

City of Los Angeles Mail

Comments Special Joint B&F, Public Works Agenda No. 1-CF 14-0163-S3-New Policy
Sidewalk Repair

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The CAO Report fails to address the compliance issues of the LA MS4 Municipal
Separate Storm Sewer System ORDER NO. R4-2012-0175 NPDES PERMIT NO.
CAS004001.

LID Ordinances, Green Street Policies are incorporated into the Permit. Because the
Los Angeles MS4 Order contains new provisions that authorize the Permittees to
develop and implement WMP/EWMPs in lieu of requiring compliance with the receiving
water limitations provisions, those Draft Plans must be reviewed in light of this motion.

The structural BMPs include:

- low-impact development
- green streets
- regional projects

Included in these Draft documents are Green Infrastructure described as:

- Bioretention and biofiltration
- Permeable pavement
- Green streets
- Bioswales
- Infiltration BMPs
- Rainfall harvest (green roofs, cisterns and rain barrels)

Placing the property owner as a Responsible Party also shows an intention that the Property Owner is also a Permittee.

That is not the case.

LA County Flood Control District has prepared a PEIR Programmatic Environmental Impact Report and the City of LA has prepared an Addendum to that Report (attached).

<http://dpw.lacounty.gov/lacfd/ewmppeir/>

You cannot hold the Property Owner responsible/liable for execution of the LA MS4 Permit.

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Attachment:

LASAN EWMP Addendum PEIR_0430201

LASAN EWMP Addendum PEIR_04302015.pdf

3855K

DRAFT



City of Los Angeles
Addendum to Los Angeles County
Flood Control
District Enhanced Watershed
Management Program Programmatic
Environmental Impact Review

Prepared for:
City of Los Angeles
Los Angeles, CA

Date:
April 2015

Project Number:
05-23210J

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Acronyms and Abbreviations

BMP:	Best Management Practice
CEQA:	California Environmental Quality Act
EWMP:	Enhanced Watershed Management Program
IC:	Illicit Connection
ID:	Illicit Discharge
IS:	Initial Study
LACFCD:	Los Angeles County Flood Control District
LARWQCB:	Los Angeles Regional Water Quality Control Board
LASAN:	Los Angeles City Bureau of Sanitation
LFD:	Low-Flow Diversion
LID:	Low-Impact Development
MCM:	Minimum Control Measure
MdR:	Marina Del Rey
MND:	Mitigated Negative Declaration
MS4:	Municipal Separate Storm Sewer System
NPDES:	National Pollutant Discharge Elimination System
PEIR:	Program Environmental Impact Report
RAD:	Regulatory Affairs Division
ROW:	Right-of-Way
RWL:	Receiving Water Limitations
SMB:	Santa Monica Bay
SWPPP:	Stormwater Pollution Prevention Plan
TMDL:	Total Maximum Daily Load
ULAR:	Upper Los Angeles River
USEPA:	United States Environmental Protection Agency
WMA:	Watershed Management Area
WMG:	Watershed Management Group
WQBEL:	Water Quality-Based Effluent Limits

Executive Summary

Background

The City of Los Angeles is participating in the development of Enhanced Watershed Management Programs (EWMPs) for the Upper Los Angeles River, Ballona Creek, Dominguez Channel, Marina del Rey, and Santa Monica Bay Jurisdictional Groups 2 and 3 Watershed Management Areas in compliance with the 2012 Regional Water Quality Control Board - Los Angeles Region (LARWQCB) National Pollution Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit (Order No. R4-2012-0175; National Pollutant Discharge Elimination System [NPDES] Permit No. CAS004001). The City must decide whether to submit the EWMPs prepared for these five watersheds to the LARWQCB. This California Environmental Quality Act (CEQA) review has been prepared to support this decision-making process.

The County of Los Angeles Department of Public Works and Los Angeles County Flood Control District published a Draft Program Environmental Impact Report (PEIR)¹ for all EWMPs within the County of Los Angeles. As a PEIR, this document may be used by individual Permittees to either satisfy fully CEQA requirements of individual EWMPs or to tier from for conducting their own project-specific CEQA analysis of individual EWMPs. Accordingly, to aid the City of Los Angeles Bureau of Sanitation (LASAN) Regulatory Affairs Division (RAD) and support the EWMP development, the City of Los Angeles has prepared this Addendum to the County PEIR. The County PEIR was intended to support decision-making by individual permittees such as the City of Los Angeles (City); this Addendum is an informational document, intended to be used in the planning and decision making process by the City and LASAN as provided for under Section 15164 of the CEQA. This Addendum incorporates the County PEIR by reference, and there are no changes or modifications to the PEIR. The Addendum summarizes those elements of the PEIR that are relevant to the City's decision on whether or not to submit the EWMPs to the LARWQCB. The Addendum has been prepared pursuant to CEQA (Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines to evaluate the potential environmental effects of EWMPs within the City's jurisdiction.

The timeline identified in the MS4 Permit requires that Permittees submit the EWMP to the LARWQCB by June 28, 2015, in order to be in compliance with the permit conditions. Because the implementation of each EWMP may potentially result in changes to environmental conditions, the Los Angeles County Flood Control District (LACFCD) prepared the PEIR in compliance with the CEQA to provide the public and the responsible and trustee agencies with information about the potential effects on the local and regional environment associated with implementation of the EWMPs. LASAN has prepared this Addendum to identify those elements of the PEIR that pertain to the City's ERWMPs.

As stated in the PEIR: "As individual projects identified in the EWMPs are fully developed, the implementing agency (i.e., the Permittee responsible for implementing the project) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA

¹ <http://dpw.lacounty.gov/lacfd/ewmppeir/> Accessed on March 23, 2015.

analysis is required or that a project is exempt from CEQA.” The Addendum has not been prepared for individual projects, and therefore does not explicitly tier from the PEIR for this purpose. Such project-specific CEQA reviews will be conducted when individual project reach this level of design. The Addendum is at the programmatic level, consistent with the County PEIR.

The City of Los Angeles has participated in five EWMP groups for the watersheds within its jurisdiction (Table ES-1). The development and implementation of each of the five EWMPs is a collaborative effort between the City of Los Angeles and the other Permittees that have opted to participate in the EWMP group in order to achieve compliance with the MS4 permit for those discharges within their jurisdiction.

Table ES-1: EWMP Participants and Watersheds.

Watershed Management Group	Affected Watersheds	Cities/Permittees	Lead/Coordinator
Upper Los Angeles River	Upper reaches of the Los Angeles River Watershed	Alhambra, Burbank, Calabasas, Glendale, Hidden Hills, La Canada Flintridge, Los Angeles, Montebello, Monterey Park, Pasadena, Rosemead, San Gabriel, San Marino, South Pasadena, Temple City, LA County, LACFCD	City of Los Angeles
Ballona Creek	Ballona Creek Watershed	Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, West Hollywood, LA County, LACFCD	City of Los Angeles
Dominquez Channel	Dominguez Channel Watershed, the Machado Lake Watershed, and the Los Angeles/Long Beach Harbors Watershed	El Segundo, Hawthorne, Inglewood, Los Angeles, Lomita, LA County, LACFCD	City of Los Angeles
Marina Del Rey	Marina del Rey Watershed	Culver City, Los Angeles, LACFCD, LA County	Los Angeles County
Santa Monica Bay	SMB JG2 and SMB JG3	Los Angeles, El Segundo, Santa Monica, LA County, LACFCD	City of Los Angeles

Project Objectives

The primary goals and objectives of the EWMPs are:

- To collaborate among agencies (Permittee jurisdictions) across the watershed to promote more cost-effective and multi-beneficial water quality improvement projects to comply with the MS4 Permit;
- To develop watershed-wide EWMPs that will, once implemented, remove or reduce pollutants from dry- and wet-weather urban runoff in a cost-effective manner; and
- To reduce the impact of stormwater and non-stormwater on receiving water quality.

Purpose and Need

In accordance with the City of Los Angeles Municipal Code and City procedures, the implementation of the EWMPs is a discretionary action and thus is subject to the California Environmental Quality Act, (“CEQA”).

The City of Los Angeles has prepared this Addendum to the PEIR to provide an evaluation of the potential environmental effects of the project and support the City’s decision regarding acceptance of the EWMPs for submittal to the LARWQCB.

Project Description

The City of Los Angeles participated in five WMGs covering EWMP areas within the County of Los Angeles including the watershed management areas of ULAR, Ballona Creek, Dominguez Channel, Marina Del Rey, and Santa Monica Bay (refer to Figure 1-1). The geographic scope covered by each of these five EWMPs is detailed below.

Upper Los Angeles River

The area included in the ULAR EWMP is the largest of all the EWMP areas in Los Angeles County, approximately 479 square miles (Figure 2-1). The Los Angeles River is approximately 55 miles long, and five of six reaches lie within the ULAR EWMP area. The natural hydrology of the Los Angeles River watershed has been altered by channelization and the construction of dams and flood control reservoirs. The Los Angeles River and many of its tributaries are lined with concrete for most or all of their length. Soft-bottomed segments of the Los Angeles River occur where groundwater upwelling prevents armoring of the river bottom, most notably at the Glendale Narrows.

Ballona Creek

The Ballona Creek watershed is approximately 128 square miles in area and includes the cities of Beverly Hills and West Hollywood, and portions of the cities of Los Angeles, Inglewood, Culver City, and Santa Monica as well as unincorporated areas of the County of Los Angeles. Additionally, the LACFCD owns and operates drainage infrastructure within incorporated and unincorporated areas in the watershed.

Dominguez Creek

The DC WMA is located within the southern portion of Los Angeles County and encompasses approximately 133 square miles of land and water, including the Upper Dominguez Channel Watershed, the Machado Lake Watershed, and the Los Angeles/Long Beach Harbors Watershed. This watershed is differentiated by a larger area of industrial land use, but also

includes Beach Cities and Machado Lake. The Dominquez Channel Watershed Management Group (DC WMG) accounts for just over 58 square miles, approximately 42 percent of the DC WMA.

Marina Del Rey

The Marina Del Rey (MdR) Watershed Management Area (WMA) is bordered by the Santa Monica Bay (SMB) Watershed to the west and the Ballona Creek watershed to the north and east. The MdR Harbor is open to the Santa Monica Bay through the main channel and shares a common breakwater with Ballona Creek. The MdR WMA consists of four subwatersheds. The MdR watershed is very different from the other Los Angeles area watersheds because it is small and highly urbanized, with a large portion of the lower watershed within a high groundwater and tidally influenced former estuary. The MdR Harbor is an active harbor for pleasure craft, consisting of the main channel and eight basins

Santa Monica Bay

The SMB EWMP Group area includes land area that drains into and includes the SMB. However, the geographical scope of the SMB EWMP Group area excludes areas of land totaling 9,124 acres for which the MS4 Permittees do not have jurisdiction, including land owned by the State of California, Caltrans, the U.S. Government, and an area of the Chevron Facility located in the City of El Segundo. As such, with the exclusion of these areas, the SMB EWMP Group area covers 25,238 acres. Approximately 49 percent of the SMB EWMP Group area is open space, of which approximately 93 percent is located in the northern natural subwatersheds and approximately 7 percent is located in the Dockweiler natural subwatershed.

EWMP BMP Measures

A variety of BMP types are defined in the EWMPs. The following section provides an overview of non-structural and structural BMP types that will be part of the EWMPs. This section also includes a summary of planned and ongoing projects listed in the EWMPs for each BMP type to provide information on the anticipated scale, construction methods, and general locations of these BMP types. Additional information and figures on the location and distribution of potential and priority BMPs are based on available data at the time of this report.

Non-Structural BMPs

Non-structural measures and institutional BMPs are policies, actions, and activities which are intended to minimize or eliminate pollutant sources. Most institutional BMPs are implemented to meet Minimum Control Measure (MCM) requirements in the MS4 permit; MCMs are considered a subset of institutional BMPs. These BMPs are not constructed, but may have costs associated with the procurement and installation of items such as signage or spill response kits. The MS4 Permit categorizes institutional BMPs into six program categories: Development Construction Programs, Industrial/Commercial Facilities Programs, Illicit Connection and Illicit Discharges (IC/ID) Detection and Elimination Programs, Public Agency Activities Programs, Planning and Land Development Programs, and Public Information and Participation Programs.

Structural BMPs

Distributed BMPs (structural) are most likely to be implemented in high-density urban, commercial, industrial, and transportation areas, where they will either replace or improve upon existing stormwater infrastructure. These types of BMPs are generally “retrofit” type projects that replace existing impervious surfaces with pervious surfaces such as bioinfiltration cells, bioswales, porous pavement, and filter strips that tie into existing stormwater management systems as part of the MS4. These projects may also augment the existing MS4 with additional inlet screens, filter media systems, sediment removal systems, and diversions to sanitary sewer lines.

Green infrastructure/Low-impact development BMPs describe a broad range of development elements that aim to manage and treat stormwater as a resource, and minimize the differences between pre- and post-development hydrology. BMP subtypes in this category include: bioretention and biofiltration, green streets, permeable pavement, infiltration, and bioswales, among other

Centralized structural BMPs use similar elements to the LID, infiltration and biofiltration type BMP used in distributed structural BMPs, but collect, store, treat and filter stormwater from multiple parcels and much larger drainage areas. Centralized BMPs also include diversion and treatment type BMPs that use similar technologies for these types of BMPs under distributed BMPs, but can be implemented on a much larger scale collecting, diverting and treating urban runoff (dry-weather flows) or limited stormwater flows from multiple parcels and large drainage areas. Therefore, centralized structural BMPs require greater footprints for construction and implementation, but provide a greater potential for water quality improvement through the filtering, treatment and/or infiltration of greater volume and rates of stormwater and urban runoff.

Regional structural BMPs are those that can capture the volume of water from an 85th percentile, 24-hr storm in a contributing watershed, known as the design volume (Generally, the 85th percentile storm is approximately 0.75 inches over 24 hours). The two types of regional BMPs are retention/infiltration and capture and use, though many regional projects would incorporate more than one BMP type. The definitions of these BMPs are the same as for centralized BMPs (described in Section 2.2.2.2 above) with the exception that they can capture the design volume. Like the centralized BMPs, regional BMPs can be implemented in a broad range of land use types, from high-density urban to open space, and can have multiple benefits (e.g. habitat, recreation, aesthetics).

Overview of City of Los Angeles Watershed EWMP Control Measures

Summarized below are the general characteristics of the watersheds within the five EWMP Groups for those watersheds within the jurisdiction of the City of Los Angeles and the overall strategies for BMP implementation that reflect these characteristics.

A key outcome of the regional project selection process in each of EWMP is the selection of signature regional projects that are summarized in the sections below. Complimentary to the regional BMP program, robust green infrastructure programs will be critical to achieving water quality compliance in each of the watersheds. While the regional BMP program is structured around large projects that are likely to be individually planned and designed specifically for

available parcels, the green infrastructure components of the EWMPs will implement vast numbers of distributed, small control measures in available rights-of-way, on residential parcels and on available public parcels (where regional BMPs are not feasible/desirable). Not only are these green infrastructure programs critical to the success of each EWMP, they provide an opportunity for multiple benefits to the local community. For example, the City of Los Angeles has already adopted a number of green infrastructure-based programs that promote water quality improvement as a primary or secondary objective. Recently, the City of Los Angeles adopted an ordinance that incorporates green infrastructure requirements for streets projects. These types of programs and ordinances represent the initial stages of developing a comprehensive infrastructure programs specifically designed to meet water quality objectives.

Upper Los Angeles River EWMP

The BMP strategy in the Upper Los Angeles River watershed includes well over a hundred planned regional and centralized retention and infiltration BMPs that take advantage of the favorable groundwater recharge characteristics in defined areas of the watershed. Also planned are centralized treatment wetlands and bioinfiltration BMPs in parks and open spaces with favorable subsurface soils that promote higher infiltration rates. The BMP strategy also includes distributed smaller BMPs located throughout the urbanized areas of the watershed as retrofits in existing developments and streets. Eight signature regional projects were identified in the regional project selection process for the ULAR EWMP

Ballona Creek EWMP

The Ballona Creek watershed is dominated by urbanized beach communities with high density residential and commercial land uses throughout the watershed. Key BMP strategies in this watershed are to address dry and wet-weather flows that may impact beach water quality through bacteria loading. Other water quality priorities include trash, marine debris, metals, and toxics. The BMP strategy includes LFDs to comply with dry-weather metals and bacteria TMDLs. Although large regional and centralized retention and infiltration BMPs will be part of the wet-weather pollutant load reduction strategy, the predominate structural BMP will be smaller distributed BMPs such as bioinfiltration, media filtration, and flow-through BMPs located in street right-of-ways, parking lots, landscaped areas, and as part of green streets and buildings. Ten signature regional projects were identified in the regional selection process of the Ballona Creek EWMP. There are several additional projects that are considered “Very High” priority, including the North Outfall Treatment Facility ([NOTF], also known as the Low Flow Treatment Facility #1)

Dominguez Channel EWMP

This Dominguez Channel watershed is differentiated by a larger area of industrial land use, but also includes Beach Cities and Machado Lake. Because of the high density of development and industrial land uses, large regional and centralized infiltration type BMPs will be limited. The structural BMP strategy will be more LFDs, both large (centralized) and small (distributed), located at MS4 outfalls near the channelized Dominguez Channel. The other BMP strategy are smaller distributed BMPs that include the LID type BMP such as Green Streets and biofiltration BMPs throughout the Beach Cities. These distributed BMPs will be retrofit type BMPs that treat runoff from already developed properties and are located in street right-of-ways, parking lots,

and limited open areas on public and private parcels. Distributed flow-through treatment BMPs will also be the other predominant BMP that will be retrofitted to the existing MS4 systems.

Marina Del Rey EWMP

The Marina Del Rey watershed is dominated by urbanized beach communities with high density residential and commercial land uses throughout the watershed. Key BMP strategies in this watershed are to address dry and wet-weather flows that may impact beach water quality through bacteria loading. Other water quality priorities include trash, marine debris, metals, and toxics. The BMP strategy includes LFDs to comply with dry-weather metals and bacteria TMDLs. Although large regional and centralized retention and infiltration BMPs will be part of the wet-weather pollutant load reduction strategy, the predominate structural BMP will be smaller distributed BMPs such as bioinfiltration, media filtration, and flow-through BMPs located in street right-of-ways, parking lots, landscaped areas, and as part of green streets and buildings.

Santa Monica Bay EWMP

The Santa Monica Bay JG2 and JG3 watershed group is dominated by urbanized beach communities with high density residential and commercial land uses throughout the watershed. Key BMP strategies in this watershed are to address dry and wet-weather flows that may impact beach water quality through bacteria loading. Other water quality priorities include trash, marine debris, metals, and toxics. The BMP strategy includes LFDs to comply with dry-weather metals and bacteria TMDLs. Although large regional and centralized retention and infiltration BMPs will be part of the wet-weather pollutant load reduction strategy, the predominate structural BMP will be smaller distributed BMPs such as bioinfiltration, media filtration, and flow-through BMPs located in street right-of-ways, parking lots, landscaped areas, and as part of green streets and buildings. Through an extensive screening process and coordination with the SMB EWMP Group, eight highlighted regional EWMP project sites were selected for conceptual design.

Required Approvals

The City will use this Addendum to the LACFCD PEIR to consider implementation of the proposed program. As Lead Agency, the City may use this Addendum PEIR to approve the proposed program, make Findings regarding identified impacts, and, if necessary, adopt a Statement of Overriding Considerations regarding these impacts. The LARWQCB has discretionary approval over the EWMPs themselves, while a broad range of responsible agencies have discretionary approval over the BMPs described in the EWMPs. These agencies and their approvals are described in Table 2-17. The specific approvals necessary for each BMP will vary by BMP; for example, BMPs that do not result in fill of jurisdictional waters of the United States will not need a Clean Water Act Section 404 Permit.

Alternatives Analysis

In accordance with the CEQA “rule of reason,” an EIR is required to consider a range of alternatives that permit a reasoned choice and that are “limited to ones that would avoid or substantially lessen any of the significant effects of the project” (CEQA Guidelines Section 15126.6(f)). The Lead Agency conducted an alternatives screening process to identify feasible

alternatives to the proposed program. The screening process for identifying viable alternatives included consideration of the following criteria:

- Ability to meet the program objectives
- Ability to reduce significant environmental effects of the proposed program
- Economic and engineering feasibility

Based on these criteria, the Lead Agency has identified the following alternatives:

- No Program Alternative - non-implementation of the EWMP approach allowed in the MS4 Permit; each Permittee would be required to reach water quality objectives for MS4 discharges on their own, with no clear compliance strategy.
- Non-Structural Best Management Practices (BMPs) Only Program Alternative - implementation of the proposed program and its associated non-structural BMPs only.
- Distributed Structural BMPs Only Program Alternative (no centralized and regional) - implementation of the proposed program and only its associated distributed structural BMPs and non-structural BMPs.

Environmentally Superior Alternative

Under the No Program alternative, the distributed Structural and Non-Structural BMPs Only Program, and the Non-structural BMP program alternative, the ability to achieve compliance with MS4 Permit water quality objectives would be reduced without the larger-scale centralized and regional BMPs, and impacts to water quality would be greater under this alternative. As a result, since the proposed alternative would provide the best chance of achieving regional water quality objectives, it is considered the environmentally superior alternative.

