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June 27, 2014

Mr. Samuel Unger, Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 West Fourth Street, Suite 200
Los Angeles, CA 90013

Dear Mr. Unger:

SUBMITTAL OF COORDINATED INTEGRATED MONITORING PROGRAM FOR THE CITY OF LOS ANGELES AREA IN JURISDICTIONAL GROUP 7 OF THE SANTA MONICA BAY WATERSHED

Please find attached the Coordinated Integrated Monitoring Program (CIMP) for the City of Los Angeles area in Jurisdictional Group 7 of the Santa Monica Bay watershed. The City of Los Angeles, as lead agency for this area, has prepared this CIMP on behalf of itself and Los Angeles County Flood Control District (LACFCD). LACFCD has reviewed the draft CIMP prior to submission to the Regional Water Board, and we appreciate their collaboration in the preparation of the document.

The CIMP for the City of Los Angeles area in Jurisdictional Group 7satisfies the requirements provided by Attachment E, the Monitoring and Reporting Program (MRP), of the new MS4 Permit (Order No. R4-2012-0175). The CIMP provides a discussion of the monitoring locations, constituents, and monitoring frequencies, details of analytical and monitoring procedures, and an approach for implementation of the CIMP. Concurrently with this CIMP, we are submitting Geographic Information System (GIS) database to satisfy the requirements of Part VII.A of the MRP.

We appreciate the discussions with and the input received from Regional Water Board staff during the development of this CIMP and we look forward to the comments on the CIMP by your staff and finalizing this document.

Should you have any questions about this submittal, please contact me at Shahram.Kharaghani@lacity.org or phone (213) 485-0587, or your staff may contact Ms. Donna Chen at Donna.Chen@lacity.org or phone (213) 485-3928.

Sincerely,

Robert Vega for
SHAHRAM KHARAGHANI, Ph.D., P.E., BCEE
Program Manager

Attachment

SK:HC
WPDCR9132

cc: Renee Purdy, California Regional Water Quality Board, Los Angeles Region
Ivar Ridgeway, California Regional Water Quality Board, Los Angeles Region
Adel Hagekhalil, City of Los Angeles, Bureau of Sanitation
Hubertus Cox, City of Los Angeles, Bureau of Sanitation
Gary Hildebrand, County of Los Angeles, Department of Public Works

June 2014

SANTA MONICA BAY JG7 WATERSHED MANAGEMENT PLAN GROUP

Coordinated Integrated Monitoring Program (CIMP)

Prepared by

City of Los Angeles and Los Angeles County Flood Control District

The MWH Team

MWH Geosyntec consultants CWE M2 Resource Consulting, Inc.

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LIST OF ACRONYMS

Acronym	Definition
40 CFR	Code of Federal Regulations
AED	Allowable Exceedance Day
AIN	Assessor's Identification Number
ASBS	Areas of Special Biological Significance
ASTM	American Society for Testing and Materials
Basin Plan	Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties
BMPs	Best Management Practices
Caltrans	California Department of Transportation
CCW	Calleguas Creek Watershed
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIMP	Coordinated Integrated Monitoring Program
County	Los Angeles County
COC	Chain of Custody
CRM	Certified/ Standard Reference Material
CSMP	Coordinated Shoreline Monitoring Plan
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
CWC	California Water Code
DAP	Discharge Assessment Plan
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DO	Dissolved Oxygen
DOC	Dissolved Organic Carbon
EDTA	Ethylene Diamine Tetra Acetic Acid
EIA	Effective Impervious Area
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
ES	Executive Summary
EWMP	Enhanced Watershed Management Program
FLPE	Fluorinated high-density polyethylene
GIS	Geographic Information System
GM	Geometric Mean
GWQC	General Water Quality Constituents
HUC	Hydrologic Unit Codes
IC/ID	Illicit Connection/Illicit Discharge
IMCR	Integrated Monitoring Compliance Report
IMP	Integrated Monitoring Program

IWC	In-stream waste concentration
JG	Jurisdictional Group
LACDPW	Los Angeles County Department of Public Works
LACFCD	Los Angeles County Flood Control District
LCS	Laboratory Control Sample/Standard
LID	Low Impact Development
MAL	Municipal Action Limits
MBAS	Methylene Blue Active Substances
MCM	Minimum Control Measure
MDL	Method Detection Limit
MES	Mass Emission Stations
MF	Multi-Family
MGD	Million Gallons per Day
MPN	Most Probable Number
MRP	Monitoring and Report Program
MS4	Municipal Separate Storm Sewer System
MTBE	Methyl tert-butyl ether
NA	Not Applicable
NELAP	National Environmental Laboratory Accreditation Program
NIST	National Institute for Standards and Technology
NPDES	National Pollutant Discharge Elimination System
NSW	Non-Stormwater
NTU	Nephelometric Turbidity Units
OC	Organochlorine
OP	Organophosphate
PBO	Piperonyl Butoxide
PCB	Polychlorinated biphenyl
PDF	Portable Document Format
PE	Polyethylene
Permit	Permit No. R4-2012-0175
PMRP	Pellets Monitoring and Reporting Plan
PRM	Pathogen Related Mortality
QA	Quality Assurance
QC	Quality Control
QPF	Quantitative Precipitation Forecast
RAA	Reasonable Assurance Analysis
REC-1/REC-2	Recreational Beneficial Use Designations
Regional Board	Los Angeles Regional Water Quality Control Board
RL	Reporting Limits
RPD	Relative Percent Difference
RW	Receiving Water

RWL	Receiving Water Limitations
RWQCB	Regional Water Quality Control Board
SCCWRP	Southern California Coastal Water Research Project
SDTF	Standardized Data Transfer Format
SF	Single Family
SIC	Standard Industrial Classification System
SM	Standard Methods
SMB	Santa Monica Bay
SMB JG7 WMP Group	Santa Monica Bay Enhanced Watershed Management Program Group
SMBBB	Santa Monica Bay Beaches Bacteria
SMC	Southern California Stormwater Monitoring Coalition
SMURRF	Santa Monica Urban Runoff Recycling Facility
SOP	Standard Operating Procedure
SPE	Solid Phase Extraction
SQO	Sediment Quality Objectives
SSC	Suspended Sediment Concentration
STS	Sodium thiosulfate
SVOC	Semi Volatile Organic Compound
SWAMP	Surface Water Ambient Monitoring Program
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TIE	Toxicity Identification Evaluation
TKN	Total Kjehdahl Nitrogen
TM	Technical Memo
TMDL	Total Maximum Daily Load
TMRP	Trash Monitoring and Reporting Plan
TOC	Total Organic Carbon
TRE	Toxicity Reduction Evaluation
TSS	Total Suspended Solids
TST	Test of Significant Toxicity
UC	University of California
USEPA	United States Environmental Protection Agency
USGS	United sStates Geological Survey
VOC	Volatile Organic Compound
WBPCs	Water Body-Pollutant Combinations
WDID	State Waste Discharge Identification
WLA	Waste Load Allocations
WMA	Watershed Management Area
WMP	Watershed Management Program
WQBEL	Water Quality-Based Effluent Limits

Section 1
Introduction

The National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit No. R4-2012-0175 (Permit) was adopted November 8, 2012 by the Los Angeles Regional Water Quality Control Board (Regional Board) and became effective December 28, 2012. The purpose of the Permit is to ensure the MS4s in Los Angeles County are not causing or contributing to exceedances of water quality objectives set to protect the beneficial uses in the receiving waters in the Los Angeles region.

The Permit allows Permittees to customize their stormwater programs through the development and implementation of a Watershed Management Program (WMP) or an Enhanced Watershed Management Program (EWMP) to achieve compliance with receiving water limitations (RWLs) and water quality-based effluent limits (WQBELs). The City of Los Angeles (City) has been a participating agency of Jurisdictional Group 7 (JG7) of the Santa Monica Bay (SMB) Watershed since the adoption of the Santa Monica Bay Beaches Bacteria Total Maximum Daily Loads (TMDLs) in 2003. However, the City of Los Angeles and the other MS4 permittees in JG7 could not reach an agreement for a collaborative approach to satisfying the requirements of the MS4 permit. Therefore, on November 26, 2013 the Regional Board requested that the City and the Los Angeles County Flood Control District (LACFCD) (see **Attachment A** for background on the LACFCD), collectively referred to as the SMB JG7 WMP Group, pursue a WMP instead of an EWMP to fulfill the requirements of the MS4 Permit. The primary reasons for this request included: 1) MS4 discharges to Santa Monica Bay are anticipated to be minimal due to the small contributing drainage areas; and 2) opportunities for structural BMP implementation are limited due to the geography of the WMP area (e.g., cliffs at outfalls, landslide and liquefaction hazards, etc.). As such, in December of 2013 the JG7 SMB WMP Group submitted a revised notice of intent to develop a WMP for the City of Los Angeles land area within JG7 of the Santa Monica Bay Watershed.

This Coordinated Integrated Monitoring Program (CIMP) fulfills the requirements presented in the Monitoring and Reporting Program (MRP) portion of the Permit, which are specified in Attachment E of the Permit. The primary objectives for the MRP are listed in Part II.A of the MRP, as follows:

- Assess the chemical, physical, and biological impacts of discharges from the MS4 on receiving waters;
- Assess compliance with RWLs and WQBELs established to implement Total Maximum Daily Load (TMDL) wet-weather and dry-weather waste load allocations (WLAs);
- Characterize pollutant loads in MS4 discharges;
- Identify sources of pollutants in MS4 discharges; and
- Measure and improve the effectiveness of pollutant controls implemented under the Permit.

Additionally, the CIMP incorporates TMDL monitoring requirements to unify monitoring efforts and to provide consistent observations of watershed conditions.

1.1 SANTA MONICA BAY JURISDICTIONAL GROUP 7 WATERSHED MANAGEMENT PLAN AREA

Santa Monica Bay is an integral part of the larger geographic region commonly known as the Southern California Bight (or, bend in the coastline). It is bordered offshore by the Santa Monica Basin, to the north by the rocky headlands of Point Dume, and to the south by the Palos Verdes Peninsula, and onshore by the Los Angeles Coastal Plain and Santa Monica Mountains. The 264,960 acres of land that drains naturally to Santa Monica Bay is bordered on the north by the Santa Monica Mountains from the Ventura-

Los Angeles County line (to the west) to Griffith Park (to the east), extending south and west across the Los Angeles Coastal Plain to include the area east of Ballona Creek and north of Baldwin Hills. South of Ballona Creek, a narrow coastal strip between Playa del Rey and the Palos Verdes Peninsula forms the southern boundary of the watershed. The Santa Monica Bay itself is the submerged portion of the Los Angeles Coastal Plain. The continental shelf extends seaward to the shelf break about 265 feet underwater, then drops steeply to the Santa Monica Basin at about 2,630 feet underwater.

Nearshore Santa Monica Bay is defined by the Ocean Plan as a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot contour, whichever is further from the shoreline. Offshore is defined as the waters between the near shore zone and the limit of State Waters. Lastly, State Waters, according to Section 13200 of the California Water Code (CWC), extends three nautical miles into the Pacific Ocean from the line of mean lower low water marking the seaward limits of inland waters and three nautical miles from the line of mean lower low water on the mainland and each offshore island.

The SMB JG7 WMP Group area lies within the larger JG7 boundary in the southern portion of the Santa Monica Bay watershed. The JG7 WMP area includes that portion of the area within the Hydrologic Unit Codes (HUC-12): Manhattan Beach – Frontal Santa Monica Bay which extends along the shoreline from the Point Fermin lighthouse up to the Ocean Trails Reserve.

The SMB JG7 WMP Group area is bordered on the north approximately by the Bogdanovich Recreation Center and W 25th street and the South by Royal Palms Beach, White Point Beach and other shoreline that drains to the Santa Monica Bay. This area is bordered on the West by the City of Ranchos Palos Verdes and on the East by portions of Angels Gate park. The SMB JG7 WMP Group area is solely under the jurisdiction of the City of Los Angeles and includes all of the White Point Natural Preserve and Education Center as well as the majority of Point Fermin Park.

The SMB JG7 WMP Group is comprised of two participating agencies: the City of Los Angeles and LACFCD. The SMB JG7 WMP Group area, which consists solely of JG7 area under the jurisdiction of the City, totals approximately 954.4 acres, which is approximately 9% of the entire JG7 area within the Santa Monica Bay Watershed (**Figure 1**). The geographical scope of the SMB JG7 WMP Group area includes land owned by the Los Angeles Air Force Base Pacific Crest Housing Area, which the MS4 Permittees have no jurisdiction over and thus is excluded from the SMB JG7 WMP Group Area. Excluding these areas, the WMP Group area covers approximately 907.6 acres. Approximate land area and land use summaries for the JG7 WMP Group area is listed in **Table 1** and presented in **Figure 1**. The most prevalent land use is residential (69%) and vacant/open space (26%). The open space area includes 102 acres of restored coastal sage scrub habitat and hiking trails located within the White Point Nature Preserve Wild Park. The remaining area consists of a mixture of commercial, education, and industrial land uses. **Figure 2** illustrates the distribution of percent imperviousness across the JG7 WMP Group area.

