942	-118.278692	5/7/2009
261	SUSMP	Infiltration	Infiltration Trench	920 W Harry Bridges Blvd	33.769942	-118.278692	5/7/2009
262	Site Specific	Unknown	Unknown	1660 W Anaheim St	33.776636	-118.288764	4/24/2009
263	SUSMP	Green Infrastructure	2 Bioretention Facilities	1000 W Pacific Coast Hwy	33.790256	-118.275197	2/25/2009
264	SUSMP	Green Infrastructure	2 Vegetated Swale/Strips	1000 W Pacific Coast Hwy	33.790256	-118.275197	2/25/2009
265	SUSMP	Permeable Pavement	Porous Pavement	1000 W Pacific Coast Hwy	33.790256	-118.275197	2/25/2009
266	SUSMP	Infiltration	15 Infiltration Trenches	2235 Miner St	33.725356	-118.278206	2/25/2009
267	SUSMP	Source Control	3 CDS	2235 Miner St	33.725356	-118.278206	2/25/2009
268	SUSMP	Source Control	4 Stormfilter	2235 Miner St	33.725356	-118.278206	2/25/2009
269	SUSMP	Unknown	Unknown	1019 W M St	33.788606	-118.275756	2/17/2009
270	SUSMP	Unknown	Unknown	1412 N Wilmington Blvd	33.791031	-118.274744	2/13/2009
271	SUSMP	Green Infrastructure	17 StormTech Chamber Systems	25020 Doble Ave	33.796975	-118.291511	2/13/2009
272	SUSMP	Unknown	Unknown	3525 Mulldae Ave	33.720811	-118.321417	2/6/2009
273	SUSMP	Green Infrastructure	Planter Box	5610 York Blvd	34.119306	-118.196408	2/3/2009
274	SUSMP	Green Infrastructure	6 Vegetated Swale/Strips	5610 York Blvd	34.119306	-118.196408	2/3/2009
275	SUSMP	Unknown	Unknown	1215 W Grant St	33.783175	-118.278606	2/2/2009
276	SUSMP	Green Infrastructure	13 StormTech Chamber Systems	1608 W Pacific Coast Hwy	33.789342	-118.304608	1/30/2009
277	SUSMP	Source Control	Drain Pac CB Insert	1608 W Pacific Coast Hwy	33.789342	-118.304608	1/30/2009
278	SUSMP	Source Control	Fossil Filter CB Insert	1608 W Pacific Coast Hwy	33.789342	-118.304608	1/30/2009
279	SUSMP	Unknown	Unknown	500 S Pacific Ave	33.739361	-118.287794	1/13/2009
280	SUSMP	Source Control	Fossil Filter CB Insert	1420 N Coil Ave	33.793053	-118.242803	1/13/2009
281	SUSMP	Infiltration	Infiltration Trench	1420 N Coil Ave	33.793053	-118.242803	1/13/2009
282	SUSMP	Green Infrastructure	StormTech Chamber System	13414 S Figueroa St	33.909933	-118.282633	1/7/2009
283	SUSMP	Source Control	Fossil Filter CB Insert	13414 S Figueroa St	33.909933	-118.282633	1/7/2009
284	SUSMP	Green Infrastructure	Planter Box	1663 E Anaheim St	33.781094	-118.241219	12/2/2008
285	SUSMP	Green Infrastructure	Planter Box	403 E Harry Bridges Blvd	33.771394	-118.257922	11/18/2008
286	SUSMP	Unknown	Unknown	751 Eldridge St	33.747031	-118.261061	11/3/2008
287	SUSMP	Green Infrastructure	2 Planter Boxes	730 N Watson Ave	33.780006	-118.246650	10/30/2008
288	SUSMP	Green Infrastructure	Vegetated Swale/Strip	323 Lecouvreur Ave	33.773375	-118.255536	10/14/2008
289	SUSMP	Green Infrastructure	2 Planter Boxes	1625 S Granville Ave	34.040750	-118.456692	10/6/2008
290	SUSMP	Source Control	Fossil Filter CB Insert	1625 S Granville Ave	34.040750	-118.456692	10/6/2008
291	SUSMP	Unknown	Unknown	18054 W Sandy Cape Dr	34.047611	-118.569014	9/25/2008
292	SUSMP	Unknown	Unknown	1140 N Monument St	34.049847	-118.524606	9/15/2008
293	SUSMP	Green Infrastructure	Vegetated Swale/Strip	421 N Henry Ford Ave	33.773861	-118.241200	8/29/2008
294	SUSMP	Permeable Pavement	Porous Pavement	421 N Henry Ford Ave	33.773861	-118.241200	8/29/2008
295	SUSMP	Green Infrastructure	2 Planter Boxes	12015 S Figueroa St	33.922947	-118.282881	8/28/2008
296	SUSMP	Source Control	3 Fossil Filter CB Inserts	12015 S Figueroa St	33.922947	-118.282881	8/28/2008
297	SUSMP	Source Control	Drain Pac CB Inserts	12015 S Figueroa St	33.922947	-118.282881	8/28/2008
298	SUSMP	Unknown	Unknown	601 N Henry Ford Ave	33.768433	-118.240439	8/27/2008
299	SUSMP	Green Infrastructure	Slope Vegetation	601 N Henry Ford Ave	33.768433	-118.240439	8/19/2008
300	SUSMP	Unknown	Unknown	6834 W Quinton Ln	34.248094	-118.280686	8/18/2008
251	SUSMP	Unknown	Unknown	3525 S Kerckoff Ave	33.711967	-118.289842	10/20/2009
252	SUSMP	Unknown	Unknown	1138 N Las Pulgas	34.053475	-118.539883	9/22/2009
253	SUSMP	Source Control	Slope Vegetation	1426 W 37th St	33.715589	-118.309219	7/7/2009
254	SUSMP	Infiltration	2 Infiltration Trenches	710 N Front St	33.749144	-118.280722	5/28/2009
255	SUSMP	Source Control	Vortechnics	710 N Front St	33.749144	-118.280722	5/28/2009

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
256	SUSMP	Source Control	6 Abtech Ultra Urban CB Inserts	710 N Front St	33.749144	-118.280722	5/28/2009
257	SUSMP	Unknown	Unknown	3411 S Carolina St	33.713014	-118.290728	5/28/2009
258	SUSMP	Source Control	Sedimentation Basin	401 N Henry Ford Ave	33.773403	-118.241156	5/15/2009
259	SUSMP	Source Control	Vortechnics	920 W Harry Bridges Blvd	33.769942	-118.278692	5/7/2009
300	SUSMP	Unknown	Unknown	6834 W Quinton Lane	34.248094	-118.280686	8/18/2008
301	SUSMP	Green Infrastructure	3 Vegetated Swale/Strip	522 N Flint Ave	33.777003	-118.249086	8/8/2008
302	SUSMP	Green Infrastructure	3 Vegetated Swale/Strip	18320 S Western Ave	33.863817	-118.308556	7/25/2008
303	SUSMP	Unknown	Unknown	602 N Flint Ave	33.777589	-118.249164	6/17/2008
304	SUSMP	Source Control	2 Fossil Filter CB Insert	618 N Pioneer Ave	33.779106	-118.248003	6/17/2008
305	SUSMP	Green Infrastructure	2 Vegetated Swale/Strip	618 N Pioneer Ave	33.779106	-118.248003	6/17/2008
306	SUSMP	Unknown	Unknown	1553 W 205th St	33.844850	-118.306011	6/12/2008
307	SUSMP	Green Infrastructure	Vegetated Swale/Strip	1355 N Broad Ave	33.779906	-118.261075	6/3/2008
308	SUSMP	Permeable Pavement	Porous Pavement	1355 N Broad Ave	33.779906	-118.261075	6/3/2008
309	SUSMP	Unknown	Unknown	1662 W Pacific Coast Hwy	33.790842	-118.286894	5/27/2008
310	SUSMP	Green Infrastructure	Vegetated Swale/Strip	238 N Trotwood Ave	33.745294	-118.317017	4/24/2008
311	SUSMP	Unknown	Unknown	3427 S Mentone Ave	34.026344	-118.410364	4/18/2008
312	SUSMP	Green Infrastructure	Planter Box	15007 W Bestor Blvd	34.051578	-118.523483	4/7/2008
313	SUSMP	Source Control	CDS	240 W Venice Blvd	34.034961	-118.266081	4/7/2008
314	SUSMP	Unknown	Unknown	210 E 22nd St	33.725678	-118.279961	3/17/2008
315	SUSMP	Unknown	Unknown	550 S Sampson Way	33.740350	-118.278919	3/17/2008
316	SUSMP	Unknown	Unknown	1320 W Mauretania St	33.790131	-118.280425	2/5/2008
317	SUSMP	Unknown	Unknown	255 W 8th St	33.736822	-118.282614	2/1/2008
318	SUSMP	Source Control	2 Fossil Filter CB Insert	536 N Banning Blvd	33.776794	-118.256636	1/30/2008
319	SUSMP	Infiltration	4 Infiltration Trenches	536 N Banning Blvd	33.776794	-118.256636	1/30/2008
320	Site Specific	Unknown	Unknown	1660 W Anaheim St	33.776689	-118.288717	1/9/2008
321	SUSMP	Unknown	Unknown	1031 W Papeete St	33.787017	-118.276022	12/20/2007
322	SUSMP	Source Control	8 Fossil Filter CB Insert	2401 E Sepulveda Blvd	33.805192	-118.223025	12/20/2007
323	SUSMP	Infiltration	Infiltration Trench	2401 E Sepulveda Blvd	33.805192	-118.223025	12/20/2007
324	SUSMP	Source Control	7 Fossil Filter CB Insert	1715 E Denni St	33.785856	-118.240750	12/5/2007
325	SUSMP	Green Infrastructure	Vegetated Swale/Strip	1715 E Denni St	33.785856	-118.240750	12/5/2007
326	SUSMP	Green Infrastructure	Off-line Storage	1715 E Denni St	33.785856	-118.240750	12/5/2007
327	SUSMP	Green Infrastructure	2 Planter Boxes	624 N Neptune Ave	33.777492	-118.268747	11/21/2007
328	SUSMP	Permeable Pavement	Porous Pavement	624 N Neptune Ave	33.777492	-118.268747	11/21/2007
329	SUSMP	Unknown	Unknown	401 W Anaheim St	33.779894	-118.267011	11/6/2007
330	SUSMP	Source Control	3 Stormfilters	25965 S Normandie Ave	33.787581	-118.297542	11/1/2007
331	SUSMP	Source Control	2 Drain Pac CB Inserts	25965 S Normandie Ave	33.787581	-118.297542	11/1/2007
332	Site Specific	Source Control	2 Fossil Filter CB Insert	545 S Fries Ave	33.765000	-118.264136	10/29/2007
333	SUSMP	Unknown	Unknown	1824 W 1st St	33.742983	-118.316150	10/26/2007
334	SUSMP	Green Infrastructure	Filterra Filter	120 W C St	33.772522	-118.262614	9/6/2007
335	SUSMP	Green Infrastructure	2 Planter Boxes	12016 S Figueroa St	33.923019	-118.282494	8/24/2007
336	SUSMP	Source Control	Fossil Filter CB Insert	12016 S Figueroa St	33.923019	-118.282494	8/24/2007
337	SUSMP	Green Infrastructure	19 Filterra Filters	1605 N Gaffey St	33.752058	-118.292308	8/23/2007
338	SUSMP	Green Infrastructure	Downspout Filter	25825 S Vermont Ave	33.788375	-118.295594	8/23/2007
339	SUSMP	Unknown	Unknown	445 S Ferry St	33.746100	-118.261519	8/22/2007
340	SUSMP	Source Control	Slope Vegetation	1093 W 27th St	33.719622	-118.301089	8/14/2007
341	SUSMP	Source Control	Slope Vegetation	1085 W 27th St	33.719556	-118.300967	8/14/2007
342	SUSMP	Source Control	Slope Vegetation	1079 W 27th St	33.719514	-118.300825	8/14/2007
343	SUSMP	Source Control	Slope Vegetation	1073 W 27th St	33.719514	-118.300697	8/14/2007
344	SUSMP	Source Control	6 Fossil Filter CB Insert	310 Centre St	33.745150	-118.283283	8/13/2007
345	SUSMP	Permeable Pavement	6 Porous Pavement	310 Centre St	33.745150	-118.283283	8/13/2007
346	SUSMP	Green Infrastructure	10 Planter Boxes	310 Centre St	33.745150	-118.283283	8/13/2007
347	SUSMP	Source Control	7 Downspout Filters	310 Centre St	33.745150	-118.283283	8/13/2007
348	SUSMP	Green Infrastructure	3 Filterra Filters	18455 S Figueroa St	33.863333	-118.282903	8/9/2007
349	SUSMP	Source Control	Fossil Filter CB Insert	18455 S Figueroa St	33.863333	-118.282903	8/9/2007
350	SUSMP	Source Control	4 Fossil Filter CB Insert	1400 W 228th St	34.029425	-118.291481	7/30/2007
351	SUSMP	Infiltration	4 Infiltration Trenches	1400 W 228th St	34.029425	-118.291481	7/30/2007
352	SUSMP	Source Control	5 Downspout Filter	1444 W Q St	33.793844	-118.281356	7/26/2007

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
353	SUSMP	Source Control	Fossil Filter CB Insert	1444 W Q St	33.793844	-118.281356	7/26/2007
354	SUSMP	Infiltration	Infiltration Trench	1444 W Q St	33.793844	-118.281356	7/26/2007
355	SUSMP	Unknown	Unknown	1026 W Pacific Coast Hwy	33.790114	-118.275939	7/24/2007
356	SUSMP	Unknown	Unknown	125 N Ave 60	34.111908	-118.189794	7/6/2007
357	SUSMP	Unknown	Unknown	2815 S Vermont Ave	34.028861	-118.291881	6/14/2007
358	SUSMP	Permeable Pavement	Porous Pavement	1640 W Paseo Del Mar	33.716031	-118.316594	6/4/2007
359	SUSMP	Source Control	4 Fossil Filter CB Inserts	1005 N Gaffey St	33.752111	-118.292278	5/18/2007
360	SUSMP	Unknown	Unknown	1026 N Cristobal Ave	33.784308	-118.242806	5/17/2007
361	SUSMP	Unknown	Unknown	417 N Meyler St	33.746486	-118.296783	5/9/2007
362	SUSMP	Green Infrastructure	2 Planter Boxes	815 S Grand Ave	33.736447	-118.290419	4/11/2007
363	SUSMP	Source Control	2 Fossil Filter CB Inserts	815 S Grand Ave	33.736447	-118.290419	4/11/2007
364	SUSMP	Source Control	2 Downspout Filters	420 9th St	34.044003	-118.258883	4/11/2007
365	SUSMP	Green Infrastructure	Planter Box	420 9th St	34.044003	-118.258883	4/11/2007
366	SUSMP	Source Control	2 Fossil Filter CB Inserts	1331 Torrance Blvd	33.842936	-118.300508	3/30/2007
367	SUSMP	Infiltration	Infiltration Trench	1331 Torrance Blvd	33.842936	-118.300508	3/30/2007
368	SUSMP	Green Infrastructure	2 Planter Boxes	366 W 8th St	33.736728	-118.284964	3/28/2007
369	SUSMP	Source Control	2 Fossil Filter CB Inserts	1417 Anaheim St	33.784261	-118.301928	3/17/2007
370	SUSMP	Green Infrastructure	Planter Box	1417 Anaheim St	33.784261	-118.301928	3/17/2007
371	SUSMP	Green Infrastructure	4 Downspout Filters	422 S Gaffy St	33.739911	-118.292147	2/21/2007
372	SUSMP	Source Control	Fossil Filter CB Insert	422 S Gaffy St	33.739911	-118.292147	2/21/2007
373	SUSMP	Infiltration	Infiltration Trench	422 S Gaffy St	33.739911	-118.292147	2/21/2007
374	SUSMP	Source Control	2 CDS	111 Pier S Ave	33.758961	-118.241681	12/20/2006
375	SUSMP	Source Control	254 Drain Pac CB Inserts	20843 S Normandie Ave	33.840478	-118.299633	11/27/2006
376	SUSMP	Infiltration	Infiltration Trench	601 N Avalon Blvd	33.777164	-118.262625	11/22/2006
377	SUSMP	Source Control	Drain Pac CB Insert	601 N Avalon Blvd	33.777164	-118.262625	11/22/2006
378	SUSMP	Source Control	Fossil Filter CB Insert	1338 W 228th St	33.818714	-118.300764	11/15/2006
379	SUSMP	Infiltration	Infiltration Trench	1338 W 228th St	33.818714	-118.300764	11/15/2006
380	SUSMP	Source Control	2 Fossil Filter CB Inserts	10400 S Grandee Ave	33.941381	-118.243633	10/25/2006
381	SUSMP	Green Infrastructure	2 Vegetated Swale/Strips	10400 S Grandee Ave	33.941381	-118.243633	10/25/2006
382	SUSMP	Green Infrastructure	2 Dry Wells	10400 S Grandee Ave	33.941381	-118.243633	10/25/2006
383	SUSMP	Green Infrastructure	Extended/Dry Retention Basin	525 E Anaheim St	33.780169	-118.257092	9/19/2006
384	SUSMP	Source Control	Fossil Filter CB Insert	245 7th St	34.042614	-118.249658	9/13/2006
385	SUSMP	Infiltration	Infiltration Trench	245 7th St	34.042614	-118.249658	9/13/2006
386	Site Specific	Unknown	Unknown	621 W 152nd St Bldg B	33.894842	-118.288269	10/27/2008
387	SUSMP	Infiltration	Infiltration Trench	340 S Mesa St	33.740542	-118.285206	9/3/2008
388	SUSMP	Source Control	3 Fossil Filter CB Inserts	340 S Mesa St	33.740542	-118.285206	9/3/2008
389	SUSMP	Unknown	Unknown	1001 N King Ave	33.782319	-118.276086	8/11/2008
Los Angeles County							
1	SUSMP	Source Control	2 Kristar Curb Mount FGP-36CI Filters with 1.50 CFS/Each Filtered Capacity	301 S Bandini St	33.741508	-118.298994	3/8/2010
2	SUSMP	Source Control	4 CB Fossil Filters	920 W Sepulveda Blvd	33.810291	-118.290874	3/8/2011
3	SUSMP	Source Control	1 Contech 8'X16' Stormfilter with 1.14 CFS Treatment Flow	902 W Sepulveda Blvd	33.810135	-118.290474	3/18/2010
4	SUSMP	Source Control	2 Jensen 24" Drop Inlets Model: DI242436 with Hydro-Cartridge Filters	810 W Sepulveda Blvd	33.809300	-118.288371	3/20/2012
5	SUSMP	Source Control	3 CB Filter Inserts	20425 S Hamilton Ave	33.845917	-118.286100	4/22/2013
6	SUSMP	Source Control	FGP-18F Kristar Flo-Gard Filter Inserts Model: FGP-18F	2626 E Vista Industrial	33.849846	-118.217048	5/11/2011
7	SUSMP	Source Control	CDS 2020-5	1303 W Sepulveda Blvd	33.813561	-118.299312	5/14/2013
8	SUSMP	Source Control	Maxwell IV Drainage System	1303 W Sepulveda Blvd	33.813561	-118.299312	5/14/2013
9	SUSMP	Source Control	Contech CMP Retention System	1303 W Sepulveda Blvd	33.813561	-118.299312	5/14/2013
10	SUSMP	Source Control	2 Kristar Swalegard Parkway Drain Filters Model: CDG-1A	2001 E Cashdan St	33.856083	-118.231217	6/7/2007
11	SUSMP	Source Control	2 SB-24 Fossil Filters	898 W Sepulveda Blvd	33.810075	-118.290319	6/7/2011
12	SUSMP	Source Control	Contech CDS Unit Model:CDS2015	19300 S Vermont Ave	33.856103	-118.290453	8/12/2009
13	SUSMP	Source Control	FGP-12F Filter	1259 W Carson St	33.831635	-118.298274	8/23/2010
14	SUSMP	Source Control	7 - Contech Stormwater Cartridge CB	833 W Torrance Blvd	33.842110	-118.288765	9/9/2008