Summary of Environmental Impacts

Table ES-2 provides a brief summary of the impacts identified at the programmatic level for the EWMPs, with additional information provided for the Upper Los Angeles River and Ballona Creek EWMPs. The following potentially significant impacts were identified as a result of project construction; there are no new significant impacts that are not addressed in the County PEIR. No significant impacts were identified with regard to project operations.

- **Air Quality** – The proposed project could potentially violate any air quality standard or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment.
- **Noise** - The proposed program could result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- **Cultural Resources** - The proposed program could cause a substantial adverse change in the significance of an historical resource as defined in §15064.5.

All other impacts would be less than significant. In some instances, mitigation is required to reduce impacts to less than significant levels.

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Table ES-2. Summary of Environmental Impacts

Impact No.	Impact summary	Mitigation	Programmatic	ULAR EWMP Regional Projects	Ballona EWMP Regional Projects	Project Level Environmental Review required
Aesthetics						
AES-1	The proposed program could create a substantial adverse effect on a scenic vista.	AES-1	Less than Significant with mitigation	No Impacts	No Impacts	No
AES-2, -3	The proposed program could substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	AES-1, AES-2	Less than Significant with mitigation	No Impacts	No Impacts	No
AES-4	The proposed program could create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	NA	Less than Significant	Less than Significant	Less than Significant	No
Air Quality						
AQ-1	The project could conflict with or obstruct implementation of the applicable air quality plan.	NA	Less than Significant	No Impact	No Impact	No
AQ-2	The project could violate any air quality standard or contribute substantially to an existing or projected air quality violation.	AIR-1, AIR-2	Significant and unavoidable for construction; Less than significant for operations	Potentially significant and unavoidable impacts for construction	Potentially significant and unavoidable impacts for construction	Yes
AQ-3	The program could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	AIR-3	Significant and unavoidable for construction; Less than significant for operations	Potentially significant and unavoidable impacts for construction	Potentially significant and unavoidable impacts for construction	Yes

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AQ-4	The project could expose sensitive receptors to substantial pollutant concentrations.	AIR-4	Less than Significant with mitigation	Less than Significant with mitigation	Less than Significant with mitigation	No
AQ-5	The proposed program could create objectionable odors affecting a substantial number of people	AIR-2, AIR-4	Less than Significant with mitigation	Less than Significant with mitigation	Less than Significant with mitigation	No
Biological Resources						
BIO-1	The proposed project could have a substantial adverse effect, either directly or through habitat modifications, on any sensitive species identified as special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	BIO-1 through BIO-8	Less than Significant with mitigation	Less Than Significant	Less Than Significant	No for currently proposed projects, yes for future projects
BIO-2	The proposed project could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.	BIO-1 through BIO-8	Less than Significant with mitigation	Less Than Significant	Less Than Significant	No for currently proposed projects, yes for future projects
BIO-3	The proposed project could have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	BIO-1 through BIO-9	Less than Significant with mitigation			No for currently proposed projects, yes for future projects
BIO-4	The proposed project could interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	NA	Less than Significant			No
BIO-5	The proposed project could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	BIO-10	Less than Significant with mitigation			Yes

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BIO-6	The proposed project could conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.	NA	Less than Significant			Yes, if located in SEA
Cultural Resources						
CUL-1	The proposed program could cause a substantial adverse change in the significance of an historical resource as defined in §15064.5.	CUL-1, through CUL-4	Potentially Significant and Unavoidable	Less Than Significant	Less Than Significant	Yes
CUL-2	The program could cause a substantial adverse change in the significance of unique archaeological resources as defined in §15064.5.	CUL-1 through CUL-4	Less Than Significant with Mitigation	Less Than Significant with Mitigation	Less Than Significant with Mitigation	Yes
CUL-3	The program could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	CUL-5, -6	Less Than Significant with Mitigation	Less Than Significant with Mitigation	Less Than Significant with Mitigation	Yes
CUL-4	The program could disturb any human remains, including those interred outside of a formal cemetery	CUL-7	Less Than Significant with Mitigation	Less Than Significant	Less Than Significant	No
Geologic and Mineral Resources						
GEOL-1	The proposed program could locate new facilities in areas susceptible to seismic impacts such as (1) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, (2) strong seismic groundshaking, or (3) seismically induced liquefaction or landslides, which could expose people, structures, or habitat to potential risk of loss, damage, injury, or death.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No (geotechnical studies required)

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GEOL-2	The proposed program could result in substantial soil erosion or the loss of topsoil.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No
GEOL-3	The proposed program could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the program, and potentially result in on-site or off-site non-seismically induced geologic hazards such as landslides, lateral spreading, subsidence, collapse or sinkholes, settlement, or slope failure.	GEOL-1	Less Than Significant	Less Than Significant	Less Than Significant	No (geotechnical studies required)
GEOL-4	The proposed program could be located on expansive soil as defined in 24 CCR 1803.5.3 of the California Building Code (2013), creating substantial risks to life or structures.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No (geotechnical studies required)
GEOL-5	The proposed program could have soils incapable of adequately supporting the use of a septic tank or alternative wastewater treatment systems where sewers are not available for the disposal of wastewater	NA	Less Than Significant	Less Than Significant	Less Than Significant	No (geotechnical studies required)
GEOL-6	The proposed program could result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or a locally important mineral resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan.	NA	Less Than Significant	Less Than Significant	Less Than Significant	Yes, for future projects
Greenhouse Gas Emissions						
GHG-1	The proposed program could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No

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GHG-2	The proposed program could conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No
Hazards and Hazardous Materials						
HAZ-1	The proposed program would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or the accidental release during construction and maintenance activities.	NA	Less Than Significant	Less Than Significant	Less Than Significant	Project Level required for Ballona Projects BH01,CC04
HAZ-2	The proposed program could create a significant hazard to the public or the environment through the accumulation of potentially hazardous materials into BMPs.	HAZ-1	Less Than Significant with mitigation	Less Than Significant	Less Than Significant	No
HAZ-3	The proposed program could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing school	HAZ-1	Less Than Significant with mitigation	Less Than Significant	Less Than Significant	No
HAZ-4	The proposed program could be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment.	HAZ-2	Less Than Significant with mitigation	Less Than Significant	Less Than Significant	Only for future projects
HAZ-5	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, for a project within the vicinity of a private airstrip, the project could result in a safety hazard for people residing or working in the project area	HAZ-3	Less Than Significant with mitigation	Less Than Significant	Less Than Significant	Only if within airport plan area

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HAZ-6	The proposed program could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No
HAZ-7	The proposed program could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No
Hydrology and Water Quality						
WR-1	Would the proposed project violate water quality standards or waste discharge requirements or further degrade water quality?	NA	No Impact	No Impact	No Impact	No
WR-2	Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)	HYDRO- through HYDRO-3	Less Than Significant wit mitigation	Less Than Significant wit mitigation	Less Than Significant wit mitigation	Yes
WR-3	The project could substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No
WR-4	The proposed project could create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No

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WR-5	The project could place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map.	NA	No Impact	No Impact	No Impact	No
WR-6	The project could place within a 100-year flood hazard area structures that would impede or redirect flood flows.	NA	Less Than Significant	No impact	No Impact	No
WR-7	The proposed project could expose structures to a significant risk of loss, including flooding as a result of the failure of a levee or dam.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No
WR-8	The proposed project could place structures in areas subject to inundation by seiche, tsunami, or mudflow.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No
Land Use and Agriculture						
LU-1	The proposed program could physically divide an established community	NA	No Impact	No Impact	No Impact	No
LU-2	The proposed program could conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the program	NA	No Impact	No Impact	No Impact	No
LU-3	The proposed program could conflict with any applicable habitat conservation plan or natural community conservation plan.	NA	No Impact	No Impact	No Impact	No
LU-4	The proposed program could convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance	NA	No Impact	No Impact	No Impact	No
LU-5	The proposed program could conflict with existing zoning for agricultural use, or a Williamson Act contract.	NA	No Impact	No Impact	No Impact	No

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LU-6	The proposed program could conflict with existing zoning for, or cause rezoning of, forest land	NA	Less Than Significant	No Impact	No Impact	No
Noise						
NOI-1	The proposed program could result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	NOI-1	Potentially significant and unavoidable impacts for construction	Potentially significant and unavoidable impacts for construction	Potentially significant and unavoidable impacts for construction	Yes
NOI-2	The proposed program could result in exposure of persons to, or generation of, excessive groundborne vibration.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No
NOI-3	The proposed program could result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	NOI-1, NOI-2	Less than Significant with Mitigation	Less Than Significant	Less Than Significant	No
NOI-4	The proposed program could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project	NOI-1	Less than Significant with Mitigation	Less Than Significant	Less Than Significant	Yes
NOI-5	For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within 2 miles of a public airport or public use airport, implementation of the proposed program could expose people residing or working in the area to excessive noise	NA	Less Than Significant	No Impact	No Impact	No
NOI-6	For a project located in the vicinity of a private airstrip, the proposed program could expose people residing or working in the project area to excessive noise levels.	NA	Less Than Significant	Less Than Significant	Less Than Significant	No
Population and Housing and Environmental Justice						

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POP-1	Implementation of the proposed program could induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	NA	No Impact	No Impact	No Impact	No
POP-2	Implementation of the proposed program could displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	NA	No Impact	No Impact	No Impact	No
POP-3	Implementation of the proposed program could displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	NA	No Impact	No Impact	No Impact	No
POP-4	Implementation of the proposed program could affect the health or environment of minority or low income populations disproportionately.	NA	Less Than Significant	Less Than Significant	NA	No
Public Services and Recreation						
PUB-1	The proposed program could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.	PS-1	Less than significant with mitigation	Less than significant	Less than significant	No

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PUB-2	The proposed program could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services.	NA	Less than significant	Less than significant	Less than significant	No
PUB-3	The proposed program could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools	NA	Less than significant	Less than significant	Less than significant	Yes, for future projects adjacent to schools
PUB-4	The proposed program could increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	NA	Less than significant	Less than significant with mitigation	Less than significant with mitigation	Yes
Transportation and Circulation						
TRAF-1	The proposed program could intermittently and temporarily increase traffic levels and traffic delays due to vehicle trips generated by construction workers and construction vehicles on area roadways.	TRAF-1	Less than significant with mitigation	Less than significant	Less than significant	No

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TRAF-2	Construction of the proposed program could potentially cause traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways, and could increase traffic hazards due to possible road wear.	NA	Less than significant	Less than significant	Less than significant	No
TRAF-3	The proposed program could result in inadequate emergency access during construction.	NA	Less than significant	Less than significant	Less than significant	No
Transportation and Circulation						
UTL-1	Implementation of the proposed program could exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board or result in the construction of new treatment facilities or expansion of existing facilities if the wastewater treatment provider has inadequate capacity to serve the proposed program.	NA	Less than significant	Less than significant	Less than significant	No
UTL-2	The proposed program could require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	NA	No Impact	No Impact	No Impact	No
UTL-3	The proposed program could require new or expanded water supply resources or entitlements or require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	UTIL-1	Less than significant with mitigation	No Impact	No Impact	No

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UTL-4	The proposed program could be served by a landfill with insufficient permitted capacity to accommodate the project solid waste disposal needs or the project could not comply with federal, state, and local statutes and regulations related to solid waste.	UTIL-2	Less than significant with mitigation	Less Than Significant	Less Than Significant	No
UTL-5	Construction and operation of the proposed program would require additional energy use that could result in wasteful consumption, affect local and regional energy supplies, or conflict with applicable energy efficiency policies or standards	NA	Less than significant	Less Than Significant	Less Than Significant	No

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ENVIRON

1 Introduction

The City of Los Angeles is participating in the development of Enhanced Watershed Management Programs (EWMPs) for the Upper Los Angeles River, Ballona Creek, Dominguez Channel, Marina del Rey, and Santa Monica Bay Jurisdictional Groups 2 and 3 Watershed Management Areas in compliance with the 2012 Regional Water Quality Control Board - Los Angeles Region (LARWQCB) National Pollution Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit (Order No. R4-2012-0175; National Pollutant Discharge Elimination System [NPDES] Permit No. CAS004001). The City must decide whether to submit the EWMPs prepared for these five watersheds to the LARWQCB. This California Environmental Quality Act (CEQA) review has been prepared to support this decision-making process.

The County of Los Angeles Department of Public Works and Los Angeles County Flood Control District published a Draft Program Environmental Impact Report (PEIR)² for all EWMPs within the County of Los Angeles. As a PEIR, this document may be used by individual Permittees to either satisfy fully CEQA requirements of individual EWMPs or to tier from for conducting their own project-specific CEQA analysis of individual EWMPs. Accordingly, to aid the City of Los Angeles Bureau of Sanitation (LASAN) Regulatory Affairs Division (RAD) and support the EWMP development, the City of Los Angeles has prepared this Addendum to the County PEIR. The County PEIR was intended to support decision-making by individual permittees such as the City of Los Angeles (City); this Addendum is an informational document, intended to be used in the planning and decision making process by the City and LASAN as provided for under Section 15164 of the CEQA. This Addendum incorporates the County PEIR by reference, and there are no changes or modifications to the PEIR. The Addendum summarizes those elements of the PEIR that are relevant to the City's decision on whether or not to submit the EWMPs to the LARWQCB. The Addendum has been prepared pursuant to CEQA (Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines to evaluate the potential environmental effects of EWMPs within the City's jurisdiction.

The timeline identified in the MS4 Permit requires that Permittees submit the EWMP to the LARWQCB by June 28, 2015, in order to be in compliance with the permit conditions. Because the implementation of each EWMP may potentially result in changes to environmental conditions, the Los Angeles County Flood Control District (LACFCD) prepared the PEIR in compliance with the CEQA to provide the public and the responsible and trustee agencies with information about the potential effects on the local and regional environment associated with implementation of the EWMPs. LASAN has prepared this Addendum to identify those elements of the PEIR that pertain to the City's ERWMPs.

As stated in the PEIR: "As individual projects identified in the EWMPs are fully developed, the implementing agency (i.e., the Permittee responsible for implementing the project) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA." The Addendum has not been prepared for individual projects, and therefore does not explicitly tier from the PEIR for this

² <http://dpw.lacounty.gov/lacfd/ewmppeir/> Accessed on March 23, 2015.

purpose. Such project-specific CEQA reviews will be conducted when individual project reach this level of design. The Addendum is at the programmatic level, consistent with the County PEIR.

1.1 Summary of Proposed Project

On December 28, 2012, the LARWQCB adopted the MS4 Permit (Order No. R4-2012-0175; NPDES Permit No. CAS004001) covering discharges within coastal watersheds from the collective storm sewer systems in Los Angeles County. The MS4 Permit regulates the discharge of stormwater runoff to waters of the United States from facilities owned and maintained by the LACFCD, the County of Los Angeles, and 84 incorporated cities within Los Angeles County (collectively referred to as Permittees). The purpose of the MS4 Permit is to achieve and maintain water quality objectives to protect beneficial uses of the receiving waters in the Los Angeles region. Each of the Permittees identified in the MS4 permit is responsible for meeting conditions of the permit for MS4 discharges occurring within their jurisdiction.

The MS4 Permit gives Permittees the option to customize their stormwater programs through the development and implementation of an EWMP to achieve compliance with receiving water limitations (RWLs) and water quality-based effluent limits (WQBELs). The City of Los Angeles has elected to exercise this option and has participated in five distinct watershed groups that fall within the City of Los Angeles jurisdiction including the EWMP groups formed for the Ballona Creek Watershed, the Upper Los Angeles River (ULAR) Watershed, the Dominguez Channel Watershed, Santa Monica Bay Jurisdictional Groups 2 and 3 (JG2 and JG3), and Marina Del Rey (refer to Figure 1-1). Accordingly, five separate Notices of Intent (NOIs) have been submitted to the LARWQCB for the development of EWMPs within the five watershed areas that fall within the City of Los Angeles jurisdiction. The Implementation of the EMWPs within the City of Los Angeles would be the responsibility of the City and would occur following approval of the EWMPs by the LARWQCB.

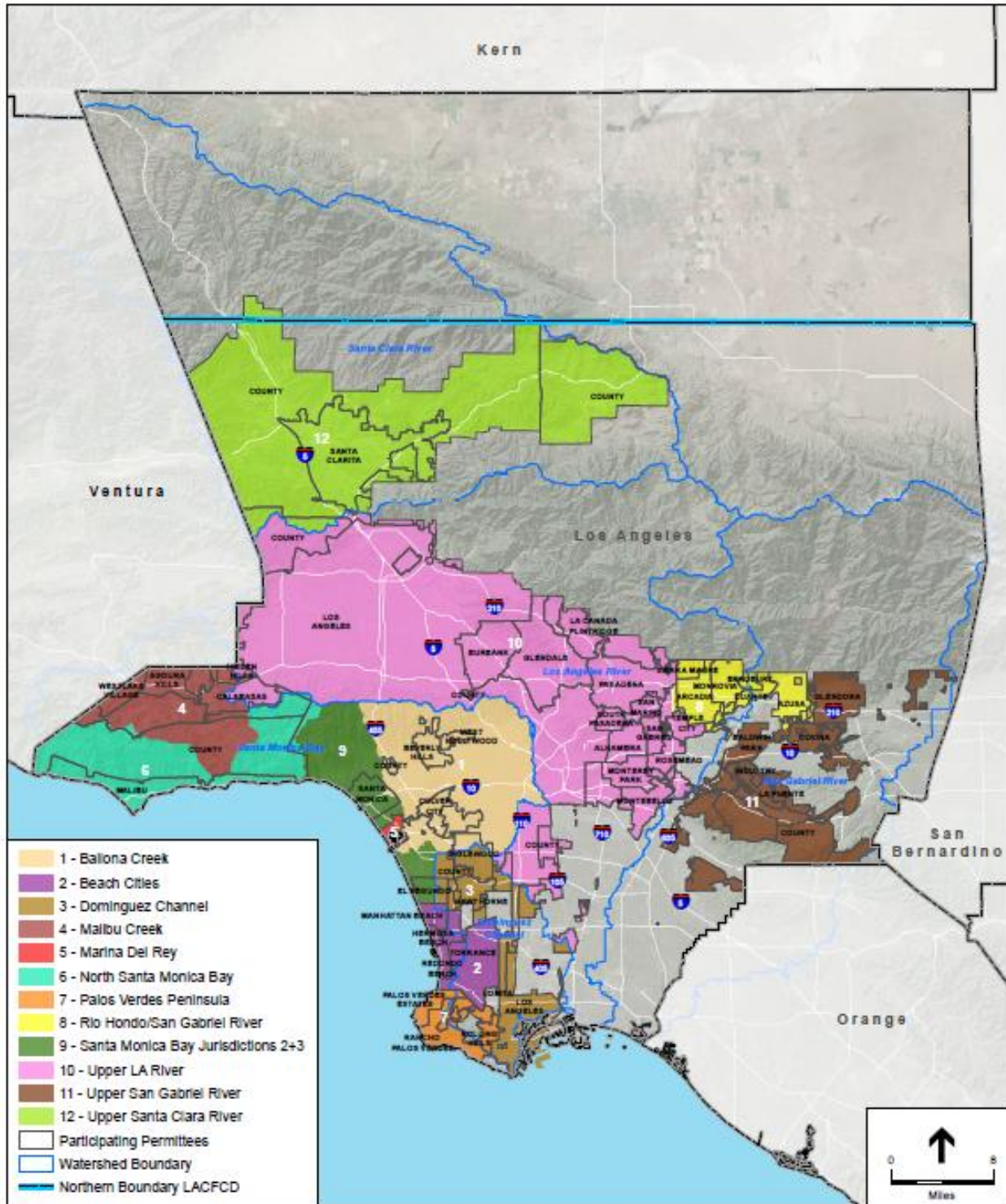


Figure 1-1. Los Angeles County EWMP Areas.

The MS4 Permit identifies conditions, requirements, and programs that municipalities must comply with to protect regional water resources from adverse impacts associated with pollutants in stormwater and urban runoff. MS4 discharges consist of stormwater and non-stormwater generated from point sources throughout a watershed, collected and conveyed through the MS4, and ultimately discharged into surface waters. The MS4 system includes curbs and gutters, man-made channels, catch basins, and storm drains throughout the Los Angeles region. Discharges may adversely affect receiving surface water quality with pollutants such as bacteria, nutrients (nitrogen and phosphorus), metals, pesticides, and other man-made organic compounds. Aquatic toxicity, particularly during wet weather, is also a concern. Stormwater and non-stormwater discharges of debris and trash are also a pervasive water quality problem in the Los Angeles region. Pollutants in stormwater and non-stormwater may have damaging effects on both human health and aquatic ecosystems when persistent at certain concentrations above water quality criteria/thresholds.