Table 1
Land Use Summary

Land Use	SMB JG7 WMP Group	
	Acres	% of Total
Agriculture	0.0	0.0%
Commercial	24.1	2.5%
Industrial	0.5	0.1%
Education	32.2	3.4%
Multi-Family Residential	118.4	12.4%
Single Family Residential	535.9	56.2%
Vacant/Open	243.3	25.5%
Transportation	0.0	0.0%
Total	954.4	100%

Figure 3 depicts the MS4 system in the JG7 WMP Group area, including approximate catchment delineations and storm drain diameters. Attachment A of the MS4 Permit defines a major MS4 outfall (or ‘‘major outfall’’) as a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive stormwater from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more) (40 CFR § 122.26(b)(5)).

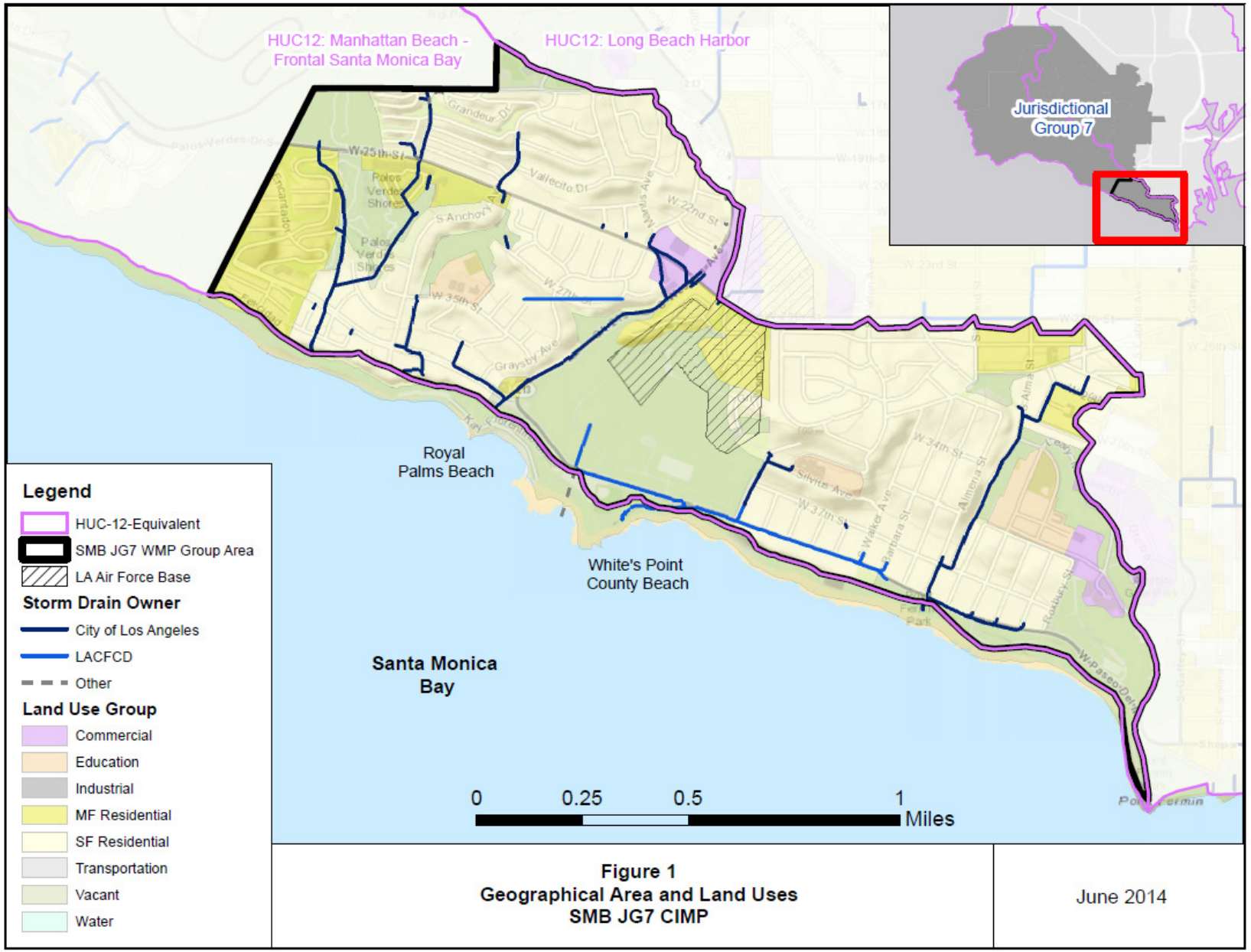

Figure 1
Geographical Area and Land Uses
SMB JG7 CIMP

June 2014

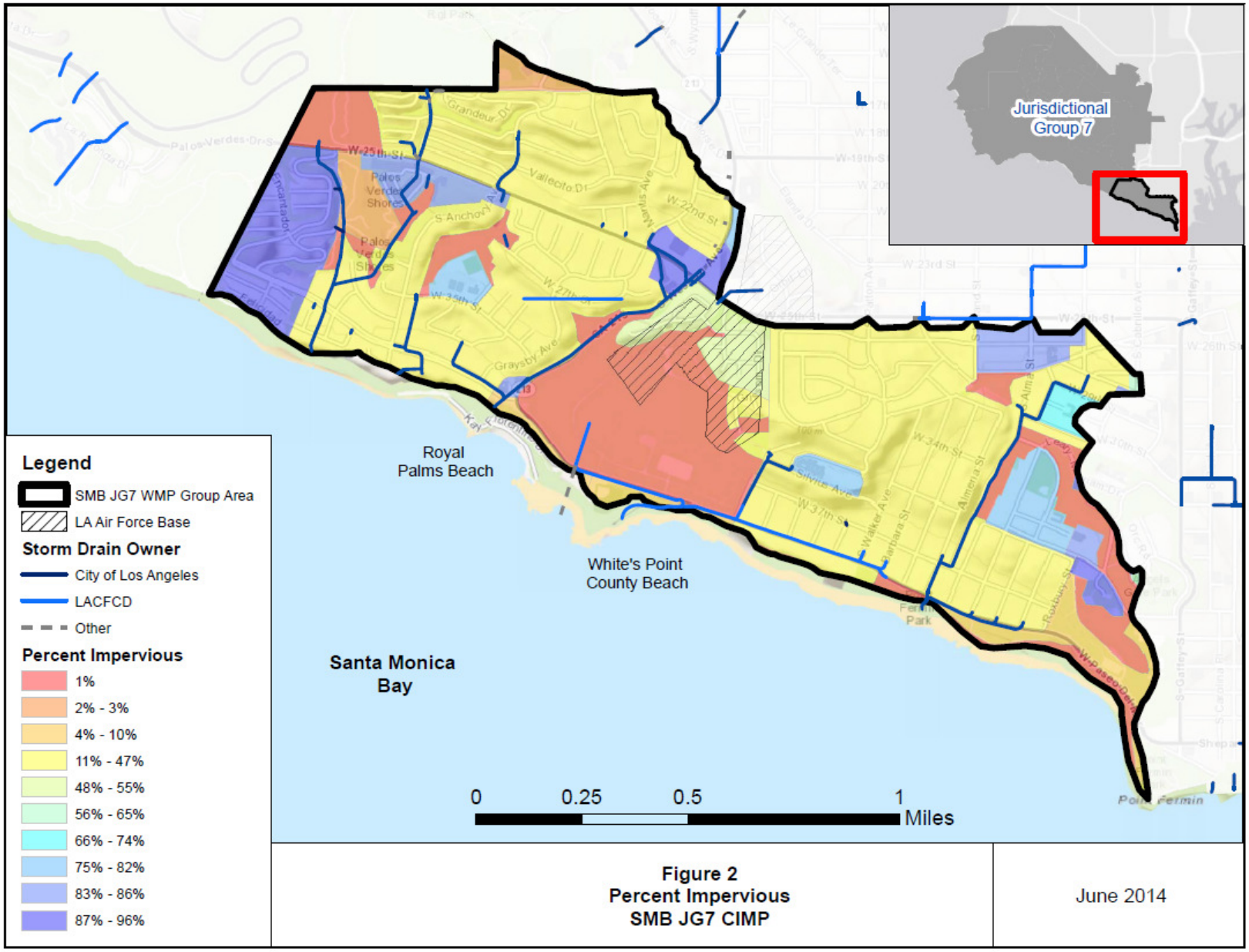

Figure 2
Percent Impervious
SMB JG7 CIMP

June 2014

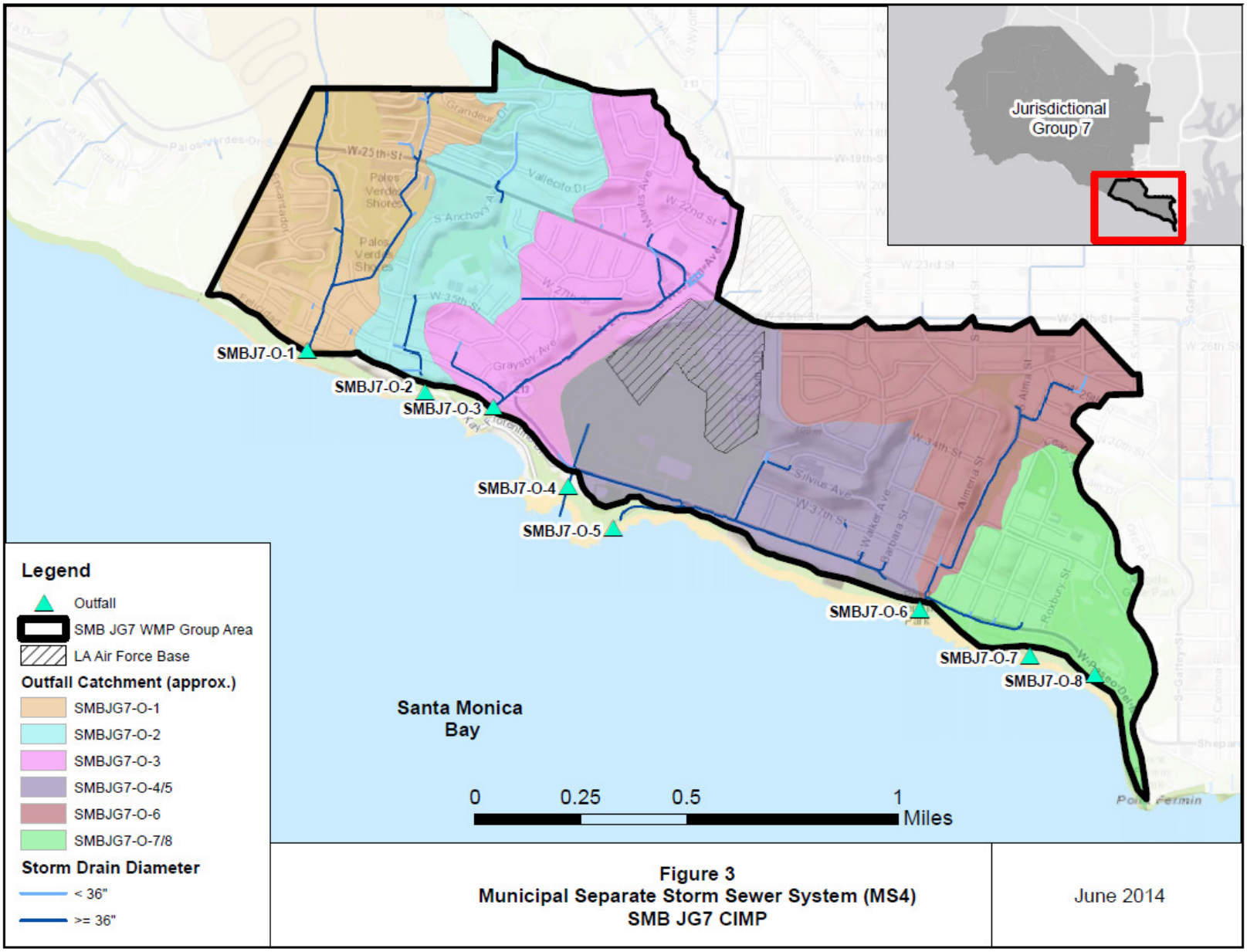

Figure 3
Municipal Separate Storm Sewer System (MS4)
SMB JG7 CIMP

June 2014

The receiving waters defined by the Water Quality Control Plan, Los Angeles Region (Basin Plan) (Regional Board, 1995, Updated 2011) within the SMB JG7 WMP Group area include:

- Santa Monica Bay – Offshore/Nearshore Zone
- Royal Palms Beach
- White's Point County Beach

Attachment B of the MS4 Permit shows mapped United States Geological Survey Hydrologic Units, and other features, based on HUC-12 watershed boundaries. In lieu of these specified boundaries, the March 26, 2014 Regional Board Reasonable Assurance Analysis (RAA) Guidelines allows WMP groups to use HUC-12 equivalent watersheds, prepared by the LACFCD. Using the LACFCD HUC-12 layer and numbering conventions, the LACFCD HUC-12 boundary relevant to the SMB JG7 WMP Group is Manhattan Beach – Frontal Santa Monica Bay (180701040500).