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
15	SUSMP	Source Control	BIOCLEAN FLUME FILTER	19914 S Via Baron	33.850439	-118.229073	10/11/2006
16	SUSMP	Source Control	2 FGP-36F Filters	19914 S Via Baron	33.850439	-118.229073	10/11/2006
17	SUSMP	Source Control	Fossil Filter FB-24	1360 W 6th St	33.738882	-118.307015	10/21/2008
18	SUSMP	Source Control	Up Flo Filters	2310 E Gladwick St	33.852978	-118.223806	12/23/2010
19	SUSMP	Source Control	CB Insert FGP-2448F	1145 W Carson St	33.831633	-118.295990	12/28/2006
20	SUSMP	Source Control	1 Fossil Filter Flo-Gard Trench Drain Filter, THREE FLOGARD TRASH & DEBR	12714 S La Cienega Blvd	33.917194	-118.371340	2/8/2012
21	SUSMP	Source Control	3 Flo-Gard Trash and Debris Filters	12714 S La Cienega Blvd	33.917194	-118.371340	2/8/2012
22	SUSMP	Source Control	4 Rubberizer C.B. Filters	219 E Alondra St	33.885796	-118.273315	2/25/2013
23	SUSMP	Source Control	Ultra Urban Filter DI Series	357 W Compton Blvd	33.894859	-118.279833	3/7/2006
24	SUSMP	Source Control	CDS Model PMSU30-20 or Equal	1330 W Imperial Hwy	33.930921	-118.299100	3/15/2007
25	SUSMP	Source Control	2 Downspout Kristar Flo-gard Filters, Model: FG-DS4	10828 S Condon Ave	33.937761	-118.359059	3/19/2008
26	SUSMP	Source Control	3 CB Fossil Filters Models: FGP-18F & FF-12D	10714 S Western Ave	33.938971	-118.308959	5/1/2007
27	SUSMP	Source Control	4 Downspout Filters	10714 S Western Ave	33.938971	-118.308959	5/1/2007
28	SUSMP	Source Control	Flo-Gard FG-TDG24	1138 E Rosecrans Ave	33.902689	-118.254998	5/2/2013
29	SUSMP	Source Control	1 FG-TD08 Filter (1)FG-TD08 F	14200 Avalon Blvd	33.903035	-118.265201	5/6/2008
30	SUSMP	Source Control	2 CDS Units	1600 W Imperial Hwy	33.930922	-118.304771	5/10/2012
31	SUSMP	Source Control	CDS Unit, CB Filter Inserts, Low Flow Dry Wells	1600 W Imperial Hwy	33.930922	-118.304771	5/18/2011
32	SUSMP	Source Control	7 CDS Units	1600 W Imperial Hwy	33.930922	-118.304771	6/17/2011
33	SUSMP	Source Control	2 CDS Units	1600 W Imperial Hwy	33.930922	-118.304771	6/17/2011
34	SUSMP	Source Control	5 CDS Units	1600 W Imperial Hwy	33.930922	-118.304771	6/17/2011
35	SUSMP	Source Control	3 CDS Units	1600 W Imperial Hwy	33.930922	-118.304771	6/17/2011
36	SUSMP	Source Control	3 FGP-2436F Filters	14702 S Maple Ave	33.898146	-118.272549	7/16/2007
37	SUSMP	Source Control	1 Flo-Gard Fossil Filter Model: FGP-24F	13414 S Figueroa St	33.910092	-118.282661	8/20/2008
38	SUSMP	Source Control	Flo-Gard Trench Drain Filters and Fossil Filter FB-24	12735 S Main St	33.917227	-118.273986	8/28/2007
39	SUSMP	Source Control	Flo-Gard CB Filter Insert	1360 W Imperial Hwy	33.930920	-118.299564	9/10/2008
40	SUSMP	Green Infrastructure	Underground Poly Storage Tanks	11044 S Freeman Ave	33.935313	-118.348188	11/3/2010
41	SUSMP	Source Control	4 Flo-Gard FG-TDG48 Filters	14439 S Avalon Blvd	33.900818	-118.265333	12/14/2006
42	SUSMP	Source Control	CB Filters	17680 S Figueroa St	33.870573	-118.281563	4/2/2008
43	SUSMP	Source Control	Trench Drain Filter	17006 S Figueroa St	33.876875	-118.282310	6/23/2008
44	LID	Green Infrastructure	Disconnect Impervious Surfaces		33.928826	-118.375382	8/19/2010
45	LID	Green Infrastructure	Disconnect Impervious Surfaces	3137 135th St	33.909448	-118.327842	NULL
46	LID	Green Infrastructure	Disconnect Impervious Surfaces	4818 138th St	33.905772	-118.362063	10/31/2011
47	LID	Rain Barrel	Rain Barrel	10700 Firmona Ave	33.939279	-118.356672	12/15/2009
48	LID	Green Infrastructure	Disconnect Impervious Surfaces	14106 Shoup Ave	33.903442	-118.363908	NULL
49	LID	Unknown	Other		33.930653	-118.305454	NULL
50	LID	Green Infrastructure	Disconnect Impervious Surfaces	3343 132nd St	33.912609	-118.332324	8/1/2012
51	LID	Green Infrastructure	Disconnect Impervious Surfaces	4825 134th Pl	33.910594	-118.362194	6/3/2010
52	LID	Green Infrastructure	Disconnect Impervious Surfaces		33.912749	-118.331088	NULL
53	LID	Rain Barrel	Rain Barrel		33.919496	-118.281407	1/24/2012
54	LID	Unknown	Other	4331 Lennox Blvd	33.938677	-118.351849	NULL
55	LID	Green Infrastructure	Disconnect Impervious Surfaces	5138 135th St	33.909221	-118.368393	2/9/2011
56	LID	Green Infrastructure	Disconnect Impervious Surfaces	20625 Catalina St	33.842936	-118.294192	NULL
57	LID	Green Infrastructure	Dry Well	1000 Carson St	33.829799	-118.294727	7/19/2010
58	LID	Unknown	Other	11507 Western Ave	33.929445	-118.310221	NULL
59	LID	Source Control	Landscaping and Irrigation	125 El Segundo Blvd	33.916800	-118.272983	NULL
60	LID	Green Infrastructure	Disconnect Impervious Surfaces	5232 119th St	33.925198	-118.371268	NULL
61	LID	Rain Barrel	Rain Barrel	10935 Osage Ave	33.936168	-118.346417	NULL
62	LID	Rain Barrel	Rain Barrel	5349 119th Pl	33.924824	-118.373838	NULL

Table G.6: Detailed List of Existing Distributed BMPs in DC WMG

ID	Data Source	BMP Category	Project Description	Address	Latitude	Longitude	Date Active
63	LID	Unknown	Other	22433 Vermont Ave	33.822400	-118.290777	NULL
64	LID	Green Infrastructure	Disconnect Impervious Surfaces	3356 152nd St	33.893586	-118.332670	NULL
65	LID	Source Control	Landscaping and Irrigation	3546 132nd st	33.912082	-118.334631	NULL
66	LID	Green Infrastructure	Disconnect Impervious Surfaces	5024 112th St	33.932534	-118.366212	6/21/2011
67	LID	Green Infrastructure	Disconnect Impervious Surfaces	3535 Redondo Beach Blvd	33.882953	-118.339007	1/31/2011
68	LID	Green Infrastructure	Disconnect Impervious Surfaces	14425 Loness Ave	33.900795	-118.254748	NULL
69	LID	Rain Barrel	Rain Garden	1525 El Segundo Blvd	33.916751	-118.303177	NULL
70	LID	Green Infrastructure	Disconnect Impervious Surfaces	14615 Chadron Ave	33.898822	-118.328934	NULL
71	LID	Unknown	Other	15730 Figueroa St	33.887734	-118.281572	NULL
72	LID	Rain Barrel	Rain Barrel	15303 Ermanita Ave	33.892549	-118.332770	4/20/2010
73	LID	Source Control	Landscaping and Irrigation	5500 119th Pl	33.924285	-118.376798	NULL
74	LID	Rain Barrel	Rain Barrel	5238 119th St	33.925198	-118.371439	11/15/2011
75	LID	Source Control	Landscaping and Irrigation	5413 118th St	33.927549	-118.374916	NULL
76	LID	Rain Barrel	Rain Barrel	10820 Osage Ave	33.937516	-118.345797	11/30/2010
77	LID	Unknown	Other	11633 Western Ave	33.927562	-118.310227	NULL

Attachment H

Comparison between 2001 and 2012 MS4 Permit MCM Requirements

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The table presented in this attachment compares the Minimum Control Measure (MCM) requirements per the 2001 MS4 Permit (Order No. 01-182) and the current 2012 MS4 Permit (Order No. R4-2012-0175), and corresponds with Section 3.2 of the Dominguez Channel Watershed Management Group (DC WMG) Enhanced Watershed Management Program (EWMP) Work Plan.

Table H.1: Comparison of 2001 MS4 Permit MCMs to 2012 MS4 Permit MCMs

Program	Activity	2012 MS4 Permit Part	2001 MS4 Permit Part
Public Information and Participation Program	Public Education Program - advisory committee meeting (once per year)		4.B
	"No Dumping" message on storm drain inlets (by 2/2/2004)		4.B.1.a
	Reporting hotline for the public (e.g., 888-CLEAN-LA)	VI.D.5.c.i.(1)	4.B.1.b
	Outreach and Education	VI.D.5.d.i.(2)	4.B.1.c
	Make reporting info available to public	VI.D.5.d.i.(4)	4.B.1.b
	Public service announcements, advertising, and media relations	VI.D.5.d.i.(1)	4.B.1.c.(1).(iii)
	Public education materials - proper handling	VI.D.5.d.i.(2)	
	Public education materials - activity specific	VI.D.5.d.i.(3)	
	Educational activities and countywide events	VI.D.5.c.ii	4.B.1.c.(4)
	Quarterly public outreach strategy meetings (by 5/1/2002)		4.B.1.c.(1).(iii)
	Ensure 35 million impressions per year are made on the general public via print, local TV, radio, or other appropriate media		4.B.1.d.(6)
	Constituent-specific outreach information made available to public		4.B.1.d
	Business Assistance Program		4.B.2
	Educate and inform corporate managers about stormwater regulations		4.B.2.a
	Maintain storm water websites	VI.D.5.d.i.(4)	
	Provide education materials to schools (50 percent of all K-12 children every two years)		4.B.1.d.(7)
	Provide independent, parochial, and public schools within jurisdiction with K-12 educational materials	VI.D.5.d.i.(5)	
	LACFCD shall develop a strategy to measure the effectiveness of in-school education programs		4.B.1.d.(9)
	LACFCD shall develop a behavioral change assessment strategy (by 5/1/2002)		4.B.1.d.(10)
	Educate and involve ethnic communities and businesses	VI.D.5.a.i.(3)	4.B.1.d.(2)
Industrial/Commercial Facilities Program	Track critical sources – restaurants	VI.D.6.b.i.(1)	4.C.1.a.(1)
	Track critical sources - automotive service facilities	VI.D.6.b.i.(1)	4.C.1.a.(1)
	Track critical sources – RGOs	VI.D.6.b.i.(1)	4.C.1.a.(1)
	Track critical sources - nurseries and nursery centers	VI.D.6.b.i.(1)	
	Track critical sources – USEPA Phase I facilities	VI.D.6.b.i.(2)	4.C.1.a.(2)
	Track critical sources - other federally-mandated facilities [40 Code of Federal Regulations (CFR) 122.26(d)(2)(iv)(C)]	VI.D.6.b.i.(3)	4.C.1.a.(2)
	Track critical sources - other commercial/industrial facilities that Permittee determines may contribute substantial constituent load to MS4	VI.D.6.b.i.(4)	
	Facility information - name of facility	VI.D.6.b.ii.(1)	4.C.1.b
	Facility information - name of owner/operator	VI.D.6.b.ii.(2)	4.C.1.b
	Facility information - contact information of owner/operator	VI.D.6.b.ii.(2)	
	Facility information - address	VI.D.6.b.ii.(3)	4.C.1.b
	Facility information – North American Industry Classification System (NAICS) code	VI.D.6.b.ii.(4)	
	Facility information – Standard Industrial Classification (SIC) code	VI.D.6.b.ii.(5)	4.C.1.b
	Facility information - narrative description of the activities performed and/or principal products produced	VI.D.6.b.ii.(6)	4.C.1.b
	Facility information - status of exposure of materials to storm water	VI.D.6.b.ii.(7)	
	Facility information - name of receiving water	VI.D.6.b.ii.(8)	
	Facility information - ID whether tributary to 303(d) listed water and generates constituents for which water is impaired	VI.D.6.b.ii.(9)	
	Facility information - NPDES/general industrial permit status	VI.D.6.b.ii.(10)	4.C.1.b
	Facility information - No Exposure Certification status	VI.D.6.b.ii.(11)	
	Update inventory of critical sources annually	VI.D.6.b.iii	4.C.1.c
	Notify inventoried industrial/commercial sites on BMP requirement	VI.D.6.c.i	
	Business Assistance Program	VI.D.6.c.ii	
	Inspect critical commercial sources (restaurants, automotive service facilities, retail gasoline outlets and automotive dealerships)	VI.D.6.d.i	4.C.2.a
	Inspect critical industrial sources (phase 1 facilities and federally-mandated facilities)	VI.D.6.e	4.C.2.b
	Verify No Exposure Certifications of applicable facilities	VI.D.6.e.i.(3)	
	Verify Waste Discharge Identification (WDID) Number of applicable facilities	VI.D.6.e.ii.(1)	4.C.2.b
	Source control BMPs	VI.D.6.f	4.C.3
	Provisions for Significant Ecological Areas (SEAs) (Environmentally Sensitive Areas (ESAs))	VI.D.6.g	4.C.3.b
	Progressive enforcement of compliance with stormwater requirements	VI.D.6.h	4.C.3.c
	Interagency coordination		4.C.3.d

Table H.1: Comparison of 2001 MS4 Permit MCMs to 2012 MS4 Permit MCMs

Program	Activity	2012 MS4 Permit Part	2001 MS4 Permit Part
Planning and Land Development Program	Peak flow control (post-development stormwater runoff rates, velocities, and duration)	VI.D.7.c.i	4.D.1
	Hydromodification Control Plan	VI.D.7.c.iv	4.D.1
	SUSMP Ordinance		4.D.2
	LID Ordinance	VI.D.7.d.i	
	Volumetric treatment control (SWQDv) BMPs	VI.D.7.c.i	4.D.3.a
	Flow-based treatment control BMPs	VI.D.7.c.i.(3)	4.D.3.b
	Prioritize BMP selection based on retention/detention versus treatment	VI.D.7.a.i.(7)	
	Alternative compliance measures through groundwater replenishment	VI.D.7.c.ii	
	Alternative compliance measures through biofiltration on- or off-site	VI.D.7.c.iii	
	Require implementation of post-construction Planning Priority Projects as treatment controls to mitigate storm water pollution	VI.D.7.b.ii	4.D.4
	Require verification of maintenance provisions for BMPs	VI.D.7.d.i	4.D.8
	California Environmental Quality Act process update to include consideration of potential stormwater quality impacts	VI.D.7.d.i	4.D.11
	General Plan Update to include stormwater quality and quantity management considerations and policies		4.D.12
	Targeted employee training of development planning employees		4.D.13
	Bioretention and biofiltration systems	VI.D.7.c.iii.(1)	
	SUSMP guidance document		4.D.14
	Annual reporting of mitigation project descriptions	VI.D.7.c.vi	
	Implement post construction BMP maintenance inspections	VI.D.7.d.iv.(c)	
Development and Construction Program	Erosion control BMPs	VI.D.8.d	4.E.1.d
	Sediment control BMPs	VI.D.8.d	4.E.1.a
	For sites less than 1 acre, implement erosion and sediment control BMPs through the use of a erosion and sediment control ordinance	VI.D.8.d	
	Non-storm water containment on project site	VI.D.8.d	4.E.1.c
	Waste containment on project site	VI.D.8.d	4.E.1.c
	Require preparation of a Local SWPPP or Erosion and Sediment Control Plan/SWPPP for approval of permitted sites	VI.D.8.d	4.E.2
	Inspect construction sites equal to or greater than one acre		4.E.2.b
	Electronic tracking system (database and/or Geographic Information System)	VI.D.8.g	
	Required documents prior to issuance of building/grading permit	VI.D.8.h.ii.(1)	4.E.3.a
	Implement technical BMP standards	VI.D.8.i.i	
	Progressive enforcement	VI.D.8.k	4.E.4
	Permittee staff training	VI.D.8.l	4.E.5
Public Agency Activities Program	Sewage system, maintenance, overflow, and spill prevention plans		4.F.1
	Public construction activities management	VI.D.9.b	4.F.2
	Public facility inventory	VI.D.9.c	
	Inventory of existing development for retrofitting opportunities	VI.D.9.d	
	Public facility and activity management	VI.D.9.e	
	Vehicle maintenance, material storage facilities, corporation yard management	VI.D.9.f	4.F.3
	Landscape, park, and recreational facilities management	VI.D.9.g	4.F.4
	Storm drain operation and maintenance	VI.D.9.h	4.F.5
	Streets, roads, and parking facilities maintenance	VI.D.9.i	4.F.6
	Parking facilities management	VI.D.9.i	4.F.7
	Emergency procedures	VI.D.9.j	4.F.8
	Alternative treatment control BMPs feasibility study		4.F.10
	Municipal employee and contractor training	VI.D.9.k	
IC/ID Program	Implementation program	VI.D.10.a.i	4.G.1.a
	MS4 Tracking (mapping) of permitted connections and illicit connections and discharges		4.G.1.b
	Procedures for conducting source investigations for IC/IDs	VI.D.10.b	4.G.2.a
	Procedures for eliminating IC/IDs	VI.D.10.c	4.G.2.b
	Procedures for public reporting of ID	VI.D.10.d	
	IC/ID response plan	VI.D.10.e	4.G.1.a
	IC/IDs education and training for staff	VI.D.10.f	4.G.1.c

Attachment I

Summary of Existing MCMs Implemented by the DC WMG

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This attachment includes tables summarizing the existing Minimum Control Measures (MCMs) implemented by the Dominguez Channel Watershed Management Group (DC WMG), corresponding with Section 3.2 of the DC WMG Enhanced Watershed Management Program (EWMP) Work Plan.