Through water quality assessments conducted by the LARWQCB, the LARWQCB and U.S. Environmental Protection Agency (USEPA) have established 33 Total Maximum Daily Loads (TMDLs) that identify Los Angeles County MS4 discharges as pollutant sources causing or contributing to water quality impairments. The MS4 Permit is designed to reduce pollutant loads into local surface waters. The MS4 Permit contains effluent limitations, receiving water limitations (RWLs), minimum control measures, and TMDL provisions and outlines the process for developing watershed management programs, including EWMPs. Specifically, the Permit Section VI.C.1.g (page 48) allows for watershed groups to collaborate in preparing an EWMP to achieve Permit compliance with RWLs. The intent of each EWMP is to comprehensively evaluate opportunities for collaboration on multi-benefit regional projects that retain MS4 discharges and also address flood control and/or water supply within the participating Permittees' collective jurisdictional boundaries.

The City of Los Angeles has participated in five EWMP groups for the watersheds within its jurisdiction. These working groups are comprised of the agencies detailed in Table 1-1 and illustrated in Figure 1-1. The development and implementation of each of the five EWMPs is a collaborative effort between the City of Los Angeles and the other Permittees that have opted to participate in the EWMP group in order to achieve compliance with the MS4 permit for those discharges within their jurisdiction.

Table 1-1: EWMP Participants and Watersheds.

Watershed Management Group	Affected Watersheds	Cities/Permittees	Lead/Coordinator
Upper Los Angeles River	Upper reaches of the Los Angeles River Watershed	Alhambra, Burbank, Calabasas, Glendale, Hidden Hills, La Canada Flintridge, Los Angeles, Montebello, Monterey Park, Pasadena, Rosemead, San Gabriel, San Marino, South Pasadena, Temple City, LA County, LACFCD	City of Los Angeles

Ballona Creek	Ballona Creek Watershed	Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, West Hollywood, LA County, LACFCD	City of Los Angeles
Dominquez Channel	Dominguez Channel Watershed, the Machado Lake Watershed, and the Los Angeles/Long Beach Harbors Watershed	El Segundo, Hawthorne, Inglewood, Los Angeles, Lomita, LA County, LACFCD	City of Los Angeles
Marina Del Rey	Marina del Rey Watershed	Culver City, Los Angeles, LACFCD, LA County	Los Angeles County
Santa Monica Bay	SMB JG2 and SMB JG3	Los Angeles, El Segundo, Santa Monica, LA County, LACFCD	City of Los Angeles

As required by the provisions of the MS4 Permit, each of the five EWMPs includes several components aimed at identifying priorities for water quality improvement and the mechanisms that will achieve those improvements. In general, these components include:

1. Stakeholder outreach and collaboration, so that development and implementation of the EWMP is a collaborative effort between Permittees, stakeholders, and the public.
2. Identification of water quality priorities, which serve as the basis for implementation and monitoring activities within the EWMP.
3. Identification of candidate watershed control measures that Permittees and stakeholders can customize to address water quality priorities.
4. Implementation of a Reasonable Assurance Analysis (RAA), so that the Permittees, stakeholders, and regulatory authorities can identify which control measures are likely to be the most effective, and have confidence in the performance of the selected watershed control measures.

The implementation of the five EWMPs and their watershed-specific compliance strategies (which are explained in more detail in Section 2.0) would address the need for reduction in urban runoff pollution through treatment and infiltration, as well as increasing stormwater retention throughout each watershed. The EWMPs vary for each watershed group, but generally provide customized stormwater programs to achieve compliance with applicable RWLs and WQBELs in accordance with the MS4 Permit through implementation of stormwater best management practices (BMPs) or watershed control measures. BMPs vary in function and type, with each BMP providing unique design characteristics and benefits from implementation. The overarching goal of BMPs in the EWMPs is to reduce the impact of stormwater and non-stormwater on receiving water quality and address the water quality priorities as defined by the MS4 Permit. The development of each EWMP is based on the evaluation and selection of multiple BMP types, including nonstructural (institutional) and distributed, centralized, and

regional structural watershed control measures that will be implemented to meet compliance goals and strategies under the 2012 MS4 Permit.

Structural control measures are constructed BMPs that reduce the impact of stormwater and nonstormwater on receiving water quality. They are broken into three categories:

- **Regional Structural BMPs**, which are meant to retain the 85th percentile storm over 24 hours from a contributing area. Generally, the 85th percentile storm is approximately 0.75 inches over 24 hours.
- **Centralized Structural BMPs**, which treat runoff from a contributing area of multiple parcels (e.g., facilities typically serving a contributing area on the order of tens or hundreds of acres or larger).
- **Distributed Structural BMPs**, which treat runoff close to the source and are typically implemented at a single- or few-parcel level (e.g., facilities typically serving a contributing area less than one acre).

Whether distributed, centralized, or regional, the major structural BMP functions are infiltration, treatment, and storage, which may be used individually or combination:

- **Infiltration**, where runoff is directed to percolate into the underlying soils. Infiltration generally reduces the volume of runoff and increases groundwater recharge.
- **Treatment**, where pollutants are removed through various unit processes, including filtration, settling, sedimentation, sorption, straining, and biological or chemical transformations.
- **Storage**, where runoff is captured, stored (detained), and slowly released into downstream waters. Storage can reduce the peak flow rate from a site, but does not directly reduce runoff volume.

The types of structural BMPs to be implemented vary with each EWMP, but each EWMP includes a variety of distributed, centralized, and regional BMPs. These are policies, actions, and activities which are intended to minimize or eliminate pollutant sources. Most institutional BMPs are implemented to meet Minimum Control Measure (MCM) requirements in the MS4 permit; MCMs are considered a subset of institutional BMPs. These BMPs are not constructed, but may have costs associated with the procurement and installation of items such as signage or spill response kits. The measures implemented in each EWMP are described in further detail in Section 2.3.

1.2 Objectives of the Project

The primary objectives of the EWMPs are:

- To collaborate among agencies (Permittee jurisdictions) across the watershed to promote more cost-effective and multi-beneficial water quality improvement projects to comply with the MS4 Permit;

- To develop watershed-wide EWMPs that will, once implemented, remove or reduce pollutants from dry- and wet-weather urban runoff in a cost-effective manner; and
- To reduce the impact of stormwater and non-stormwater on receiving water quality.

1.3 Purpose of the Addendum and Relationship to the PEIR

In accordance with the City of Los Angeles Municipal Code and City procedures, the decision to submit the EWMPs to the LARWQCB and commit to their implementation is a discretionary action and thus is subject to the California Environmental Quality Act, ("CEQA").

The City of Los Angeles has prepared this Addendum to the PEIR to provide a more focused evaluation of the effects of this program, emphasizing the City's EWMPs. The Addendum is otherwise fully consistent with the County PEIR. The PEIR is incorporated by reference to this document.

1.4 Documents Incorporated by Reference

In addition to the County PEIR, the following documents are incorporated by reference in this Addendum:

Ballona Creek Watershed Management Group, Enhanced Watershed Management Program (EWMP), prepared by City of Beverly Hills, City of Culver City, City of Los Angeles, City of Inglewood, City of Santa Monica, City of West Hollywood, County of Los Angeles, and Los Angeles County Flood Control District, 2015.

Ballona Creek Watershed Management Group, Enhanced Watershed Management Program (EWMP) Final Work Plan, prepared by City of Beverly Hills, City of Culver City, City of Los Angeles, City of Inglewood, City of Santa Monica, City of West Hollywood, County of Los Angeles, and Los Angeles County Flood Control District, June 2014.

Ballona Creek Watershed Management Group, Revised Notice of Intent: Enhanced Watershed Management Program (EWMP) and Coordinated Integrated Monitoring Program, December 2013.

California Regional Water Quality Control Board Los Angeles Region, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges Within the Coastal Watersheds of Los Angeles County, Order NO. R4-2012-0175, NPDES Permit NO. CAS004001, December 2012.

Dominguez Channel Watershed Management Area Group, Enhanced Watershed Management Program (EWMP), prepared by City of Los Angeles, County of Los Angeles, City of Hawthorne, City of Inglewood, City of El Segundo, City of Lomita, and Los Angeles County Flood Control District, 2015.

Dominguez Channel Watershed Management Area Group, Enhanced Watershed Management Program (EWMP) Work Plan, prepared by City of Los Angeles, County of Los Angeles, City of Hawthorne, City of Inglewood, City of El Segundo, City of Lomita, and Los Angeles County Flood Control District, June 2014.

Dominguez Channel Watershed Management Area Group, Notice of Intent: Enhanced Watershed Management Program (EWMP) and Coordinated Integrated Monitoring Program, June 2013.

Marina del Rey Enhanced Watershed Management Agencies, Marina del Rey Enhanced Watershed Management Program (EWMP), prepared for County of Los Angeles, Los Angeles County Flood Control District, City of Los Angeles, and City of Culver City, 2015.

Marina del Rey Enhanced Watershed Management Agencies, Marina del Rey Enhanced Watershed Management Program (EWMP) Work Plan, prepared for County of Los Angeles, Los Angeles County Flood Control District, City of Los Angeles, and City of Culver City, June 2014.

Marina del Rey Watershed Group, Revised Notice of Intent: Enhanced Watershed Management Program (EWMP) and Coordinated Integrated Monitoring Program, March 2014.

Santa Monica Bay Watershed Jurisdictions 2 & 3, Enhanced Watershed Management Program (EWMP), prepared by City of Los Angeles, Los Angeles County Flood Control District, County of Los Angeles, City of Santa Monica, and City of El Segundo, 2015.

Santa Monica Bay Watershed (Jurisdictional Group 2 and Jurisdictional Group 3), Notice of Intent: Enhanced Watershed Management Program (EWMP) and Coordinated Integrated Monitoring Program, December 2013.

Santa Monica Bay Watershed Jurisdictions 2 & 3, Enhanced Watershed Management Program (EWMP) Work Plan, prepared by City of Los Angeles, Los Angeles County Flood Control District, County of Los Angeles, City of Santa Monica, and City of El Segundo, June 2014.

Upper Los Angeles River Watershed Management Group, Enhanced Watershed Management Program (EWMP), prepared by City of Alhambra, City of Burbank, City of Calabasas, City of Glendale, City of Hidden Hills, City of La Canada Flintridge, City of Los Angeles, City of Montebello, City of Monterey Park, City of Pasadena, City of Rosemead, City of San Gabriel, City of San Marino, City of South Pasadena, City of Temple City, County of Los Angeles, and Los Angeles County Flood Control District, 2015.

Upper Los Angeles River Watershed Group, Notice of Intent: Enhanced Watershed Management Program (EWMP) and Coordinated Integrated Monitoring Program, June 2013.

Upper Los Angeles River Watershed Management Group, Enhanced Watershed Management Program (EWMP) Work Plan, prepared by City of Alhambra, City of Burbank, City of Calabasas, City of Glendale, City of Hidden Hills, City of La Canada Flintridge, City of Los Angeles, City of Montebello, City of Monterey Park, City of Pasadena, City of Rosemead, City of San Gabriel, City of San Marino, City of South Pasadena, City of

Temple City, County of Los Angeles, and Los Angeles County Flood Control District,
June 2014.

1.5 Summary of Document Contents

The remainder of this review is divided into the following major sections.

- **Section 2 Project Description** – This section first provides a brief description of the components of each watershed, followed by descriptions of the proposed programs contained in each EWMP.
- **Section 3 Environmental Analysis** – This section evaluates the potential environmental effects of the proposed project.
- **Section 4 Cumulative Impact Analysis** – This section evaluates potentially significant cumulative impacts
- **Section 5 Alternatives Analysis** – This section analyzes project alternatives and identifies the environmentally preferred alternative
- **Section 6 List of References** – This section provides a list of references that were used to prepare the environmental assessment.

2 Project Description

This section provides a brief overview of the project site's regional and local setting. Additional descriptions of the environmental setting as it relates to each of the environmental issues analyzed in this Addendum are included in the environmental setting discussions contained within Section 3.0. Also provided in this section is an overview of the EWMP control measures included in the five EWMPs for those watersheds within the jurisdiction of the City of Los Angeles. Specifically, this Project Description describes types of BMPs presented in the five EWMPs. The BMPs listed in each EWMP are in various phases of planning or implementation.

2.1 Overview of Environmental Setting

As detailed in Section 1.1 above, following the adoption of the MS4 Permit by the LARWQCB, some Permittees from each EWMP area formed Watershed Management Groups (WMGs) to collaborate on the development of EWMPs. The City of Los Angeles participated in five WMGs covering EWMP areas within the County of Los Angeles including the watershed management areas of ULAR, Ballona Creek, Dominguez Channel, Marina Del Rey, and Santa Monica Bay (refer to Figure 1-1). The geographic scope covered by each of these five EWMPs is detailed below.

2.1.1 Upper Los Angeles River

The area included in the ULAR EWMP is the largest of all the EWMP areas in Los Angeles County, approximately 479 square miles (Figure 2-1). The Los Angeles River is approximately 55 miles long, and five of six reaches lie within the ULAR EWMP area. The natural hydrology of the Los Angeles River watershed has been altered by channelization and the construction of dams and flood control reservoirs. The Los Angeles River and many of its tributaries are lined with concrete for most or all of their length. Soft-bottomed segments of the Los Angeles River occur where groundwater upwelling prevents armoring of the river bottom, most notably at the Glendale Narrows.

The Los Angeles River is segmented into six reaches by the California Water Quality Control Plan, Los Angeles Region (Basin Plan) as follows (listed from upstream to downstream; reach breaks are shown in Figure 2-1):

- Reach 6 begins at the headwaters of the Los Angeles River (the confluence of Arroyo Calabasas and Bell Creek) and extends to Balboa Boulevard.
- Reach 5 runs from Balboa Boulevard through the Sepulveda Basin.
- Reach 4 runs from Sepulveda Dam to Riverside Drive.
- Reach 3 runs from Riverside Drive to Figueroa Street.
- Reach 2 runs from Figueroa Street to Carson Street.
- Reach 1 runs from Carson Street to the estuary.

Major tributaries to ULAR EWMP area include Aliso Canyon Creek, Bell Creek, Bull Creek, Tujunga Wash, Burbank Western Channel, Arroyo Seco, Rio Hondo, and Compton Creek. The ULAR EWMP area also includes Lake Calabasas, Echo Park Lake, and Legg Lake.

Collectively, the ULAR EWMP area makes up over 57% of the total Los Angeles River watershed area. A breakdown of the areas associated with the participating MS4 Permittees is provided in Table 2-1. All drainage infrastructure operated and maintained by the LACFCD within the ULAR EWMP area have been covered under this EWMP. It should be noted that agencies participating in the ULAR EWMP have no jurisdiction over the land owned by the State of California (i.e., California Department of Fish and Wildlife [CDFW], the State Lands Commission, and California Department of Transportation [Caltrans]) and the U.S. Government.

Table 2-1: ULAR Watershed Land Area Distribution and EWMP Participation.

Agency	EWMP MS4 Permittee	EWMP Watershed (Acres)	% EWMP Watershed Area
City of Los Angeles	Yes	181,288.00	58.83%
County of Los Angeles	Yes	41,048.07	13.32%
LACFCD	Yes	NA	N/A
City of Alhambra	Yes	4,884.31	1.58%
City of Burbank	Yes	11,095.20	3.60%
City of Calabasas	Yes	4,005.68	1.30
City of Glendale	Yes	19,587.50	6.36
City of Hidden Hills	Yes	961.03	0.31
City of La Canada Flintridge	Yes	5,534.46	1.80
City of Montebello	Yes	5,356.38	1.74
City of Monterey Park	Yes	4,951.51	1.61
City of Pasadena	Yes	14,805.30	4.80
City of Rosemead	Yes	3,310.87	1.07
City of San Fernando	Yes	1,517.64	0.49
City of San Gabriel	Yes	2,644.87	0.86
City of San Marino	Yes	2,409.64	0.78
City of South Pasadena	Yes	2,186.20	0.71
City of Temple City	Yes	2,576.50	0.84
ULAR EWMP Watershed Area		308,163.16	100%

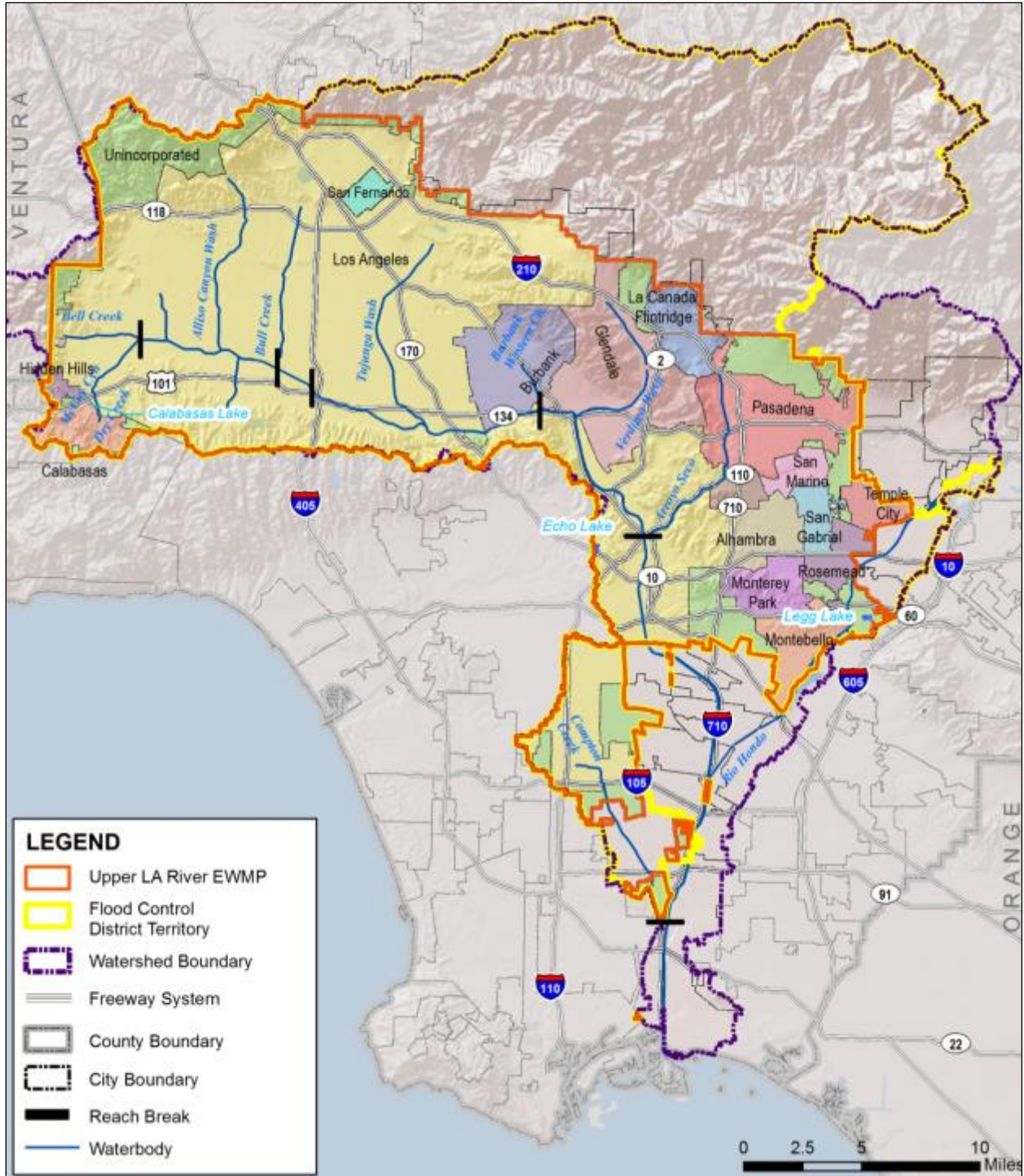


Figure 2-1. Upper Los Angeles River EWMP Area.

2.1.2 Ballona Creek

The Ballona Creek watershed is approximately 128 square miles in area and includes the cities of Beverly Hills and West Hollywood, and portions of the cities of Los Angeles, Inglewood, Culver City, and Santa Monica as well as unincorporated areas of the County of Los Angeles. Additionally, the LACFCD owns and operates drainage infrastructure within incorporated and unincorporated areas in the watershed. Figure 2-2 provides a map of the watershed boundaries and the delineations of the jurisdictions of the MS4 Permittees and other entities within the watershed.

Ballona Creek and Estuary are collectively approximately 9.5 miles long and divided in three hydrological units:

- Ballona Creek Reach 1 is approximately two miles long from Cochran Avenue to National Boulevard. This portion of the creek is channelized with vertical concrete walls.
- Ballona Creek Reach 2 is approximately four miles long between National Boulevard and Centinela Avenue where Ballona Estuary starts. Reach 2 is also channelized for the most part, with trapezoidal walls.
- Ballona Estuary starts at Centinela Creek and continues to the Pacific Ocean. This portion of the creek is approximately 3.5 miles of soft bottom channel and experiences tidal inundation.