1.2 CIMP OVERVIEW

The CIMP is designed to provide the information necessary to guide management decisions in addition to providing a means to measure compliance with the Permit. The SMB JG7 WMP Group's CIMP addresses the six required elements of the Permit MRP:

1. Receiving Water Monitoring
2. Stormwater Outfall Monitoring
3. Non-Stormwater Outfall Monitoring
4. New Development and Redevelopment Effectiveness Tracking
5. Regional Studies
6. Special Studies

Each of the six CIMP elements is summarized below.

1.2.1 Receiving Water Monitoring

Receiving water monitoring is intended to assess whether water quality objectives are being achieved, to determine if beneficial uses are being supported, and to track trends in constituent concentrations over time. One receiving water monitoring site was selected. **Section 2** discusses SMB JG7 WMP Group's receiving water monitoring program.

1.2.2 Stormwater Outfall Monitoring

Stormwater outfall monitoring assesses compliance with municipal action limits (MALs), WQBELs derived from TMDL WLAs, and evaluates whether discharges have the potential to have caused or contributed exceedances of RWLs derived from TMDL WLAs or receiving water quality objectives.

The majority of storm drains within the SMB JG7 WMP Group generally drain towards Santa Monica Bay. One stormwater outfall monitoring site was selected for further evaluation, including safety and accessibility considerations. A synopsis of the outfall drainage area, along with an analysis of its land use/zoning characteristics is summarized in **Section 4**.

1.2.3 Non-Stormwater Outfall Program

To fulfill the Permit requirements, the MRP requires Permittees to implement a Non-Stormwater Outfall Screening and Monitoring Program (Non-Stormwater Program) which is focused on eliminating non-

permitted non-stormwater discharges to receiving waters. Additional details of the Non-Stormwater Program are presented in **Section 5**.

1.2.4 New Development and Redevelopment Effectiveness Tracking

The New Development/Re-Development Effectiveness Tracking is required to identify the information necessary for data management and annual compliance reporting. The SMB JG7 WMP Group will maintain an informational database record for each new development/re-development project subject to the minimum control measure (MCM) and their adopted Low Impact Development (LID) Ordinance. In addition, the SMB JG7 WMP Group will implement a tracking system for new development/re-development projects that have been conditioned for post-construction BMPs. **Section 6** presents the new development and redevelopment effectiveness tracking system for the SMB JG7 WMP Group.

1.2.5 Regional Studies

The MRP identifies one regional study: the SMC Regional Watershed Monitoring Program. None of the SMC monitoring sites are located within the SMB JG7 WMP Group area due to a lack of streams or rivers.

1.2.6 Special Studies

The MRP requires each Permittee to be responsible for conducting special studies required in an effective TMDL or an approved TMDL Monitoring Plan. Special studies options are further discussed in **Section 8**.

Section 2
Receiving Water Monitoring Program

Receiving water bodies within the SMB JG7 WMP Group area were presented in Section 1. The receiving water bodies (Santa Monica Bay – Offshore/Nearshore zone, Royal Palms Beach, and White Point Beach) are designated as having existing recreational beneficial uses (REC-1 and REC-2), among others. The objectives of the CIMP receiving water monitoring program include the following (Part II.E.1 of the MRP):

- Determine whether the receiving water limitations are being achieved;
- Assess trends in pollutant concentrations over time, or during specified conditions; and
- Determine whether the designated beneficial uses are fully supported as determined by water chemistry, as well as aquatic toxicity and bioassessment monitoring.

The requirements in the MRP for selecting receiving water monitoring sites include utilizing receiving water monitoring sites at previously designated LACDPW mass emission (ME) stations, TMDL receiving water compliance points, and additional receiving water locations representative of the impacts from MS4 discharges. Through the evaluation of previously-utilized and existing receiving water monitoring sites, no existing ME stations were located. As shown in **Figure 4**, two existing Santa Monica Bay Beaches Bacteria TMDL monitoring stations are located within the SMB JG7 WMP Group's jurisdictional area (SMB 7-6 and SMB 7-8). Additionally, four sites in the Santa Monica Bay offshore of the JG7 WMP Group area are monitored as part of the Bight Program. Existing monitoring programs are discussed in Section 2.1 below.

One receiving water station was identified for monitoring as part of the CIMP. Details on the monitoring site selection as well as the proposed frequency, parameters, and duration of monitoring are discussed in Section 2.2 through 2.4.

2.1 EXISTING MONITORING PROGRAMS

A regional monitoring program to assess the health of the Southern California Bight has been coordinated through Southern California Coastal Water Research Project (SCCWRP) at five-year intervals including 1994, 1998, 2003, 2008, and 2013. The Bight Regional Monitoring programs include:

- Coastal Ecology
- Shoreline Microbiology
- Offshore Water Quality
- Rocky Reef
- Areas of Special Biological Significance (ASBS)
- Coastal Wetlands and Estuaries

Through these programs, the SCCWRP has been able to conduct a regional assessment of the cumulative impacts from multiple sources. Bight sampling locations are shown in **Figure 4**. The monitoring site were analyzed for trace metals, Polychlorinated biphenyls (PCBs), Polycyclic aromatic hydrocarbons (PAHs), Poly Brominated Diphenyl Ethers (PBDEs), chlorinated hydrocarbons, total organic carbon (TOC), nitrogen, phosphorus, and grain size.

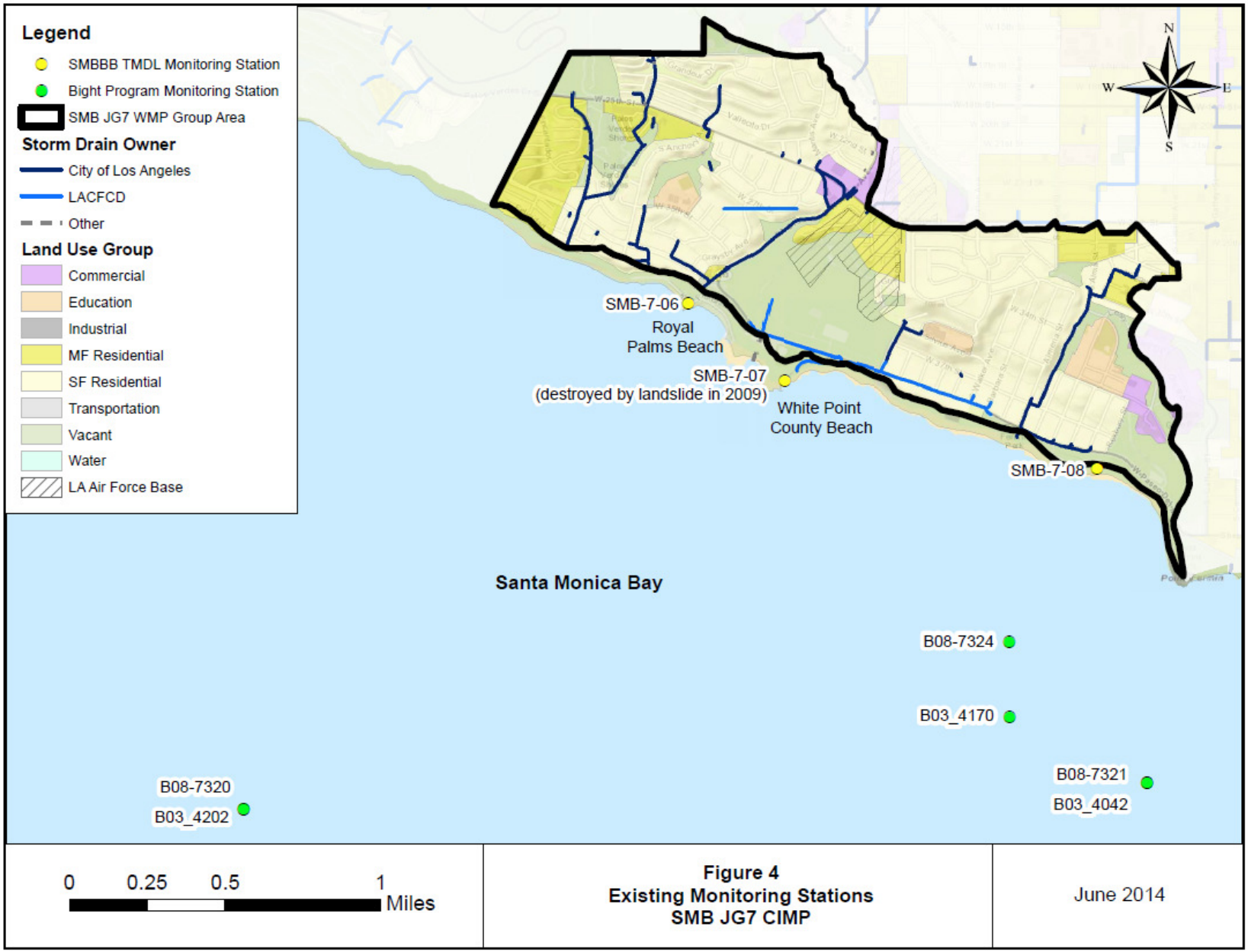

Figure 4
Existing Monitoring Stations
SMB JG7 CIMP

June 2014

The TMDLs addressing water body-pollutant combinations within or downstream of the SMB JG7 WMP Group include:

- Santa Monica Bay Beaches Bacteria TMDL (Wet and Dry), July 15, 2003 (SMBBB TMDL);
- Santa Monica Bay TMDL for Dichlorodiphenyltrichloroethane (DDTs) and Polychlorinated biphenyls (PCBs), March 26, 2012 (SMB DDT and PCB TMDL); and
- Santa Monica Bay Nearshore and Offshore Debris TMDL, March 20, 2012 (SMB Debris TMDL).

The water body-pollutant priorities are summarized in **Table 2**, as described in detail in the SMB JG7 WMP. Compliance deadlines associated with each of the TMDLs listed above are also presented in **Table 2**. All SMB JG7 WMP water body-pollutant combinations fall within Category 1, highest priority. No Category 2 or 3 water body-pollutant combinations were identified.

Table 2
Water Body Pollutant Priorities

Category	Water Body	Pollutant	Compliance Deadline
1: Highest Priority (Approved TMDL)	SMB Beaches	Summer dry weather bacteria	7/15/2006 (Single sample)
		Winter dry weather bacteria	7/15/2009 (Single sample)
		Wet weather bacteria	7/15/2013 (Single sample)[1]
			7/15/2013 (Geometric mean)[1, 2]
	SMB Offshore/ Nearshore	Debris	3/20/2016 (20% load reduction)
			3/20/2017 (40% load reduction)
			3/20/2018 (60% load reduction)
			3/20/2019 (80% load reduction)
			3/20/2020 (100% load reduction)
	SMB	DDTs	[No compliance deadline specified in TMDL][3]
		PCBs	[No compliance deadline specified in TMDL][3]

[1] Per Resolution 2006-008, the JG7 agencies elected to pursue a non-integrated water resources approach to SMBBB TMDL compliance, which resulted in a final wet weather compliance deadline of at most 10-years, or July 15, 2013. http://63.199.216.6/larwqcb_new/bpa/docs/2006-008/2006-008_RB_RSL.pdf

[2] The rolling 30-day geometric mean is calculated based on the previous 30 days. If weekly sampling is conducted, the weekly sampling result will be assigned to the remaining days of the week. The reopened 2012 TMDL, which has not yet been approved by USEPA, modified this to a weekly calculation of a rolling six week geometric mean using five or more samples, starting all calculation weeks on Sunday.

[3] Although the TMDL lacks a formal compliance schedule for the WLAs, Table 6-5 of the TMDL does specify a timeline for the DDT/PCB targets in water and sediment. Additionally, WLA target was set at existing waste load, so antidegradation conditions exist.

2.1.1 Santa Monica Bay Beaches Bacteria TMDL

The Santa Monica Bay beaches were designated as impaired and included on California's 1998 Clean Water Act (CWA) §303(d) list of impaired waters due to excessive amounts of coliform bacteria. The presence of coliform bacteria in surface waters is an indicator that water quality may not be sufficient to maintain the beneficial use of these waters for human body contact recreation (REC-1). In 2003, the USEPA approved the SMBBB TMDL for dry- and wet-weather conditions, the first bacteria TMDL

adopted by the Regional Board in the State of California. To comply with the requirements of the TMDL, the Jurisdictional Groups developed a Coordinated Shoreline Monitoring Plan (CSMP) and began monitoring compliance sites on November 1, 2004 subsequent to Regional Board approval.

As this was the first bacteria TMDL, new approaches for regulating bacteria were developed. The SMBBB TMDL used these new approaches, including the reference beach/antidegradation approach and the corresponding exceedance day approach to expressing TMDL allocations.