Attachment I List of Tables

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Table I.1: DC WMG Existing Minimum Control Measures Reported during Permit Year 2010-2011								
Program Tasks and Milestones	**2001 MS4 Permit Part**	**Due Date**	**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**Los Angeles**	**Los Angeles County[1]**
General Permit Requirements								
Prohibit non-stormwater discharges into the MS4 and watercourses	1	Feb-02	I	I	I	I	I	I
Comply with Receiving Water Limitations (RWL) requirements	2	Feb-02	I	I	I	I	I	I
Implement the Stormwater Quality Management Plan (SQMP)	3.A.1	Feb-02	I	I	I	I	I	I
Revise the SQMP	3.A.4	Aug-02	NA	I	NA	I	NA	I
Implement the most effective combination of BMPs for storm water/ urban runoff pollution	3.B	Feb-02	I	I	I	D	I	I
Prepare and submit Annual Budget Summary as part of the annual report to the RWQCB	3.E.5	Oct-02	I	I	I	I	I	I
Conduct quarterly watershed management committee meetings	3.F.3.g	Mar-02	NA	NA	NA	NA	I	I
Amend and adopt county ordinance to enforce all requirements of the permit, if needed	3.G.3	Nov-02	I	I	I	NA	I	I
Submit to RWQCB a legal statement demonstrating the necessary legal authority	3.G.4	Dec-02	I	I	I	I	I	I
Prepare and submit to the RQWCB individual annual reports	1.B	Aug-02	I	I	I	I	I	I
Special Provisions								
Public Information and Participation - Permit Requirements								
Implement public information and participation program	4.B	Feb-02	I	I	I	I	I	I
Convene an Advisory Committee	4.B	ASAP	NA	NA	NA	I	NA	I
Mark all storm drain inlets with a "no dumping" message	4.B.1.a	Feb-04	I	I	I	I	I	I
Maintain the (888) CLEAN-LA hotline	4.B.1.b	Feb-02	NA	NA	NA	I	NA	I
Provide a list of reporting contacts to public through www.888CleanLA.com	4.B.1.b	Mar-02	I	NA	NA	NA	I	I
Media campaign for Storm Water Pollution Prevention (SPP)	4.B.1.c.1	Feb-02	NAv	NA	NA	NA	NA	I
Strategy to educate ethnic communities about SPP	4.B.1.c.2	Feb-03	NA	NA	NA	NA	NA	I
Enhance outreach for proper disposal of cigarette butts	4.B.1.c.3	Feb-02	NA	NA	NA	I	NA	I

Table I.1: DC WMG Existing Minimum Control Measures Reported during Permit Year 2010-2011								
Program Tasks and Milestones	**2001 MS4 Permit Part**	**Due Date**	**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**Los Angeles**	**Los Angeles County[1]**
Conduct educational activities within jurisdiction and participate in county-wide events	4.B.1.c.4	Feb-02	I	I	I	I	I	I
Organize Public Outreach Strategy meetings quarterly	4.B.1.c.5	May-02	NA	NA	NA	NA	NA	I
Conduct Media Outreach to 35 million impressions per year	4.B.1.c.6	Annually	NA	NA	NA	NA	NA	I
Distribute SPP information to K-12 schools	4.B.1.c.7	-	I	NC	NA	I	I	I
Coordinate and provide contact information for public education activities	4.B.1.c.8	Apr-02	I	I	I	I	I	I
Strategy to measure effectiveness of in-school programs	4.B.c.9	May-02	NA	NA	NA	NA	NA	I
Behavioral change assessment strategy towards SPP	4.B.c.10	May-02	NA	NA	NA	NA	NA	I
Coordinate watershed-specific pollution prevention outreach programs	4.B.1.d	Feb-03	I	NA	I	NA	I	I
Corporate Outreach Program to target retail gas outlets and restaurant chains	4.B.2.a	Feb-03	I	NA	NA	NA	NA	I
Coordinate an SPP program for a Business Assistance Program	4.B.2.b	Optional	NA	I	NA	NA	I	I
Industrial/Commercial Facilities Control - Permit Requirements								
Maintain a list of industrial/commercial facilities to be inspected	4.C.1	Aug-02	I	I	I	I	I	I
Inspect/visit industrial/commercial facilities appropriately	4.C.2	Aug-04	I	I	I	I	I	I
Initiate progressive enforcement for facilities failing to implement BMP's	4.C.3	-	I	I	I	I	I	I
Inspect restaurants twice during Permit cycle	4.C.2	Aug-04	I	I	I	I	I	I
Development Planning - Permit Requirements								
Implement development planning program that requires SUSMP	4.D	Feb-02	I	I	I	I	I	I
Develop peak flow control criteria	4.D.1	Feb-05	NA	NA	NA	NA	I	I
Amend codes and ordinances to give legal effect to SUSMP changes in permit	4.D.2.a	Aug-02	I	I	I	I	I	I
Implement revised SUSMP	4.D.2.b	Sep-02	I	I	I	I	I	I
Submit an Environmentally Sensitive Areas (ESAs) Delineation map to RWQCB	4.D.2.d	Jun-02	I	I	I	I	I	I

Table I.1: DC WMG Existing Minimum Control Measures Reported during Permit Year 2010-2011								
Program Tasks and Milestones	**2001 MS4 Permit Part**	**Due Date**	**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**Los Angeles**	**Los Angeles County[1]**
Implement SUSMP requirements for industrial/commercial projects >1 acre	4.D.5	Mar-03	I	I	I	I	I	I
Update CEQA guidelines to include specific storm water related issues	4.D.11	Feb-02	I	I	I	I	I	I
Update General Plan to include specific storm water related issues	4.D.12	-	I	NA	NA	I	I	I
Train targeted employees in permit requirements for Development Planning	4.D.13	Varies	I	I	I	I	I	I
Develop and make SUSMP guidelines available to the developer	4.D.14.a	Feb-02	I	I	I	I	I	I
Develop a technical manual for the siting and design of BMPs	4.D.14.b	Feb-04	I	NA	NA	NA	I	I
Development Construction - Permit Requirements								
Implement a development construction program	4.E.1 &2	Feb-02	I	I	I	I	I	I
Require proof of a Waste Discharger ID (WDID) number prior to filing Notice of Intent (NOI)	4.E.2.c	Mar-03	I	I	I	I	I	I
Require proof of an NOI and a copy of SWPPP for a transfer of ownership	4.E.3	Feb-02	I	I	I	I	I	I
Track the number of issued building and grading permits	4.E.3.c	Feb-02	I	I	I	I	I	I
Refer General Construction Activities Stormwater Permit (GCASP) violations to RWQCB	4.E.4	Feb-02	I	I	I	I	I	I
Train targeted employees in permit requirements for Development Construction	4.E.5	Varies	I	I	I	I	I	I
Public Agency Activities - Permit Requirements								
Implement a sewer overflow prevention and response program	4.F.1	Aug-02	I	I	I	I	I	I
Implement Development Planning Program at Permittee-owned construction projects	4.F.2.a	Aug-02	I	I	I	I	I	I
Implement Development Construction Program at Permittee-owned construction projects	4.F.2.b	Feb-02	I	I	I	I	I	I
Develop, if needed, and implement SWPPPs for field facilities	4.F.3	Feb-02	I	I	I	I	I	I
Equip wash areas with a clarifier, pre-treatment device, or be connected to sewer	4.F.3.c	Feb-02	I	I	I	I	I	I
Store pesticides/herbicides/fertilizers indoors and apply only in accordance	4.F.4.c&g	Feb-02	I	I	I	I	I	I
Designate Catch Basins as priority A, B, or C	4.F.5.a	Feb-02	I	I	I	I	I	I

Table I.1: DC WMG Existing Minimum Control Measures Reported during Permit Year 2010-2011								
Program Tasks and Milestones	**2001 MS4 Permit Part**	**Due Date**	**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**Los Angeles**	**Los Angeles County[1]**
Ensure that Catch Basins (CBs) are cleaned appropriately	4.F.5.c.1	Feb-02	I	I	I	I	I	I
Place temporary screens on CBs prior to special events or cleanout immediately afterwards	4.F.5.c.2	Feb-02	I	I	I	I	I	I
Place and maintain trash receptacles at all transit stops with shelters	4.F.5.c.3	Feb-02	I	I	I	I	I	I
Inspect the legibility of CB stencils and re-label within 180 days if necessary	4.F.5.d	-	I	I	I	I	I	I
Visually monitor and clean all open channels annually for debris	4.F.5.e.1	Feb-02	NA	I	I	I	I	I
Designate curbed streets as priority A, B, or C based on liter accumulation	4.F.6.a.b	Feb-02	I	I	I	I	I	I
Recover saw cutting waste and dispose it offsite	4.F.6.c	Feb-02	I	I	I	I	I	I
Train targeted employees in permit requirements for Public Agency Activities	4.F.6.d	Varies	I	I	I	I	I	I
Inspect and, if needed, clean Permittee owned parking lots twice per month, but at least once	4.F.7	Feb-02	I	I	I	I	I	I
Conduct a dry weather diversion study and create a priority list of drains for diversion	4.F.10	Jul-03	I	NA	NA	NA	I	I
Illicit Connections / Illicit Discharges - Permit Requirements								
Develop an Implementation Program which specifies how revisions of the IC/ID SQMP are implemented	4.G.1.a	-	I	I	I	I	D	I
Create a database for permitted storm drain connections and map IC/ID	4.G.1.b	Feb-03	NA	I	I	I	I	I
Perform IC/ID Trend Analysis	4.G.1.b	Feb-03	NA	NA	NA	NA	NA	I
Train targeted employees in the permit requirements for IC/ID	4.G.1.c	Varies	I	I	I	I	I	I
Field screen the storm drain system for illicit connections in open channels	4.G.2.a	Feb-03	NA	I	I	I	I	I
Field screen the storm drain system for illicit connections in underground storm drains in priority areas	4.G.2.a	Feb-05	I	I	I	I	I	I
Field screen the storm drain system for illicit connections in underground s/d larger than 36 inch diameter	4.G.2.a	Dec-06	I	I	I	I	I	I
Review all permitted connections to the storm drain system for compliance	4.G.2.a	Dec-06	NA	NA	NA	I	I	I
Investigate illicit connections 21 days after discovery	4.G.2.b	-	I	I	I	I	I	I
Terminate illicit connections 180 days after confirmation	4.G.2.b	-	I	I	I	I	I	I

Table I.1: DC WMG Existing Minimum Control Measures Reported during Permit Year 2010-2011								
Program Tasks and Milestones	**2001 MS4 Permit Part**	**Due Date**	**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**Los Angeles**	**Los Angeles County[1]**
Respond to illicit discharges within one business day of discovery	4.G.3.a	-	I	I	I	I	I	I
Investigate illicit discharges as soon as practicable	4.G.3.a	-	I	I	I	I	I	I

[1] Data is a combination of Los Angeles County and Los Angeles County Flood Control District
NA - Not Applicable or Completed
D - Developed
I - Program Implemented/Completed

Table I.2: DC WMG Existing Minimum Control Measures Reported during Permit Year 2011-2012									
Program Tasks and Milestones	**2001 MS4 Permit Section**	**Due Date**	**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**Los Angeles**	**Los Angeles County**	**LACFCD**
General Permit Requirements									
Prohibit non-stormwater discharges into the MS4 and watercourses	1	Feb-02	I	I	I	I	I	I	I
Comply with Receiving Water Limitations (RWL) requirements	2	Feb-02	I	I	I	I	I	I	I
Implement the Stormwater Quality Management Plan (SQMP)	3.A.1	Feb-02	I	I	I	I	I	I	I
Revise the SQMP	3.A.4	Aug-02	NA	I	NA	I	NA	I	I
Implement the most effective combination of BMPs for storm water/ urban runoff pollution	3.B	Feb-02	I	I	I	I	I	I	I
Prepare and submit Annual Budget Summary as part of the annual report to the RWQCB	3.E.5	Oct-02	I	I	I	I	I	I	I
Conduct quarterly watershed management committee meetings	3.F.3.g	Mar-02	NA	NA	I	I	I	I	I
Amend and adopt county ordinance to enforce all requirements of the permit, if needed	3.G.3	Nov-02	I	I	I	I	I	I	I
Submit to RWQCB a legal statement demonstrating the necessary legal authority	3.G.4	Dec-02	I	I	I	I	I	I	I
Prepare and submit to the RQWCB individual annual reports	1.B	Aug-02	I	I	I	I	I	I	I
Special Provisions									
Public Information and Participation - Permit Requirements									
Implement public information and participation program	4.B	Feb-02	I	I	I	I	I	I	I
Convene an Advisory Committee	4.B	ASAP	NA	NA	I	I	NA	I	I
Mark all storm drain inlets with a "no dumping" message	4.B.1.a	Feb-04	I	I	I	I	I	I	I
Maintain the (888) CLEAN-LA hotline	4.B.1.b	Feb-02	NA	NA	I	I	NA	I	I
Provide a list of reporting contacts to public through www.888CleanLA.com	4.B.1.b	Mar-02	I	NA	I	I	I	I	I
Media campaign for Storm Water Pollution Prevention (SPP)	4.B.1.c.1	Feb-02	NA	NA	I	I	NA	NA	I
Strategy to educate ethnic communities about SPP	4.B.1.c.2	Feb-03	NA	NA	I	NA	NA	NA	I
Enhance outreach for proper disposal of cigarette butts	4.B.1.c.3	Feb-02	NA	NA	I	I	NA	I	I

Table I.2: DC WMG Existing Minimum Control Measures Reported during Permit Year 2011-2012									
Program Tasks and Milestones	**2001 MS4 Permit Section**	**Due Date**	**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**Los Angeles**	**Los Angeles County**	**LACFCD**
Conduct educational activities within jurisdiction and participate in county-wide events	4.B.1.c.4	Feb-02	I	I	I	I	I	I	I
Organize Public Outreach Strategy meetings quarterly	4.B.1.c.5	May-02	NA	NA	NA	I	NA	NA	I
Conduct Media Outreach to 35 million impressions per year	4.B.1.c.6	Annually	NA	NA	NA	NA	NA	NA	I
Distribute SPP information to K-12 schools	4.B.1.c.7	-	I	NA	NA	I	I	NA	I
Coordinate and provide contact information for public education activities	4.B.1.c.8	Apr-02	I	I	I	I	I	I	I
Strategy to measure effectiveness of in-school programs	4.B.c.9	May-02	NA	NA	NA	I	NA	NA	I
Behavioral change assessment strategy towards SPP	4.B.c.10	May-02	NA	NA	NA	NA	NA	NA	I
Coordinate watershed-specific pollution prevention outreach programs	4.B.1.d	Feb-03	I	NA	NA	I	I	I	I
Corporate Outreach Program to target retail gas outlets and restaurant chains	4.B.2.a	Feb-03	I	NA	NA	NA	NA	NA	I
Coordinate an SPP program for a Business Assistance Program	4.B.2.b	Optional	NA	I	NA	NA	I	NA	NA
Industrial/Commercial Facilities Control - Permit Requirements									
Maintain a list of industrial/commercial facilities to be inspected	4.C.1	Aug-02	I	I	I	I	I	I	NA
Inspect/visit industrial/commercial facilities appropriately	4.C.2	Aug-04	I	I	I	I	I	I	NA
Initiate progressive enforcement for facilities failing to implement BMP's	4.C.3	-	I	I	I	I	I	I	NA
Inspect restaurants twice during Permit cycle	4.C.2	Aug-04	I	I	I	I	I	I	NA
Development Planning - Permit Requirements									
Implement development planning program that requires SUSMP	4.D	Feb-02	I	I	I	I	I	I	NA
Develop peak flow control criteria	4.D.1	Feb-05	NA	NA	I	I	I	I	NA
Amend codes and ordinances to give legal effect to SUSMP changes in permit	4.D.2.a	Aug-02	I	I	I	I	I	I	NA
Implement revised SUSMP	4.D.2.b	Sep-02	I	I	I	I	I	I	NA
Submit an Environmentally Sensitive Areas (ESAs) Delineation map to RWQCB	4.D.2.d	Jun-02	I	I	I	I	I	I	NA