Major tributaries to Ballona Creek include Sepulveda Canyon Channel (tributary to Reach 2) and Centinela Creek (tributary to Ballona Estuary). Other water bodies in the watershed include the Del Rey Lagoon and the Ballona Wetlands, which are both connected to the Ballona Estuary through tide gates. Note that although Benedict Canyon Channel is identified in TMDLs as a tributary to Ballona Creek, it is a closed channel that daylight where the channel meets Ballona Creek and is not identified in the Basin Plan as a waterbody in the watershed. As such, it is not considered a tributary for the purposes other than addressing the bacteria TMDL for the watershed. The City of Los Angeles is the responsible agency for the Del Rey Lagoon whose tributary area is approximately 25 acres. The Ballona Wetlands encompass approximately 626 acres (541 acres of natural wetlands area and 85 acres of roads, parking lots, levees and other structures). Approximately 460 acres of the Ballona Wetlands are located within the Ballona Creek watershed and the remaining portion is located in the Marina Del Rey watershed. The Ballona Wetlands are owned and/or managed by the CDFW and the State Land Commission.

The Ballona Creek Watershed Management Group (BCWMP) agencies have agreed to collectively develop the EWMP. Therefore, the EWMP covers all of the areas owned by the MS4 Permittees within the watershed. Collectively, the MS4 Permittees in the Ballona Creek watershed have jurisdiction over about 123 square miles or 96 percent of the total watershed area. The EWMP agencies have no jurisdiction over the land that is owned by the State of California (i.e., CDFW, the State Lands Commission, and Caltrans) or the US Government. A breakdown of the area by MS4 Permittee and other agencies is provided in Table 2-2. All of the drainage infrastructure operated and maintained by the LACFCD within the Ballona Creek Watershed Management Area is covered under the Ballona Creek EWMP.

Table 2-2. Ballona Creek Watershed Land Area Distribution and EWMP Participation.

Agency	EWMP MS4 Permittee	EWMP Watershed (Acres)	% EWMP Watershed Area
City of Los Angeles	Yes	65,272.89	83.21%
County of Los Angeles	Yes	3,164.76	4.03%
LACFCD	Yes	NA	--
City of Beverly Hills	Yes	3,618.95	4.61%
City of Culver City	Yes	3,125.00	3.98%
City of Inglewood	Yes	1,907.72	2.43%
City of West Hollywood	Yes	1,135.00	1.45%
City of Santa Monica	Yes	217.31	0.28%
Area of EWMP Agencies		78,441.63	100%
Caltrans	No	1,651.33	
State of California	No	909.34	
U.S. Government	No	674.49	
Total Area of the BC Watershed		81,676.79	

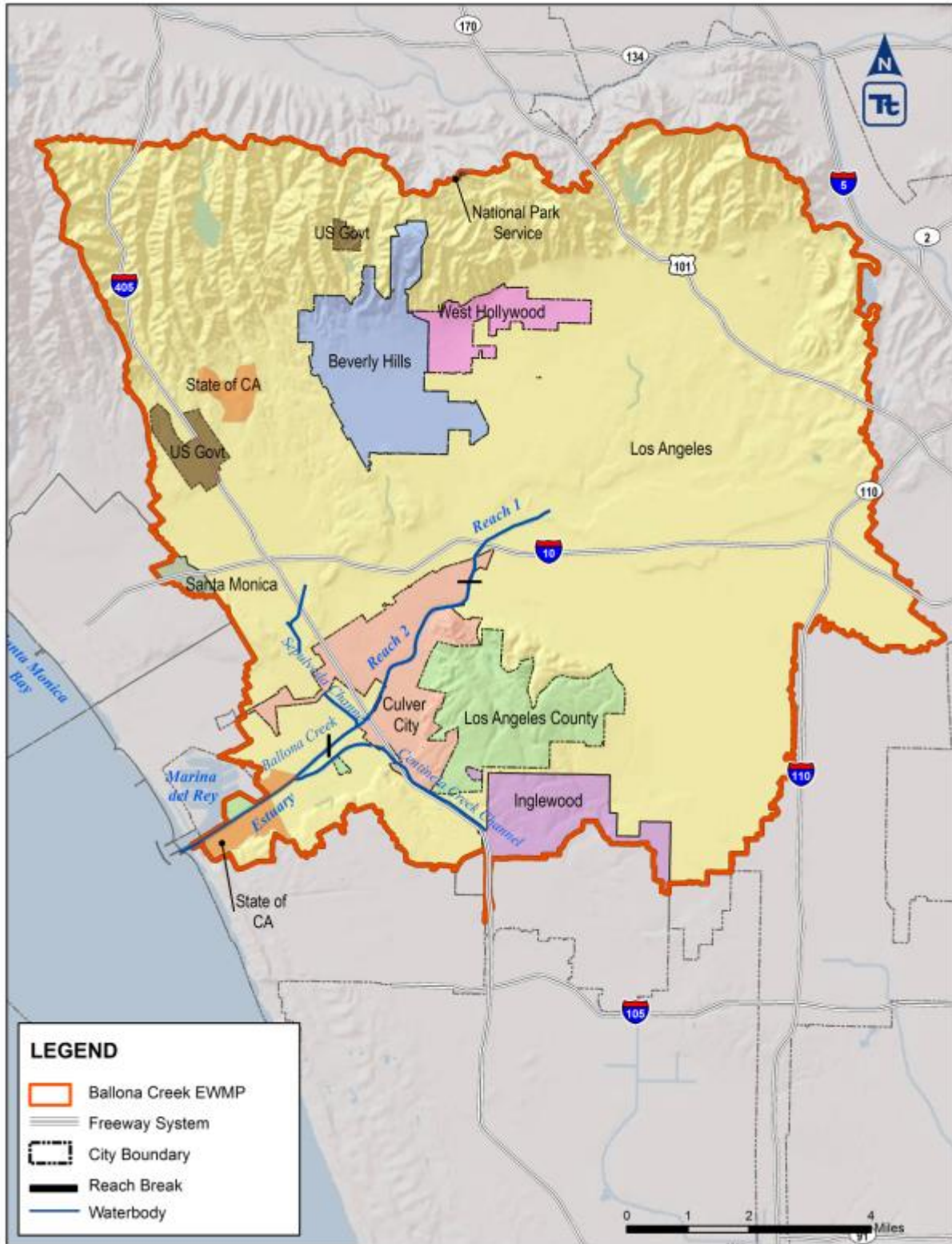


Figure 2-2. Ballona Creek EWMP Area.

2.1.3 Dominguez Channel

The DC WMA is located within the southern portion of Los Angeles County and encompasses approximately 133 square miles of land and water, including the Upper Dominguez Channel Watershed, the Machado Lake Watershed, and the Los Angeles/Long Beach Harbors Watershed as illustrated in Figure 2-3. The DC WMA is tributary to the water bodies listed below, which have been assessed by the State Water Resources Control Board (State Board):

- Dominguez Channel
 - Dominguez Channel (lined portion above Vermont Avenue)
 - Dominguez Channel Estuary (unlined portion below Vermont Avenue)
 - Torrance Carson Channel (Torrance Lateral)
- Machado Lake
 - Machado Lake
 - Wilmington Drain
- Los Angeles Harbor
 - Inner Cabrillo Beach
 - Consolidated Slip

This watershed is differentiated by a larger area of industrial land use, but also includes Beach Cities and Machado Lake.

The Dominguez Channel Watershed Management Group (DC WMG) accounts for just over 58 square miles, approximately 42 percent of the DC WMA. A breakdown of the area by MS4 Permittee and other agencies is provided in Table 2-3.

Table 2-3. Dominguez Channel Watershed Land Area Distribution and EWMP Participation.

Agency	EWMP MS4 Permittee	EWMP Watershed (Acres)	% EWMP Watershed Area
City of El Segundo	Yes	1,252.18	3.33%
City of Hawthorne	Yes	3,891.93	10.34%
City of Inglewood	Yes	3,884.28	10.32%
City of Lomita	Yes	1,227.70	3.26%
City of Los Angeles	Yes	19,243.25	51.12%
Los Angeles County	Yes	8,140.91	21.63%
LACFCD	Yes	N/A	N/A
Area of EWMP Agencies		37,640.25	100%

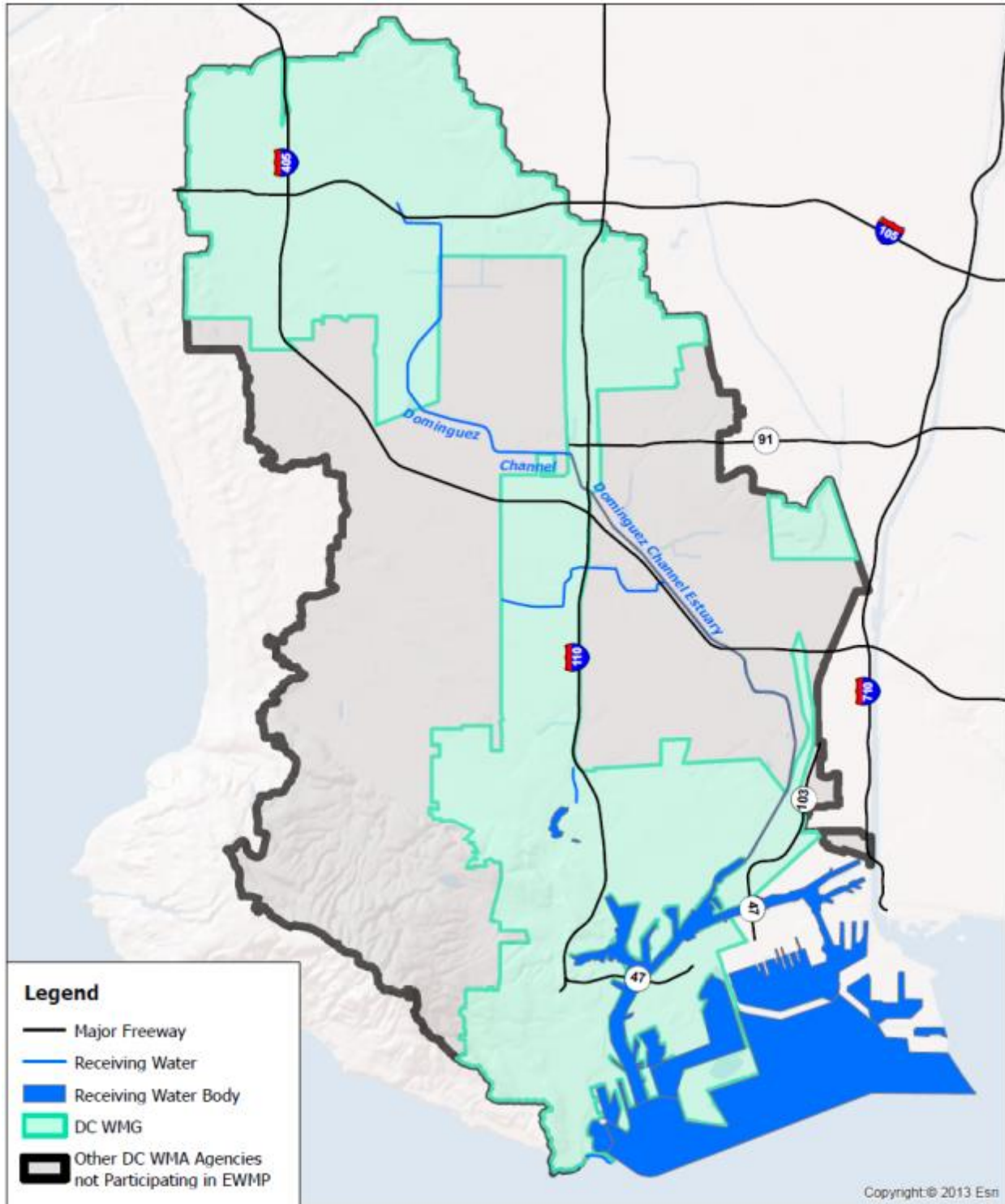


Figure 2-3. Dominguez Channel EWMP Area.

2.1.4 Marina Del Rey

The Marina Del Rey (MdR) Watershed Management Area (WMA) is bordered by the Santa Monica Bay (SMB) Watershed to the west and the Ballona Creek watershed to the north and east. The MdR Harbor is open to the Santa Monica Bay through the main channel and shares a common breakwater with Ballona Creek. The MdR WMA consists of four subwatersheds, referred to as Subwatersheds 1 to 4 as illustrated in Figure 2-4. The MdR watershed is very different from the other Los Angeles area watersheds because it is small and highly urbanized, with a large portion of the lower watershed within a high groundwater and tidally influenced former estuary.

The MdR Harbor is an active harbor for pleasure craft, consisting of the main channel and eight basins (A to H). Basins A, B, C, G, and H are known as the Front Basins. Basins D, E, and F are known as the Back Basins and are located in Subwatershed 1. The MdR watershed also includes the Venice Canals and the tributary area to the Ballona Lagoons, which discharge to the MdR Harbor, near the exit to the Santa Monica Bay (Subwatershed 2). The Caltrans Right-of-Way (ROW) areas, which are located mainly within the City of Los Angeles in Subwatersheds 1 and 4, and the portions of the Ballona Wetland located on State land in Subwatershed 1 are outside the boundaries of the MdR EWMP MS4 Permit area. A breakdown of the area by MS4 Permittee and other agencies is provided in Table 2-4.

Table 2-4. MdR Watershed Land Area Distribution and EWMP Participation.

Agency	EWMP MS4 Permittee	Sub-watershed 1 (Acres)	Sub-watershed 2 (Acres)	Sub-watershed 3 (Acres)	Sub-watershed 4 (Acres)	EWMP Watershed (Acres)	% EWMP Watershed Area
City of Los Angeles	Yes	32.9	278.1	70.5	589.8	971.3	69%
County of Los Angeles	Yes	336.2	46.8	0.0	12.7	395.7	28%
City of Culver City	Yes	0.0	0.0	0.0	42.2	42.2	3%
Los Angeles County Flood Control District	Yes	N/A	N/A	N/A	N/A	N/A	N/A
Area of EWMP Agencies		369.1	324.9	70.5	644.7	1409	100%
Caltrans	No	5.4	0.0	0.0	26.4	31.8	NA
State of California (Ballona Wetland)	No	49.3	0.0	0.0	0.0	49.3	NA
MdR Watershed Area		423.8	324.9	70.5	671.1	1490	-



Figure 2-4. Marina Del Rey EWMP Area

The MdR Harbor land area in Subwatershed 1 (369.1 acres) is almost entirely composed of unincorporated County land and has many small drains that discharge into all the basins. Subwatershed 2 (approximately 324.9 acres) does not drain into the MdR Harbor Front or Back Basins, but drains into the Venice Canal and the Ballona Lagoon, which discharge into the MdR Harbor main channel mouth. Boone Olive Pump Plant serves Subwatershed 3, a tributary area of 70.5 acres that lies entirely within the boundaries of the City of Los Angeles. The pump station discharges into Basin E. Subwatershed 4 lies mainly within the jurisdiction of the City of Los Angeles and the City of Culver City and totals approximately 644.7 acres (excluding Caltrans areas). Its corresponding runoff discharges into the Oxford Basin, a man-made flood control basin occupying approximately 10 acres within the County. Situated north of the Back Basins, Oxford Basin is operated by the LACFCD. It drains into Basin E through two tide gates and storm drain piping. The Oxford Retention Basin Multi-Use Enhancement Project is currently underway. Once completed this project will provide multiple benefits through enhanced water circulation, contaminated soil removal, bioswale construction as well as native and drought resistant landscaping. An expected outcome of the project is a reduction of pollutants discharged to Marina Del Rey Harbor Basin E from Oxford Basin.

2.1.5 Santa Monica Bay

The SMB EWMP Group area includes land area that drains into and includes the SMB. However, the geographical scope of the SMB EWMP Group area excludes areas of land totaling 9,124 acres for which the MS4 Permittees do not have jurisdiction, including land owned by the State of California, Caltrans, the U.S. Government, and an area of the Chevron Facility located in the City of El Segundo. As such, with the exclusion of these areas, the SMB EWMP Group area covers 25,238 acres.

Approximately 49 percent of the SMB EWMP Group area is open space, of which approximately 93 percent is located in the northern natural subwatersheds and approximately 7 percent is located in the Dockweiler natural subwatershed. The boundary of the SMB, as defined for the National Estuary Program, extends from the Los Angeles/Ventura County line to the northwest, southward to Point Fermin located on the Palos Verdes Peninsula to the southeast. The land area that drains into SMB follows the crest of the Santa Monica Mountains on the north to Griffith Park, then extends south and west across the Los Angeles coastal plain to include the area east of Ballona Creek and north of the Baldwin Hills. South of Ballona Creek the natural drainage is a narrow coastal strip between Playa del Rey and Palos Verdes (LARWQCB, 2011). Figure 2-5 shows the SMB EWMP Group within the SMB Watershed. A breakdown of the area by MS4 Permittee and other agencies is provided in Table 2-5.

Table 2-5. Santa Monica Bay Watershed Land Area Distribution and EWMP Participation.

Agency	EWMP MS4 Permittee	EWMP Watershed (Acres)	% EWMP Watershed Area
City of Los Angeles	Yes	18,934.64	75.02%
County of Los Angeles	Yes	130.40	0.52%
City of Santa Monica	Yes	4,987.47	19.76%
City of El Segundo	Yes	1,185.63	4.70%

LACFCD	Yes	NA	NA
Area of EWMP Agencies		25,238.14	100%
Caltrans	No	241.40	
Chevron	No	995.36	
State of California	No	7,885.12	
U.S. Government	No	2.50	
Total Area of the Santa Monica Bay Watershed		34,362.52	



Figure 2-5. Santa Monica Bay EWMP Area.

2.2 Overview of EWMP BMP Measures

A variety of BMP types are defined in the EWMPs. The following section provides an overview of non-structural and structural BMP types that will be part of the EWMPs. This section also includes a summary of planned and ongoing projects listed in the EWMPs for each BMP type to provide information on the anticipated scale, construction methods, and general locations of these BMP types. Additional information and figures on the location and distribution of potential and priority BMPs based on available data at the time of this report, are presented in Section 2.3, Overview of City of Los Angeles Watershed EWMP Control Measures.

2.2.1 Overview of Non-Structural Control Measures/Institutional BMPs

Non-structural measures and institutional BMPs are policies, actions, and activities which are intended to minimize or eliminate pollutant sources. Most institutional BMPs are implemented to meet Minimum Control Measure (MCM) requirements in the MS4 permit; MCMs are considered a subset of institutional BMPs. These BMPs are not constructed, but may have costs associated with the procurement and installation of items such as signage or spill response kits. The MS4 Permit categorizes institutional BMPs into six program categories:

- Development Construction Programs, which establish standards for stormwater management from construction sites of all sizes (e.g., with or without a stormwater pollution prevention plan [SWPPP]).
- Industrial/Commercial Facilities Programs, which establish standards for pollutant reduction and control measures at industrial and commercial facilities.
- Illicit Connection and Illicit Discharges (IC/ID) Detection and Elimination Programs, which describe procedures for identifying, eliminating, and reporting illicit connections and discharges to the stormwater system.
- Public Agency Activities Programs, which describe a broad range of municipal practices such as street cleaning, landscape management, storm drain operation, and more.
- Planning and Land Development Programs, which encourage the application of smart growth and low-impact development (LID) practices to development and redevelopment projects.
- Public Information and Participation Programs, which educate and engage the public on a broad range of pollution- and stormwater-related issues.

Within each EWMP, the MCMs are evaluated to identify potential modifications that will address water quality priorities, and provide justification for modification or elimination of any MCM that is determined to be ineffective (with the exception of the Planning and Land Development Program, which may not be eliminated or modified). MCM customization may include replacement, reduced implementation, augmented implementation, focused implementation, or elimination.

2.2.2 Overview of Structural Control Measures

The following discussion presents an overview of various types of structural BMPs. Included with each overview of the types of these BMPs is a discussion of the anticipated construction activities to implement these projects.

2.2.2.1 Distributed Structural BMPs

Because of their nature (intended to treat runoff at the parcel-scale), distributed BMPs are most likely to be implemented in high-density urban, commercial, industrial, and transportation areas, where they will either replace or improve upon existing stormwater infrastructure. These types of BMPs are generally “retrofit” type projects that replace existing impervious surfaces with pervious surfaces such as bioinfiltration cells, bioswales, porous pavement, and filter strips that tie into existing stormwater management systems as part of the MS4. These projects may also augment the existing MS4 with additional inlet screens, filter media systems, sediment removal systems, and diversions to sanitary sewer lines. Types of distributed structural BMPs to be implemented in the EWMPs include the following:

- **Site-scale detention.** Site-scale detention facilities are designed to detain runoff from an individual parcel and improve water quality through pollutant settling. Site-scale detention facilities can reduce peak flows and improve water quality by storing water in a basin before slowly draining the water through an orifice to the downstream waterway. Settling of sediment and sediment-bound pollutants is the primary pollutant removal mechanism. There are two primary types of site-scale detention: dry detention basins, in which runoff fully drains during storm events, and wet detention ponds, which capture water in a temporary storage zone above a permanent pool.