In 2012, the Regional Board put forward the *Reconsideration of Certain Technical Matters for the Santa Monica Bay Beach Bacteria TMDLs; the Marina del Rey Harbor Mothers' Beach and Back Basins Bacteria TMDL; and the Los Angeles Harbor Inner Cabrillo Beach and Main Ship Channel Bacteria TMDL.* The reconsideration examined certain elements of the SMBBB TMDL, which is presented in **Table A-1**. Through the reconsideration process, winter dry-weather single sample allowable exceedance days were increased and modifications were made to the geometric mean calculation.

Table 3
Summary of Reconsideration Elements for SMBBB TMDL

TMDL	Reconsideration Items
Santa Monica Bay Beaches Dry-Weather TMDL	Re-consider TMDL to re-evaluate allowable winter dry weather exceedance days based on additional data on bacterial indicator densities in the wave wash, a reevaluation of the reference system selected to set allowable exceedance levels, and a re-evaluation of the reference year used in the calculation of allowable exceedance days.
Santa Monica Bay Beaches Wet-Weather TMDL	Refine allowable wet weather exceedance days based on additional data on bacterial indicator densities in the wave wash and an evaluation of site-specific variability in exceedance levels.
	Re-evaluate the reference system selected to set allowable exceedance levels, including a reconsideration of whether the allowable number of exceedance days should be adjusted annually dependent on the rainfall conditions and an evaluation of natural variability in exceedance levels in the reference system(s).
	Re-evaluate the reference year used in the calculation of allowable exceedance days.
	Re-evaluate whether there is a need for further clarification or revision of the geometric mean implementation provision.

The SMBBB TMDL establishes multi-part numeric targets for total coliform, fecal coliform, and enterococcus densities, reported as bacteria counts (Most Probable Number, MPN or colony forming unit, cfu) per 100 milliliters of sample. The TMDL waste load allocation (WLA), expressed as water quality-based effluent limitations (WQBELs), are based on the Los Angeles Basin Plan objectives for body-contact recreation (REC-1) as summarized in **Table 4.** Dry-weather WQBELs compliance was anticipated as of July 15, 2006 for summer dry weather, and July 15, 2009 for winter dry weather. Wet-weather compliance has been required as of July 15, 2013. This is based on Resolution 2006-008, in which the JG7 agencies elected to pursue a non-integrated water resources approach to SMBBB TMDL compliance, which resulted in a final wet weather compliance deadline of at most 10-years. Therefore, all milestones for SMB-7-6 and SMB 7-8 are currently enforceable (there are no interim targets).

Table 4
SMBBB TMDL Water Quality-Based Effluent Limitations and Receiving Water Limitations

Constituent	Daily Maximum	Rolling 30-day Geometric Mean[2]
Total coliform[1]	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.

2 The rolling 30-day geometric mean is calculated based on the previous 30 days. The reopened 2012 TMDL, which has not yet been approved by USEPA, modified this to weekly calculation of a rolling six week geometric mean using five or more sample, starting all calculation weeks on Sunday.

In addition, the 2012 reconsideration also modified the grouped final single sample bacteria RWL allowable exceedance days for beaches identified as anti-degradation beaches as summarized in **Table 5.** These new calculations were made using data collected from 2004 to 2010.

Table 5
Annual Allowable Exceedance Days of the Single Sample Objective (days) [1]

Monitoring Sites	Beach Monitoring Locations	Summer Dry-Weather (April 1 - October 31)		Winter Dry-Weather (November 1 - March 31)		Wet-Weather (Year-round)	
		Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
SMB 7-6	Royal Palms State Beach	0	0	1	1	6	1
SMB 7-8	Wilder Annex, San Pedro	0	0	1	1	2	1

1 The final receiving water limitations are group-based and shared among all MS4 Permittees located within the sub-drainage area to each beach monitoring location.

In summary, to satisfy the monitoring requirements for the SMBBB TMDL, the two existing bacteria TMDL monitoring sites (SMB-7-06 and SMB-7-08; SMB-7-07 was destroyed in a landslide) will continue to be monitored in accordance to the Santa Monica Bay Beaches Bacteria TMDL Coordinated Shoreline Monitoring Plan (CSMP) (Technical Steering Committee 2004).

2.1.2 Santa Monica Bay Nearshore and Offshore Debris TMDL

Compliance with the SMB Debris TMDL is based on the final Numeric Target, WLA, and Load Allocation (LA), which are defined as zero trash in and on the shorelines of Santa Monica Bay, and no plastic pellets discharged from plastic manufacturers and facilities. The compliance deadline is to be achieved no later than March 20, 2020, and every year thereafter. If a Permittee adopts local ordinances to ban plastic bags, smoking in public places, and single-use expanded polystyrene food packaging by November 4, 2013, the final compliance deadline will be extended to March 20, 2023. The SMB Debris TMDL compliance is assessed in accordance with the Permittees' implementation of BMPs to address point and non-point source trash and plastic pellet abatement, and attainment of the progressive trash reductions in accordance with the TMDL compliance schedule as shown in **Table 6**.

Table 6
Santa Monica Bay Debris TMDL Compliance Schedule

Permittees	Baseline[1]	3/20/2016	3/20/2017	3/20/2018	3/20/2019	3/20/2020[2]
		Annual Trash Discharge (gals/yr)				
City of Los Angeles	25,112	20,090	15,067	10,045	5,022	0

1 If a Permittee elects not to use the default baseline, then the Permittee shall include a plan to establish a site specific trash baseline in their TMRP.
2 Permittees shall achieve their final effluent limitation of zero trash discharge for the 2019-2020 storm year and every year thereafter.

Permittees are to report their compliance strategy through the development of a Trash Monitoring and Reporting Plan (TMRP) and Plastic Pellets Monitoring and Reporting Plan (PMRP), or demonstrate that a PMRP is not required, to be approved by the Regional Board. Once the TMRP and PMRP are approved and adopted, a progress report based on installation of structural BMPs, such as full capture or partial capture systems, institutional controls, or any BMPs, is to be reported in order to calculate the reduction in the amount of trash and plastic pellets, if applicable, being discharged into Santa Monica Bay.

Each of the jurisdictions within SMB JG7 WMP Group will submit or have submitted a TMRP and PMRP. Each jurisdiction has conducted the following:

- **City of Los Angeles**: The *Trash TMDL Compliance Method: Structural Measures* was submitted in September 2011 and was adopted as the TMRP for the City of Los Angeles. A preliminary investigation of industries with standard industrial classification system (SIC) codes associated with manufacturing or use of plastic pellets within the City of Los Angeles was conducted, and it was found that no facilities were located within the City of Los Angeles for the SMB JG7 WMP Group area. The City of Los Angeles is preparing to modify the emergency/spill response plan for hazardous material to include the actions required for a spill or release of plastic pellets within its jurisdictional area.
- **LACFCD**: A PMRP was submitted on September 19, 2013 for all LACFCD within the Santa Monica Bay WMA. A TMRP was not submitted as the LACFCD does not have any land jurisdiction that generates trash.

All submitted TMRPs and PMRPs for each jurisdiction will be implemented by the corresponding jurisdiction, once approved by the Regional Board. As the SMB Debris TMDL is fulfilled through the implementation of BMPs to achieve compliance of zero trash in and on the shorelines of Santa Monica Bay, monitoring is not required if complying with the WLA. Manufacturers of plastic pellets were not identified within any of the SMB JG7 WMP Group's jurisdictional area, and monitoring for plastic pellets at the MS4 is not required. Appropriate actions for emergency spills and special circumstances for safety considerations are addressed for each jurisdiction.

2.1.3 Santa Monica Bay DDTs and PCBs TMDL

The SMB DDTs and PCBs TMDL are regulated for Santa Monica Bay from Point Dume to Point Vicente, and the Palos Verdes shelf from Point Vicente to Point Fermin. As the TMDL originates through the United States Environmental Protection Agency (USEPA), the Regional Board has been advised to implement the TMDL either through an implementation plan, NPDES permit, or other regulatory mechanisms such as State waste discharge requirements (WDRs), conditional waivers of WDRs, and/or enforcement actions. The Regional Board has decided to implement this TMDL through the MS4 Permit. Within the Permit, the WLA targets are stated in **Table 7**, which is expressed as an annual stormwater loading of pollutants to Santa Monica Bay from the LA County MS4.

Table 7
Santa Monica Bay DDTs and PCBs TMDL Waste Load Allocations

Constituent	Annual Mass-Based WLA (g/yr)[1]
Total DDT	27.08
PCBs	140.25

1 Compliance shall be determined based on a three-year averaging period. WLA is for entire LA County MS4.

The PCB and DDT TMDL states that the highest DDT and PCB loadings were from the Ballona Creek, Hermosa Beach, and Santa Monica Canyon Channel watersheds, which combined accounted for 94% of the developed area draining to Santa Monica Bay. Therefore, compliance with the WLAs for DDTs and PCBs will be assessed through monitoring conducted as part of the JG2/JG3 CIMP in Santa Monica Canyon Channel rather than sampling in the JG7 WMP Group area.

2.2 CIMP RECEIVING WATER MONITORING SITE

The primary objective of receiving water monitoring is to assess trends in pollutant concentrations over time, or during specified conditions. .

One receiving water monitoring site, SMBJ7-RW-1, is being proposed located at a transect outward from the CIMP outfall monitoring site SMBJ7-O-6, consistent with the stormwater plume during a qualifying storm event when it has been deemed safe for collection by the Captain of the boat. Single grab samples would be collected from the mixing zone in the ocean, at the nearest distance from the shoreline that the Environmental Monitoring Division boat can safely access. **Figure 5** presents the approximate location of the receiving water monitoring site for the SMB JG7 WMP Group.

Receiving water monitoring site SMBJ7-RW-1 is representative of the drainage characteristics of the SMB JG7 WMP Group area based on a linkage to the point of initial mixing from stormwater outfall SMBJ7-O-6, a representative catchment area within SMB JG7 WMP Group. The catchment area from SMBJ7-O-6, and therefore approximately from SMBJ7-RW-1, represents approximately 18% of the total SMB JG7 WMP Group area.

The JG7 WMP Group area consists solely of City of Los Angeles land. Primary land uses in the JG7 WMP Group area and the general catchment area of SMBJ7-RW-1 are residential and vacant. Given that the land uses of JG7 WMP and the catchment area are comparable, monitoring at SMBJ7-RW-1 is considered sufficiently representative of the JG7 WMP area. **Table 8** presents the land use composition of the HUC-12, the JG7 WMP area, and the catchment area of the proposed stormwater outfall SMBJ7-O-6, which is considered an approximation of the drainage area tributary to the proposed receiving water site SMBJ7-RW-1.

Table 8
Land Use Overview of Outfall Nearest to Receiving Water Monitoring Site SMBJ7-RW-1

	HUC-12		J7 WMP Area		SMBJ7-O-6	
Land Use	**Acres**	**% of Total**	**Acres**	**% of Total**	**Acres**	**% of Total**
Water	0.0	0.0	0.0	0.0	0.0	0.0
Agriculture	89.8	0.4	0.0	0.0	0.0	0.0
Commercial	1230.5	5.1	24.1	2.5	0.0	0.0
Education	806.2	3.3	32.2	3.4	2.8	1.7
Industrial	1487.5	6.2	0.5	0.1	0.0	0.0
MF Residential	2042.4	8.5	118.4	12.4	21.9	13.6
SF Residential	11265.0	46.7	535.9	56.2	125.7	77.9
Transportation	1956.6	8.1	0.0	0.0	0.0	0.0
Vacant	5236.9	21.7	243.3	25.5	11.0	6.8
Total	24115.1	100	954.4	100	161.4	100