Table I.2: DC WMG Existing Minimum Control Measures Reported during Permit Year 2011-2012									
Program Tasks and Milestones	**2001 MS4 Permit Section**	**Due Date**	**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**Los Angeles**	**Los Angeles County**	**LACFCD**
Implement SUSMP requirements for industrial/commercial projects >1 acre	4.D.5	Mar-03	I	I	I	I	I	I	NA
Update CEQA guidelines to include specific storm water related issues	4.D.11	Feb-02	I	I	I	I	I	I	NA
Update General Plan to include specific storm water related issues	4.D.12	-	I	NA	I	I	I	I	NA
Train targeted employees in permit requirements for Development Planning	4.D.13	Varies	I	I	I	I	I	I	NA
Develop and make SUSMP guidelines available to the developer	4.D.14.a	Feb-02	I	I	I	I	I	I	NA
Develop a technical manual for the siting and design of BMPs	4.D.14.b	Feb-04	I	NA	NA	I	I	I	NA
Development Construction - Permit Requirements									
Implement a development construction program	4.E.1 &2	Feb-02	I	I	I	I	I	I	NA
Require proof of a Waste Discharger ID (WDID) number prior to filing Notice of Intent (NOI)	4.E.2.c	Mar-03	I	I	I	I	I	I	NA
Require proof of an NOI and a copy of SWPPP for a transfer of ownership	4.E.3	Feb-02	I	I	I	I	I	I	NA
Track the number of issued building and grading permits	4.E.3.c	Feb-02	I	I	I	I	I	I	NA
Refer General Construction Activities Stormwater Permit (GCASP) violations to RWQCB	4.E.4	Feb-02	I	I	I	I	I	I	NA
Train targeted employees in permit requirements for Development Construction	4.E.5	Varies	I	I	I	I	I	I	NA
Public Agency Activities - Permit Requirements									
Implement a sewer overflow prevention and response program	4.F.1	Aug-02	I	I	I	I	I	I	NA
Implement Development Planning Program at Permittee-owned construction projects	4.F.2.a	Aug-02	I	I	I	I	I	I	NA
Implement Development Construction Program at Permittee-owned construction projects	4.F.2.b	Feb-02	I	I	I	I	I	I	I
Develop, if needed, and implement SWPPPs for field facilities	4.F.3	Feb-02	I	I	I	I	I	I	I
Equip wash areas with a clarifier, pre-treatment device, or be connected to sewer	4.F.3.c	Feb-02	I	I	I	I	I	I	I
Store pesticides/herbicides/fertilizers indoors and apply only in accordance	4.F.4.c&g	Feb-02	I	I	I	I	I	I	I
Designate Catch Basins as priority A, B, or C	4.F.5.a	Feb-02	I	I	I	I	I	I	I

Table I.2: DC WMG Existing Minimum Control Measures Reported during Permit Year 2011-2012									
Program Tasks and Milestones	**2001 MS4 Permit Section**	**Due Date**	**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**Los Angeles**	**Los Angeles County**	**LACFCD**
Ensure that Catch Basins (CBs) are cleaned appropriately	4.F.5.c.1	Feb-02	I	I	I	I	I	I	I
Place temporary screens on CBs prior to special events or cleanout immediately afterwards	4.F.5.c.2	Feb-02	I	I	I	I	I	I	I
Place and maintain trash receptacles at all transit stops with shelters	4.F.5.c.3	Feb-02	I	I	I	I	I	I	NA
Inspect the legibility of CB stencils and re-label within 180 days if necessary	4.F.5.d	-	I	I	I	I	I	I	I
Visually monitor and clean all open channels annually for debris	4.F.5.e.1	Feb-02	NA	I	I	I	I	I	I
Designate curbed streets as priority A, B, or C based on liter accumulation	4.F.6.a.b	Feb-02	I	I	I	I	I	I	NA
Recover saw cutting waste and dispose it offsite	4.F.6.c	Feb-02	I	I	I	I	I	I	I
Train targeted employees in permit requirements for Public Agency Activities	4.F.6.d	Varies	I	I	I	I	I	I	I
Inspect and, if needed, clean Permittee owned parking lots twice per month, but at least once	4.F.7	Feb-02	I	I	I	I	I	I	I
Conduct a dry weather diversion study and create a priority list of drains for diversion	4.F.10	Jul-03	I	NA	I	NA	I	NA	I
Illicit Connections/Illicit Discharges - Permit Requirements									
Develop an Implementation Program which specifies how revisions of the IC/ID SQMP are implemented	4.G.1.a	-	I	I	I	I	D	I	I
Create a database for permitted storm drain connections and map IC/ID	4.G.1.b	Feb-03	NA	I	I	I	I	I	I
Perform IC/ID Trend Analysis	4.G.1.b	Feb-03	NA	NA	I	NA	NA	I	I
Train targeted employees in the permit requirements for IC/ID	4.G.1.c	Varies	I	I	I	I	I	I	I
Field screen the storm drain system for illicit connections in open channels	4.G.2.a	Feb-03	NA	I	I	I	I	I	I
Field screen the storm drain system for illicit connections in underground storm drains in priority areas	4.G.2.a	Feb-05	I	I	I	I	I	I	I
Field screen the storm drain system for illicit connections in underground s/d larger than 36 inch diameter	4.G.2.a	Dec-06	I	I	I	I	I	I	I
Review all permitted connections to the storm drain system for compliance	4.G.2.a	Dec-06	NA	NA	I	I	I	I	I
Investigate illicit connections 21 days after discovery	4.G.2.b	-	I	I	I	I	I	I	I
Terminate illicit connections 180 days after confirmation	4.G.2.b	-	I	I	I	I	I	I	I

Table I.2: DC WMG Existing Minimum Control Measures Reported during Permit Year 2011-2012									
Program Tasks and Milestones	**2001 MS4 Permit Section**	**Due Date**	**El Segundo**	**Hawthorne**	**Inglewood**	**Lomita**	**Los Angeles**	**Los Angeles County**	**LACFCD**
Respond to illicit discharges within one business day of discovery	4.G.3.a	-	I	I	I	I	I	I	I
Investigate illicit discharges as soon as practicable	4.G.3.a	-	I	I	I	I	I	I	I

NA - Not Applicable or Completed
D - Developed
I - Program Implemented/Completed

Attachment J

Potential Regional BMP Projects Worksheet

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This attachment includes a worksheet that can be used to identify the most beneficial regional BMP projects within the Dominguez Channel Watershed Management Group (DC WMG), corresponding with Section 3.1.4 of the DC WMG Enhanced Watershed Management Program (EWMP) Work Plan. The ranking criteria and corresponding scoring system is outlined in the table below. Each potential project can be evaluated based on these criteria, and a score can be assigned to each subcategory. The summation of the subcategory scores can then be used as a basis to compare various regional projects. Regional projects with the highest score will be considered most beneficial, and those with lower scores will most likely not be considered viable. This approach may easily be modified by the DC WMG to develop a weight for each of the ranking criteria. If this method is utilized, weights may be assigned to each of the ranking criteria, allowing specific criteria to play a more significant role in determining regional BMP projects. Using this method, the score developed will be multiplied by the respective ranking criteria weight and then the scores will be summed to determine the most beneficial projects.

Table J.1: Potential Regional Projects Ranking Criteria

Ranking Criteria
General Criteria
Proximity to receiving water/MS4 infrastructure
Ownership
Size of opportunity site
Size of catchment area
Catchment area land use and likely pollutants
Multi-use opportunities and connectivity
Underlying Soil Conditions
Seasonal high groundwater table depth
Proximity to groundwater production wells
Pollutants in soil or groundwater
Geotechnical hazards
Soil type
Infiltration rates

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Table J.2: Potential Regional BMP Projects Worksheet

	General Criteria						Underlying Soil Conditions						
Ranking Criteria	Proximity to receiving water/MS4 infrastructure	Ownership	Size of opportunity site	Size of catchment area	Catchment area land use and likely pollutants	Multi-use opportunities and connectivity	Seasonal high groundwater table depth	Proximity to groundwater production wells	Pollutants in soil or groundwater	Geotechnical hazards	Soil type	Infiltration rates	**Total: Σ (weight x score)**
Scoring System													
Assigned Weight													
Potential Project													
Potential Project													
Potential Project													
Potential Project													
Potential Project													
Potential Project													
Potential Project													
Potential Project													
Potential Project													
Potential Project													
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Attachment K

Summary of BMP Performance Data

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This attachment includes tables summarizing the existing Best Management Practice (BMP) performance data obtained from the sources listed below, corresponding with Section 3.3 of the Dominguez Channel Watershed Management Group (DC WMG) Enhanced Watershed Management Program (EWMP) Work Plan:

- CASQA Development and Municipal BMP Handbooks (
- California Department of Transportation (Caltrans) BMP Retrofit Pilot Program Report
- Center for Watershed Protection's National Pollutant Removal Performance Database Version 3
- Priority A and B Catch Basin Cleanout Data

Attachment K List of Tables

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Table K.1: Treatment Control BMP Removal Efficiency Per CASQA and BMP Handbooks

Pollutant of Concern	Treatment Control BMPs					
	Vegetated Swale/Strip	Catch Basin Screen/Insert	Hydrodynamic Separator	Infiltration Basin/Trench	Bioswale	Grease Trap
Sediment/ Turbidity/ Suspended Solids/ PH	High/Medium	High/Medium	High/Medium Low for Turbidity	High/Medium	High/Medium	Low
Nutrients	Low	Low	Low	High/Medium	Low	Low
Organic Compounds	Medium/Low	Low	Low	High/Medium	Medium	Low
Trash & Debris	Low	High/Medium	High/Medium	High/Medium	Low	Medium
Oxygen Demanding Substances	Low	Low	Low	High/Medium	Low	Low
Pathogens (Bacteria/ Viruses)	Low	Low	Low	High/Medium	low	Low
Oil & Grease	High/Medium	Medium	Medium/Low	High/Medium	High/Medium	Medium
Pesticides/PCBs	Medium	Low	Low	High/Medium	Medium	Low
Metals	High/Medium	Medium	Low	High	High/Medium	Low

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Table K.2: Treatment Control BMP Pollutant Removal Efficiency

Pollutant of Concern	Caltrans BMP Retrofit Pilot Program Concentration Percent Reduction (%)													
	Austin Sand Filter	Delaware Sand Filter	Extended Detention Basin (Unlined)	Extended Detention Basin (Lined)	Wet Basin Storm (Wet Weather)	Wet Basin Base flow (Wet Weather)	Bioswale	Biofiltration Strip	Storm-Filter™	Multi-Chambered Treatment Train	Continuous Deflective Separators (CDS®)	StreamGuard™ Inlet Insert	FossilFilter™ Inlet Insert	Oil Water Separator
Total Suspended Solids	90	81	72	40	94	21	49	69	40	75	0	3	14	49
NO_3-N	-67	-142	8	8	77	49	27	-30	-7	-68	15	----	----	----
TKN	53	36	17	16	27	-11	31	-5	19	17	0	----	----	----
Total N[A]	32	9	14	14	51	43	30	-10	13	0	5	----	----	----
Ortho-phosphate	24	11	-22	10	-266	-24	-218	-216	9	-3	0	----	----	----
Particulate P	----	----	39	16	----	----	----	----	----	----	----	----	----	----
Phosphorus	39	44	39	15	5	49	-106	-46	17	18	15	----	----	----
Total Cu	50	66	58	27	89	54	63	85	53	35	8	0	2	2
Total PB	87	85	72	30	98	62	68	88	52	74	11	1	7	7
Total Zn	80	92	73	54	91	62	77	72	51	75	17	1	2	2
Particulate Cu	----	----	76	50	----	----	----	----	----	----	----	----	----	----
Particulate Pb	----	----	74	55	----	----	----	----	----	----	----	----	----	----
Particulate Zn	----	----	84	65	----	----	----	----	----	----	----	----	----	----
Dissolved Cu	7	40	0	8	57	90	49	65	18	22	16	----	----	----
Dissolved Pb	40	31	29	42	76	22	57	65	15	32	6	----	----	----
Dissolved Zn	61	94	16	39	41	45	74	53	18	71	14	----	----	----
TPH-Oil[B]	31	55	18	11	38	33	51	59	52	70	34	----	----	14
TPH-Gasoline[B]	----	----	----	----	----	----	----	----	----	----	0	----	----	----
TPH-Diesel[B]	22	47	32	0	91	75	69	66	67	80	0	----	----	52
Fecal Coliform[B]	72	79	-122	-12	99	99	-30	92	47	14	-121	----	----	----
Hydrocarbons	----	----	----	----	----	----	----	----	----	----	----	2	0	----
Oil & Grease	----	----	----	----	----	----	----	----	----	----	----	----	----	89

(-) data above indicates an increase in pollutant of concern upon treatment.
[A] Sum of NO_3-N and TKN
[B] TPH and Coliform are collected by grab method and may not accurately reflect removal.

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Table K.3: Treatment Control BMP Removal Efficiency Per Center for Watershed Protection							
Pollutant of Concern	**Treatment Control BMPs Average Percentage Removed (%)**						
	Dry Pond	**Wet Pond**	**Wetlands**	**Filters**	**Bioretention**	**Infiltration**	**Open Channels**
Total Suspended Solids (TSS)	49	80	72	86	59	89	81
Total Phosphorus (TP)	20	52	48	59	5	65	24
Soluble Phosphorus (Sol P)	-3	64	25	3	-9	85	-38
Total Nitrogen (TN)	24	31	24	32	46	42	56
Nitrogen as Nitrate (NOx)	9	45	67	-14	43	0	39
Copper (Cu)	29	57	47	37	81	86	65
Zinc (Zn)	29	64	42	87	79	66	71
Bacteria	88	70	78	37	N/A	N/A	-25

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Table K.4: Catch Basin Trash Removal Totals				
Jurisdiction	Dominguez Channel Watershed			
	Number of City Catch Basins	Number of County Catch Basins	Total City Trash Removed	Total County Trash Removed
			Tons	Tons
2010-2011[1]				
El Segundo	0	159	0.00	1.78
Hawthorne	118	823	1.32	9.23
Inglewood	0	549	0.00	6.16
Lomita	41	215	0.46	2.41
Los Angeles	0	1,221	0.00	13.69
Los Angeles County	0	1,347	0.00	15.11
Total/Average:	**159**	**4,314**	**1.78**	**48.38**
2011-2012[1]				
El Segundo	0	159	0.00	1.39
Hawthorne	118	824	1.03	7.19
Inglewood	0	549	0.00	4.79
Lomita	41	215	0.36	1.88
Los Angeles	0	1,221	0.00	10.65
Los Angeles County	0	1,342	0.00	11.71
Total/Average:	**159**	**4,310**	**1.39**	**37.61**

[1] An average of 22.43 lbs of trash per catch basin was removed.
[2] An average of 17.45 lbs of trash per catch basin was removed.

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Attachment L

RAA Approach Figures

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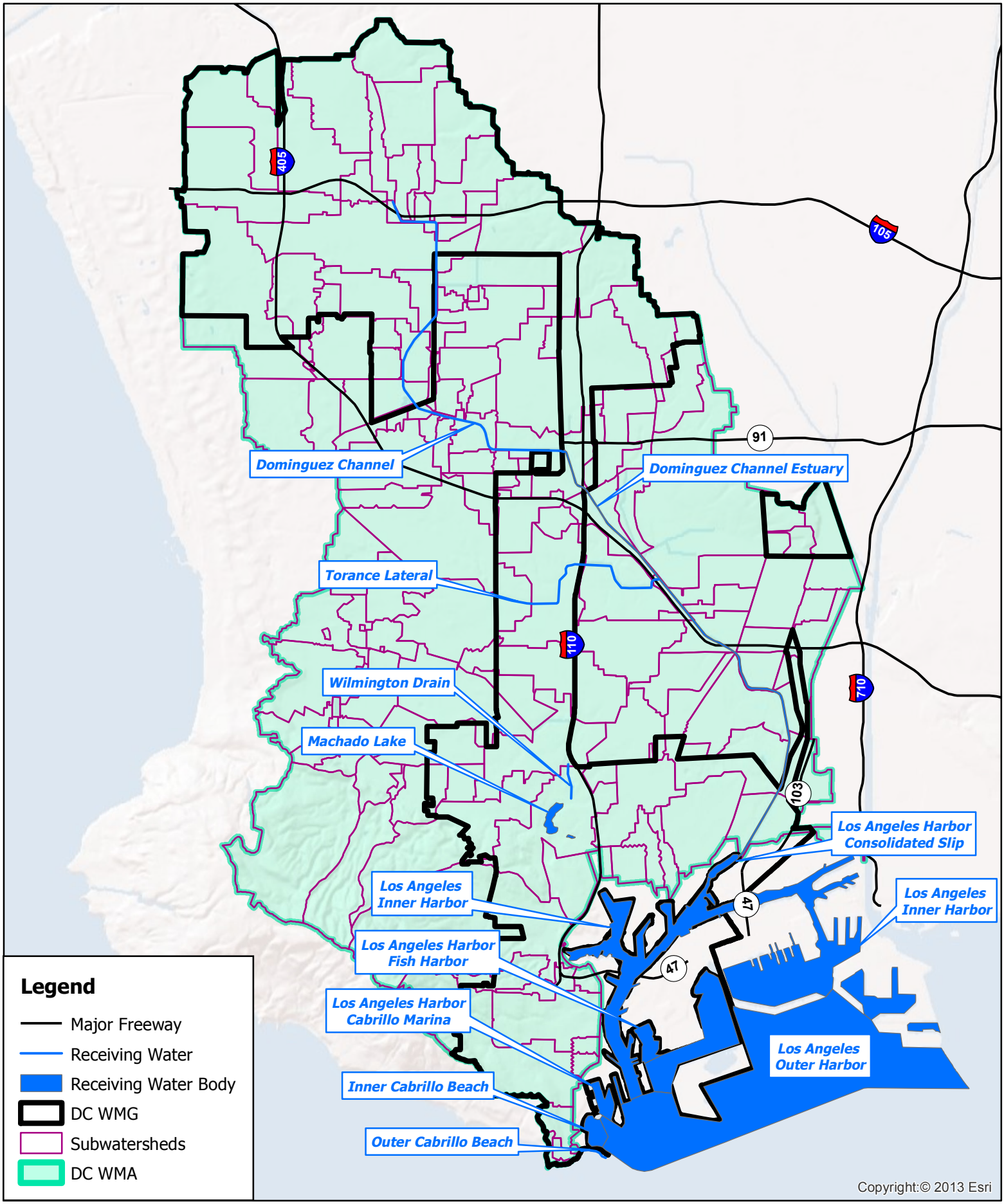