Anticipated Construction Activities: The construction of detention basins typically requires the permanent removal of aboveground infrastructure and/or surface materials such as asphalt and concrete for retrofit type projects and excavation and grading for projects on soil-covered sites. Ground disturbance for distributed detention is typically less than 1 to 2 acres in extent, but may extend in some limited applications up to 5 acres where space is available. Site soils must be excavated to create the desired storage volume for stormwater. The depth of excavation will vary with available space, existing grades, and desired storage volume. For these smaller-scale systems, excavation is likely to be several feet and up to 10 feet. Generally, excavation below 6 feet is limited by the size of these systems and available space to provide adequate slope grading for safety and stability. Berms may be used to increase storage to reduce cost of excavation. Berms for these types of projects are several feet. Higher berms may be possible in some limited locations where space is available. Increasing berm height increases the footprint of these facilities to accommodate side slopes for safety and stability factors. On parcels where there is adequate room, soils may be placed on-site to balance cut and fill; smaller parcels may necessitate the off-hauling of excavated soils. Construction of dry detention basins in areas with high groundwater may limit the depth of the basins to meet minimum groundwater separation distances. The construction of dry detention basins may include the installation of recreational elements (nets, benches, etc.) so that the basins can serve as playing fields when not inundated. Wet detention ponds may require engineering (separate outlet structures with low-flow

orifices, circulation elements, etc.) to ensure that the permanent pool does not become stagnant and a magnet for mosquito production (must be emptied within 72 hours). Detention basin includes berms and outlet structures that control the volume stored and the flow and velocity of the discharge.

- **Green infrastructure/Low-impact development (LID).** This BMP category describes a broad range of development elements that aim to manage and treat stormwater as a resource, and minimize the differences between pre- and post-development hydrology. BMP subtypes in this category include:

- Bioretention and Biofiltration. Bioretention areas are shallow, depressed, vegetated basins with permeable soil media and no underdrains. Runoff temporarily ponds on the surface of these basins before filtering through the soil. Biofiltration areas are bioretention areas with underdrains. Infiltration in these systems is considered incidental, although substantial infiltration can occur in some unlined systems.

Anticipated Construction Activities: Similar to distributed detention basins, distributed bioretention and biofiltration BMPs would typically require the permanent removal of aboveground infrastructure and/or surface materials such as asphalt and concrete for retrofit type projects and excavation and grading for projects on soil covered sites. Ground disturbance for LID distributed BMPs is typically less than 1 to 2 acres in extent, but may extend in some limited applications up to 5 acres where space is available and where linear projects extend to adjacent parcels. The extent of land disturbance depends on the type of distributed BMP and may be more linear for bioswales and filter strips, compared to larger continuous areas for bioretention cells that store and then filter or infiltrate stormwater. In areas proposed for biofiltration without suitably permeable soils, native soils will have to be excavated, amended, and put back in place, or replaced entirely with biofiltration media (e.g., coarse gravels). The replacement of local soils would likely require that those soils then be hauled off-site. Systems with underdrains may require more extensive excavation and construction so that the underdrain can be connected to the MS4. The depth of excavation for these distributed systems will vary from several feet and up to 10 feet depending on the thickness and number of filter and storage layers. Generally, excavation is limited to 4 to 6 feet below existing grade for these systems.

- Permeable Pavement. Permeable pavement is a stable load-bearing surface that allows for stormwater infiltration. Beneath the permeable surface is a crushed-rock/ aggregate reservoir that provides structural support while allowing runoff to percolate to the underlying soils. Permeable pavement can be fully infiltrating or can have an underdrain like biofiltration practices. The mixes for pervious concrete and porous asphalt exclude fines from the aggregate to create permeable void space. Permeable interlocking concrete pavers allow infiltration of stormwater through joints between the blocks.

Anticipated Construction Activities: Similar to distributed bioretention and biofiltration BMPs, porous pavement BMPs would typically require the permanent removal of aboveground infrastructure and/or surface materials such as asphalt and concrete for retrofit type projects and excavation and grading for projects on soil covered sites. Porous pavement projects are generally retrofit type projects to increase infiltration and/or filtering of stormwater, but may include installation in new development and redevelopment, which may require clearing and grubbing activities prior to installation. Ground disturbance for these systems is typically less than 1 to 2 acres in extent, but may extend in some limited applications up to 5 acres where space is available. The depth of excavation for these distributed systems will vary from several feet and up to 6 feet depending on the thickness and number of structural support, filter, underground stormwater storage, and underdrain transmission layers. Systems with underdrains will require additional excavation. Generally, excavation is limited to 2 to 6 feet below existing grade for these systems. The installation of permeable pavement is frequently associated with the reconstruction of transportation elements such as parking lots, sidewalks, non-motorized paths, and related features.

- Green streets. Green streets are systems of multiple BMPs arranged in a linear fashion within the street right-of-way (as opposed to a parcel-based implementation). Green streets are designed to reduce runoff and improve water quality of runoff from the roadway and adjacent parcels by replacing impervious surfaces with more porous ones, and directing stormwater to vegetated systems that can filter and infiltrate stormwater. Bioretention, biofiltration, and permeable pavement BMPs are commonly used in conjunction and can be hydraulically connected using subsurface stone reservoirs.

Anticipated Construction Activities: The installation of green street BMPs is similar to the construction activities that are summarized for the porous pavement and the LID-type distributed BMPs provided above as these include elements of both these types. These BMPs would typically require the permanent removal of aboveground infrastructure and/or surface materials such as asphalt and concrete for retrofit type projects and excavation and grading for projects on soil covered sites. Ground disturbance for green streets is typically less than 1 to 2 acres in extent, but may extend in some limited applications up to 5 acres where space is available and where these more linear projects extend to adjacent parcels. In areas proposed for biofiltration without suitably permeable soils, native soils will either have to be excavated, amended, and put back in place, or replaced entirely with biofiltration media (e.g. coarse gravels). The replacement of local soils would likely require that those soils then be hauled off-site. Systems with underdrains may require more extensive excavation and construction so that the underdrain can be connected to the MS4. The depth of excavation for these distributed systems will vary from several feet up to 6 feet depending on the thickness and number of filter and storage layers. Generally, excavation is limited to 4 feet below existing grade for these systems.

- Infiltration BMPs. Infiltration BMPs capture and infiltrate runoff into unvegetated underlying soils. Runoff is typically stored in subsurface trenches or vaults filled with engineered soil media, gravel, or concrete chambers. There are multiple types of infiltration BMPs, including: dry/wet wells, which are gravel-surrounded vaults with perforated walls that receive runoff from a pipe and allow it to infiltrate into the ground, and infiltration trenches, which are media-filled trenches that capture runoff in pore space prior to infiltration.

Anticipated Construction Activities: The ground disturbance footprint necessary to install infiltration BMPs can vary depending on the project's size and location. As illustrated above, infiltration trenches tend to be linear features and as such typically have relatively small footprints (less than 1 acre) unless they are very long (e.g., associated with transportation upgrades – roads, rail corridors, etc.). Subsurface excavation is typically required to replace native soils with highly porous infiltration media, vaults or other subsurface storage structures that will retain runoff and allow it to infiltrate into the subsurface. Larger underground storage and infiltration structures will require greater depths and volume of excavation. These types of infiltration BMPs may disturb larger (2 to 3 acres) areas. Larger systems are designed for multi-parcels and are characterized as centralized BMPs rather than distributed BMPs that are for one to two parcels. Depth of excavation of infiltration BMPs will depend on the storage requirements and depth to groundwater. Minimum separation distances of 10 feet to groundwater are typical. Excavation for these distributed type infiltration projects is generally 2 to 4 feet for infiltration trenches and 4 to 8 feet for vault and dry well systems. Dry/wet wells require deeper excavation but are more localized and smaller in footprint.

- Bioswales. Bioswales are BMPs that convey storm flow through vegetated, shallow depressions to remove sediment-associated pollutants by settling and filtering mechanisms. Infiltration and filtration through soil media are not key components of bioswales; rather, bioswales are typically implemented to act as pretreatment and used to transport runoff to an associated bioretention cell or infiltration type of distributed BMP to provide additional pollutant removal and volume reduction. There are two primary types of bioswales: vegetated swales (which are linear), vegetated channels that convey concentrated flow to another structural BMP (detention, infiltration, storage), and vegetative filter strips (which are more broadly sloped than swales).

Anticipated Construction Activities: The construction of bioswales typically requires the removal and off-hauling of any impermeable surfaces within the bioswale footprint, and the regrading of site soils to facilitate drainage to the associated storage/infiltration BMP. Bioswales with more landscaping and natural contouring elements may have more complex grading.

- Planter Boxes. Planter boxes are bioretention systems enclosed in concrete structures. They are most commonly designed to drain runoff from paved areas

or roofs. They are typically used in urbanize settings where space constraints limit the implementation of other LID elements such as bioswales and bioretention systems. Planter boxes may be designed to both filter and store runoff using a series of filter media and aggregate layers below the vegetated layers. They can be used in combination with rain barrels and cisterns that store the runoff and then direct it these boxes to filter the runoff.

Anticipated Construction Activities: Construction activities associated with planter boxes will be in most cases much less than other types of distributed BMPs as the footprint of these BMPs are generally smaller and integrated into the construction and design of existing buildings and structures. The space saving advantages limits construction disturbance. Planter boxes for retrofit projects are generally fabricated off-site and installed after the ground surface is graded and prepared for the planters. Soil, filter media, and aggregate are generally brought to the site and placed in the planter boxes per the design requirements. Some excavation may be performed if portions of the planters are set below ground and connected to existing drainage pipes and MS4 through an underdrain system in the planter box.

- Rainfall Harvest. Rainfall harvesting improves water quality by intercepting rooftop runoff and lowering the overall impervious impact of a developed site. Runoff can be reduced through interception and evapotranspiration on green roofs or used for alternative uses with a cistern or rain barrel. There are multiple kinds of rainfall harvest mechanisms; two of the more common are green roofs and cisterns/rain barrels. Green roofs are engineered, vegetated roof structures meant to intercept rainfall within a plant growth medium. Cisterns and rain barrels are storage tanks used to intercept and store rooftop runoff for nonpotable use such as landscape irrigation or gradual infiltration.

Anticipated Construction Activities: Similar to planter boxes, construction activities associated with green roofs and cisterns will be in most cases much less than other types of distributed BMPs as the footprint of these BMPs are generally smaller and integrated into the construction and design of existing buildings and structures. Construction activities associated with rainfall harvest systems tend to be minimal unless cisterns are placed underground, in which case subsurface excavation would be necessary. The depth and extent of excavation will depend on the size of the cisterns, but for single to several parcel distributed systems, the excavation will generally be limited to 4 to 6 feet and an area of less than an acre.

- Flow-Through Treatment BMPs. Manufactured flow-through devices are commercial products that aim to provide stormwater treatment using patented, innovative technologies. Typical types of manufactured devices for stormwater management include cartridge/media filters and high-flow biotreatment devices. Cartridge/media filters are proprietary filtration devices used to remove

pollutants; high-flow biotreatment devices are modular, vault-type practices that contain high-flow media and typically incorporate vegetation.

Anticipated Construction Activities: The construction activities necessary to install flowthrough treatment BMPs can vary based on the location, size, and configuration of the BMP. These BMPs are generally installed as part of the MS4 within catch basins and curb inlets. Typically, flow-through BMPs have a relatively small footprint (less than 1 acre) because they are designed to provide a higher rate of pollutant removal/transformation than less engineered approaches (e.g. infiltration trenches). Stormwater moves through most flow-through treatment BMPs via gravity flow. This may require expansion of existing catch basins or installation of new catch basin or vaults to intercept and direct storm flows to these treatment units and back into the MS4. This may then require limited subsurface excavation and off-hauling to create the below-grade space for the treatment device. The extent and volume of excavation is much less than LID, retention and Green Street projects.

- Source Control BMPs. Source control structural BMPs are commercial products designed to treat runoff in highly urbanized environments. Mechanical separation, or more complex physicochemical processes, provides separation of gross solids and other pollutants. Many models feature media or materials designed to sequester hydrocarbons and other pollutants. Two types of source control BMPs include catch basin inserts, which use nets, screens, fabric, or similar filtration media to separate sediment and gross solids from stormwater, and hydrodynamic separators, which use screens, baffles, or vertical flow to separate the two.

Anticipated Construction Activities: Similar to flow-through devices, the construction activities necessary to construct source control BMPs can vary based on the location, size, and configuration of the BMP, but are generally less than other types of distributed BMPs. Source control measures such as catch basin inserts and connector pipe screens are typically installed as retrofits to the existing MS4 within catch basins and curb inlets, and generally do not result in an increased ground disturbance footprint. Hydrodynamic separators may require expansion of existing catch basins or installation of new catch basins or vaults to intercept and direct storm flows to these treatment units and back into the MS4. This may then require limited subsurface excavation and off-hauling to create the below-grade space for the treatment device. The extent and volume of excavation is much less than LID, retention and Green Street projects, and is usually limited to less than one acre.

Additional information and figures on the location and distribution of potential and priority BMPs, where data is available, are presented in Section 2.5, Overview of City of Los Angeles EWMP Watershed Control Measures.

2.2.2.2 Centralized Structural BMPs

Centralized structural BMPs use similar elements to the LID, infiltration and biofiltration type BMP used in distributed structural BMPs, but collect, store, treat and filter stormwater from multiple parcels and much larger drainage areas. Centralized BMPs also include diversion and treatment type BMPs that use similar technologies for these types of BMPs under distributed BMPs, but can be implemented on a much larger scale collecting, diverting and treating urban runoff (dry-weather flows) or limited stormwater flows from multiple parcels and large drainage areas. Therefore, centralized structural BMPs require greater footprints for construction and implementation, but provide a greater potential for water quality improvement through the filtering, treatment and/or infiltration of greater volume and rates of stormwater and urban runoff.

Centralized BMPs that include storage and infiltration or storage and use have similar functions and construction methods to regional BMPs using the same stormwater management elements. However, regional BMPs have the distinct requirement per the Permit to retain on-site the 85th percentile 24-hour storm event for the drainage area served by the BMP (i.e., in the Los Angeles area, the 85th percentile storm is around 0.75 inch of rain in a 24-hour period). Finally, centralized BMPs include two unique BMP types, treatment wetlands and stream/creek restoration projects. Unlike the other structural BMP types described, these BMPs use natural systems to filter and clean the water. Treatment wetlands are typically off-line treatment systems that are not in the receiving waters, but may have habitat benefits through the establishment of more native plants and ecosystems. Creek, river, and estuary restoration projects provide a unique opportunity to restore natural cleansing processes, reestablish habitats and address impacts from hydromodification and urban runoff. These projects are the only BMPs that are implemented within the receiving water. Types of centralized structural BMPs and the definitions for these BMPs (which were taken from Los Angeles Department of Public Works' "Structural Fact Sheets") include the following:

- **Infiltration BMPs.** Infiltration facilities are designed to decrease runoff volume through groundwater recharge and improve water quality through filtration and sorption. Facilities can incorporate engineered media to improve percolation into native soils. Infiltration facilities can be open-surface basins or subsurface galleries. Surface infiltration basins can be vegetated to encourage evapotranspiration and aesthetics; subsurface infiltration galleries are often used when limited land is available for BMP implementation. Catch basins divert stormwater to the infiltration galleries, while bioswales capture and treat additional urban runoff.

Anticipated Construction Activities: Centralized infiltration facilities are generally larger than distributed BMPs and can vary from 2 to 10 acres in size, depending on the number of parcels (drainage area). Subsurface excavation is typically required to replace native soils with highly porous infiltration media, vaults or other subsurface storage structures that will retain runoff and allow it to infiltrate into the subsurface. Larger underground storage and infiltration structures will require greater depths and volume of excavation. Depth of excavation of infiltration BMPs will depend on the storage requirements and depth to groundwater. Minimum separation distances of 10 feet to groundwater are typical. Excavation for these centralized infiltration project is generally 2 to 6 feet for surface infiltration and 4 to 10 feet for vault or infiltration gallery systems. Excavated

soils must also be off-hauled unless the site is of an adequate size to allow balancing of cut and fill on-site. Subsurface infiltration galleries require that subsurface soils be excavated and replaced with highly permeable structures that rapidly infiltrate stormwater. These structures are typically transported to the site on flatbed trucks and then lowered into the ground using specialized cranes and related equipment. Subsurface infiltration galleries also require pretreatment facilities to remove sediment and debris prior to entering the galleries or vaults to reduce the potential for clogging. These systems increase the project footprint and required excavation by 25 to 50 percent of the vault footprint.

- **Capture and Use BMPs.** Capture and use BMPs capture stormwater runoff and store it for later use, typically as irrigation water.

Anticipated Construction Activities: The construction activities for these BMPs are similar to those summarized for the infiltration galleries above with the exception that these galleries and vaults are designed to retain and reuse (not infiltrate) the stormwater. In addition to the anticipated ground surface disturbance and excavation for the installation of the underground storage units, these systems also require a pre- and post-treatment system that generally consist of additional and more sophisticated treatment steps and thereby a larger footprint. In addition, these systems need to be connected to a distribution system for the treated water that can be used for irrigation or for grey water or groundwater recharge systems. This additional infrastructure will require additional construction grading, excavation, and transportation of materials and equipment on and off site.

- **Bioinfiltration BMPs.** Centralized bioinfiltration BMPs are a larger-scale version of their distributed counterpart, and typically incorporate elements of both infiltration (using native soils or underdrains) and treatment (using vegetated swales or filter strips).

Anticipated Construction Activities: Bioretention and biofiltration BMPs typically require the permanent removal of aboveground infrastructure and/or surface materials such as asphalt and concrete for retrofit type projects and excavation and grading for projects on soil covered sites. Ground disturbance for bioinfiltration centralized BMPs is typically 2 to 5 acres in extent, but may extend in some limited applications up to 10 acres where space is available. The extent of land disturbance depends on the type of BMP and may be more linear for bioswales and filter strips, compared to larger continuous areas for bioretention cells that store and then filter or infiltrate stormwater. In areas proposed for biofiltration without suitably permeable soils, native soils will either have to be excavated, amended, and put back in place, or replaced entirely with biofiltration media (e.g., coarse gravels). The replacement of local soils would likely require that those soils then be hauled off-site. Systems with underdrains may require more extensive excavation and construction so that the underdrain can be connected to the MS4. The depth of excavation for these distributed systems will vary from several feet to up to 10 feet depending on the thickness and number of filter and storage layers. Generally, excavation is limited to 4 to 6 feet below existing grade for these systems.

- **Detention BMPs.** Centralized detention facilities are designed to detain runoff and improve water quality through pollutant settling. Facilities encourage settling by decreasing runoff flow rates and allowing ponding to occur. Detention facilities can be open-surface practices or subsurface galleries and can be dry during non-rainy seasons or wet year-round. Surface detention basins are designed to detain stormwater runoff for a specified amount of time so that particle-bound pollutants can settle. Subsurface detention galleries are underground storage systems designed to detain water in areas where limited land is available for BMP implementation.

Anticipated Construction Activities: Centralized detention facilities can range from between an acre to 5 acres in size, and up to 10 acres. Surface detention basins require the removal and off-hauling of surface armoring and infrastructure, as well as the excavation of adequate soil to create the target storage volume. Excavated soils may either be balanced on-site or hauled off-site; the latter is more likely in most cases due to the larger size of centralized basins. Surface detention basins may in some cases be utilized as recreational facilities during the dry season, allowing for the installation of features such as athletic fields and benches. Subsurface detention galleries require the excavation of native soils and their replacement with engineered structures that detain water underground. The construction and installation of these structures can be complex and require the use of specialized cranes and related construction equipment.

- **Treatment Facilities and Low-Flow Diversions.** Other centralized water quality technology falls into the low-flow diversion (LFD) and treatment facilities subcategories. LFDs reduce stormwater pollution by diverting a design flow rate to a sanitary sewer for treatment. Treatment facilities convey stormwater through a physical, chemical, or radiological treatment system before returning it to the original channel, or diverting it for beneficial reuse. Below are photographs of an example LFD. LFDs may include on-site treatment of the diversion low flows prior to discharge back into the storm drain, or diversion to a local wastewater treatment plant

Anticipated Construction Activities: Low-flow diversions and treatment facilities usually have a relatively small footprint of less than 2 acres. Construction typically requires subsurface excavation and off-haul of excavated soils in order to create adequate room for the subsurface engineered structures. The installation of these BMPs can often be complex due to the need to retrofit existing stormwater infrastructure and, in the case of LFDs, connect to active wastewater treatment infrastructure.

- **Constructed Wetlands.** Constructed wetlands are engineered, shallow-marsh systems designed to control and treat stormwater runoff. Particle-bound pollutants are removed through settling, and other pollutants are removed through adsorption and biogeochemical transformation. Constructed wetlands must always maintain a baseflow into the system, which can come from an intersected groundwater or an associated LFD using dry-weather flows. There are two primary types of constructed treatment wetlands: 1) wetland basins, which have shallow permanent pools and outlet structures that regulate dewatering, and 2) flow-through/linear wetlands, which are typically constructed parallel to existing channels so water can be easily diverted in/out of the wetland.

Anticipated Construction Activities: Due to their multi-benefit nature and their ability to provide significant habitat benefits (most wetlands within the Los Angeles Basin have been lost to development and urbanization), most constructed wetland projects are greater than 5 acres in size and may be up to 10 acres or larger. Typical constructed wetland projects require extensive grading of site soils, though excavated soils are often balanced on-site to provide material for levees, berms, ecotones, and other flood control/habitat features. Many constructed wetland projects require the construction/installation of water control structures such as screw gates and culverts to manage how water is directed into, out of, and through the wetland. Constructed wetlands are often actively planted to accelerate the establishment of mature wetland vegetation and resultant stormwater treatment.