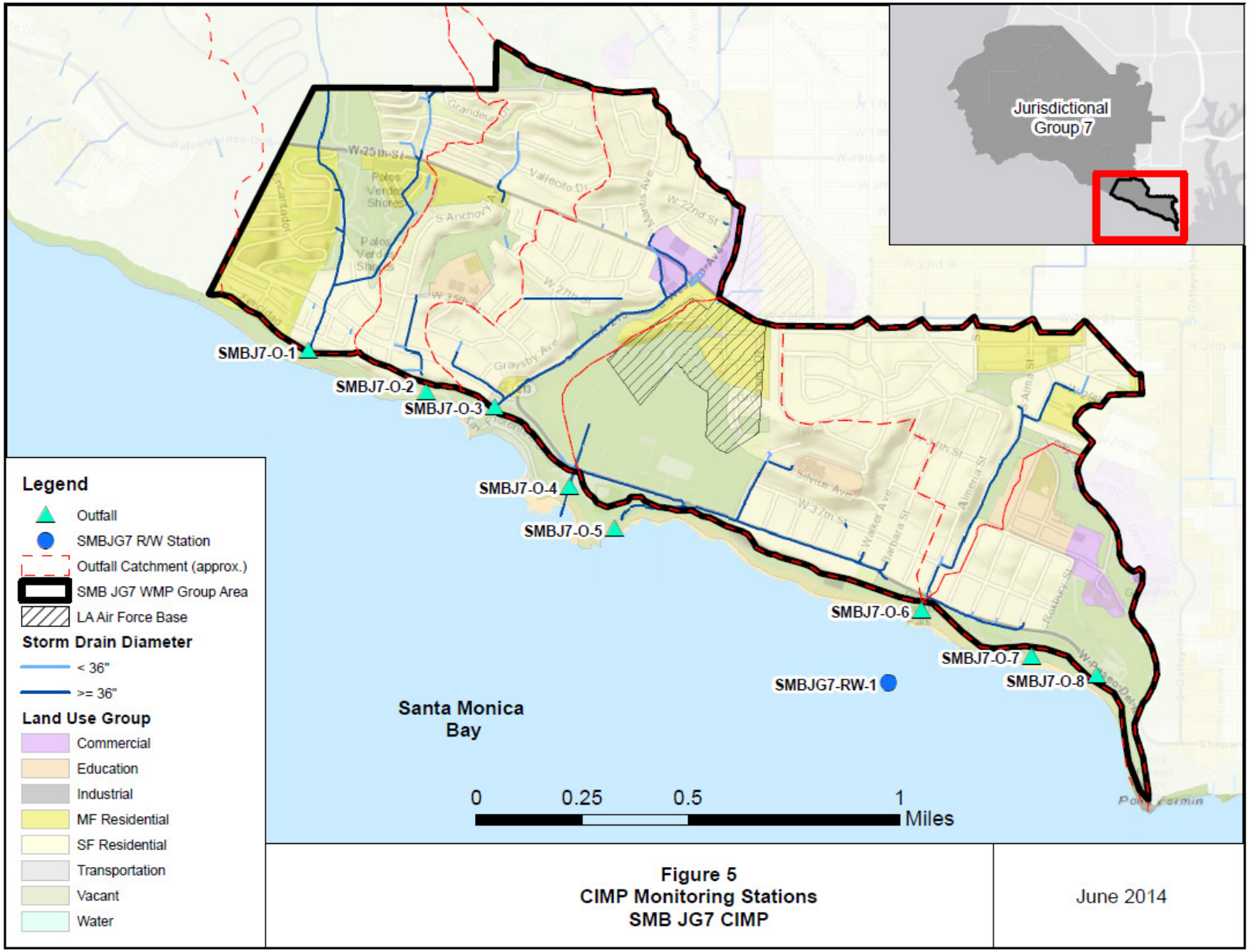

Figure 5
CIMP Monitoring Stations
SMB JG7 CIMP

June 2014

2.3 MONITORING FREQUENCY, PARAMETERS, AND DURATION

The MRP section of the MS4 Permit identifies specific requirements for salt water (Santa Monica Bay). Wet- and dry-weather monitoring frequency, parameters, and duration will be addressed in the following sections. Parameters for monitoring were based on the MS4 Permit requirements as well as the water quality priorities as identified in the SMB JG7 WMP. Additional analytical and monitoring procedures are discussed in **Attachments B-D**. Parameters to be collected and sampling frequency to meet the receiving water monitoring requirements of the MRP are summarized in **Table 9**.

Table 9
Receiving Water Monitoring Parameters and Annual Frequency at SMBJ7-RW-1

Constituents	Wet Weather	Dry Weather
Flow and field parameters[1]	3	0
Pollutants identified in Table E-2 of the MRP	1[2]	0
Aquatic Toxicity and Toxicity Identification Evaluation (TIE)	2[3]	0
Total Coliform	1	0
E. Coli (Fecal Coliform)	1	0
Enterococcus	1	0

[1] Field parameters are defined as DO, pH, temperature, salinity (due to ocean monitoring), and specific conductivity and TSS
[2] Monitoring frequency only applies during the first year of monitoring during the first significant rain event. For pollutants identified in Table E-2 of the MRP that are not detected at the Method Detection Limit (MDL) or the result is below the lowest applicable water quality objective, additional monitoring will not be conducted. For pollutants detected above the lowest applicable water quality objective, future monitoring will be conducted at the frequency specified in the MRP.
[3] A TIE is only required if either the survival or sublethal endpoint of the toxicity text demonstrates a percent effect value equal to or greater than 50% at the instream waste concentration.

2.3.1 Wet Weather

Wet-weather receiving water monitoring will be conducted for the duration of the MS4 permit. For SMBJ7-RW-1, the receiving water monitoring site within SMB JG7 WMP Group, wet-weather conditions will be defined as a storm event of greater than or equal to 0.1 inch of precipitation, as measured from the closest Los Angeles County controlled rain gauge within the watershed. Wet-weather monitoring will be conducted initially for all MRP Table E-2 parameters during the first significant rain event of the first year of monitoring; three times a year for flow and field parameters; and twice a year for aquatic toxicity, per Part VI.C.1.a of the MRP. For Table E-2 pollutants detected above the lowest applicable water quality objective during the first significant rain event, future monitoring of those pollutants will be conducted at the frequency specified in the MRP. Wet-weather monitoring will target the first significant rain event of the storm year. Wet-weather receiving water monitoring will be performed in close coordination with stormwater outfall monitoring to be reflective of potential impacts from MS4 discharges.

2.3.2 Dry Weather

Outfall catchment areas in the SMB JG7 WMP Group area are relatively small, ranging from less than 140 acres to approximately 370 acres. During dry weather it is unlikely that discharge from these outfalls would be of sufficient quantity to impact the Santa Monica Bay, where wet weather monitoring is conducted. Therefore, at this time no dry weather receiving water monitoring will be conducted unless triggered by the non-stormwater outfall screening program. If dry weather monitoring is triggered, it

shall be conducted in the month of August, which is the historically driest month on record for the SMB J7 WMP Group area[1].

2.4 RECEIVING WATER MONITORING SUMMARY

One receiving water monitoring site, SMBJ7-RW-1, which is to be located offshore from the proposed CIMP outfall monitoring site, has been selected to meet the MRP objects for receiving water monitoring in the Santa Monica Bay for wet weather only. Receiving water monitoring will be performed from a boat in Santa Monica Bay, at a transect outward from SMBJ7-O-6, consistent with the stormwater plume. Due to the small size of the outfall catchment areas, dry weather receiving water monitoring in the Santa Monica Bay is not proposed at this time, but may be triggered in the future by the results of the non-stormwater outfall screening. The approximate location of the monitoring site is presented in **Figure 5**. A summary of constituents and monitoring frequency for the receiving water monitoring site was presented in **Table 9**. Sampling and analytical methods for receiving water monitoring is provided in **Attachments B-D**.

[1] The driest month on record was determined based on the rainfall records at the LA County DPW gauges at Palos Verdes and Torrance Airport, between 1996 and 2008.

Section 3
MS4 Infrastructure Database

To meet the requirements of Part VII of the MRP, a map(s) and/or database of the MS4 storm drains, channels, and outfalls must be submitted with the CIMP and include the following information (Part VII.A of the MRP). The SMB JG7 WMP Group has gathered for submittal as a map and/or in a database the items below with the exception of numbers 9 and 11e, which will be determined as the CIMP progresses:

1. Surface water bodies within the Permittee(s) jurisdiction
2. Sub-watershed (HUC-12) boundaries
3. Land use overlay
4. Effective Impervious Area (EIA) overlay
5. Jurisdictional boundaries
6. The location and length of all open channel and underground pipes 18 inches in diameter or greater (with the exception of catch basin connector pipes)
7. The location of all dry-weather diversions
8. The location of all major MS4 outfalls within the Permittees' jurisdictional boundary. Each major outfall shall be assigned an alphanumeric identifier, which must be noted on the map
9. Notation of outfalls with significant non-stormwater discharges (to be updated annually)
10. Storm drain outfall catchment areas for each major outfall within the Permittee(s) jurisdiction
11. Each mapped MS4 outfall shall be linked to a database containing descriptive and monitoring data associated with the outfall. The data shall include:

    a. Ownership
    b. Coordinates
    c. Physical description
    d. Photographs of the outfall, where possible, to provide baseline information to track operation and maintenance needs over time
    e. Determination of whether the outfall conveys significant non-stormwater discharges
    f. Stormwater and non-stormwater monitoring data

Figures 1 through **3** present the available database information, listed above, for the SMB JG7 WMP Group. Each year, a storm drain, channel, outfall map as well as an associated database for the SMB JG7 WMP Group are required to be updated to incorporate the most recent characterization data for outfalls with significant non-stormwater discharge. .As further investigations are conducted and additional data is collected, updates to the maps and/or database will be conducted over time. Updates to the maps and/or database will be submitted through the Annual Report.

Section 4
Stormwater Outfall Monitoring

Stormwater outfall monitoring assesses compliance with municipal action limits (MALs), WQBELs derived from TMDL WLAs, as well as the potential to cause or contribute to exceedances of RWLs derived from TMDL WLAs or receiving water quality objectives. The majority of SMB JG7 WMP Group storm drains generally drain towards Santa Monica Bay. An analysis of land use per HUC-12, drainage area and SMB JG7 WMP Group area was conducted for the monitoring site.

4.1 PROGRAM OBJECTIVES

As outlined in the Part VIII.A of the MRP, stormwater discharges from the MS4 shall be monitored at outfalls and/or alternative access points such as manholes, or in channels representative of the land uses within the Permittees' jurisdiction to support meeting the three objectives of the stormwater outfall based monitoring program:

1. Determine the quality of a Permittee's discharge relative to MALs;
2. Determine whether a Permittee's discharge is in compliance with applicable stormwater WQBELs derived from TMDL WLAs; and
3. Determine whether a Permittee's discharge causes or contributes to an exceedance of receiving water limitations.

Each potential stormwater outfall monitoring site was evaluated and assessed on how representative it is of the surrounding land use of the SMB JG7 WMP Group area, jurisdictions, and the HUC-12. Each zoning category provided by the RAA guidance manual was fit into one of the following eight land use categories:

- Agricultural
- Industrial
- Single Family Residential
- Vacant/Open Space
- Commercial
- Education
- Multi-Family Residential
- Transportation

4.2 STORMWATER OUTFALL MONITORING SITE

The SMB J7 WMP area within the City of Los Angeles lies within a single HUC-12. Based on this, accessibility considerations, and its representativeness of the land use distribution within the WMP Group area, one stormwater outfall monitoring site, as shown in **Figure 5**, was selected, designated as SMBJ7-O-6, pending further evaluation for safe access.

Site SMBJ7-O-6 is located north of SMBBB TMDL monitoring location SMB-7-08. This stormwater outfall monitoring site discharges into Santa Monica Bay. The outfall is an 18-feet by 25-feet reinforced concrete box structure that, based on the GIS data, appears to be the outfall for a 66-inch diameter reinforced concrete pipe. The outfall is located near the intersection of Paseo del Mar and Almeria Street.

Runoff from SMBJ7-O-6 is solely from the City of Los Angeles. **Table 10** compares the land use composition of the SMBJ7-O-6 catchment area, HUC-12, and SMB JG7 WMP Group area. Although this table reflects the same delineation as presented for SMBJ7-RW-1, it should be noted that the area tributary to an offshore location is likely larger than the outfall delineation area. The site comprises about 17% of the drainage area of the SMB JG7 WMP Group. SMBJ7-O-6 is representative of the drainage area of the overall WMP Group area, in particular, residential and vacant/open space land uses. Based on

this comparison, SMBJ7-O-6 will be a suitable outfall monitoring site to assess water quality for these land uses. It should be noted, however, that pending an accessibility review, if conditions prohibit safe access to this site another location may be selected as an alternate.

Table 10
Land Use Distribution for Catchment for Outfall Monitoring Site SMBJ7-O-6

	HUC-12		J7 WMP Area		SMBJ7-O-6	
Land Use	**Acres**	**% of Total**	**Acres**	**% of Total**	**Acres**	**% of Total**
Water	0.0	0.0	0.0	0.0	0.0	0.0
Agriculture	89.8	0.4	0.0	0.0	0.0	0.0
Commercial	1230.5	5.1	24.1	2.5	0.0	0.0
Education	806.2	3.3	32.2	3.4	2.8	1.7
Industrial	1487.5	6.2	0.5	0.1	0.0	0.0
MF Residential	2042.4	8.5	118.4	12.4	21.9	13.6
SF Residential	11265.0	46.7	535.9	56.2	125.7	77.9
Transportation	1956.6	8.1	0.0	0.0	0.0	0.0
Vacant/open	5236.9	21.7	243.3	25.5	11.0	6.8
Total	24115.1	100	954.4	100	161.4	100

4.3 MONITORING FREQUENCY, PARAMETERS, AND DURATION

The stormwater outfall monitoring site will be monitored for three (3) storm events per year, in coordination with and prior to receiving water monitoring, for all required constituents except aquatic toxicity. Aquatic toxicity will be monitored when triggered by recent receiving water toxicity monitoring, where a toxicity identification evaluation (TIE) on the observed receiving water toxicity test was inconclusive. The requirements for monitored constituents at the monitoring site are outlined in the MRP Section VIII.B.1.c and presented in **Table 11**. Parameters in Table E-2 of the MRP, as listed in **Attachment B**, will not be included as part of outfall monitoring until after the first year of receiving water monitoring if it is determined there are parameters in Table E-2 present in concentrations exceeding the applicable water quality objective in the receiving water. Monitoring for the selected site would occur for at least the duration of the Permit term, unless an alternative site is warranted, per the adaptive management process, as presented in **Section 10**. Additional analytical and monitoring procedures are discussed in **Attachment B**.