N

0 0.5 1 2 Miles

Figure L.1
Watersheds, Subwatersheds, and Water Bodies
DC WMG EWMP Work Plan
June 2014

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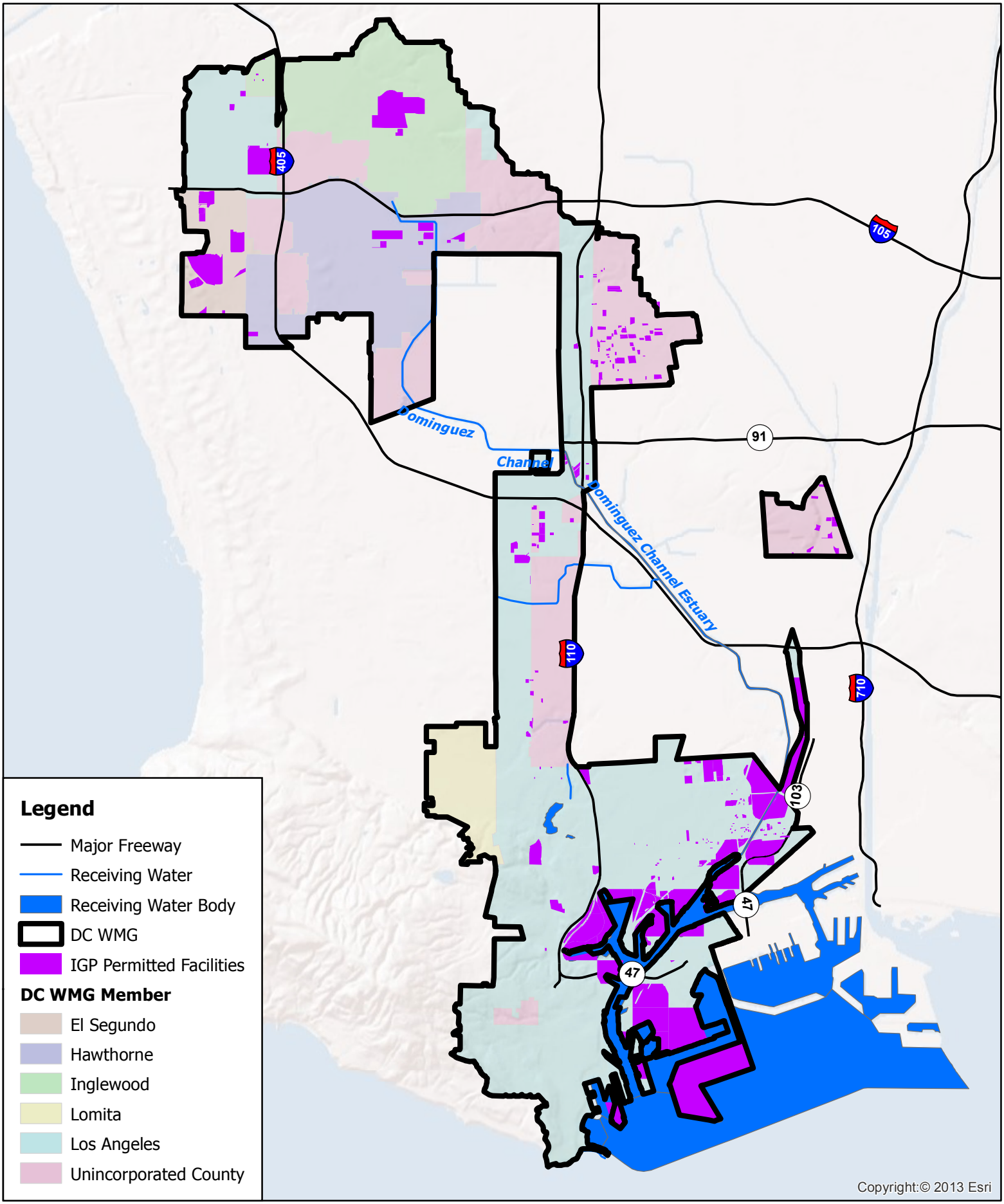

Figure L.2
Industrial Facilities under IGP in DC WMG
DC WMG EWMP Work Plan
June 2014

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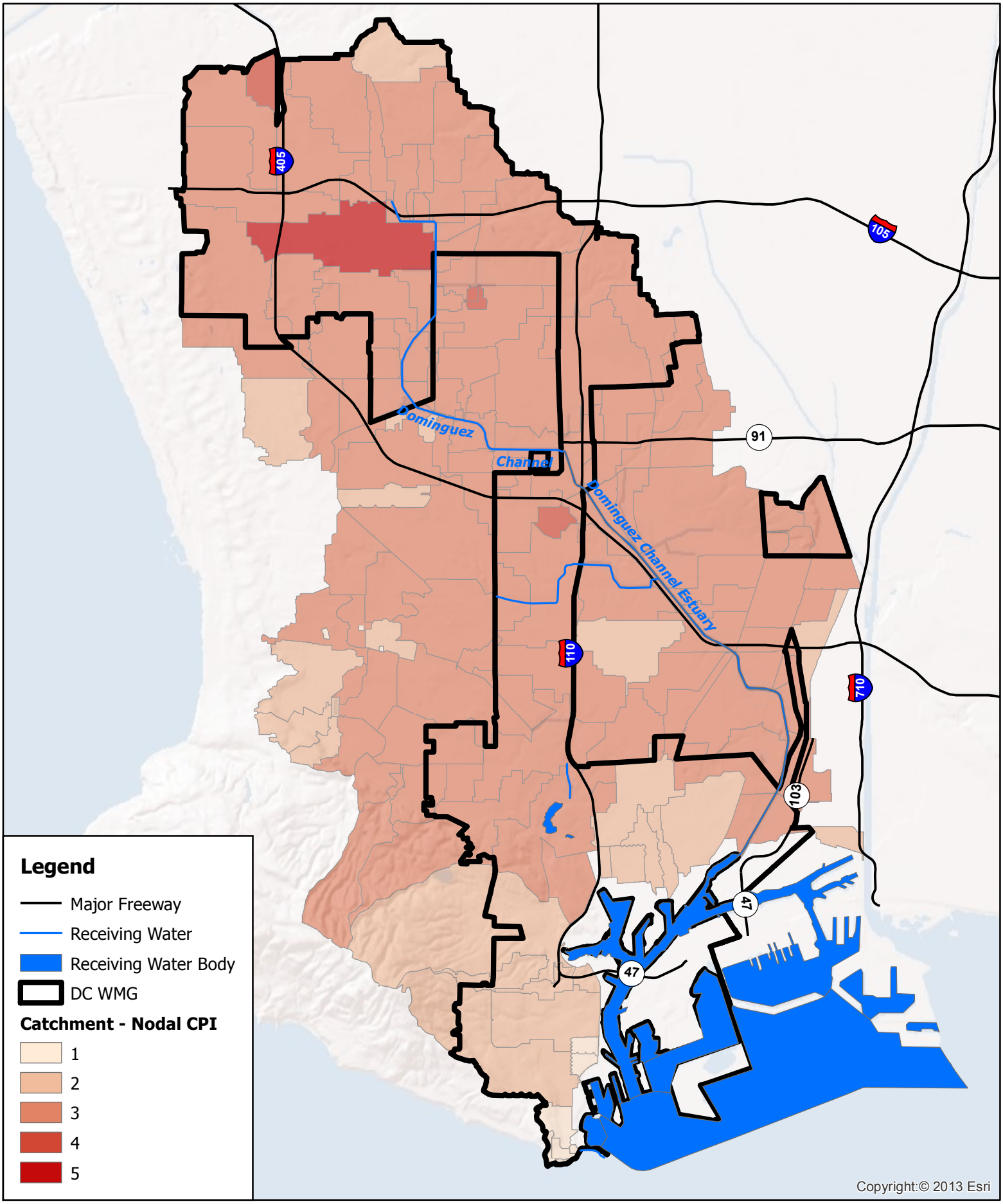

Figure L.3
Nodal CPI Map for Catchment Prioritization
DC WMG EWMP Work Plan
June 2014

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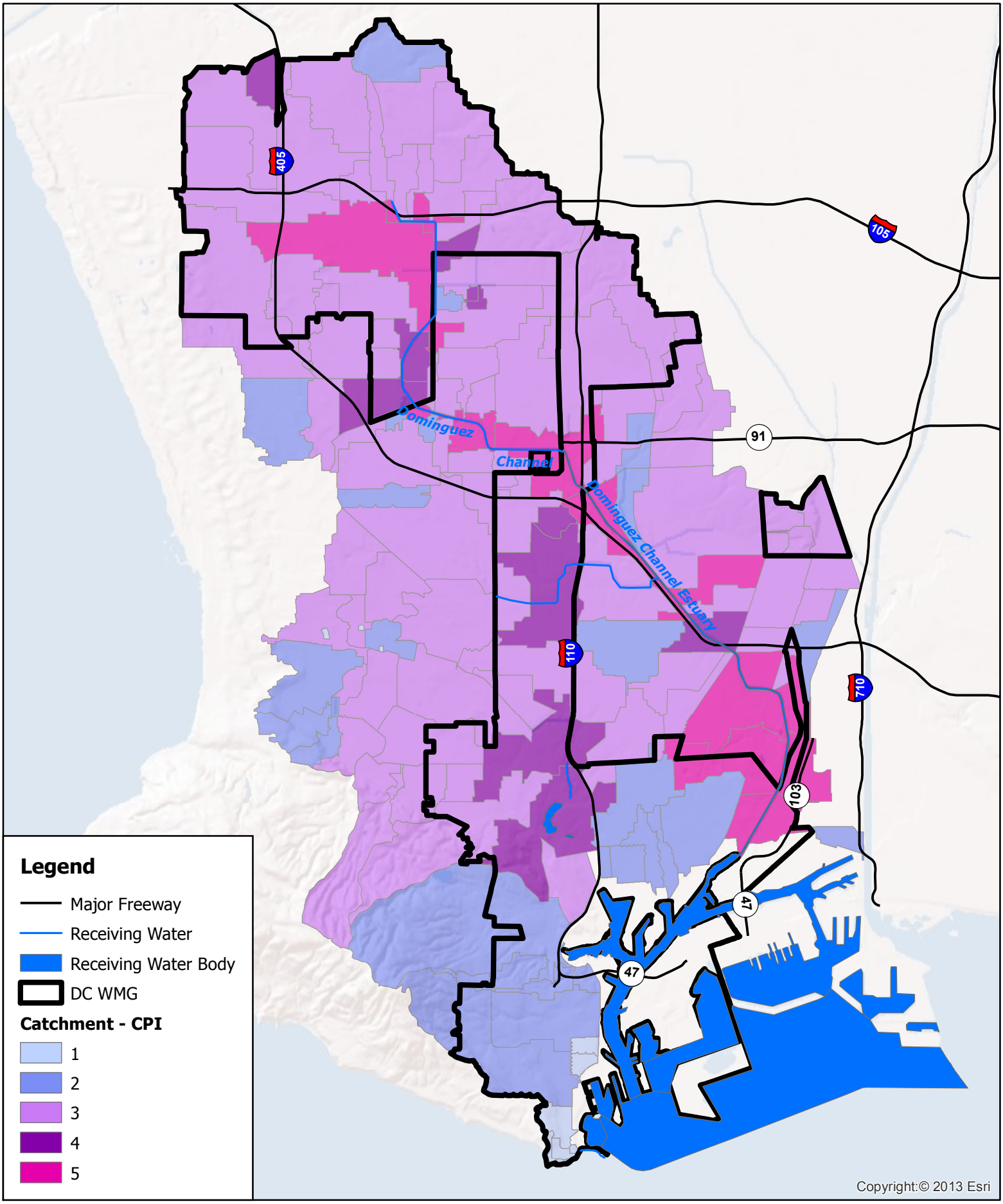

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0 0.5 1 2 Miles

Figure L.4
CPI Map for Catchment Prioritization
DC WMG EWMP Work Plan
June 2014

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Attachment M

Industrial Facilities Covered Under the IGP in DC WMG

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This attachment includes a table summarizing the industrial facilities covered under the Industrial General Permit (IGP) within the Dominguez Channel Watershed Management Group (DC WMG), corresponding with Section 4.3 of the DC WMG Enhanced Watershed Management Program (EWMP) Work Plan. The table corresponds with Figure L.2 in Attachment L.

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Table M.1: Summary of Industrial Facilities Covered Under the IGP in DC WMG

Application ID	WDID	Status Date	Owner/Operator Name	Site/Facility Name	Address	City	Zip Code	APN
439562	4 19I024358	7/11/2013	Carlisle Interconnect Tech Inc	Tri Star Electronics Intl Inc	2201 Rosecrans Ave	El Segundo	90245	4138011011
189616	4 19I006362	4/24/1992	Northrop Grumman Corp	Northrop Grumman Mil Air Sys	1 Hornet	El Segundo	90245	4138002901
339622	4 19I021413	1/16/2008	Raytheon Co	Raytheon Co	2000 E El Segundo Blvd	El Segundo	90245	4138014047
189128	4 19I003356	4/3/1992	Air Product & Chemicals	Air Prod & Chemicals	2021 Rosecrans Ave	El Segundo	90245	4138015012
339623	4 19I021414	1/16/2008	Raytheon Co	Raytheon Co	2030 E Maple Ave	El Segundo	90245	4138019001
188987	4 19I002527	4/1/1992	Mattel Toys	Mattel Toys Design Ctr	2031 E Mariposa Ave	El Segundo	90245	4138019002
189564	4 19I006091	4/21/1992	The Boeing Company	The Boeing Company	2060 E Imperial Hwy	El Segundo	90245	4138005067
190263	4 19I012074	1/3/1996	West Basin MWD	West Basin Mun Water Dist Recl	1935 Hughes	El Segundo	90245	4138014906
190113	4 19I011326	12/29/1994	CalPortland Co	Catalina Pacific Concrete Co	339 S Aviation Blvd	El Segundo	90245	4138008002
191274	4 19I016870	10/17/2001	CoorsTek	Coors Tek	2051 E Maple Ave	El Segundo	90245	4138005016
190121	4 19I011377	1/26/1995	First Student Inc co Strata Env	First Student Inc 12477	14800 S Avalon Blvd	Gardena	90248	6137005029
293047	4 19I019382	3/23/2005	FedEx Freight	Fedex Freight Gardena	15200 S Main St	Gardena	90248	6129018054
190096	4 19I011249	11/1/1994	Los Angeles Unified School District	LA Unified Sch Dist Gardena Ga	18421 S Hoover St	Gardena	90248	6121020904
189640	4 19I006665	7/9/1993	Mills Iron Works	Mills Iron Works	14834 S Maple Ave	Gardena	90248	6129011027
191530	4 19I018105	4/28/2003	California Waste Services LLC	California Waste Services LLC	621 152nd	Gardena	90247	6120001017
189680	4 19I007120	6/2/1992	A & A Ready Mixed Concrete	A&A Ready Mixed Concrete	100 Redondo Beach	Gardena	90248	6129007017
190664	4 19I014209	11/29/2012	Hubbard Casting Co Inc	Hubbard Casting Co Inc	127 E 157th St	Gardena	90248	6129020035
189335	4 19I004271	4/6/1992	Coast Plating	Coast Plating Co	128 W 154th St # 150	Gardena	90248	6129007035
293279	4 19I019852	10/21/2005	Nasco Aircraft Brake Inc	Nasco Aircraft Brake Inc	13300 Estrella Ave	Gardena	90248	6132004029
189682	4 19I007122	6/2/1992	A & A Ready Mixed Concrete	A&A Ready Mixed Concrete	134 Redondo Beach	Gardena	90248	6129007017
190311	4 19I012361	6/4/1996	Spectrum Laboratory Product Inc	Spectrum Laboratory Prod Inc	14422 S San Pedro St	Gardena	90248	6137001004
401870	4 19I022501	1/27/2010	Proplas Technologies	Proplas Technologies	14600 S Main St	Gardena	90248	6129010040
423791	4 19I023491	1/30/2012	Umair Syed	Fastener Innovation Tech	14601 S Broadway	Gardena	90248	6129001047
190823	4 19I014999	3/12/1999	Chemtrans	Chemtrans	14700 S Avalon Blvd	Gardena	90248	6137005005
189698	4 19I007219	6/18/1992	International Die Casting	International Die Casting	14733 Avalon	Gardena	90248	6137002019
293088	4 19I019473	5/5/2005	Designed Metal Connections	Designed Metal Connections	14800 S Figueroa St	Gardena	90248	6129001046
430619	4 19I023799	8/29/2012	First Transit Inc	First Transit Inc 55580	2727 E Del Amo Blvd	Compton	90221	7306018042
408447	4 19I022875	10/14/2010	Praxair Surface Technologies	Praxair Surface Technologies	18502 Laurel Park Rd	Compton	90220	7318019033
191053	4 19I015979	7/31/2000	Plaskolite West Inc	Plaskolite West Inc	2225 Del Amo	Compton	90220	7318007034
190590	4 19I013713	1/23/1998	TA Davies Co	Ta Davies Co	19500 S Alameda St	Compton	90221	7306017013
191717	4 19I018765	4/30/2004	JB Chemical Co Inc	J B Chemical Co Inc	14803 S Spring St	Gardena	90248	6129009072
191688	4 19I018650	2/25/2004	Carson Trailer	Carson Trailer inc	14831 S Maple Ave	Gardena	90248	6129011021
189502	4 19I005353	4/10/1992	Allied Waste Services of North America LLC	Gardena Hauling	14905 S San Pedro Street	Gardena	90248	6129011040
189782	4 19I009247	11/11/1992	Binder Metal Product Inc	Binder Metal Prod Inc	14909 S Broadway St	Gardena	90248	6129002018
191835	4 19I019135	12/1/2004	Moonlight Molds Inc	Moonlight Molds Inc	14920 S San Pedro St	Gardena	90248	6137003015
189441	4 19I004906	4/7/1992	Any Kar Auto Dismantling	Any Kar Auto Dismantling	150 W Lennon St	Gardena	90248	6129009075
322389	4 19I020739	3/23/2007	Lite Extrusions Mfg	Lite Extrusions Mfg	15025 S Main St	Gardena	90248	6129008038
323958	4 19I020839	4/25/2007	Amfoam Inc	American Foam & Packaging	15110 S Broadway	Gardena	90248	6129008044
188533	4 19I000043	2/10/1992	Mechanical Metal Finishing	Mechanical Metal Finishing	15220 S Broadway St	Gardena	90248	6129008050
189310	4 19I004162	4/6/1992	Huniu Norman	Capital Auto Wrecking	15326 S Figueroa St	Gardena	90248	6129004033
189130	4 19I003359	4/3/1992	Westway Auto Dismantlers	Westway Auto Dismantlers	15414 S Figueroa St	Gardena	90248	6129004014