- **Creek/River/Floodplain/Estuary Restoration.** This category includes multi-benefit projects that typically combine elements of habitat restoration for fish and wildlife as well as flood management and water quality improvement. Project components such as setback levees, floodplain bench excavation, levee breaches, and other actions can increase the flood storage capacity of a water body and thereby slow flow rates.

Anticipated Construction Activities: These projects may require ground disturbance and construction to convert lined flood channels into more naturalized creek/river systems. Projects are typically greater than 5 acres in size, and many have footprints of over 10 acres. This category of BMP may require removal and off-hauling of concrete and asphalt, grading/excavation/off-hauling of site soils (particularly if contaminants are present, since they could pose a threat to the health of fish and wildlife), the construction of elements such as setback levees and water control structures, and active revegetation with native plants. Projects that aim to enhance habitats within more naturalized settings (e.g., floodplain expansion along an unarmored/channelized creek) would have to account for the potential for construction to disturb existing natural communities, and incorporate appropriate impact avoidance/minimization/mitigation measures, though most projects are designed to be self-mitigating.

- **Multi-benefit flood management projects.** This category includes a broad range of redevelopment, transit, transportation improvement, and related projects that are designed to result in direct or indirect benefits to flood management.

Anticipated Construction Activities. Multi-benefit flood management projects are typically expansive projects that range from a few to tens of acres in size. Construction requirements can vary extensively based on the nature of the project. Because of their scale, multi-benefit flood management projects usually require extensive excavation and grading of site soils, off-hauling of soils and related materials, utility relocation, infrastructure construction, and related activities. It is not uncommon for these types of projects to be constructed over multiple construction seasons.

Additional information and figures on the location and distribution of potential and priority BMPs, where data is available, are presented in Section 2.3, Overview of City of Los Angeles Watershed EWMP Control Measures.

2.2.2.3 Regional Structural BMPs

Regional structural BMPs are those that can capture the volume of water from an 85th percentile, 24-hr storm in a contributing watershed, known as the design volume (generally, the 85th percentile storm is approximately 0.75 inches over 24 hours). The two types of regional BMPs are retention/infiltration and capture and use, though many regional projects would incorporate more than one BMP type. The definitions of these BMPs are the same as for centralized BMPs (described in Section 2.2.2.2 above) with the exception that they can capture the design volume. Like the centralized BMPs, regional BMPs can be implemented in a broad range of land use types, from high-density urban to open space, and can have multiple benefits (e.g. habitat, recreation, aesthetics).

Anticipated Construction Activities: The construction activities for regional BMPs are generally similar to those of their centralized counterparts, with the exception of regional retention BMPs, which must have adequate storage capacity to hold runoff from the design storm. The need for this capacity will generally result in more extensive excavation and off-hauling of site soils.

Larger, multi-benefit regional BMPs are similar to centralized multi-benefit regional flood management projects (above) that their scale and complexity often requires an intensive construction effort executed over multiple seasons.

Additional information and figures on the location and distribution of potential and priority BMPs, where data is available, are presented in Section 2.3, Overview of City of Los Angeles Watershed EWMP Control Measures.

2.3 Overview of City of Los Angeles Watershed EWMP Control Measures

Summarized below are the general characteristics of the watersheds within the five EWMP Groups for those watersheds within the jurisdiction of the City of Los Angeles and the overall strategies for BMP implementation that reflect these characteristics.

A key outcome of the regional project selection process in each of EWMP is the selection of signature regional projects that are summarized in the sections below. Complimentary to the regional BMP program, robust green infrastructure programs will be critical to achieving water quality compliance in each of the watersheds. While the regional BMP program is structured around large projects that are likely to be individually planned and designed specifically for available parcels, the green infrastructure components of the EWMPs will implement vast numbers of distributed, small control measures in available rights-of-way, on residential parcels and on available public parcels (where regional BMPs are not feasible/desirable). Not only are these green infrastructure programs critical to the success of each EWMP, they provide an opportunity for multiple benefits to the local community. For example, the City of Los Angeles has already adopted a number of green infrastructure-based programs that promote water quality improvement as a primary or secondary objective. For instance, Table 2-6 provides an overview of the many street programs that the City of Los Angeles and its partners participate in. Recently, the City of Los Angeles adopted an ordinance that incorporates green infrastructure requirements for streets projects. These types of programs and ordinances represent the initial stages of developing a comprehensive infrastructure programs specifically designed to meet water quality objectives.

Table 2-6. Summary of the City of Los Angeles’ Green Infrastructure-Related Streets Programs.

Street Program	Description of Program & Objectives	Includes Stormwater Elements	Identifies & Prioritizes Opportunities	Demonstration Projects	Establishes Standards	Systematizes Implementation
Green Streets	Designs streets & sidewalks to capture and/or infiltrate runoff in drought-tolerant bioswales and permeable pavement.	X	X	X	X	X
Great Streets	Active mayoral initiative in early stages of design and planning.		X	X	X	
Complete Streets	Planning and guidance document with conceptual designs for streets. Complete Streets Design Guide is Companion to Mobility Plan 2035	X			X	X
Green Alleys Program	Sister to Green Streets Program. Effort began as a study led by USC and NGO partners.	X	X	X	X	X
GRASS Program	Collaboration between LASAN, Cal Poly, and UCLA. Task to create a priority grid of stormwater capture greenways.	X	X	X		
Water LA	An NGO-led effort, this program promotes “urban acupuncture” that includes installing shallow infiltration basins in the parkways of residential neighborhoods.	X	X	X	X	X

In addition, the LID program is an important component of each EWMP. While individually, LID projects are smaller than regional projects, when deployed across numerous parcels throughout the watershed, they can collectively make significant progress towards improving water quality and achieving RWLs. Since the vast of runoff from the developed portions of the watersheds is generated from impervious areas on parcels, LID is a natural choice as a key EWMP strategy to treat runoff from parcel-based impervious areas. LID can be viewed as the “first line of defense” due to the fact that the water is treated on-site before it runs off from the parcel and travels downstream. Especially for areas where regional opportunities do not exist downstream, LID is an effective strategy that will only be limited by the extent of implementation.

Each EWMP incorporates institutional BMPs, which are non-constructed control measures that limit the amount of stormwater runoff or pollutants that are transported within the MS4 area. If institutional control measures are effective, they ultimately offset the need for more expensive structural control measures. Most institutional BMPs are implemented to meet requirements for Minimum Control Measures (MCMs) in the MS4 Permit. Specific institutional BMPs currently

implemented by the Permittees as part of these stormwater program categories are reported in the Los Angeles County MS4 Permit Unified Annual Report³.

The MCMs that were implemented as part of the 2001 Permit are assumed to be a component of the “baseline” condition for the EWMPs and Reasonable Assurance Analyses. The 2012 Permit includes an extensive list of additional MCMs that are required to be implemented by the MS4s. A summary of key changes in the permit are noted in Table 2-7 below.

Table 2-7. Comparison of MS4 Permit Requirements

MCM	Additional Requirement in 2012 Permit versus 2001 Permit
Progressive Enforcement	Develop and maintain a Progressive Enforcement Policy to track compliance, including: 1) follow-up inspection, 2) enforcement action, 3) records retention, 4) referral of violations, 5) investigation of complaints, 6) assistance with Regional Board enforcement actions
Public Information and Participation Program (PIPP)	More robust public participation program that measurably increases knowledge and changes behavior, and involves a diversity of socio-economic and ethnic communities
Industrial/Commercial Facilities Program	Added education component to notify of BMP requirements applicable to the site Expanded inspection to all commercial and industrial facilities that may contribute substantial pollutants
Planning and Land Development Program	Updated ordinance/design standards to conform with new requirements (LID and hydromodification) Increased performance measure to require onsite retention or bioretention/biofiltration Provision for alternative compliance measures due to technical infeasibility of onsite retention, or opportunity for groundwater replenishment at offsite location
Planning and Land Development Program	Updated ordinance/design standards to conform with new requirements (LID and
Development Construction Program	For sites disturbing less than an acre, added requirement to inspect construction sites based upon water quality threat The use of BMPs are tailored to the risks posed by the project, ranked from Low Risk (Risk 1) to High Risk (Risk 3) Increased frequency of inspections, at least once every 2 weeks for high threat sites, at least monthly for lower threat sites, and during all phases of construction (at least 3 times)
Public Agency Activities Program	Added requirement to maintain an updated inventory of all public facilities that are potential sources of storm water pollution and inventory of existing development for retrofitting opportunities.
Illicit Connections and Illicit Discharges Elimination Program	Required to implement a spill response plan for all sewage and other spills that may discharge into its MS4

In addition, many Permittees have elected to implement additional institutional control measures to achieve additional reduction. Over time, it is anticipated that additional jurisdictions will implement enhanced institutional control measures and offset the need for structural control measures.

³ Los Angeles County provides access to Permittee Annual Reports at the following website:
<http://ladpw.org/wmd/NPDESRSA/AnnualReport/>

The summary of each EWMP below provides additional detail on the distribution and location of potential and priority BMPs, where data is available, based on the overall BMP implementation strategy and maps of BMP distribution provided in the five EWMPs. These maps are presented for each EWMP and show the location and distribution of planned and priority regional/centralized BMPs for which data are available at the time of publication of this report.

2.3.1.1 Upper Los Angeles River EWMP

The BMP strategy in the Upper Los Angeles River watershed includes well over a hundred planned regional and centralized retention and infiltration BMPs that take advantage of the favorable groundwater recharge characteristics in defined areas of the watershed. Also planned are centralized treatment wetlands and bioinfiltration BMPs in parks and open spaces with favorable subsurface soils that promote higher infiltration rates. The BMP strategy also includes distributed smaller BMPs located throughout the urbanized areas of the watershed as retrofits in existing developments and streets. Eight signature regional projects were identified in the regional project selection process for the ULAR EWMP, as listed in Table 2-8 and illustrated in Figure 2-6. The evaluation methodology and a more detailed description of these analyses and results is presented in the ULAR EWMP (2015). Key design parameters considered for each signature project are presented in Table 2-9. Each of the signature regional projects will achieve multiple benefits including water supply, groundwater recharge, flood control, recreation and/or habitat. It should be noted that all of the regional projects are concepts at this stage and subject to change, but that each of the respective EWMP Group members have provided significant input and review of these concepts.

Several of the signature regional projects meet the EWMP definition of a regional project that captures the 85th percentile, 24-hour (design) storm event (Table 2-8). During the engineering evaluation of optimum stormwater capture events, it was also determined that there are unique situations where it is advisable to consider capturing much larger tributary areas upstream of the regional project site in order to maximize capture of dry weather flows. Also, some sites are constrained by the size of the BMP footprint available at the site, which prevents capture of the entire 85th percentile flow. It is important to recognize there are many situations in which regional projects that are sized smaller than the design storm may actually provide more pollutant reduction benefit than simply capturing the 85th percentile storm event defined in the MS4 Permit.

D R A F T

Table 2-8. Signature Regional Projects in the ULAR EWMP

Regional Project	BMP Type	Maximum Drainage Area		Alternative Drainage Area		Available BMP Volume	Recommended BMP Volume	Retain the 85th Percentile, 24-Hour Storm Event
		(acres)	BMP Volume (AF)	(acres)	BMP Volume (AF)	(AF)	(AF)	
Alhambra Golf Course	Subsurface Retention & Infiltration	1,145	49.0	51	0.52	255	74.7	Yes
Freemont Park	Subsurface Retention & Infiltration	NA1	NA1	206	16.0	8	8.0	No
Roosevelt Park	Subsurface Retention & Infiltration	2,250	82.4	169	2.2	200	138.2	Yes
Sierra Vista Park	Subsurface Retention & Infiltration	2,928	178.6	800	48.6	14	10.0	No
San Fernando Regional Park	Subsurface Retention & Infiltration	NA1	NA1	423	11.3	54	22.6	Yes
Lacy Park	Subsurface Retention & Infiltration	1,067	46.6	928	40.0	48	46.4	Yes
Lower Arroyo Park	Subsurface Retention & Infiltration	NA1	NA1	145	0.06	265	3.7	Yes
North Hollywood Park	Subsurface Retention & Infiltration	NA1	NA1	5,122	38.0	156	38.0	Yes

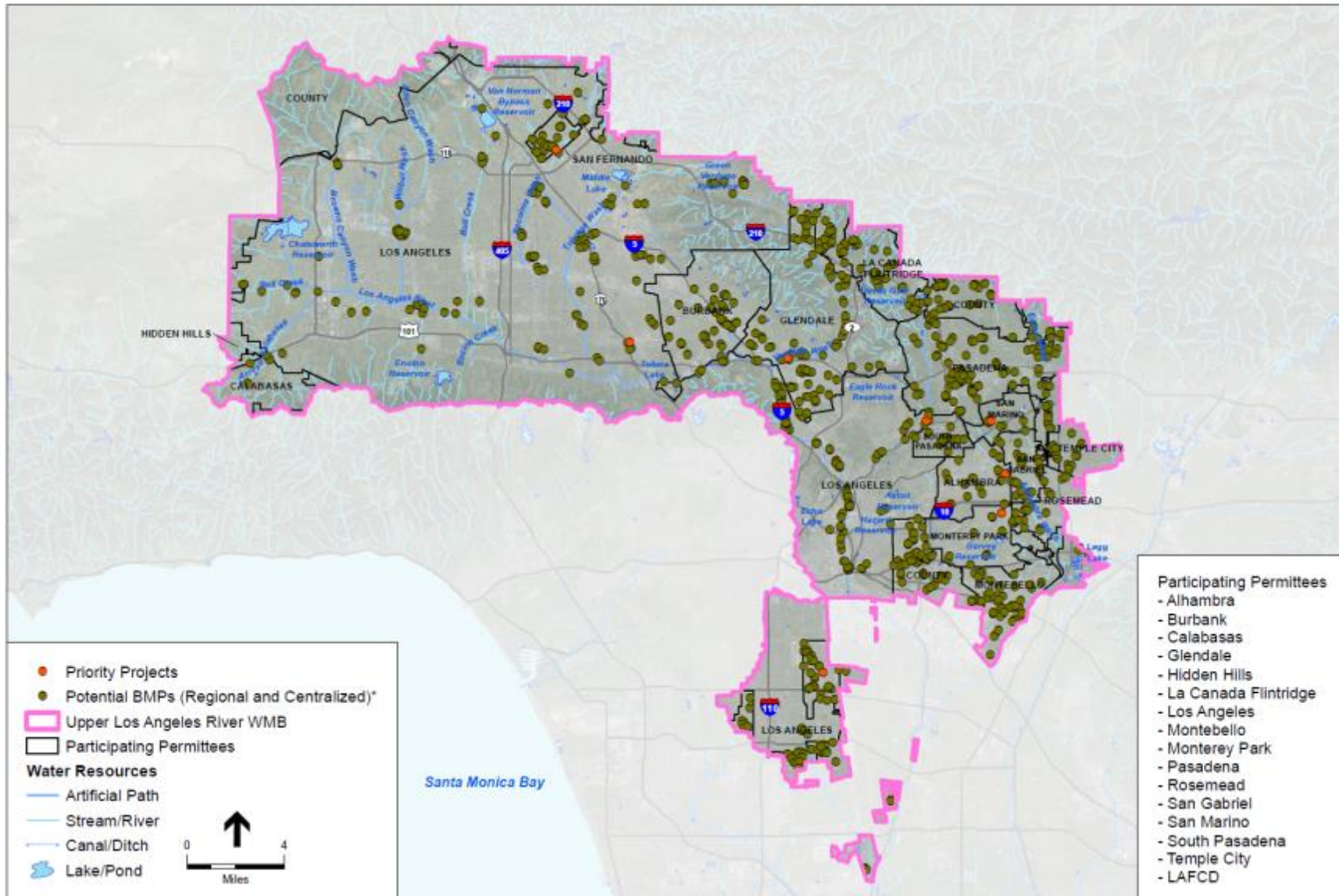


Figure 2-6. Identified Regional and Centralized BMPs in the ULAR EWMP Area.

Table 2-9. Key Design Parameters for Signature EWMP Projects.

Project Site Parameters	Total (Maximum) Drainage Area	The area in acres of the maximum drainage area delineated for each project site. The drainage area delineation is described in Section 2 of the Engineering & Environmental Feasibility TM.
	Alternative (Minimum) Drainage Area	The area in acres of the alternative drainage area delineated for each project site. The drainage area delineation is described in Section 2 of the Engineering & Environmental Feasibility TM.
	Maximum Required BMP Volume	The BMP volume in acre-feet that is required to retain the 85 th percentile design storm volume generated from the maximum drainage area.
	Alternative Required BMP Volume	The BMP volume in acre-feet that is required to retain the 85 th percentile design storm volume generated from the alternative drainage area.
	Groundwater Depth	The groundwater depth in feet from the ground surface. Groundwater depths were determined using groundwater contours and ground elevation GIS data provided by the City.
BMP Design Parameters	BMP Opportunity Area	The area in acres of the BMP opportunity area(s) identified during the field investigations and follow-up discussions. This process is described in Section 2 of the Engineering & Environmental Feasibility TM.
	Recommended Maximum BMP Depth	The depth in feet of the recommended BMP project. This depth is based on groundwater depth and practical project design characteristics, as discussed in Section 2 of the Engineering & Environmental Feasibility TM.
	Available BMP Volume	The BMP volume in acre-feet that is potentially available at the project site. This volume is based on the BMP opportunity area and recommended depth presented above, as discussed in Section 2 of the Engineering & Environmental Feasibility TM.
	Recommended Active BMP Volume	The recommended BMP volume in acre-feet. This volume is recommended based on the hydrologic modeling and optimization results as discussed in Section 2 of the Engineering & Environmental Feasibility TM.

In addition, all available streets throughout the watershed were screened to define the maximum available green street length. The Reasonable Assurance Analysis evaluated a series of detailed green street implementation parameters (described in detail in the Reasonable Assurance Analysis, Section 6.3 of the ULAR EWMP [2015]), and determined the percent of available streets to be retrofitted with green infrastructure to meet EWMP objectives, as shown in Figure 2-7. While it is anticipated that the implementation of green streets will evolve over the course of adaptive management, the EWMP Implementation Strategy provides the foundation of a robust watershed-wide green streets program going forward.

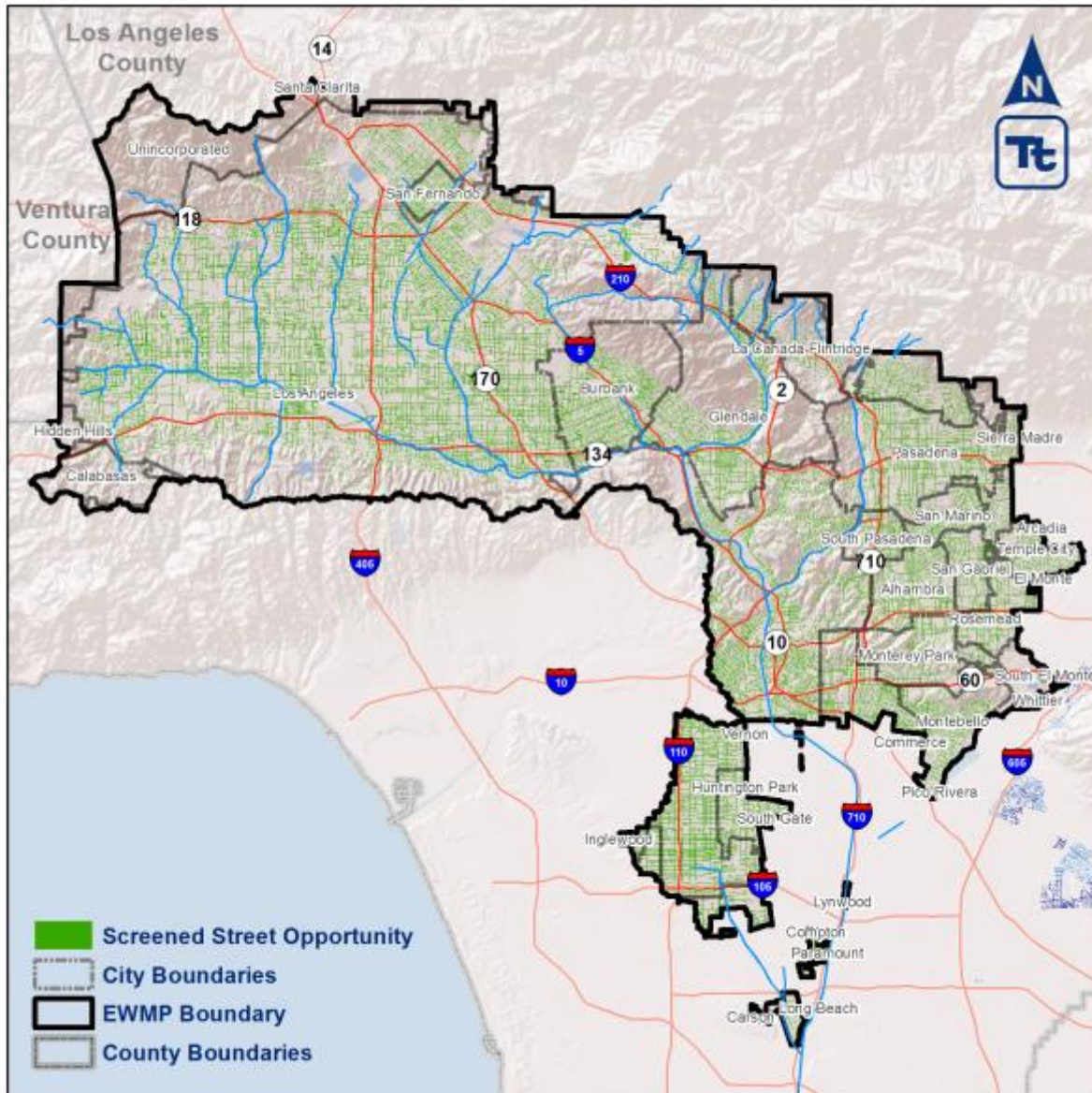


Figure 2-7. Green Street Screened Opportunities in the ULAR EWMP Area.