Table 11
Stormwater Outfall Monitoring Parameters and Annual Frequency at SMBJ7-O-6

Constituents	Annual Frequency
Flow, hardness, pH, dissolved oxygen, temperature, specific conductivity, and TSS	3
Table E-2 pollutants detected above relevant objectives in receiving waters[2]	3
Aquatic Toxicity and Toxicity Identification Evaluation (TIE)	(see note 1)
Total Coliform	3
E. Coli (Fecal Coliform)	3
Enterococcus	3

1. Toxicity is only monitored from outfalls when triggered by recent receiving water toxicity monitoring where a TIE on the observed receiving water toxicity test was inconclusive. If toxicity is observed at the outfall a TIE must be conducted.
2. Table E-2 parameters will not be tested at the outfall in the first monitoring year to allow for review of the receiving water results. If water quality objectives are exceeded in the receiving waters, then those exceeding parameters would be tested at the outfall three times annually.

Section 5
Non-Stormwater Outfall Screening and Monitoring Program

The MRP requires Permittees to implement a non-stormwater outfall-based screening and monitoring program. The Non-Stormwater Outfall Screening and Monitoring Program (Non-Stormwater Program) is focused on non-stormwater discharges to receiving waters from major outfalls.

5.1 PROGRAM OBJECTIVES

The objectives of the Non-Stormwater Program include the following (Part II.E.3 of the MRP):

a. Determine whether a Permittee's discharge is in compliance with applicable non-stormwater WQBELs derived from TMDL WLAs;
b. Determine whether a Permittee's discharge exceeds non-stormwater action levels, as described in Attachment G of the MS4 Permit;
c. Determine whether a Permittee's discharge contributes to or causes an exceedance of receiving water limitations; and
d. Assist a Permittee in identifying illicit discharges as described in Part VI.D.10 of the MS4 Permit.

Additionally, the outfall screening and monitoring process is intended to meet the following objectives (Part IX.A of the MRP):

1. Develop criteria or other means to ensure that all outfalls with significant non-stormwater discharges are identified and assessed during the term of this MS4 Permit.
2. For outfalls determined to have significant non-stormwater flow, determine whether flows are the result of illicit connection/illicit discharge (IC/IDs), authorized or conditionally exempt non-stormwater flows, natural flows, or from unknown sources.
3. Refer information related to identified IC/IDs to the IC/ID Elimination Program (Part VI.D.10 of the MS4 Permit) for appropriate action.
4. Based on existing screening or monitoring data or other institutional knowledge, assess the impact of non-stormwater discharges (other than identified IC/IDs) on the receiving water.
5. Prioritize monitoring of outfalls considering the potential threat to the receiving water and applicable TMDL compliance schedules.
6. Conduct monitoring or assess existing monitoring data to determine the impact of non-stormwater discharges on the receiving water.
7. Conduct monitoring or other investigations to identify the source of pollutants in non-stormwater discharges.
8. Use results of the screening process to evaluate the conditionally exempt non-stormwater discharges identified in Parts III.A.2 and III.A.3 of the MS4 Permit and take appropriate actions pursuant to Part III.A.4.d of the MS4 Permit for those discharges that have been found to be a source of pollutants. Any future reclassification shall occur per the conditions in Parts III.A.2 or III.A.6 of the MS4 Permit.
9. Maximize the use of Permittee resources by integrating the screening and monitoring process into existing or planned Integrated Monitoring Program (IMP) and/or CIMP efforts.

5.2 NON-STORMWATER OUTFALL SCREENING AND MONITORING PROGRAM

The Non-Stormwater Program is focused on dry-weather discharges to receiving waters from major outfalls. The Program fills two roles: (1) to provide assessment of whether the non-stormwater discharges are potentially impacting the receiving water, and (2) to determine whether significant non-stormwater discharges are allowable. The Program is complimentary to the IC/ID minimum control measure.

For the SMB JG7 WMP Group area, all major outfalls will be screened prior to proceeding with dry weather monitoring. To determine whether an outfall must be monitored for non-stormwater discharges, the SMB JG7 WMP Group has developed an outfall screening and monitoring program. The sections starting with **Section 5.3** are part of the monitoring program. Within 90 days of the approval of this CIMP, the SMB JG7 WMP Group will initiate steps to identify and monitor the non-stormwater discharges. The non-stormwater outfall program will involve following steps:

1. **Outfall Screening**: The SMB JG7 WMP Group will implement a screening process to determine whether the monitoring site exhibits non-stormwater discharges and if so, if it is considered significant or if it can be excluded from further investigation. This process will include: 1) updating the outfall inventory, 2) measuring observed flows, and 3) testing for E. coli where flow is observed.
2. **Significant Non-stormwater Discharge Source Identification** (Part IX.F of the MRP): If the monitoring site exhibits significant non-stormwater discharges, the SMB JG7 WMP Group will complete source identification activities.
3. **Monitoring Non-Stormwater Discharges Exceeding Criteria** (Part IX.G of the MRP): Using the information collected during screening and source identification efforts, the SMB JG7 WMP Group will monitor the site if it has been determined to convey significant non-stormwater discharges comprised of either unknown or non-essential conditionally exempt non-stormwater discharges, or continuing discharges attributed to illicit discharges.

5.3 IDENTIFICATION OF OUTFALLS WITH SIGNIFICANT NON-STORMWATER DISCHARGES

An initial field survey was conducted for the identification of outfalls in the JG7 WMP Group area, the majority of which were observed to be corrugated metals pipes protruding from the top of rocky cliffs above rocky beaches. As described in the field survey, observation of outfalls was limited by accessibility and safety constraints. **Attachment C** presents the photos from this field survey.

Based on a review of the available information, identification of significant non-stormwater discharges is not available at this time. The SMB JG7 WMP Group will undertake a field reconnaissance to evaluate the major outfall(s), in its jurisdiction, dependent on accessibility. A major outfall for the SMB JG7 WMP Group is defined as follows:

- 36-inch or larger pipes
- 12-inch or larger pipes from industrial zoned areas

Table 12 summarizes the pertinent information for each of the outfalls in the SMB JG7 WMP Group area. As shown, six of the eight outfalls qualify as major outfalls and will be included in the non-stormwater outfall screening process, noting that accessibility and safety constraints may still limit access to these outfalls.

Table 12
Non-Stormwater Screening Sites in SMB JG7 WMP Group Area

Station ID	Type of Outlet	Outlet Size	Major Outfall?
SMBJ7-O-1	Corrugated metal pipe	84-inch diameter	Yes
SMBJ7-O-2	Corrugated metal pipe	48-inch diameter	Yes
SMBJ7-O-3[1]	Corrugated metal pipe	72-inch diameter	Yes
SMBJ7-O-4	Corrugated metal pipe	36-48-inch diameter (approx.)	Yes
SMBJ7-O-5[2]	Reinforced concrete pipe (damaged in landslide, replaced by plastic pipe)	36-inch diameter (approx.)	Yes
SMBJ7-O-6	Reinforced concrete pipe (however, appears to be reinforced concrete box at outfall)	66-inch diameter	Yes
SMBJ7-O-7[3]	Corrugated metal pipe (broken)	18-inch diameter (approx.)	No
SMBJ7-O-8	Corrugated metal pipe	18-inch diameter (approx.)	No

[1] Adjacent to SMB-7-06
[2] Adjacent to SMB-7-07
[3] Adjacent to SMB-7-08

In order to collect data to determine whether the outfalls contribute significant non-stormwater discharge, the SMB JG7 WMP Group will perform three outfall screenings for the first year after CIMP approval. The SMB JG7 WMP Group has identified *E. coli* and flow as the primary characteristic for determining significant non-stormwater discharges and will monitor for *E. coli* and flow during the three initial screening. The initial screening serves the dual purpose of data collection for completing the MS4 infrastructure database, addressed in **Section 3**, and the initial evaluation of the outfall for significant non-stormwater discharge. A standard field data collection form will be used, including information fields for:

- Channel bottom, calculated flow
- Whether discharge ponds, or reaches the receiving water
- Clarity
- Presence of odors and foam

Additionally, outstanding information for the MS4 inventory database will be collected, including, at a minimum, geographically referenced photographs.

5.4 SIGNIFICANT NON-STORMWATER DISCHARGE SOURCE IDENTIFICATION

If any outfalls are identified as producing significant non-stormwater discharges, based on flow and bacteria sampling, a source identification investigation will be conducted to identify the source(s) or potential source(s) of non-stormwater discharge.

Part IX.A.2 of the MRP requires Permittees to classify the source identification results into the following types as summarized in **Table 13**:

A. **IC/ID**: If the source is determined to be an illicit discharge, then the Permittee must implement procedures to eliminate the discharge consistent with IC/ID requirements (Permit Part VI.D.10) and document actions.

B. **Authorized or Conditionally-Exempt Non-Stormwater Discharges**: If the source is determined to be an NPDES permitted discharge, a discharge subject to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or a conditionally exempt essential discharge, then the Permittee must document the source. For non-essential conditionally exempt discharges, the Permittee must conduct monitoring consistent with Part IX.G of the MRP to determine whether the discharge should remain conditionally exempt or be prohibited.
C. **Natural Flows**: If the source is determined to be natural flows, then the Permittee must document the source.
D. **Unknown Sources**: If the source is unknown, then the Permittee must conduct monitoring consistent with Part IX.G of the MRP.
E. **Originates Upstream of SMB JG7 WMP Group**: If the source is determined to originate from an upstream WMA, then the Permittee must inform the upstream WMA and Regional Board in writing within 30 days of identifying the presence of the discharge, provide all available characterization data and determination efforts, and document actions taken to identify its source.

Table 13
Source Identification Types

Type	Follow-up	Action Required by Permit
A. Illicit Discharge or Connection	Refer to IC/ID program	Implement control measures and report in annual report. Monitor if cannot be eliminated.
B. Authorized or Conditionally Exempt Discharges[1]	Document and identify if essential or non-essential	Monitor non-essential discharges
C. Natural Flows	End investigation	Document and report in annual report
D. Unknown	Refer to IC/ID program	Monitor
E. Upstream of SMB JG7 WMP Group	End investigation	Inform upstream WMA and the Regional Board in writing within 30 days of identifying discharge.

1 Discharges authorized by a separate NPDES permit, a discharge subject to a Record of Decision approved by USEPA pursuant to section 121 of CERCLA, or is a conditionally exempt NSW discharge addressed by other requirements. Conditionally exempt NSW discharge addressed by other requirements are described in detail in Part III.A. Prohibitions – NSW Discharges of the Permit.

Source identification will be conducted using site-specific procedures based on the characteristics of the non-stormwater discharge. Investigations could include:

- Performing field measurements to characterize the discharge;
- Following dry-weather flows from the location where they are first observed in an upstream direction along the conveyance system; and
- Compiling and reviewing available resources, including past monitoring and investigation data, land use/MS4 maps, aerial photography, and property ownership information.

Where the source identification has determined the non-stormwater source to be authorized, natural, or essential conditionally-exempt flows, and it has been determined that the source is not causing or contributing to exceedances in the receiving water, then the outfall will require no further assessment. However, if the source identification determines that the source of the discharge is non-essential conditionally exempt, an ID, or is unknown, then further investigation will be conducted to eliminate the discharge or to demonstrate that it is not causing or contributing to receiving water impairments and will be added to the monitoring list until non-stormwater discharge is eliminated.

In some cases, source investigations may ultimately lead to prioritized programmatic or structural BMPs. Where the SMB JG7 WMP Group has determined that they will address the non-stormwater discharge through modifications to programs or by structural BMP implementation, the SMB JG7 WMP Group will incorporate the approach into the implementation schedule developed in the EWMP, and monitoring of the outfall may be discontinued.

5.5 NON-STORMWATER DISCHARGE MONITORING

As outlined in the MRP (Part II.E.3), outfalls with significant non-stormwater discharges that remain unaddressed after source investigation shall be monitored to meet the following objectives:

a. Determine whether a Permittee's discharge is in compliance with applicable dry-weather WQBELs derived from TMDL WLAs;
b. Determine whether the quality of a Permittee's discharge exceeds non-stormwater action levels, as described in Attachment G of the Permit; and
c. Determine whether a Permittee's discharge causes or contributes to an exceedance of receiving water limitations.

Thus, if any outfalls have been determined to convey significant non-stormwater discharges where the source identification concluded that the source is attributable to a continued ID (Type A from **Table 13)** non-essential conditionally exempt (Type B from **Table 13**), or unknown (Type D from **Table 13**) the site must be monitored. Monitoring will begin within 90 days of completing the source identification and will be coordinated with dry weather receiving water sampling efforts.