Table M.1: Summary of Industrial Facilities Covered Under the IGP in DC WMG

Application ID	WDID	Status Date	Owner/Operator Name	Site/Facility Name	Address	City	Zip Code	APN
307772	4 19I020413	8/16/2006	Sanchez Auto Wrecking	Sanchez Auto Wrecking	15503 1/2 Main	Gardena	90248	6129006033
400870	4 19I022416	11/23/2009	MDH Auto Wrecking	MDH Auto Wrecking	15503 3/4 S Main St	Gardena	90248	6129006033
402718	4 19I022570	3/24/2010	Main St Auto Dismantlers Inc	Main St Auto Dismantlers Inc	15503 S Main St	Gardena	90248	6129006033
191446	4 19I017633	11/18/2002	Grow More Inc	Grow More Inc	15600 New Century Dr	Gardena	90248	6129005045
346405	4 19I021608	6/10/2008	Environmental Recovery Services Inc	Environmental Recovery Services Inc	15902 S Main St	Gardena	90248	6125003003
188928	4 19I002282	3/31/1992	TCI Precision Metals	TCI Precision Metals	240 E Rosecrans Ave	Gardena	90248	6129010036
190973	4 19I015609	2/1/2000	Bay Cities Metal Production	Bay Cities Metal Production	301 E Alondra Blvd	Gardena	90248	6125004006
403279	4 19I022633	5/13/2010	Maya Steel Fabrications Inc	Maya Steel Fabrications Inc	301 E Compton Blvd	Gardena	90248	6129011030
189746	4 19I009076	11/7/1992	Blue Daisy Cement Product	Blue Daisy Cement Prod	314 E Compton Blvd	Gardena	90248	6129015049
432128	4 19I023869	10/19/2012	Impresa Aerospace LLC	Impresa Aerospace LLC	344 W 157th Street	Gardena	90248	6125001002
433466	4 19I023969	1/22/2014	Metric Precision	Metric Precision	350 W Compton Blvd	Gardena	90248	6129003010
410489	4 19I022954	12/22/2010	RJs Demolition & Disposal	RJs Chipping & Grinding	355 W Alondra Blvd	Gardena	90248	6125001012
434520	4 19I024036	1/30/2013	Samuel Cohen	Vege Misting Alco Designs	407 E Redondo Beach Blvd	Gardena	90248	6129014037
189944	4 19I010285	7/8/1993	Thomas Auto Salvage	Thomas Auto Salvage	440 E Redondo Beach Blvd	Gardena	90248	6129021031
189659	4 19I006973	5/15/1992	Cast Rite Corp	Cast Rite Corp	515 E Airline Way	Gardena	90248	6125011028
190120	4 19I011370	1/25/1995	Scotch Paint	Scotch Paint	555 W 189th St	Gardena	90248	7339008030
190142	4 19I011444	2/27/1995	Hi Craft Metal Product	Hi Craft Metal Prod	606 W 184th St	Gardena	90248	7339008029
190255	4 19I012046	12/18/1995	Power Magnetics	Power Magnetics	711 W Knox St	Gardena	90248	7351032034
190810	4 19I014946	2/11/1999	California Metals Recycling	CA Metals Recycling	833 W 182nd St	Gardena	90248	6121019009
370140	4 19I022330	9/17/2009	Ecology Auto Parts Inc	Ecology Auto Parts Inc	14701 S Maple	Gardena	90248	6129010041
351216	4 19I021762	8/25/2008	Richard Hough	Cosway Company	14805 S Maple	Gardena	90247	6129011020
189395	4 19I004554	4/8/1992	Angelus Block Co Inc	Angelus Block Co Inc	252 E Redondo Beach Blvd	Gardena	90248	6129019053
410815	4 19I022992	1/27/2011	Gamma 2	Gamma 2	14505 S Main St	Gardena	90248	6129009048
188864	4 19I001829	3/30/1992	Superior Gear Facility	Superior Gear Facility	14814 Broadway	Gardena	90248	6129009065
188950	4 19I002372	3/31/1992	Harbor Auto Liquidators	U Pick U Save	17800 S Vermont Ave	Gardena	90248	6121019005
189092	4 19I003126	4/2/1992	YRC Freight	YRC Inc	15400 S Main St	Gardena	90248	6129019057
191454	4 19I017672	12/9/2002	Robertsons Ready Mix	Robertsons Ready Mix Gardena	301 Rosecrans	Gardena	90248	6132044033
304186	4 19I020268	6/5/2006	Gerald Tupper	American Aircraft Products	15411 S Broadway Ave	Gardena	90248	6129004029
298183	4 19I020140	3/10/2006	Waste Resources Recovery Inc	Waste Resources Recovery	357 Compton	Gardena	90248	6129002029
432837	4 19I023928	11/16/2012	Rex Foreign Used Auto Parts	Rex Foreign Used Auto Parts	15601 S Main St	Gardena	90248	6129006023
190809	4 19I014945	2/11/1999	California Metals Recycling	CA Metals Recycling	1022 Lomita Blvd	Harbor City	90710	7413017019
189722	4 19I007371	7/6/1993	Bryant Rubber Corp	Bryant Rubber Corp Steve Bryan	1112 Lomita Blvd	Harbor City	90710	7413008018
188744	4 19I001069	3/25/1992	C Brite Metal Finishing Inc Joh	C Brite Co	1213 253rd St	Harbor City	90710	7413006010
188939	4 19I002342	3/31/1992	Brea Canon Oil Co	Brea Canon Oil Co Joughin Facility	23903 Normandie	Harbor City	90710	7438017013
293153	4 19I019621	6/30/2005	Maxima Ent Inc	Maxima Ent Inc	23920 Vermont Ave	Harbor City	90710	7409019015
323973	4 19I020849	4/27/2007	Plasticorp	Plasticorp	24105 24049 Frampton Ave	Harbor City	90710	7439011037
190226	4 19I011879	9/21/1995	Zachers Automotive Recycler	Zachers Automotive Recycler	25224 Vermont	Harbor City	90710	7413020022
188701	4 19I000862	3/23/1992	Interplastic Corp	Interplastic Corp	12335 S Van Ness Ave	Hawthorne	90250	4056032051
424943	4 19I023543	3/6/2012	Space Exploration Technologies	Space Exploration Technologies	1 Rocket Rd	Hawthorne	90250	4049019013
188930	4 19I002294	3/31/1992	Hawthorne City	Hawthorne City Airport	12101 Crenshaw Blvd	Hawthorne	90250	4049017905
443973	4 19I024648	1/23/2014	Arrow Recycling Solutions Inc	Arrow Recycling Solutions Inc	12410 Wilkie Ave	Hawthorne	90250	4056032045

Table M.1: Summary of Industrial Facilities Covered Under the IGP in DC WMG

Application ID	WDID	Status Date	Owner/Operator Name	Site/Facility Name	Address	City	Zip Code	APN
191221	4 19I016662	7/25/2001	OSI Optoelectronics Inc	Udt Sensors Inc	12525 Chadron Ave	Hawthorne	90250	4049007042
190566	4 19I013631	12/30/1997	Fed Ex	Fed Ex	12600 Prairie Ave	Hawthorne	90250	4049011017
405512	4 19I022728	7/19/2010	Triumph Aerostructures LLC	Triumph Aerostructures Hawthorne	3901 Jack Northrop Ave	Hawthorne	90250	4049013004
293147	4 19I019606	6/28/2005	UPS Cartage Services Inc	UPS Cartage Services Inc CAIWD	3600 W Century Blvd	Inglewood	90303	4032004045
188945	4 19I002358	3/31/1992	Microplate Inc	Microplate Inc	1013 W Hillcrest Blvd	Inglewood	90301	4126006011
189311	4 19I004165	4/6/1992	Chromplate Co Inc	Chromplate Co Inc	1127 W Hillcrest Blvd	Inglewood	90301	4126003013
189658	4 19I006958	5/14/1992	Standun Inc	Zephyr Manufacturing	201 Hindry Ave	Inglewood	90301	4127029001
188819	4 19I001526	3/27/1992	Rho Chem LLC	Rho Chem LLC	425 Isis Ave	Inglewood	90301	4126003020
293257	4 19I019821	10/12/2005	Hollywood Park Land Co LLC	Hollywood Park Racetrack	1050 S Prairie Ave	Inglewood	90301	4025011037
190221	4 19I011858	9/6/1995	LACMTA	Metro Division 22 Green Line	14724 Aviation Blvd	Lawndale	90260	4149011910
338208	4 19I021353	12/20/2007	Mortimer & Wallace Inc	Mortimer & Wallace Inc	2422 E Sepulveda Blvd	Long Beach	90810	7315015905
190630	4 19I013944	4/30/1998	Union Pacific Railroad	ICTF	2401 E Sepulveda Blvd	Long Beach	90810	7315011804
292954	4 19I019183	12/7/2004	National Technical Systems Inc	National Technical Systems Inc	5320 W 104th St	Los Angeles	90045	4129035022
189959	4 19I010364	7/22/1993	Neutrogena	Neutrogena	5755 W 96th St	Los Angeles	90045	4125021030
189775	4 19I009217	11/10/1992	Merle Norman	Norman Merle	9130 Bellanca Ave	Los Angeles	90045	4125010015
191316	4 19I017076	2/6/2002	Stepstone Inc	Stepstone Inc Plant No 3	13238 S Figueroa St	Los Angeles	90061	6132008038
190485	4 19I013149	6/25/1997	Phillips 66 Company	Phillips 66 Company LA Terminal	13500 S Broadway	Los Angeles	90061	6132042022
336892	4 19I021302	11/28/2007	D&D Palstics Inc	D&D Palstics Inc	13920 S Figueroa	Los Angeles	90061	6132044007
190091	4 19I011230	10/20/1994	Pacific Sintered Metals	Pac Sintered Metals	14000 Avalon Blvd	Los Angeles	90061	6134018064
188732	4 19I001009	3/23/1992	V & M Plating Co	V & M Plating Co	14024 Avalon Blvd	Los Angeles	90061	6134018056
190177	4 19I011620	5/30/1995	Parkers Towing & Salvage Inc	Parker S Towing & Salvage Inc	14116 Avalon Blvd	Los Angeles	90061	6134018039
188651	4 19I000584	3/16/1992	Als Plating Co Inc	Al S Plating Co Inc	318 W 131st St	Los Angeles	90061	6132011016
403688	4 19I022657	6/1/2010	River Star Inc	River Star Inc	378 W 133rd St	Los Angeles	90061	6132009001
402389	4 19I022550	3/4/2010	Golden Gate Steel Inc	Golden Gate Steel Inc	19826 S Alameda St	Los Angeles	90221	7306006034
189729	4 19I008028	9/26/1992	Letvin Ronald A	S Letvin & Son	13210 S Figueroa Steet	Los Angeles	90248	6132008020
321914	4 19I020720	3/9/2007	CalPortland Co	Catalina Pacific Concrete Co	5299 W 111th St	Los Angeles	90045	4129036908
332951	4 19I021196	2/18/2014	Gus Billings	Cabilt Inc	14032 S Avalon Blvd	Los Angeles	90061	6134018058
363241	4 19I022095	4/1/2009	Connector Plating Corp	Connector Plating Corp	327 W 132nd St	Los Angeles	90061	6132011022
439786	4 19I024407	8/9/2013	Pellico Investments LLC	Laclede Inc	2103 East University Drive	Rancho Del Campo	90220	7318009028
439465	4 19I024349	7/9/2013	Puratos Corporation	Puratos Corporation	18831 Laurel Park Road	Rancho Dominguez	90220	7318019044
190488	4 19I013173	6/26/1997	Aerol Co	Aerol Co	19560 S Rancho Way	Rancho Dominguez	90220	7318023014
351475	4 19I021776	10/15/2013	Sea Recovery Corp	Sea Recovery Corp	19610 S Rancho Way	Rancho Dominguez	90220	7318023019
340590	4 19I021438	2/11/2008	Sims Recycling Solutions	Sims Recycling Solutions	20212 S Rancho Way	Rancho Dominguez	90220	7318007043
191325	4 19I017122	3/11/2002	General Petroleum Corporation	General Petroleum Rancho Dominguez	19501 S Santa Fe Ave	Rancho Dominguez	90221	7306017012
431624	4 19I023845	10/1/2012	Fargo Trucking Co Inc	Fargo Trucking Co Inc	2727 E Del Amo Blvd	Rancho Dominguez	90221	7306018042
418710	4 19I023288	8/10/2011	CRM CO LLC H Barry Takallou	CRM CO LLC	15800 Avalon Blvd	Rancho Dominguez	90220	6139013006
189785	4 19I009280	11/13/1992	Nabors Completion & Production	Nabors Completion & Production	19431 S Santa Fe Ave	Rancho Dominguez	90221	7306017007
189522	4 19I005602	12/20/2011	Defense Logistics Agency	US Defense Fuel Support Point	3171 N Gaffey St	San Pedro	90731	7442001915
189709	4 19I007310	2/3/1993	US Coast Guard CO	US Coast Guard Support Ctr San Pedro	1001 S Seaside Ave	San Pedro	90731	7440033903
189308	4 19I004159	4/6/1992	Ciro Coppa	Coppa Woodworking	1231 Paraiso St	San Pedro	90731	7445012047
190642	4 19I014039	6/1/1998	Seaside Transportation Service	Marine Terminals Corp Yang Min	2050 John S Gibson Blvd # Bert	San Pedro	90731	7440016911

Table M.1: Summary of Industrial Facilities Covered Under the IGP in DC WMG

Application ID	WDID	Status Date	Owner/Operator Name	Site/Facility Name	Address	City	Zip Code	APN
191518	4 19I018069	4/8/2003	APM Terminals	APM Terminals	2500 Navy Way	San Pedro	90731	7440042904
188568	4 19I000231	3/2/1992	Yusen Terminal Inc	Yusen Terminal Inc	701 New Dock St	San Pedro	90731	7440022911
191471	4 19I017765	1/21/2003	Southern California Ship Services	So Cal Ship Services	971 S Seaside Ave	San Pedro	90731	7440033903
431612	4 19I023843	10/1/2012	SSA Marine	Outer Harbor Berths 54 and 55	Outer Harbor Berths 54 and 55	San Pedro	90731	7440039910
433704	4 19I023989	12/27/2012	Catalina Express	Catalina Express	Berth 95	San Pedro	90731	7440024911
189488	4 19I005178	4/8/1992	City of Los Angeles	Terminal Island WWTP	445 Ferry St	San Pedro	90731	7440027914
189857	4 19I009687	1/8/1993	Jankovich Co	Jankovich Co San Pedro Marine	Berth 74	San Pedro	90731	7440034902
292961	4 19I019214	12/16/2004	BNSF Railway Company	Terminal Island	100 Navy Way	San Pedro	90731	7440042904
370246	4 19I022300	8/31/2009	Plains Midstream Canada	Rancho LPG Holdings LLC	2110 N Gaffey St	San Pedro	90731	7412026006
190481	4 19I013131	6/25/1997	Eagle Marine Services Ltd	Eagle Marine Services Ltd	614 Terminal Way	San Pedro	90731	7440028905
422641	4 19I023444	12/15/2011	Progress Rail Services	United Industries Corp	710 Earle St	Terminal Island	90731	7440029917
337275	4 19I021320	12/4/2007	General Petroleum Corporation	General Petroleum Corporation Terminal Island	1028 S Seaside Ave	Terminal Island	90731	7440031906
340586	4 19I021437	2/6/2008	American Marine Corp	American Marine Corp	1500 S Barracuda St	Terminal Island	90731	7440032905
410531	4 19I022958	12/27/2010	CA United Terminals	CA United Terminals	2525 Navy Wy	Terminal Island	90731	7440042904
190173	4 19I011597	5/9/1995	Seaside Transportation Service	Evergreen Terminal	389 Terminal Wy	Terminal Island	90731	7440029917
298504	4 19I020148	3/16/2006	Ardagh Metal Packaging USA Inc	Ardagh Metal Packaging USA Inc	936 Barracuda St	Terminal Island	90731	7440029917
331011	4 19I021125	9/5/2007	SA Recycling LLC	SA Recycling LLC dba SA Recycling of Los Angeles	901 New Dock St	Terminal Island	90731	7440013907
296617	4 19I020093	2/23/2006	Crossfields Products	Crossfield Products Torrance Plant	19514 Normandie Avenue	Torrance	90502	7351035020
191845	4 19I019159	12/2/2004	MK Diamond Product	MK Diamond Prod	1315 Storm Pkwy	Torrance	90501	7347018034
425138	4 19I023557	3/13/2012	Quality Forming LLC	Quality Forming LLC	22906 Frampton Ave	Torrance	90501	7347018009
190158	4 19I011513	4/4/1995	Industrial Parts Depot	Industrial Parts Depot	23231 Normandie Ave	Torrance	90501	7347018024
190238	4 19I011957	11/2/1995	Stewart Filmscreen Corp	Stewart Filmscreen Corp	1161 Sepulveda Blvd	Torrance	90502	7407016045
190344	4 19I012498	8/15/1996	Metro Truck Body Inc	Metro Truck Body Inc	1201 Jon St	Torrance	90502	7351036011
443596	4 19I024619	1/3/2014	AGC Automotive California Inc	AGC Automotive California Inc	19301 Pacific Gateway Drive	Torrance	90502	7351031007
189132	4 19I003373	4/3/1992	RR Donnelley	RR Donnelley LA Div	19681 Pacific Gateway Dr	Torrance	90502	7351034015
419881	4 19I023318	9/7/2011	Redman Equipment & Manufacturing Co	Redman Equipment & Manufacturing Co	19800 Normandie Ave	Torrance	90502	7351035018
191503	4 19I017993	3/18/2003	Ace Clearwater Ent	Ace Clearwater Ent	19815 Magellan Dr	Torrance	90502	7351034043
189628	4 19I006466	4/24/1992	BCI CocaCola Bottling Company of LA	BCI Coca Cola Co of Los Angeles - Torrance Facility	19875 Pacific Gateway	Torrance	90502	7351034057
191241	4 19I016724	8/21/2001	Sonic Industries	Sonic Industries	20030 Normandie Ave	Torrance	90502	7351036020
189361	4 19I004385	4/6/1992	Farmer Bros Co	Farmer Bros Co	20333 Normandie Ave	Torrance	90502	7351020021
190380	4 19I012624	10/30/1996	Ecology Control Industries	Ecology Control Industries	20846 Normandie	Torrance	90502	7351027001
189322	4 19I004213	4/6/1992	Schimmicks Dismantling	Schimmick S Dismantling	22704 Normandie Ave	Torrance	90502	7344018023
191802	4 19I019016	9/7/2004	Rolling Frito Lay Sales	LA Mega	1500 Francisco St	Torrance	90501	7351021039
321913	4 19I020719	3/9/2007	CalPortland Co	Catalina Pacific Concrete Co	19030 S Normandie Ave	Torrance	90502	7351030003
188733	4 19I001017	3/23/1992	Praxair Inc	Praxair Inc	2300 E Pacific Coast Hwy	Wilmington	90744	7428008905
190640	4 19I014013	5/21/1998	Penzoil Quaker State Co SOPUS Products	Sopus Prod LA Lubes Plant	1926 E Pacific Coast Hwy	Wilmington	90744	7428007010
191350	4 19I017191	4/4/2002	Ultramar Inc Hanford	Ultramar Inc Wilmington Refine	2402 E Anaheim St	Wilmington	90744	7440002032
189495	4 19I005229	4/9/1992	Savage Industries Inc	Savage Industries Inc	1635 E Denni St	Wilmington	90744	7428005028
190102	4 19I011272	11/22/1994	Apple Auto Dismantling Inc	Apple Auto Dismantling	2701 Anaheim	Wilmington	90744	7428014029