Four of the ULAR jurisdictions have elected to implement additional institutional control measures as a component of the EWMP to achieve a total 10% reduction. The jurisdictions and their planned additional institutional control measures are summarized in Table 2-10 along with a schedule for planned completion. Over time, it is anticipated that additional ULAR jurisdictions will implement enhanced institutional control measures and offset the need for structural control measures.

Table 2-10. Additional Institutional Control Measures to be Implemented by Select ULAR Agencies.

Agency	Additional Institutional Control Measures to be Implemented	Description	Schedule for Completion
Temple City	Small Site LID	<p>The Temple City LID Ordinance requires for residential and industrial projects below the MS4 Permit threshold, requiring projects with 500 square feet or more of soil disturbance to incorporate LID BMPs into the project design.</p> <p>This ordinance will result in a significant reduction in stormwater pollution.</p>	In Effect
<ul style="list-style-type: none"> • Temple City • South Pasadena • Glendale 	Train staff to facilitate LID and Green Streets implementation	Conduct training for relevant staff in LID and Green Streets implementation prior to the onset of the programs. The elements of the training follow the provisions listed in MS4 Permit §VI.D.7. Additionally, the agency will educate governing bodies in LID and Green Streets implementation.	Ongoing
<ul style="list-style-type: none"> • Temple City • South Pasadena • Glendale 	Adopt Sewer System Management Plan (SSMP)	<p>The agency is enrolled in the statewide Waste Discharge Requirements for Sanitary Sewer Systems, which required the development and implementation of a SSMP in mid-2009. The goal of the SSMP is to reduce and prevent sanitary sewer overflows (SSOs), as well as mitigate any SSOs that do occur. This goal also addresses WQPs. Elements of the SSMP include:</p> <ul style="list-style-type: none"> • Sanitary sewer system operation and maintenance program • Design and performance provisions • Overflow emergency response plan • FOG Control Program • System Evaluation and Capacity Assurance Plan <p>Following these SSMP elements will address WQPs.</p>	Ongoing
<ul style="list-style-type: none"> • Temple City • South Pasadena • Glendale 	Prepare guidance documents to aid implementation of MS4 Permit MCMs	Documents will be developed to address two issues: 1) the MS4 Permit introduces many new and enhanced MCM provisions that do not have preexisting guidance documentation and 2) the model Stormwater Quality Management Program (SQMP) – which was required in the prior LA MS4 Permit and served as a guide to permit implementation – is now obsolete. Unlike the SQMP, the Agencies are not bound to the guidance and forms provided. They are provided as a resource to improve the effectiveness of the Jurisdictional Stormwater Management Plans.	June 2015
South Pasadena	Incentives for irrigation reduction practices	<p>Provide incentives such as rebates for irrigation reduction (i.e. runoff reduction) practices such as xeriscaping and turf conversion.</p> <p>South Pasadena is currently involved in this effort through the Metropolitan Water District’s water conservation rebate program.</p>	Ongoing
South Pasadena	Encourage retrofitting of downspouts (downspout disconnect)	Encourage owners/operators of existing developments to disconnect existing downspouts from the MS4.	Ongoing
South Pasadena	Refocused outreach to target audiences and	Within the Public Information and Education Program, elements such as material use/development and advertisements will address	Ongoing

Agency	Additional Institutional Control Measures to be Implemented	Description	Schedule for Completion
	water quality priorities	WQPs. The development of this effort will be ongoing throughout the MS4 Permit term.	

2.3.1.2 Ballona Creek EWMP

The Ballona Creek watershed is dominated by urbanized beach communities with high density residential and commercial land uses throughout the watershed. Key BMP strategies in this watershed are to address dry and wet-weather flows that may impact beach water quality through bacteria loading. Other water quality priorities include trash, marine debris, metals, and toxics. The BMP strategy includes LFDs to comply with dry-weather metals and bacteria TMDLs. Although large regional and centralized retention and infiltration BMPs will be part of the wet-weather pollutant load reduction strategy, the predominate structural BMP will be smaller distributed BMPs such as bioinfiltration, media filtration, and flow-through BMPs located in street right-of-ways, parking lots, landscaped areas, and as part of green streets and buildings. Ten signature regional projects were identified in the regional selection process of the Ballona Creek EWMP as listed in Table 2-11. There are several additional projects that are considered “Very High” priority, including the North Outfall Treatment Facility ([NOTF], also known as the Low Flow Treatment Facility #1). The priority projects are illustrated in Figure 2-8. The ten signature projects were subject to more detailed environmental, geotechnical and engineering feasibility analysis. The evaluation methodology and a more detailed description of these analyses and results is presented in a document incorporated by reference: [Engineering and Environmental Feasibility for Selected Regional Project Sites, February 2015 of the Ballona Creek EWMP \(2015\)](#). Key design parameters considered for each signature project are presented in [Table 2-9](#) above. Each of the signature regional projects will achieve multiple benefits including water supply, groundwater recharge, flood control, recreation and/or habitat. The signature regional projects emphasize subsurface retention and infiltration as primary functionality.

Several of the signature regional projects meet the EWMP definition of a regional project which captures the 85th percentile, 24-hour (design) storm event (Table 2-11). During the engineering evaluation of optimum stormwater capture events, it was also determined that there are unique situations where it is advisable to consider capturing much larger tributary areas upstream of the regional project site in order to maximize capture of dry weather flows. Also, some sites are constrained by the size of the BMP footprint available at the site, which prevents capture of the entire flow from an 85th percentile, 24-hour event. It is important to recognize there are many situations in which regional projects that are sized smaller than the design storm may actually provide more pollutant reduction benefit than simply capturing the 85th percentile, 24-hour storm event defined in the MS4 Permit.

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Table 2-11. Signature Regional Projects in the Ballona Creek EWMP

Regional Project	BMP Type	Maximum Drainage Area		Alternative Drainage Area		Available BMP Volume	Recommended BMP Volume	Retain the 85th Percentile, 24-Hour Storm Event
		(acres)	BMP Volume (AF)	(acres)	BMP Volume (AF)	(AF)	(AF)	
Rancho Park Golf Course	Surface and Subsurface Retention & Infiltration	7,273	181.4	359	7.7	403	11.6	Yes
La Cienega Park	Subsurface Retention & Infiltration	7,776	352	578	24	51.3	24	Yes
Culver Boulevard Median	Subsurface Retention & Infiltration	829	41	139	5.6	33.7	29.2	No
Edward Vincent Junior Park	Biofiltration and Wetlands	983	31.5	453	11	63	45.7	Yes
Lafayette Park	Subsurface Retention & Infiltration	2,864	143.5	637	30.4	25	18	No
Poinsettia Park	Subsurface Retention & Infiltration	1,379	56	N/A	N/A	15.5	10.1	No
Queen Anne Recreation Center	Subsurface Retention & Infiltration	8,537	397.3	3,067	141.7	42	11.6	No
Plummer Park	Subsurface Retention & Infiltration	389	13	283	9.3	7.2	7.2	No
Ladera Park	Subsurface Retention & Infiltration	155	5.1	N/A	N/A	7.0	5.3	Yes
Westside WQ Improvement Project	Subsurface Retention & Infiltration	2,736	TBD	N/A	N/A	TBD	TBD	Yes

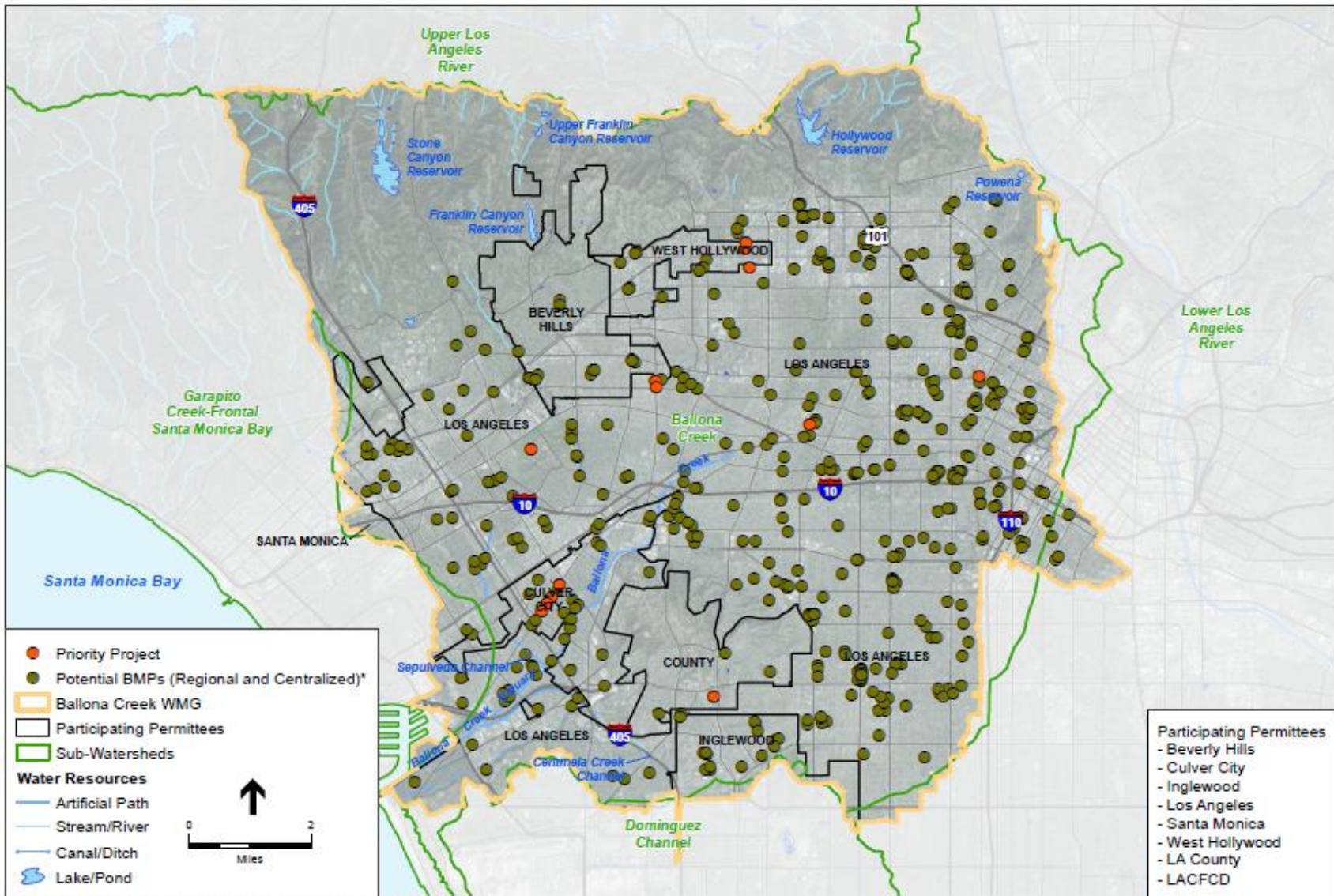


Figure 2-8. Identified Regional and Centralized BMPs in the Ballona Creek EWMP Area.

In addition, all available streets throughout the watershed were screened to define the maximum available green street length. The Reasonably Assurance Analysis evaluated a series of detailed green street implementation parameters (described in detail in the RAA, Section 6.3 of the Ballona Creek EWMP [2015]), and determined the percent of available streets to be retrofitted with green infrastructure to meet EWMP objectives, as shown in Figure 2-9. While it is anticipated that the implementation of green streets will evolve over the course of adaptive management, the EWMP Implementation Strategy provides the foundation of a robust watershed-wide green streets program going forward.

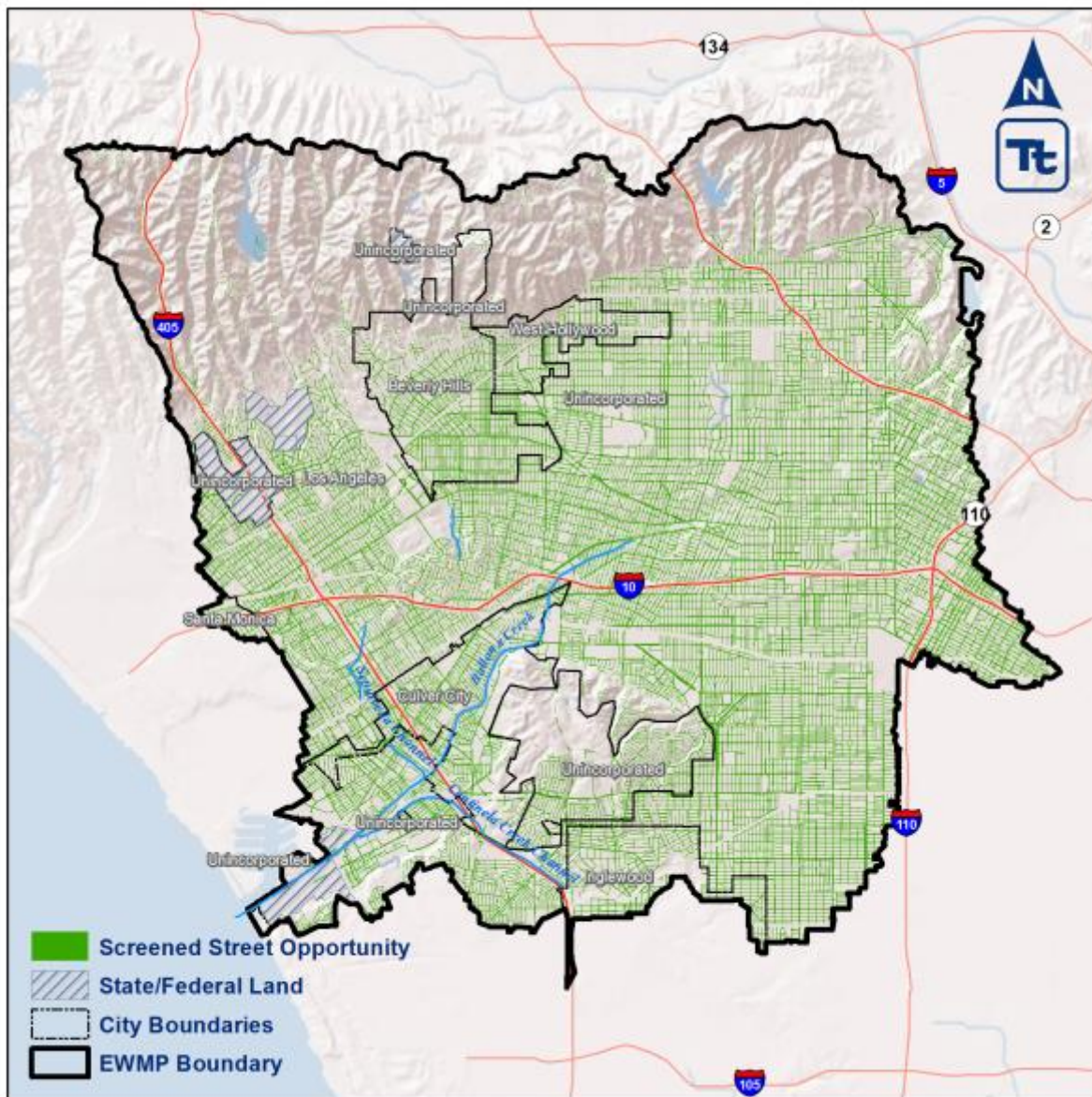


Figure 2-9. Green Street Screened Opportunities in the Ballona Creek EWMP Area.

While the Ballona Creek EWMP places a focus on specific regional projects, green infrastructure efforts are outlined through more of a programmatic lens. The EWMP presents

examples of green infrastructure projects with the understanding that the smaller projects can be replicated throughout the watershed. The following summarizes the few example projects presented in the EWMP:

- Residential Neighborhood “Pilot-to-Scale” Landscape Transformation Project
 - *Locations:* Neighborhoods in the Upper LA and the Ballona Creek/Dominguez Channel Watersheds
 - *Control Measures:* Infiltration and capture practices on private residential properties
- Vermont Avenue Stormwater Capture and Green Street Project
 - *Location:* Vermont Ave from Gage Ave to Florence Ave, South Los Angeles
 - *Control Measures:* ½ mile of Green Streets
- Westwood Neighborhood Greenway
 - *Location:* Exposition Light Rail Transit Station (Westwood Station) between Westwood Blvd and Overland Avenue
 - *Control Measures:* Simulated streams along rail tracks, lift stations, and bioswales
- Centinela Avenue Hybrid Green Street Regional Project
 - *Location:* 0.4-mile stretch of S. Centinela Avenue from West Pico Boulevard southward to Ocean Park Boulevard
 - *Control Measures:* Surface green infrastructure systems in the public right of way, such as curb extensions, depressed landscapes, and tree wells and underground runoff capture system for passive infiltration.

None of the Ballona Creek jurisdictions have elected to implement institutional control measures in addition to those required by the 2012 Permit (refer to Table 2-7 above) to achieve a total 10 percent reduction. Over time, it is anticipated that additional Ballona Creek jurisdictions will implement enhanced institutional control measures and offset the need for structural control measures.

2.3.1.3 Dominguez Channel EWMP

This Dominguez Channel watershed is differentiated by a larger area of industrial land use, but also includes Beach Cities and Machado Lake. Because of the high density of development and industrial land uses, large regional and centralized infiltration type BMPs will be limited. The structural BMP strategy will be more LFDs, both large (centralized) and small (distributed), located at MS4 outfalls near the channelized Dominguez Channel. The other BMP strategy are smaller distributed BMPs that include the LID type BMP such as Green Streets and biofiltration

BMPs throughout the Beach Cities. These distributed BMPs will be retrofit type BMPs that treat runoff from already developed properties and are located in street right-of-ways, parking lots, and limited open areas on public and private parcels. Distributed flow-through treatment BMPs will also be the other predominant BMP that will be retrofitted to the existing MS4 systems.

The following nine parcels were identified that show promise for placement of regional projects that capture some catchment area and may be controlled by Dominguez Channel WMG members (listed in order from the northern part of the watershed to the southern part):

- Darby Park
- El Segundo
- Ramona Park
- Jim Thorpe Park
- Chester Washington Golf Course
- Hawthorne Memorial Park
- Harbor City Park
- Wilmington Recreation Center
- Averill Park

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Figure 2-10 provides the location and distribution of potential regional/centralized BMPs for the Dominguez Channel EWMP. **Error! Reference source not found.** lists the recommended projects within the Dominguez Channel WMG and identifies the space available, drainage area, design volume (associated with the 85th percentile, 24-hour rain event), and volume provided based on the concept drawings.

All of the regional project concepts, with the exception of the El Segundo site, involve subsurface storage that promotes infiltration using perforated steel reinforced poly-ethylene (SRPE) cisterns or a concrete vault with a perforated volume. It was preferable to infiltrate the captured volume of water within 72 hours as that is the presumptive vector (mosquito) control standard for the Los Angeles County Department of Public Health. In some locations, there was insufficient footprint to infiltrate within 72 hours given the published potential infiltration rates of the site soils as they are currently mapped. In those locations, deeper vaults were considered necessary to capture the control volume. It would infiltrate, but not within 72 hours. These locations were at such depth that, based on prior work siting subsurface retention in Los Angeles County, the Department of Public Health would be likely to consider the depth of the vault to be sufficient to prevent vector breeding from occurring in the vault.

The recommended regional project sites were modeled in the Reasonable Assurance Analysis by setting the drainage area tributary to the sites as compliant when the project provides the 85th percentile, 24-hour storm event volume or greater capture. These projects are considered regional EWMP projects and satisfy the criteria identified in Part VI.C.1.g of the MS4 Permit. All of the regional project sites proposed capture a volume greater than or equal to the 85th percentile, 24-hour storm volume generated from their subcatchments within the DC WMG.