5.5.1 Monitoring Frequency, Parameters, and Duration

After the outfall screening and determination of the outfall(s) that have significant non-stormwater flows, those site(s) will be monitored. While a monitoring frequency of four times per year is specified in the Permit, it is inconsistent with the dry weather receiving water monitoring requirements. The receiving water monitoring requires two dry weather monitoring events per year. As a result, the SMB JG7 WMP Group will conduct required NSW outfall monitoring twice per year. The NSW outfall monitoring events will be coordinated with the dry weather receiving water monitoring events, which would then be triggered, to allow for an evaluation of whether the NSW discharges are causing or contributing to an observed exceedance of water quality objectives in the receiving water.

If the outfall(s) are found to be significant non-stormwater outfall(s), they will be monitored for all required constituents as outlined in Part IX.G.1.a-e of the MRP, except toxicity. Toxicity monitoring is only required when triggered by recent receiving water toxicity monitoring where a TIE on the observed receiving water toxicity test identified pollutants during dry weather, or where the TIE results were inconclusive. If the discharge exhibits aquatic toxicity, then a TIE shall be conducted. An overview of the constituents to be monitored and the corresponding frequency is listed in **Table 14**. The outfall(s) will be monitored for at least the duration of the Permit term, or until the non-stormwater discharge is eliminated. Additional analytical and monitoring procedures are discussed in **Attachments B-D**.

Table 14
Non-stormwater Outfall Monitoring Parameters and Annual Frequency (Year 1)

Constituent	Annual Frequency
Flow, hardness, pH, dissolved oxygen, temperature, specific conductivity, and TSS	2
Table E-2 pollutants detected above relevant objectives	2
Aquatic Toxicity and Toxicity Identification Evaluation (TIE)[1]	TBD
Total Coliform	2
E Coli (Fecal Coliform)	2
Enterococcus	2

[1] Toxicity is only monitored from outfalls when triggered by recent receiving water toxicity monitoring where a TIE on the observed receiving water toxicity test identified pollutants or the results of the TIE were inconclusive. If toxicity is observed at the outfall a TIE must be conducted.

5.6 NON-STORMWATER OUTFALL PROGRAM SUMMARY

The SMB JG7 WMP Group will conduct the following steps as part of the non-stormwater outfall program at all major outfalls in the SMB JG7 WMP Group area:

1. Perform the outfall screening and determine whether any major outfall has significant non-stormwater discharge (Part IX.C of the MRP);
2. Identify sources of significant non-stormwater discharges (Part IX.F of the MRP); and, if relevant
3. Continue to monitor NSW discharges which exceed the criteria (Part IX.G of the MRP).

As non-stormwater discharges are addressed, monitoring at the outfall(s) will cease. Additionally, if monitoring demonstrates that discharges do not exceed any WQBELs, then action levels or water quality standards for pollutants identified on the 303(d) list, monitoring will cease at the outfall(s) after the first year. Thus, monitoring activities have the potential to change on an annual basis.

Section 6
New Development/Re-Development Effectiveness Tracking Program

The New Development/Re-Development Effectiveness Tracking Program is used for tracking information data in regards to new and re-development activities. To meet the MRP requirements of Permit Attachment E, Part X.A, the SMB JG7 WMP Group will maintain an informational database record for each new development/re-development project subject to the MCM requirements in Part VI.D.7 of the Permit and their adopted LID Ordinance. The database should track the following information:

1. Name of the Project and Developer;
2. Mapped project location (preferably linked to the Geographic Information System (GIS) storm drain map);
3. Issuance date of the project Certificate of Occupancy;
4. 85^{th} percentile 24-hour storm event for project design (inches);
5. 95^{th} percentile 24-hour storm event for projects draining to natural water bodies (inches);
6. Other design criteria required to meet hydromodification requirements for drainages to natural water bodies;
7. Project design storm (inches per 24 hours);
8. Project design storm volume (gallons or million gallons);
9. Percent of design storm volume to be retained onsite;
10. Design volume for water quality mitigation treatment BMPs (if any);
11. If flow through, water quality treatment BMPs are approved, provide the one-year, one-hour storm intensity as depicted on the most recently issued isohyetal map published by the Los Angeles County Hydrologist;
12. Percent of design storm volume to be infiltrated at an off-site mitigation or groundwater replenishment project site;
13. Percent of design storm volume to be retained or treated with biofiltration at an off-site retrofit project;
14. Location and maps (preferably linked to the GIS storm drain map) of off-site mitigation, groundwater replenishment, or retrofit sites; and
15. Documentation of issuance of requirements to the developer.

Until the WMP is approved by the Regional Board or the Executive Officer, the SMB JG7 WMP Group is only required to implement and track MCM information in its existing stormwater management program per Part V.C.4.d.i.

In addition to the requirements in Part X.A of the MRP, Part VI.D.7.d.iv of the Permit requires that the SMB JG7 WMP Group implement a tracking system for new development/re-development projects that have been conditioned for post-construction BMPs. The following information is to be tracked using GIS or another electronic system:

1. Municipal Project ID
2. State Waste Discharge Identification (WDID) Number
3. Project Acreage
4. BMP Type and Description
5. BMP Location (coordinates)
6. Date of Acceptance

7. Date of Maintenance Agreement
8. Maintenance Records
9. Inspection Date and Summary
10. Corrective Action
11. Date Certificate of Occupancy Issued
12. Replacement or Repair Date

6.1 PROGRAM OBJECTIVES

The objective of the New Development/Re-Development Effectiveness Tracking is to assess whether post-construction BMPs, as outlined in permits issued by the Permittees, are implemented, and to ensure the volume of stormwater associated with the design storm is retained onsite, as required by Part VI.D.7.c.i. of the Permit. The New Development/Re-Development Effectiveness Tracking will gather necessary data to assess whether construction MCM, LID ordinances and BMPs are effective and being implemented.

6.2 EXISTING NEW DEVELOPMENT/RE-DEVELOPMENT TRACKING PROCEDURES

The City of Los Angeles has an established process of tracking some or the entire 27 required development program tracking elements (15 elements identified in Attachment E.X.A and 12 elements in Part VI.D.7.d.iv.).

6.3 SPECIAL CONSIDERATIONS FOR DATA MANAGEMENT AND REPORTING

A fundamental step in establishing individual data management protocols consists of developing a recommended standard operating procedure (SOP) and determining the responsible person within each City department for collecting, reviewing, and reporting the data. The SOP developed by the City of Los Angeles will consist of written instructions regarding documentation of routine activities and delineation of the primary steps in the land development approval process, relevant data generated at each step, and procedures for "handoff" of the project to the next group. Development and use of an SOP is an integral part of successful data management as it provides information to perform a task properly, and facilitates consistency in the quality and integrity of the tracking data.

6.3.1 Data Management

The City will conduct tracking to meet Permit requirements and facilitate reporting. The data management protocols will include:

- Designing and testing data entry sheets for the required information fields identified in **Section 6.1**;
- Describing the procedures and identifying the persons responsible for inputting data, assessing accuracy and consistency, and coordinating follow up actions when questions arise;
- Strategy for checking and validating data entry, including identifying persons responsible for managing and safeguarding data, performing data entry, supervising the data entry, and ensuring quality control of the data; and
- Specifying procedures for routinely and safely archiving data files.

Data collection for development review processes generally consist of the following similar steps:

- **Planning**: Project proponents submit an application to agency planning department to determine whether or not the project meets jurisdictional requirements. When required, the project may require a public hearing for conditions and entitlements. Project conditions may include water quality related requirements.
- **Building**: Projects may be conditioned subject to engineering, community services, or building department review and approval of plans or technical reports. During review, required water quality BMP designs are reviewed and accepted. When a building and/or grading permit is issued, project construction usually proceeds without further discretionary approvals.
- **Construction**: During construction, approved BMPs are implemented and then verified by the jurisdiction's inspector prior to issuance of a Certificate of Occupancy.
- **Post-Construction Inspections**: Once constructed, inspection and verification of maintenance is transferred to the jurisdiction's water quality program manager.

Relevant project data is collected during each phase of the development review process described above. Based on this general process and information gathered through the questionnaire, **Table 15** illustrates data collection opportunities throughout the planning, building, construction, and post-construction inspection processes for requirements in Part VI.D.7 of the Permit.

Table 15
Development Review Process and Data Collection

Stage	Process	Data Collection Opportunity
Planning	Planning review, conditions, and entitlements	Project name
		Developer name
		Location/Map
		Documentation of issuance of requirements
Building	Engineering review and approval of plans and technical reports	85^{th} and 95^{th} percentile storm event criteria
		Other hydromodification management requirements
		Project design storm intensity and volume
		Percent of design storm volume retained onsite
		Design volume for treatment BMPs
		One year/one hour storm intensity
		Percent of design storm infiltrated offsite
		Percent of design storm retained/treated with biofiltration offsite
		Location/Maps of offsite mitigation
Construction	Approval of BMP construction and issuance of Certificate of Occupancy	Issuance date of Certificate of Occupancy
Post-Construction Inspections	Inspection and tracking of post-construction BMPs	Inspection and maintenance dates

6.3.2 Additional Data

To facilitate annual assessment and reporting and future Reasonable Assurance Analyses (RAA) input data compilation, the SMB JG7 WMP Group may also track the following questions and/or information:

- Do any modified MCMs apply to this project?

- Assessor's Identification Number (AIN)
- Street address
- Revised land use (based on City/County Land Use Categories)
- BMP maintenance funding source
- Tributary area to each BMP

6.3.3 Reporting

Development of a data collection template and established SOPs will aid in future analyses and annual reporting. The example data collection template, presented in **Table 16**, includes the information to be tracked for each project.

Table 16
Example Data Collection Template

PLANNING									
Project Name / Description	New or Re-Development	Planning ID	Name of Developer	Assessor's Identification Number (AIN)	Location (Lat/Long or Cross Streets)	Address	City	Zip	Issuance of Requirements Date
ABC Development	*New Development*	*PA14-0001*	*XYZ Development, LLC*	*4272-029-017*	*Paseo Del Mar and Almeria Street 33.711563, -118.303522*	*1234 Paseo Del Mar*	*Los Angeles*	*90731*	*3/11/2014*

Required = Required Field
Recommended = Recommended

BUILDING																	
Building ID	Project Acreage (Acres)	Design Storm (in/24 hr)	Design Storm Volume (Gallons or MGD)	Units	Storm Volume Retained On-site (%)	85th % Storm Event (in/24 hr)	95th % Storm Event - Projects Draining to Natural Water Bodies (in/24 hr)	Type of BMP (Please select from list)	BMP Location (Lat/Long or Coordinates)	Contributing Area (Acres)	Design Volume for Treatment BMPs	Units	Offsite Run-on / Mitigation	Offsite Run-on Location	Design Storm Volume - Infiltrated at an Off-Site Mitigation Project (%)	Design Storm Volume - Retained or Treated with Biofiltration Off-Site (%)	Date of Maintenance Agreement	State WDID #
B14-0001	*18.943*	*0.920*	*473,200*	*Gallons*	*100%*	*0.920*	*None*	*(Bio)Infiltration Basins*	*34.012711, 118.271411*	*5.540*	-		*No*	*None*	*0.00%*	*0.00%*	*11/15/2014*	*4 | 19C123456*
								Permeable Pavement	*34.012311, 118.272411*	*3.400*	-				*0.00%*	*0.00%*		
								Water Harvesting	*34.012311, 118.271411*	*2.400*	-				*0.00%*	*0.00%*		
								Media Filtration Practices	*34.012511, 118.271411*	*2.103*	*6722*	*sf*			*0.00%*	*0.00%*		
								Wet Detention	*34.012811, 118.271811*	*5.500*	-				*0.00%*	*0.00%*		

CONSTRUCTION		POST-CONSTRUCTION BMP INSPECTIONS			
Acceptance Date	Certificate of Occupancy Date	Maintenance Records	Inspection Date and Summary	Replacement or Repair Date	Corrective Action
11/5/2016	*11/15/2016*	*Yes*	*11/21/2017*	*None*	*No*
		No	*11/21/2018 - No Records*	*Unknown*	*Yes*
		Yes	*11/21/2019*	*None*	*No*
		Yes	*11/21/2020*	*None*	*No*
		Yes	*11/21/2021*	*None*	*No*

Annual Assessment and Reporting requirements to be included in an Annual Report are outlined in Part XVIII.A.1 through A.7 of the MRP. With regard to New Development/Re-Development Effectiveness Tracking, the SMB JG7 WMP Group is required to annually track, analyze, and report on the following stormwater control measures in Part XVIII.A.1:

- Estimate the cumulative change in percent effective impervious area (EIA) since the effective date of the Permit and, if possible, the estimated change in the stormwater runoff volume during the 85th percentile storm event.
- Summarize new development/re-development projects constructed within the Permittee's jurisdictional area during the reporting year.
- Summarize retrofit projects that reduced or disconnected impervious area from the MS4 during the reporting year.
- Summarize other projects designed to intercept stormwater runoff prior to discharge to the MS4 during the reporting year.
- For the projects summarized above, estimate the total runoff volume retained onsite by the implemented projects.
- Summarize actions taken in compliance with TMDL implementation plans or approved Watershed Management Programs to implement TMDL provisions in Part VI.E and Attachments L-R of the Permit.
- Summarize riparian buffer/wetland restoration projects completed during the reporting year. For riparian buffers include width, length and vegetation type; for wetland include acres restored, enhanced, or created.
- Summarize other MCMs implemented during the reporting year, as deemed relevant.
- Provide status of all multi-year efforts that were not completed in the current year and will therefore continue into the subsequent year(s). Additionally, if any of the requested information cannot be obtained, then the Permittee shall provide a discussion of the factor(s) limiting its acquisition and steps that will be taken to improve future data collection efforts.