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Application ID	WDID	Status Date	Owner/Operator Name	Site/Facility Name	Address	City	Zip Code	APN
189491	4 19I005196	4/9/1992	Los Angeles Department of Water and Power Power	Harbor Generating Station	161 Island	Wilmington	90744	7440006911
189114	4 19I003269	4/3/1992	Norwalk Industries Co	Ecology Auto Wrecking	1000 Lomita	Wilmington	90744	7426001014
188959	4 19I002397	3/31/1992	Brea Canon Oil Co	Brea Canon Oil Co South Torrance	630 Lomita	Wilmington	90744	7414001902
189576	4 19I006177	4/22/1992	Catalina Freight Line	Catalina Freight Line	100 W Water St	Wilmington	90744	7440009911
188667	4 19I000668	1/12/1993	HJ Baker & Bro Inc	H J Baker & Bro Inc	1001 Schley Ave	Wilmington	90744	7428022903
358274	4 19I021964	12/19/2008	Astro Auto Wrecking	Astro Auto Wrecking	1002 Schley Ave	Wilmington	90744	7428019066
429198	4 19I023724	7/17/2012	G M B Auto Sales & Dismantling	G M B Auto Sales & Dismantling	1008 Vreeland Ave	Wilmington	90744	7428030005
366197	4 19I022175	6/3/2009	Howdy Auto Dismantler Inc	Howdy Auto Dismantler	1018 Alameda St	Wilmington	90744	7425042021
189087	4 19I003067	4/2/1992	Jacks Foreign Auto Wrecking	Jacks Foreign Auto Wrecking	1019 E Anaheim St	Wilmington	90744	7425037015
425346	4 19I023570	3/20/2012	Shokri Sayegh	Nu Way Auto Dismantling Inc	1022 E Anaheim St	Wilmington	90744	7424021006
440599	4 19I024417	8/19/2013	Davilas Enterprise LLC	4 Wheel Dismantling	1034 Cristobal Ave	Wilmington	90744	7425042009
191263	4 19I016818	9/25/2001	Moine Charles A	Wilmington Recyclers	1120 Henry Ford	Wilmington	90744	7428005025
189244	4 19I003826	4/3/1992	Alco Truck & Auto Inc	Alco Truck & Van Parts	1230 Alameda St	Wilmington	90744	7428003003
428728	4 19I023699	7/2/2012	Wilmington Recycling Group LLC	Wilmington Recycling Group LLC	1248 Alameda St	Wilmington	90744	7428003048
190970	4 19I015579	1/12/2000	Lincoln Iron & Metals	Lincoln Iron & Metals	1262 Alameda St	Wilmington	90744	7428002037
189167	4 19I003490	4/3/1992	Ace High Truck	Ace High Truck	1305 Sandison	Wilmington	90744	7426008034
189430	4 19I004876	4/7/1992	AMC Auto Salvage	AMC Auto Salvage	1310 E Lomita Blvd	Wilmington	90744	7426006016
315179	4 19I020571	11/27/2006	Martin Container Inc	Martin Container Inc	1402 E Lomita Blvd	Wilmington	90744	7426006001
189766	4 19I009176	11/9/1992	GS Roofing dba CertainTeed RPG	GS Roofing dba CertainTeed RPG	1431 E	Wilmington	90744	7412025009
410443	4 19I022956	12/23/2010	Ruben Chavez	West Coast Dismantlers	1523 E Sandison St	Wilmington	90744	7426024038
435549	4 19I024124	3/5/2013	Commercial Truck Used Parts	Commercial Truck Used Parts	1523 East I Street	Wilmington	90744	7425043057
293027	4 19I019352	3/16/2005	Juniors Auto Parts	Juniors Auto Parts	1535 E Sandison St	Wilmington	90744	7426024054
189443	4 19I004915	4/7/1992	International Cargo Equipment	International Cargo Equipment	1540 Eubank Ave	Wilmington	90744	7426001013
190157	4 19I011502	3/14/1995	Liberty Auto Sales & Dismantling	Liberty Auto Sales & Dismantling	1542 E Opp St	Wilmington	90744	7425043024
442369	4 19I024542	10/28/2013	Maria Leticia Urias Alfonso Urias Alfonso Hijinio Urias Junior	Tex Auto Wrecking	1549 East Sandison Street	Wilmington	90744	7426024043
189238	4 19I003787	4/3/1992	Action Sales & Metal Co	Action Sales & Metal Co	1625 E Pacific Coast Hwy	Wilmington	90744	7426033030
191190	4 19I016559	6/5/2001	Valero Refining Co California	Valero Refining Co CA	1651 Alameda St	Wilmington	90744	7426028005
426005	4 19I023594	4/10/2012	Elvira Mercedes Lezama Ruiz	CL Auto Parts & Dismantling	1714 E Mauretania St	Wilmington	90744	7428002031
303010	4 19I020236	5/30/2006	Clean Harbors Wilmington LLC	Clean Harbors Wilmington LLC	1737 E Denni St	Wilmington	90744	7428006006
432146	4 19I023876	10/19/2012	Titos Auto Dismantling and Used	Titos Auto Dismantling and Used	1801 East I Street	Wilmington	90744	7428034036
345563	4 19I021575	5/27/2008	New Bone Inc DBA Boneyard Auto Parts	New Bone Inc DBA Boneyard Auto Parts	1807 E M St	Wilmington	90744	7428002009
191613	4 19I018414	10/16/2003	Martinez Engine Cores	Martinez Engine Cores	1814 E Mauretania St	Wilmington	90744	7428002027
191050	4 19I015957	7/19/2000	Wilmington Auto Wrecking	Wilmington Auto Wrecking	1817 M	Wilmington	90744	7428002012
191744	4 19I018854	6/23/2004	I De L Auto Dismantling	I De L Auto Dismantling	1907 E I St	Wilmington	90744	7428035020
441218	4 19I024461	9/13/2013	William Miranda	Idel Auto Dismantling and Body Work	1907 East I Street	Wilmington	90744	7428035021
190464	4 19I013005	3/19/1997	Salvador Danny	Danny Auto Dismantling	1919 I	Wilmington	90744	7428035025
332751	4 19I021192	10/4/2007	Tesoro Refining & Marketing Co	Tesoro Refining & Marketing Co	1930 Pacific Coast Hwy	Wilmington	90744	7315017005
191604	4 19I018386	9/30/2003	Cerritos Yacht Anchorage	Cerritos Yacht Anchorage	205 Berth Ste C	Wilmington	90744	7440014904
326777	4 19I020937	6/20/2007	Tesoro Refining and Marketing Company LLC	Tesoro Los Angeles Refinery	2101 E Pacific Coast Highway	Wilmington	90744	7428007009

Table M.1: Summary of Industrial Facilities Covered Under the IGP in DC WMG

Application ID	WDID	Status Date	Owner/Operator Name	Site/Facility Name	Address	City	Zip Code	APN
409668	4 19I022930	12/3/2010	Rafael Ruiz Sanchez	Sanchez Auto Service Dismantling	2113 E I St	Wilmington	90744	7428024001
189047	4 19I002849	4/2/1992	VOPAK Terminal Los Angeles Inc	Vopak Terminal Los Angeles Inld	2200 Pacific Coast	Wilmington	90744	7428007009
191040	4 19I015917	7/6/2000	Barillas Nicolas	Nicks Auto Wrecking	2211 E Anaheim St	Wilmington	90744	7428021049
439672	4 19I024363	7/16/2013	Anoosh Dayani	Harbor Auto LLC	2223 E Anaheim Street	Wilmington	90744	7428021050
191519	4 19I018076	4/10/2003	Milans Honda	Milans Honda	225 E Harry Bridges Blvd	Wilmington	90744	7418030015
189105	4 19I003212	4/3/1992	California Cartage Co	CA Cartage Co	2401 E Pacific Coast Hwy	Wilmington	90744	7315015905
191194	4 19I016573	6/11/2001	Pacific Auto Dismantler LLC LRP	Pacific Auto Dismantler	2423 E Anaheim St	Wilmington	90744	7428020023
368978	4 19I022242	7/28/2009	Associated Pacific Contructors Inc.	APC Berth 193	325 Yacht St	Wilmington	90744	7440013909
189048	4 19I002850	4/2/1992	VOPAK Terminal Los Angeles Inc	Vopak Terminal Los Angeles	401 Canal	Wilmington	90744	7440010910
190789	4 19I014881	12/31/1998	Car Aroma Supplies	Car Aroma Supplies	412 W Anaheim St	Wilmington	90744	7416028004
189939	4 19I010244	6/28/1993	Auto Recycling Wilmington I	Auto Recycling Wilmington I	418 E Anaheim St	Wilmington	90744	7423015013
292925	4 19I018664	3/2/2004	Smart Recycling Inc	Smart Recycling Inc	424 426 N Fries Ave	Wilmington	90744	7418015011
190153	4 19I011485	3/9/1995	Garcia Mario	C & G Auto Wrecking	516 Quay Ave	Wilmington	90744	7418009023
191420	4 19I017505	9/25/2002	Garcias Auto Sales & Dismantling Inc	Garcias Auto Dismantling	640 Flint Ave	Wilmington	90744	7424024038
190768	4 19I014799	12/5/1998	Honda and Toyota Auto Parts	Honda Toyota Auto Parts Dis	707 E Anaheim St	Wilmington	90744	7416021035
191313	4 19I017067	2/6/2002	Gil Perez	M G Auto Dismantlers	711 Watson Ave	Wilmington	90744	7424023014
190912	4 19I015333	8/12/1999	Quintanilla Maria	Mid Auto Dismantler & Sales	725 Watson Ave	Wilmington	90744	7424023012
293435	4 19I019979	12/19/2005	Royal Adhesives & Sealants LLC	Royal Adhesives & Sealants LLC	800 E Anaheim St	Wilmington	90744	7424011056
189064	4 19I002928	4/2/1992	Pasha Stevedoring & Terminal	Pasha Stevedoring & Terminal	802 S Fries Ave	Wilmington	90744	7440014904
190354	4 19I012541	9/6/1996	M & R Auto Sales	M & R Auto Sales	820 Macdonough Ave	Wilmington	90744	7428020029
191002	4 19I015698	3/23/2000	Olmedos Auto Sales Dismantler	Olmedos Auto Sales Dismantler	828 Macdonough Ave	Wilmington	90744	7428020029
324960	4 19I020888	5/16/2007	Shore Terminals LLC	Shore Terminals LLC	841 La Paloma Ave	Wilmington	90744	7440014904
191614	4 19I018415	10/16/2003	B & R Auto Dismantling	B & R Auto Dismantling	902 Foote Ave	Wilmington	90744	7428017940
191317	4 19I017082	2/6/2002	Rugerio Moises	Chicos Auto Wrecking	905 Farragut Ave	Wilmington	90744	7428015030
191716	4 19I018761	4/29/2004	Aguar Auto Dismantling	Aguar Auto Dismantling	908 Vreeland Ave	Wilmington	90744	7428035018
411829	4 19I023015	2/9/2011	Shoreline Auto Wrecking	Shoreline Auto Wrecking	911 S Vreeland Ave	Wilmington	90744	7428034031
327168	4 19I020955	6/29/2007	Robertos Auto Dismantler	Robertos Auto Dismantler	912 Vreeland Ave	Wilmington	90744	7428035046
190453	4 19I012926	2/20/1997	Guadalupe Rivas	Lupes Auto Sales & Dismantling	918 Schley	Wilmington	90744	7428019092
190299	4 19I012295	5/9/1996	Mikes Foreign Auto Parts	Mikes Foreign Auto Parts	921 E Anaheim St	Wilmington	90744	7425011018
191013	4 19I015737	4/12/2000	Juan Cerna	4 Stars Auto Dismantler Sales	921 N Henry Ford Ave	Wilmington	90744	7425043055
190840	4 19I015054	4/8/1999	Blanco Engine Core	Blanco Engine Core	925 Henry Ford	Wilmington	90744	7425043050
190162	4 19I011535	4/6/1995	Medrano George	George S Body Shop Auto Sales	927 Vreeland Ave	Wilmington	90744	7428034906
191154	4 19I016406	3/16/2001	AJC Sandblasting Inc	AJC Sandblasting Inc	932 Schley	Wilmington	90744	7428019064
190269	4 19I012137	2/7/1996	Japanese Truck Dismantling	Japanese Truck Dismantling	940 Alameda St	Wilmington	90744	7425043045
188808	4 19I001436	3/27/1992	Colonial Yacht Anchorage	Colonial Yacht Anchorage	Berth 204 Anchorage Rd	Wilmington	90744	7440011908
347060	4 19I021624	6/18/2008	West Coast Aerospace Inc	West Coast Aerospace	220 W E St	Wilmington	90744	7418005015
347059	4 19I021625	6/18/2008	West Coast Aerospace Inc	West Coast Aerospace Inc	516 Marine St	Wilmington	90744	7418015008
190946	4 19I015482	11/9/1999	Paramount Forge Inc	Paramount Forge Inc	1721 E Colon St	Wilmington	90744	7426031023
188641	4 19I000538	3/16/1992	Wilmington Woodworks Inc	Wilmington Woodworks Inc	318 C St	Wilmington	90744	7418034900
188702	4 19I000868	3/23/1992	Trans Pacific Container	Trans Pac Container	920 W Harry Bridges Blvd	Wilmington	90744	7440008901
306858	4 19I020378	7/27/2006	Warren E & P Inc	Warren E & P Inc	2209 E I St	Wilmington	90744	7428023050

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Application ID	WDID	Status Date	Owner/Operator Name	Site/Facility Name	Address	City	Zip Code	APN
189346	4 19I004312	4/6/1992	Tidelands Oil Production Co	Tidelands Oil Production Co	420 Henry Ford	Wilmington	90744	7440004271
307626	4 19I020405	1/6/2014	Warren E and P Inc	Warren E and P Inc WTU	625 E Anaheim St	Wilmington	90744	7423024032
443539	4 19I024612	12/31/2013	Manson Construction Co	Manson Construction Co	Berth 200 611 Henry Ford	Wilmington	90744	7440001912
190462	4 19I012997	3/19/1997	BNSF Railway Co	BNSF Railway Watson	1302 Lomita	Wilmington	90744	7426001808
293255	4 19I019816	10/11/2005	Tension Member Technology	Coordinated Equipment Co	1707 E Anaheim St	Wilmington	90744	7428036045
189484	4 19I005133	4/7/1992	Pick Your Partners Auto Wrecking	Pick Your Part	1903 Blinn Ave	Wilmington	90744	7426007001
189482	4 19I005131	4/7/1992	Pick Your Partners Auto Wrecking	Pick Your Part Help Yourself	1232 Blinn Ave	Wilmington	90744	7425026002
324019	4 19I020852	4/27/2007	Estes Express West	GI Trucking Co dba Estes West	1531 Blinn Ave	Wilmington	90744	7426007002
189009	4 19I002660	4/1/1992	US Borax Inc	U S Borax	300 Falcon	Wilmington	90744	7440019001
293285	4 19I019868	10/31/2005	Air Product & Chemicals	Air Products & Chemicals Inc	700 N Henry Ford Ave	Wilmington	90744	7440002034
189424	4 19I004763	4/7/1992	Vanderwerff Chip	Alle Auto Wrecking	1710 E Opp St	Wilmington	90744	7428033042
412771	4 19I023050	3/7/2011	Luis Castro and Pablo Rene Cruz	Element Auto Dismantling	1800 E Opp St	Wilmington	90744	7428034020
426874	4 19I023621	5/7/2012	Recycling Unlimited Metal Co	Recycling Unlimited Metal Co	1813 E Robidoux St	Wilmington	90744	7428003015
365982	4 19I022166	5/29/2009	Tonys Vette Inc	Tonys Vette Inc	1818 E Mauretania St	Wilmington	90744	7428002026
337578	4 19I021327	12/5/2007	Marine Technical Services	Marine Technical Services	211 N Marine Ave	Wilmington	90744	7418033907
370632	4 19I022314	9/9/2009	Ford Only Inc	Ford Only Inc	728 N Sanford Ave	Wilmington	90744	7424021012
307192	4 19I020391	8/3/2006	Adrian Orozco	Motor Sport Auto Body	734 N Flint Ave	Wilmington	90744	7424022008
431152	4 19I023817	9/14/2012	Potential Industries	Potential Industries	922 East E St	Wilmington	90744	7424017043
442792	4 19I024557	11/14/2013	Roland A Molina	Blanco Auto Wrecking and Repair	925 N Henry Ford Ave	Wilmington	90744	7425043050
402387	4 19I022548	3/3/2010	Walid Jahchan	WJ Auto Wrecking Inc Wally Auto Dismantling	942 N Vreeland Ave	Wilmington	90744	7428035039

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Attachment N

Figures from Part I of the Watershed Model Configuration and Calibration Manual

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This attachment includes figures from Part I (Hydrology) of the Los Angeles County Watershed Model Configuration and Calibration (2010a) summarizing the spatial domain data associated with the Watershed Management Modeling System (WMMS) and the Loading Simulation Program in C++ (LSPC) calibration. The data illustrated in this attachment helps define the Reasonable Assurance Analysis (RAA) approach, corresponding with Section 4.3 of the Dominguez Channel Watershed Management Group (DC WMG) Enhanced Watershed Management Program (EWMP).