Group members are also required to track, evaluate, and provide an effectiveness assessment of stormwater control measures per Attachment E, Part XVIII.A.2:

- Summarize rainfall for the reporting year. Summarize the number of storm events, highest volume event (inches/24 hours), highest number of consecutive days with measureable rainfall, total rainfall during the reporting year compared to average annual rainfall for the subwatershed. Precipitation data may be obtained from the LACDPW rain gauge stations available at http://www.ladpw.org/wrd/precip/.
- Provide a summary table describing rainfall during stormwater outfall and wet-weather receiving water monitoring events. The summary description shall include the date, time that the storm commenced and the storm duration in hours, the highest 15-minute recorded storm intensity (converted to inches/hour), the total storm volume (inches), and the time between the storm event sampled and the end of the previous storm event.
- Where control measures were designed to reduce impervious cover or stormwater peak flow and flow duration, provide hydrographs or flow data of pre- and post-control activity for the 85th percentile, 24-hour rain event, if available.
- For natural drainage systems, develop a reference watershed flow duration curve and compare it to a flow duration curve for the subwatershed under current conditions.
- Provide an assessment as to whether the quality of stormwater discharges as measured at designed outfalls is improving, staying the same, or declining. The Permittee may compare water quality data from the reporting year to previous years with similar rainfall patterns, conduct

trends analysis, or use other means to develop and support its conclusions (e.g., use of non-stormwater action levels or municipal action levels as provided in Attachment G of the Permit).

- Provide an assessment as to whether wet-weather receiving water quality within the jurisdiction of the Permittee is improving, staying the same, or declining when normalized for variations in rainfall patterns. The Permittee may compare water quality data from the reporting year to previous years with similar rainfall patterns, conduct trends analysis, draw from regional bioassessment studies, or use other means to develop and support its conclusions.
- Provide status of all multi-year efforts, including TMDL implementation, that were not completed in the current year and will continue into the subsequent year(s). Additionally, if any of the requested information cannot be obtained, then the Permittee shall provide a discussion of the factor(s) limiting its acquisition and steps that will be taken to improve future data collection efforts.

Additional reporting elements required are identified in Part VI.D.7 of the Permit and include:

- A summary of total offsite project funds raised to date and a description (including location, general design concept, volume of water expected to be retained, and total estimated budget) of all pending public offsite projects.
- A list of mitigation project descriptions and estimated pollutant and flow reduction analyses.
- A comparison of the expected aggregate results of alternative compliance projects to the results that would otherwise have been achieved by retaining onsite the stormwater quality design volume.

Part XV.A of the MRP requires each Permittee or group to submit an Annual Report to the Regional Board by December 15th of each year. The annual reporting period is from July 1st through June 30th, and information reported will cover approved and constructed projects that have been issued occupancy.

6.4 SUMMARY OF NEW DEVELOPMENT/RE-DEVELOPMENT EFFECTIVENESS TRACKING

New Development/Re-Development Effectiveness Tracking is used for tracking information data in regards to new and re-development activities and their associated post-construction BMPs. The information is stored and will be submitted in an annual compliance report.

The City has developed mechanisms for tracking new development/re-development projects that have been conditioned for post-construction BMPs pursuant to MS4 Permit Part VI.D.7 The City has also developed mechanisms for tracking the effectiveness of these BMPs pursuant to MS4 Permit Attachment E.X.

Section 7
Regional Studies

As stated earlier, the MRP identifies one regional study: the SMC Regional Watershed Monitoring Program. The goal of the program is to conduct ongoing, large-scale regional monitoring on coastal streams and rivers. However, since there are no streams or rivers in the SMB JG7 WMP Group area, there are no SMC monitoring sites located in the WMP Group area.

Regardless, the City of Los Angeles and the LACFCD will continue to participate in the Regional Watershed Monitoring Program (Biosassessment Program) being managed by the Southern California Stormwater Monitoring Coalition (SMC). Initiated in 2008, the SMC's Regional Bioassement Program is designed to run over a five-year cycle. Monitoring under the first cycle concluded in 2013, with reporting of findings and additional special studies planned to occur in 2014. The SMC, including the SMB JG7 WMP Group agencies, is currently working on designing the bioassessment monitoring program for the next five-year cycle, which is scheduled to run from 2015 to 2019.

SCCWRP's Bight Regional Monitoring program is also expected to continue. Among other focuses, this program assesses the health of the Southern California Bight with respect to offshore water quality.

Section 8
Special Studies

The MRP requires each Permittee to be responsible for conducting special studies required in an effective TMDL or an approved TMDL Monitoring Plan. The effective TMDLs, revised TMDLs, and approved monitoring plans relevant to the SMB JG7 WMP Group do not require the completion of special studies. However, the SMB DDT and PCB TMDL has identified optional special studies as follows:

- Refine the relationship between sediment and concentrations of pollutants and fish tissue contamination;
- Determine total mass of DDT and PCBs in Santa Monica Bay subsurface sediments through sediment coring profiles;
- Identify flux rate of pollutants from the sediments to the water column; and
- Evaluate sediments embedded in storm drains to better estimate potential loadings of DDT and PCBs to Santa Monica Bay and identify potential sources.

At this time, the SMB JG7 WMP Group will not participate in any special studies. At a future date, if implementation of a special study is desirable, then a separate work plan that coordinates with the CIMP will be developed.

Section 9
Non-Direct Measurements

Existing monitoring programs that collect water quality data in the watershed, as identified in Section 2.1, will be incorporated into the CIMP database to the extent practicable. Gathering and compiling information from outside the CIMP programs will be dictated by the cost. Water quality data reported by these monitoring programs will be evaluated for suitability for inclusion in the CIMP database. If the water quality data is deemed to be suitable, then it will be included in the database.

Section 10
Adaptive Management

An adaptive management approach provides a structured process that allows for taking action under uncertain conditions based on the best available science, closely monitoring and evaluating outcomes, and re-evaluating and adjusting decisions as more information is obtained.

The WMP and CIMP are to be implemented using the adaptive process. As new program elements are implemented and data gathered over time, the WMP and CIMP will undergo revision to reflect the most current understanding of the watershed and present a sound approach to addressing changing conditions. As such, the WMP and CIMP will employ an adaptive management process that will allow the two programs to evolve over time.

10.1 INTEGRATED MONITORING AND ASSESSMENT PROGRAM

Part XVIII.A of the MRP details the annual assessment and reporting that is required as part of the annual report. The annual assessment and reporting is composed of seven parts:

1. Stormwater Control Measures
2. Effectiveness Assessment of Stormwater Control Measures
3. Non-stormwater Control Measures
4. Effectiveness Assessment of Non-stormwater Control Measures
5. Integrated Monitoring Compliance Report
6. Adaptive Management Strategies
7. Supporting Data and Information

Based on the findings of the annual assessment, revisions to the CIMP will be included as part of the Integrated Monitoring Compliance Report (IMCR), which is further outlined in **Section 11.2**, and submitted as part of the annual report.

10.2 CIMP REVISION PROCESS

Implementation of the CIMP will be used to gather data on receiving water conditions and stormwater/non-stormwater quality to assess water quality and the effectiveness of the WMP. As part of the adaptive management process, re-evaluation of the CIMP will need to be conducted to better inform the SMB JG7 WMP Group of ever-changing conditions of the watershed. Each program of the CIMP will be re-evaluated every two years, in line with the WMP's adaptive management process, for the following:

- **Monitoring Site Locations**: As water quality priorities change and certain WBPCs are being address or identified, monitoring site locations will either need to be added or changed.
- **Monitoring Constituents**: Eliminate or reduce monitoring of certain constituents if constituents were not initially detected during initiation of the CIMP and are not being addressed by a watershed control measure.
- **Monitoring Frequency**: Increase or decrease monitoring frequency based on the evaluation of RWL, WQBELs, and non-stormwater action levels.

Based on the re-evaluation, CIMP revisions will be made and submitted to the Regional Board for approval. CIMP revisions will be implemented upon approval by the Regional Board or within 60 days of submittal if the Regional Board expresses no objections.

Section 11
Reporting

Analysis and reporting of data is an integral part of verifying whether the CIMP is meeting MRP objectives. The MRP, establishes NPDES permit monitoring, reporting, and recordkeeping requirements, including those for large MS4s, based on federal Clean Water Act (CWA) section 308(a) and Code of Federal Regulations (40 CFR) sections 122.26(d)(2)(i)(F), (iii)(D), 122.41(h)-(l), 122.42(c), and 122.48. In addition, California Water Code (CWC) section 13383 authorizes the Regional Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The following sections outline the CIMP reporting process for the SMB JG7 WMP Group.

11.1 DOCUMENTS AND RECORDS

Consistent with the Part XIV.A of the MRP requirements, the SMB JG7 WMP Group will retain records of all monitoring information for a period of at least 3 years from the date of the sample, measurement, report, or application, including:

- Calibration data;
- Major maintenance records;
- Original lab and field data sheets;
- Original strip chart recordings for continuous monitoring instrumentations;
- Copies of reports required by the permit; and
- Records of data used to complete the application for the permit.

Records of monitoring will include:

- Date, time of sampling or measurements, exact place, weather conditions, and rainfall amount;
- Individual(s) who performed the sampling or measurements;
- Date(s) analyses were performed;
- Individual(s) who performed the analyses;
- Analytical techniques or methods used;
- Results of such analyses; and
- Data sheets showing toxicity test results.

11.1.1 Semi-Annual Data Submittal

Monitoring results data will be submitted semi-annually, as stated in Part XIV.L of the MRP. The transmitted data will be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs) and sent electronically to the Regional Board Stormwater site to MS4stormwaterRB4@waterboards.ca.gov. The SMC SDTFs can be found at the SCCWRP web page http://www.sccwrp.org/data/DataSubmission.aspx. The submitted monitoring data will highlight exceedances of applicable WQBELs, receiving water limitations, action levels, and/or aquatic toxicity thresholds for all test results, with corresponding sampling dates per receiving water monitoring station.

11.1.2 Annual Monitoring Reports

Part XVIII.A.5, of the MRP presents the requirements of the IMCR that will be included and submitted on an annual basis as part of the Annual Report. As discussed in **Section 10**, the IMCR is one of seven parts of the Annual Assessment and Reporting.

The IMCR will include the following information as required by the MRP:

- Summary of exceedances against all applicable RWLs, WQBELs, non-stormwater action levels, and aquatic toxicity thresholds for:
    - Receiving water monitoring – Wet- and dry-weather
    - Stormwater outfall monitoring
    - Non-stormwater outfall monitoring
- Summary of actions taken:
    - To address exceedances for WQBELs, non-stormwater action levels, or aquatic toxicity for stormwater and non-stormwater outfall monitoring
    - To determine whether MS4 discharges contributed to RWL exceedances and efforts taken to control the discharge causing the exceedances to the receiving water
- If aquatic toxicity was confirmed and a TIE was conducted, then identify the toxic chemicals determined by the TIE, and include all relevant data to allow the Regional Board to review the adequacy and findings of the TIE.

The IMCR will be submitted, as part of the Annual Assessment Report section of the Annual Report, to the Regional Board by December 15th of each year covering the preceding reporting year from July 1 through June 30th, for at least the duration of the Permit term.

11.1.3 Signatory and Certification Requirements

Part V.B of Attachment D of the Permit presents the Signatory and Certification Requirements and states:

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or US Environmental Protection Agency (USEPA) shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below [40 CFR section 122.41(k)(1)].
2. All applications submitted to the Regional Water Board shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer includes: (i) the chief executive officer of the agency (e.g., Mayor), or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., City Manager, Director of Public Works, City Engineer, etc.).[40 CFR section 122.22(a)(3)].
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above [40 CFR section 122.22(b)(1)];
    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named

individual or any individual occupying a named position.) [40 CFR section 122.22(b)(2)]; and

c. The written authorization is submitted to the Regional Water Board [40 CFR section 122.22(b)(3)].

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR section 122.22(c)].
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." [40 CFR section 122.22(d)].

All required signatures and statements will be included as an attachment of the Annual Report, which will be submitted to the Regional Board by December 15th of each year, for at least the duration of the Permit term.

Section 12
Schedule for CIMP Implementation

As stated in Part IV.C.6 of the MRP, the SMB JG7 WMP Group's CIMP will initiate 90 days after approval by the Executive Officer of the Regional Board. CIMP monitoring will be implemented in a phased-in approach to allow sufficient time for permitting and installation of equipment for all monitoring sites. Established TMDL monitoring programs, specifically the SMBBB TMDL 2004 approved CSMP, will continue without modification.

Section 13
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