Attachment N List of Tables

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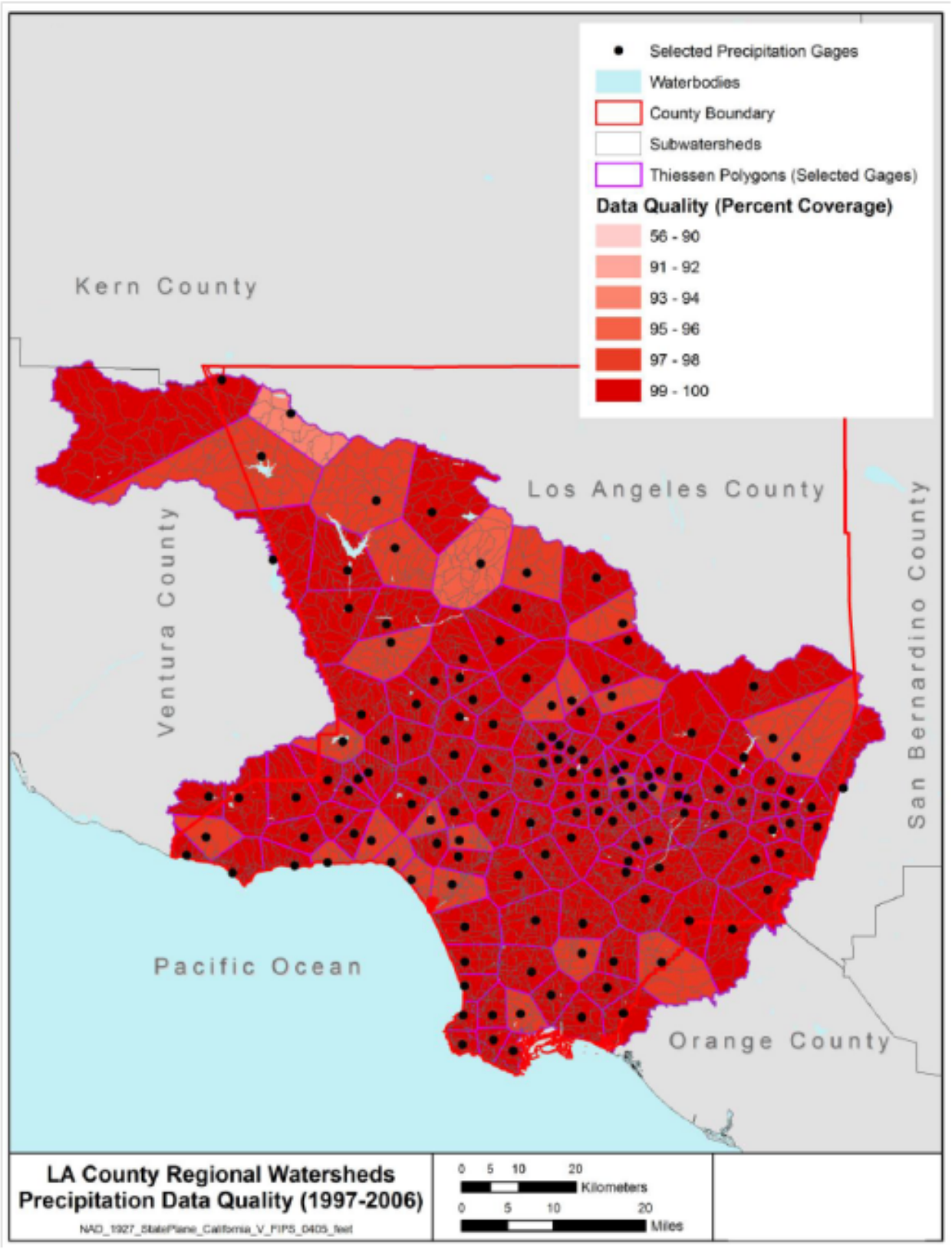

Figure N.1: WMMS/LSPC Rain Gage Data Sets for Los Angeles Region (LACDPW, 2010a)

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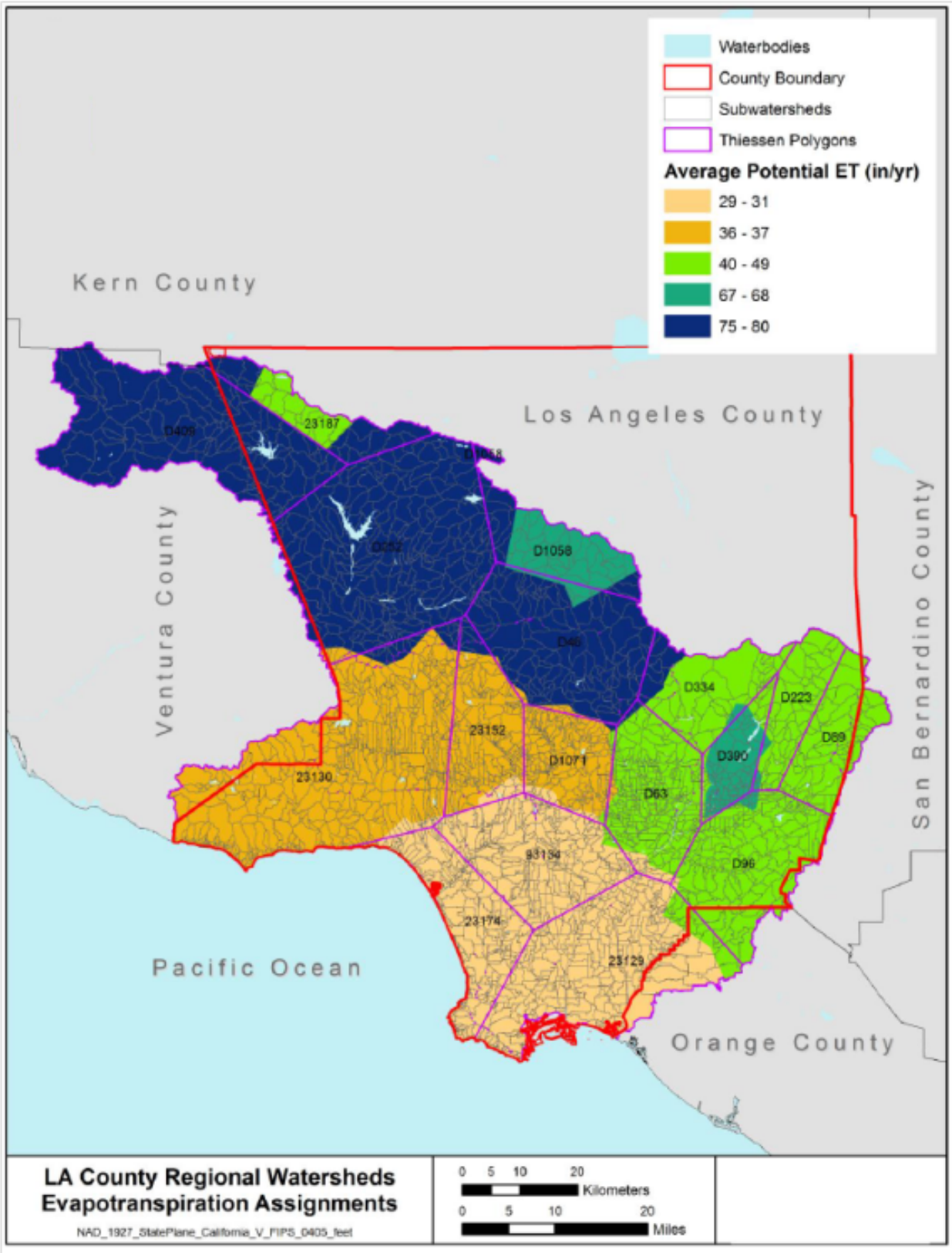

Figure N.2: WMMS/LSPC Model Evapotranspiration Zones (LACDPW, 2010a)

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Figure N.3: WMMS/LSPC Runoff Stations used for Calibration (LACDPW, 2010a)

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Attachment O

Stakeholder Process

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On April 10, 2014, a stakeholder workshop was held at the Los Angeles Zoo from 10:00 a.m. through approximately 2:00 p.m. The Dominguez Channel Watershed Management Group participated in the workshop and had a table set up with information on the watershed. Attached is a list of the persons and their organizations that attended the event, a card the Dominguez Channel Watershed Management Group handed out inviting persons to join a webinar, and a handout provided by the RWQCB describing the watershed.

The webinar provided guidance on how to use the Dominguez Channel Watershed Management Group's OPTI system to input project ideas. The OPTI system that has been set up can be found at: http://opti.rmcwater.com/ewmp/.

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EWMP Workshop - April 10, 2014

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The Dominguez Channel Watershed Management Group wants your input on the

ENHANCED WATERSHED MANAGEMENT PLAN.

Come join us for a webinar to see how you can get your projects considered for the plan. Follow the link below to sign up. Two webinars are scheduled:

- Wednesday 4/16/2014, 10:00am – 11:00am
- Tuesday 4/22/2014, 1:00pm – 2:00pm

http://bit.ly/dc-ewmp-opti

If you need assistance, please call (323)669-7655 and someone will get back to you.

Scan to link to webinar registration.

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Planning Workshop for Enhanced Watershed Management Programs being developed pursuant to the Los Angeles County MS4 Permit

April 10, 2014

Witherbee Auditorium, LA Zoo

The following provides an overview of the principles and requirements of an Enhanced Watershed Management Program (EWMP) to help guide discussions and the identification of possible projects to implement through the EWMP. Additionally, in many cases work has already been underway to identify potential opportunities to implement water quality improvement projects in these watersheds; Board staff has identified some of these existing watershed management / restoration plans, below. Additionally, excerpts from some of these plans will be made available at the watershed specific breakout groups to help generate discussion.

Dominguez Watershed

The Los Angeles County MS4 Permit states, in part:

"An Enhanced Watershed Management Program (EWMP) is one that comprehensively evaluates opportunities, within the participating Permittees' collective jurisdictional area in a Watershed Management Area, for collaboration among Permittees and other partners on multi-benefit regional projects …"

And, "An EWMP shall [among other things]:

- Include multi-benefit regional projects to ensure that MS4 discharges achieve compliance with all final Water Quality-Based Effluent Limitations … and do not cause or contribute to exceedances of receiving water limitations … by retaining through infiltration or capture and reuse the storm water volume from the 85th percentile, 24-hour storm for the drainage areas tributary to the multi-benefit regional project;
- Maximize the effectiveness of funds through analysis of alternatives and the selection and sequencing of actions needed to address human health and water quality related challenges and non-compliance;
- Incorporate effective innovative technologies, approaches and practices, including green infrastructure, and
- In drainage areas within the EWMP area where retention of the 85th percentile, 24-hour storm event is not feasible, the EWMP shall include a Reasonable Assurance Analysis to demonstrate that applicable water quality based effluent limitations and receiving water limitations shall be achieved through implementation of other watershed control measures."

Keys words and phrases are *watershed, collaboration, green infrastructure, multi-benefit regional projects, maximize effectiveness of funds.*

The Regional Water Board encourages EWMP Partners to utilize and build on previous work where possible, such as the watershed management plans funded through Proposition 13 and Cal-Fed and other plans which identified potential sites for multi-benefit regional projects. These plans were developed with considerable stakeholder input. Additionally, various types of dispersed "green" projects such as green alleys/streets or permeable pavement in large parking lots can help with the drainage areas tributary to the multi-benefit regional projects and are identified in the watershed plans. Green projects have been implemented at many locations at this point, so EWMP partners can benefit from the experience and lessons learned from these projects. Collaboration with Integrated Regional Water Management (IRWM) groups is also important, as these groups are implementing projects to improve the water supply, water quality, and open space/habitat.

Selection of Resources for Planning in the Dominguez Watershed:

Los Angeles County Department of Public Works, 2004. *Dominguez Watershed Management Master Plan*. http://ladpw.org/wmd/watershed/dc/DCMP/docs/Section%204%20Action%20Plan.pdf

Integrated Regional Water Management Plan

- Greater Los Angeles County Leadership Committee, 2014 (draft). *The Greater Los Angeles County Integrated Regional Water Management Plan, 2013 Update*. http://www.ladpw.org/wmd/irwmp/index.cfm?fuseaction=update2013

Attachment P

LACFCD Background

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This attachment provides background information pertaining to the Los Angeles County Flood Control District (LACFCD), and their involvement in the Dominguez Channel Watershed Management Group (DC WMG) Enhanced Watershed Management Program (EWMP), supplemental to the EWMP Work Plan.

In 1915, the Los Angeles County Flood Control Act established the LACFCD and empowered it to manage flood risk and conserve stormwater for groundwater recharge. In coordination with the United States Army Corps of Engineers the LACFCD developed and constructed a comprehensive system that provides for the regulation and control of flood waters through the use of reservoirs and flood channels. The system also controls debris, collects surface storm water from streets, and replenishes groundwater with stormwater and imported and recycled waters. The LACFCD covers the 2,753 square-mile portion of Los Angeles County south of the east-west projection of Avenue S, excluding Catalina Island. It is a special district governed by the County of Los Angeles Board of Supervisors, and its functions are carried out by the Los Angeles County Department of Public Works. The LACFCD service area is shown in Figure P.1.

Unlike cities and counties, the LACFCD does not own or operate any municipal sanitary sewer systems, public streets, roads, or highways. The LACFCD operates and maintains storm drains and other appurtenant drainage infrastructure within its service area. The LACFCD has no planning, zoning, development permitting, or other land use authority within its service area. The Permittees that have such land use authority are responsible under the MS4 Permit for inspecting and controlling pollutants from industrial and commercial facilities, development projects, and development construction sites. (MS4 Permit, Part II.E, page 17.)

The MS4 Permit language clarifies the unique role of the LACFCD in storm water management programs: "[g]iven the LACFCD's limited land use authority, it is appropriate for the LACFCD to have a separate and uniquely-tailored storm water management program. Accordingly, the storm water management program minimum control measures imposed on the LACFCD in Part VI.D of this Order differ in some ways from the minimum control measures imposed on other Permittees. Namely, aside from its own properties and facilities, the LACFCD is not subject to the Industrial/Commercial Facilities Program, the Planning and Land Development Program, and the Development Construction Program. However, as a discharger of storm and non-storm water, the LACFCD remains subject to the Public Information and Participation Program and the Illicit Connections and Illicit Discharges Elimination Program. Further, as the owner and operator of certain properties, facilities and infrastructure, the LACFCD remains subject to requirements of a Public Agency Activities Program." (MS4 Permit, Part II.F, page 18).

Consistent with the role and responsibilities of the LACFCD under the MS4 Permit, the EWMPs and Coordinated Integrated Monitoring Programs (CIMPs) reflect the opportunities that are available for the LACFCD to collaborate with Permittees having land use authority over the subject watershed area. In some instances, the opportunities are minimal, however the LACFCD remains responsible for compliance with certain aspects of the MS4 Permit as discussed above.

In some instances, in recognition of the increased efficiency of implementing certain programs regionally, the LACFCD has committed to responsibilities above and beyond its obligations under the 2012 MS4 Permit. For example, although under the 2012 MS4 Permit the Public Information and Participation Program (PIPP) is a responsibility of each Permittee, the LACFCD is committed to implementing certain regional elements of the PIPP on behalf of all Permittees at no cost to the Permittees. These regional elements include:

- Maintaining a countywide hotline (888-CLEAN-LA) and website (www.888cleanla.com) for public reporting and general stormwater management information at an estimated annual cost of $250,000. Each Permittee can utilize this hotline and website for public reporting within its jurisdiction.
- Broadcasting public service announcements and conducting regional advertising campaigns at an estimated annual cost of $750,000.

- Facilitating the dissemination of public education and activity specific stormwater pollution prevention materials at an estimated annual cost of $100,000.
- Maintaining a stormwater website at an estimated annual cost of $10,000.

The LACFCD will implement these elements on behalf of all Permittees starting July 2015 and through the MS4 Permit term. With the LACFCD handling these elements regionally, Permittees can better focus on implementing local or watershed-specific programs, including student education and community events, to fully satisfy the PIPP requirements of the 2012 MS4 Permit.

Similarly, although water quality monitoring is a responsibility of each Permittee under the 2012 MS4 Permit, the LACFCD is committed to implement certain regional elements of the monitoring program. Specifically, the LACFCD will continue to conduct monitoring at the seven existing mass emissions stations required under the previous Permit. The LACFCD will also participate in the Southern California Stormwater Monitoring Coalition's Regional Bioassessment Program on behalf of all Permittees. By taking on these additional responsibilities, the LACFCD wishes to increase the efficiency and effectiveness of these programs.

Figure P.1: LACFCD Service Area

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