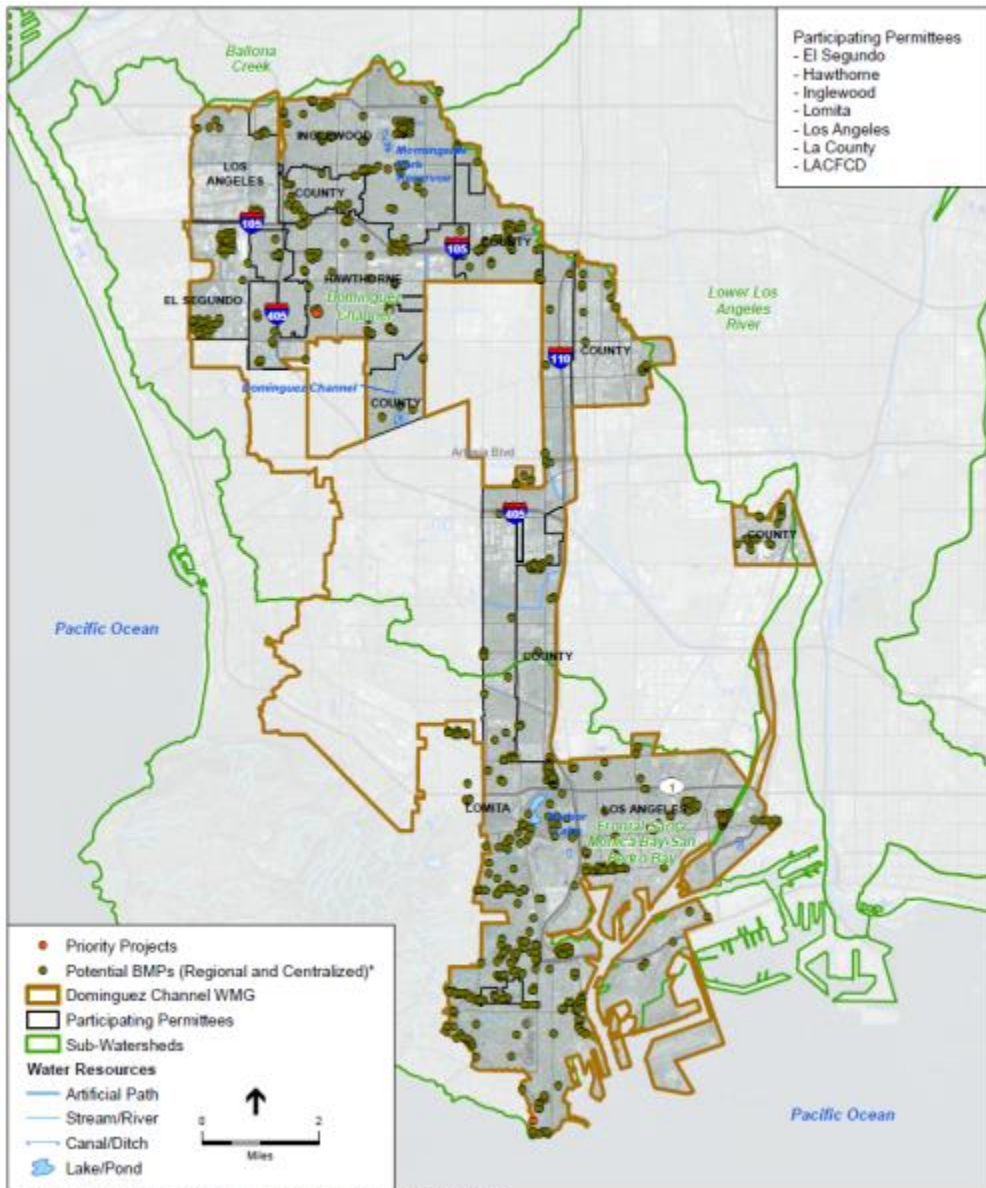
Table 2-12. Signature Regional Projects in the Dominguez Channel EWMP.

Recommended Project Site	Ownership	Parcel Size (acres)	Drainage Area (acres)	Design Volume (AF)	Storage Volume (AF)
Darby Park	Inglewood	19.5	106	5.2	5.2
El Segundo	El Segundo	6.2	574	27.0	27.0
Ramona Park	Hawthorne	1.7	273	12.9	12.9
Jim Thorpe Park	Hawthorne	7.6	378	16.0	16.0
Hawthorne Memorial Park	Hawthorne	6.6	202	8.2	8.2

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Chester Washington Golf Course (North)	County ¹	116	636	25.8	26.4
Chester Washington Golf Course (South)			542	22.0	26.1
Harbor City Park	Los Angeles	14.8	4,460	77.0	80.7
Wilmington Recreation Center	Los Angeles	7.2	273	12.9	12.9
Averill Park	Los Angeles	10.7	1,376	21.4	21.4

¹ Facility is owned by the County, but operated under lease by American Golf.



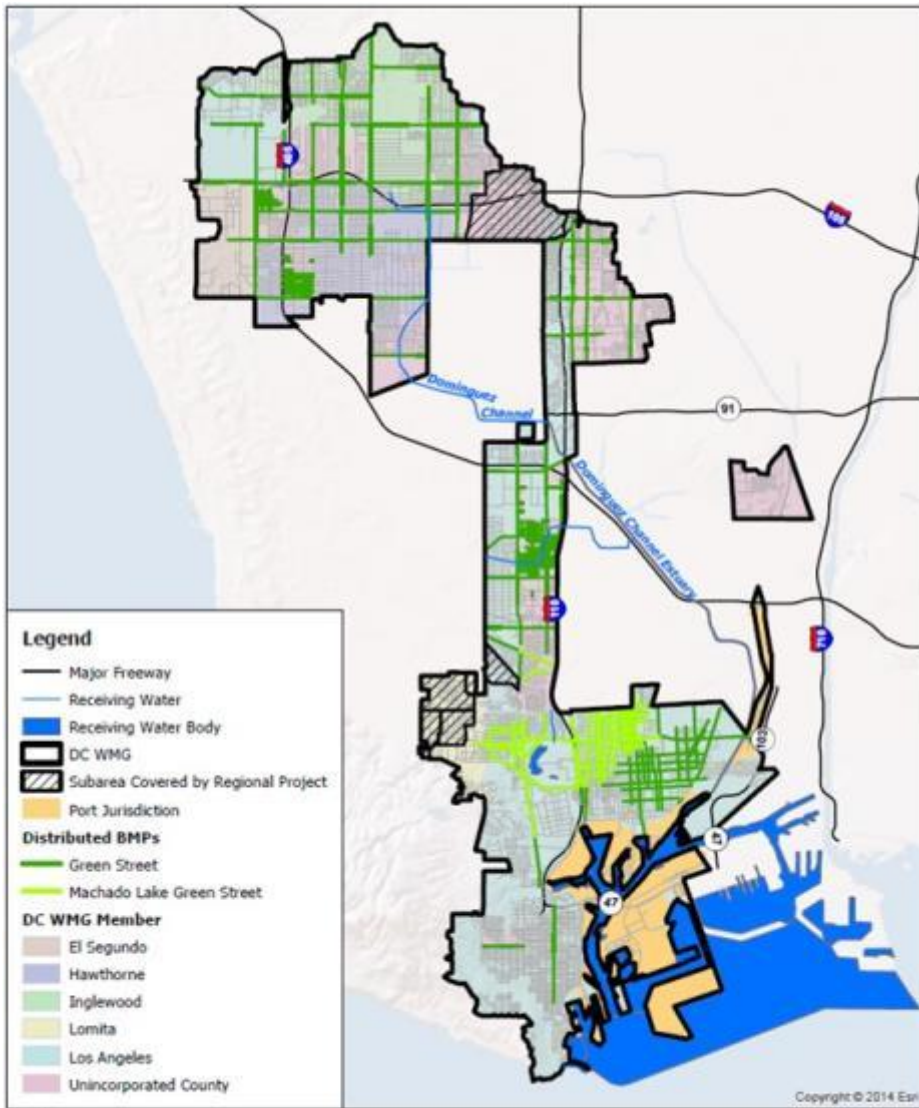
* Potential Distributed BMP not shown - predominantly located in urbanized areas

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Figure 2-10. Identified Regional and Centralized BMPs in the Dominguez Channel EWMP Area.

In addition, a green streets analysis was performed for the entire Dominguez Channel WMG area to estimate which streets are most suitable for green street implementation. Error! Reference source not found. illustrates the lane miles required throughout the Dominguez Channel WMG, compiling the information from the subarea analysis. Similar to the subarea maps, the green street recommendations are shown as bold green lines. The figure also shows the subareas that are completely within a regional project tributary area, as green streets are not required in these subareas as they are mitigated by the regional project. Additionally, the port jurisdiction is shown so that it is clear where green streets will not be implemented due to jurisdictional preferences.

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Green Street Implementation Summary
DC WMG EWMP

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Figure 2-11. Green Street Screened Opportunities in the Dominguez Channel EWMP Area.

The Dominguez Channel EWMP specifies that there may be additional opportunities for distributed at sites that do not fall under SUSMP, LID, or green streets policies. These sites will be further evaluated in order to evaluate if water quality improvements could be incorporated at a relatively low cost. Distributed BMPs also may be incorporated through future stakeholder processes, allowing the stakeholders to provide input on additional distributed BMP locations and types and help to stimulate volunteerism amongst private property owners to implement BMPs on their properties that may achieve a pollutant load reduction benefit. The adaptive management process will be used to evaluate how effective such distributed BMPs are and evaluate if modifications to planned regional or green streets projects are necessary.

In the Dominguez Channel EWMP, the existing MCMs/institutional BMPs within the DC WMG were evaluated and summarized based on the Los Angeles County Unified Annual Stormwater Reports for the Fiscal Years 2010-2011 and 2011-2012. Potential modifications to MCM programs are being considered, as they may provide load reductions and bring the DC WMG closer to the achievement of WQOs. Alternatively, if MCMs are not modified, implementation of structural controls will be required. Table 2-13 identifies potential modifications that were considered by DC WMG.

Table 2-13. Summary of Potential Non-Structural BMP Enhancements Identified in Dominguez Channel EWMP.

Potential Modification or Enhancement	Justification
Public Information and Participation Program (PIPP)	
Develop a Grassroots Committee. ¹	Community leaders may have stronger community connections, thus a better platform to provide educational and outreach materials.
Industrial/Commercial Facilities Program	
Evaluate operations of industrial facilities inspected to verify whether their operations are subject to Industrial General Permit (IGP). ¹	Identifying activities at industrial/commercial facilities where the SIC code does not require coverage under IGP will require facilities to get coverage and comply with requirements in IGP.
Development and Construction Program	

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Potential Modification or Enhancement	Justification
Recommend monitoring and sampling as part of the Erosion and Sediment Control Plan requirements.	Conducting monitoring, sampling, and inspections will give the DC WMG more presence at construction sites which will most likely result in more thorough BMP implementation by developers and contractors.
Inspect construction sites where Erosion and Sediment Control Plans have been approved.	
Public Agency Activities Program	
More frequent street sweeping, especially in areas that lack full capture certified trash control devices.	Implementing a more vigorous street sweeping schedule will allow debris to be captured before they can be transported downstream.
Utilize street sweeping using the regenerative air vacuum equipment in land use areas that generate high metals loads. ²	Vacuum street cleaners would be more effective at removing metals compared to sweepers.
Set maximum street sweeper speeds to optimize effectiveness in removing trash, debris, and sediments. ²	Traveling at speeds recommended by street sweeping manufacturers will improve the sweeping effectiveness at removing pollutants.
Sweeping center median gutters, and "pork chop" islands at street intersections.	Sweeping areas that are not normally swept may capture additional pollutants.
Revise curb miles cleaned as an indicator to volume of trash collected.	Volume of trash collected provides a better indication of the program effectiveness.
Enhanced maintenance of catch basins, especially those with connector pipe screens. ¹	Enhanced maintenance will prevent sediments and debris from accumulating and traveling downstream.
Illicit Discharge/Illicit Connection (IC/ID) Program	

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

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Potential Modification or Enhancement	Justification
Expand the downspout disconnect program to include additional area within DC WMG.	capturing stormwater runoff for irrigation use, thus reducing the volume of water reaching the storm drain system.

¹ Potential modification applicable to LACFCD.

² Applicable to LACFCD's parking lot sweeping.

2.3.1.4 Marina Del Rey EWMP

The Marina Del Rey watershed is dominated by urbanized beach communities with high density residential and commercial land uses throughout the watershed. Key BMP strategies in this watershed are to address dry and wet-weather flows that may impact beach water quality through bacteria loading. Other water quality priorities include trash, marine debris, metals, and toxics. The BMP strategy includes LFDs to comply with dry-weather metals and bacteria TMDLs. Although large regional and centralized retention and infiltration BMPs will be part of the wet-weather pollutant load reduction strategy, the predominate structural BMP will be smaller distributed BMPs such as bioinfiltration, media filtration, and flow-through BMPs located in street right-of-ways, parking lots, landscaped areas, and as part of green streets and buildings.

Figure 2-12 provides the location and distribution of potential regional/centralized BMPs for the Marina del Rey EWMP. Distributed BMPs will be located throughout the urbanized areas of the EWMP. Because of the tidal influence of the marina to most of the watershed, regional projects will be located near the upstream end of the watershed where ground water depths are favorable. The tidally influenced areas will consist of mostly treatment distributed BMPs, including bioinfiltration or tree wells.

A total of 23 potential regional MCM locations within the MdR WMA were identified. These consisted of the Costco site, green streets, parks, sanitary sewer diversions, and public schools. These were further evaluated and ranked based on various criteria, including depth to groundwater, public acceptance, infrastructure disturbance, maintenance factors, as well as others. The resulting 19 potential regional MCM implementation sites are listed in **Error! Reference source not found..**

Table 2-14. Ranking of Potential Regional BMPs within the MdR EWMP.

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Site	Ranking	Land -Use	Subwatershed	Jurisdiction	Agencies	Groundwater Depth (feet)
Costco	1	Private	4	City of Culver City	Costco	10-19
Triangle Park	2	Public	4	City of LA	Parks	10-19
Venice of America Centennial Park	2	Public	3	City of LA	Parks	10-19
Green Streets ^b (high ^a)	4	Public/ROW	4	City of LA	LADOT	20-39
Green Streets ^b (medium ^a)	5	Public/ROW	4	City of LA / City of Culver	LADOT	10-19
Green Streets ^b (medium ^a)	5	Public/ROW	2	City of LA	LADOT	10-19
Green Streets ^b (low ^a)	7	Public	1	County	LADOT	<10
Green Streets ^b (medium ^a)	8	Public/ROW	3	City of LA	LADOT	10-19
Canal Park	8	Public	2	City of LA	Parks	10-19
Via Dolce Park	8	Public	2	City of LA	Parks	10-19
Twain Middle School	11	Public	4	City of LA	LAUSD	20-39
Green Streets ^b (low ^a)	12	Public/ROW	2	City of LA	LADOT	<10
Green Streets ^b (low ^a)	13	Public/ROW	4	City of LA	LADOT	<10
Venice High School	14	Public	4	City of LA	LAUSD	20-39
Coeur D'Elene Elementary School	15	Public	4	City of LA	LAUSD	10-19
Westside Leadership Magnet	16	Public	2	City of LA	LAUSD	10-19
Sanitary Sewer Diversion (1a and 1b)	17	Public/Private				
Sanitary Sewer Diversion (4)	17	Public/Private				

^a Referring to groundwater depth

^b For green streets refer to the Green Streets section below
Parks - City of Los Angeles Parks and Recreation



Figure 2-12. Identified Regional BMPs in the Marina Del Rey EWMP Area.

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Green streets sized to capture and infiltrate the 85th percentile storm (Regional Distributed Green Streets) are planned for locations in Subwatershed 4. Additionally, localized green streets (not designed to capture and infiltrate the 85th percentile storm) will be needed throughout large areas of all the subwatersheds to achieve the water quality load reductions required to achieve compliance with the WLAs of the Toxics TMDL. Three main types of MCMs were included in the green street designs: infiltration-type MCMs (infiltration gallery); capture-type MCMs (sidewalk planters and downspout disconnections) and filtration-type MCMs (sidewalk biofiltration and porous pavement with underdrains). Catch basin inserts were also included. The feasibility of the implementation of these MCMs depends upon separation from the groundwater table, spatial constraints of the project footprint and underlying soil types. Vegetation-space requirements to beneficially re-use captured stormwater runoff as irrigation also constrains the feasibility and implementation of capture-treat type MCMs. In these shallow groundwater areas, filtration may be the predominant feasible MCM in the public thoroughfare.

The non-structural MCM programs proposed for the MdR watershed include modeling updates and other studies, source control, catch basin cleaning, and industry targeted outreach and education, enforcement, and inspection programs. These are briefly listed in Table 2-15.

Table 2-15. Non-Structural MCMs within the MdR WMA.

Non-Structural MCM Category		% Potential Contaminant Reduction
Watershed Studies	Pollutant Loading Model and Database; Total Suspended Solids/Pollutant Correlations	--
Source Control	Collaborative Environmentally Friendly Alternative Services Program; Product Substitution Campaign	4%
Municipal Separate Storm Sewer System (MS4)	Targeted Aggressive MS4 and Catch Basin Cleaning Program	1%
Restaurants, Parking Garage, Construction, and Commercial Facilities Compliance	Code Survey and Modification; Targeted Inspections; Business-led Voluntary BMP Implementation Program	1%
Community Outreach and Education	Outreach and Education; Environmentally Friendly Boating Program; Green Gardening, and Runoff Reduction Program	0.5%
Total Contaminant Reduction		6.5%

2.3.1.5 Santa Monica Bay EWMP

The Santa Monica Bay JG2 and JG3 watershed group is dominated by urbanized beach communities with high density residential and commercial land uses throughout the watershed. Key BMP strategies in this watershed are to address dry and wet-weather flows that may impact beach water quality through bacteria loading. Other water quality priorities include trash, marine debris, metals, and toxics. The BMP strategy includes LFDs to comply with dry-weather metals and bacteria TMDLs. Although large regional and centralized retention and infiltration BMPs will be part of the wet-weather pollutant load reduction strategy, the predominate structural BMP will be smaller distributed BMPs such as bioinfiltration, media filtration, and flow-through BMPs located in street right-of-ways, parking lots, landscaped areas, and as part of green streets and buildings.

Through an extensive screening process and coordination with the SMB EWMP Group, eight highlighted regional EWMP project sites were selected for conceptual design. These eight regional projects will retain the stormwater volume from the 85th percentile, 24-hour storm and infiltrate or beneficially reuse stormwater runoff for the drainage area tributary to the project. The conceptual designs include preliminary sizing, BMP type, configuration, environmental constraints, construction feasibility review, preliminary cost, and schedules. Based on discussions with the SMB EWMP Group and industry standards, the criteria and assumptions presented provided the basis for the conceptual designs. During the final design process and implementation phase of the projects, these assumptions should be reevaluated. The location and BMP type of the eight proposed regional EWMP projects are summarized in Table 2-16. In addition, Figure 2-13 provides the location and distribution of potential regional/centralized BMPs for the Santa Monica Bay JG2/JG3 EWMP. Many efforts have already been completed for the Santa Monica Bay JG2/JG3 Watershed including LFDs and reuse facilities.

Table 2-16. Signature Regional Projects in the SMB EWMP.

Regional EWMP Project	BMP Type	Jurisdiction	Address / Location
Brentwood Country Club	Storage and Use	City of Los Angeles	590 S Burlingame Ave, Los Angeles, CA 90049
Oakwood Recreation Center	Storage and Use	City of Los Angeles	767 California Ave, Venice, CA 90291
Riviera Country Club	Storage and Use	City of Los Angeles	1250 Capri Dr., Pacific Palisades, CA 90272
Rustic Canyon Recreation Center	Subsurface Infiltration	City of Los Angeles	601 Latimer Rd., Santa Monica, CA 90402

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Line B Pump Station	Surface Infiltration	City of El Segundo	201-223 Center St., El Segundo, CA 90245
Recreation Park	Subsurface Infiltration	City of El Segundo	401 Sheldon St., El Segundo, CA 90245
Memorial Park	Storage and Use	City of Santa Monica	1401 Olympic Blvd., Santa Monica, CA 90404
Santa Monica Civic Auditorium and Courthouse	Subsurface Infiltration	City of Santa Monica	1855 Main St, Santa Monica, CA 90401

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Figure 2-13. Identified Regional and Centralized BMPs in the SMB JG2/JG3 EWMP Area.

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In addition, green streets were the primary form of distributed structural BMP considered in the SMB EWMP. Bioswales were also considered as an additional structural BMP. In subwatersheds where no distributed green streets BMPs are necessary to meet the final TMDL compliance deadlines, regional BMPs were prioritized to reduce redundant load reductions.

No modifications to the institutional control measures required by the 2012 Permit (refer to Table 2-7 above) are proposed in the Santa Monica Bay EWMP. However, the SMB EWMP Group may consider modifications in the future.

2.4 Adaptive Management Framework

Part VI.C.8 of the MS4 Permit identifies the adaptive management process as follows:

- “Permittees shall implement an adaptive management process, every two years, adapting the EWMP to become more effective, based on, but not limited to a consideration of the following:
 - Progress toward achieving interim and/or final WQBELs and/or RWLs.
 - Progress toward achieving interim and/or final WQBELs and/or RWLs.
 - Achievement of interim milestones.
 - Re-evaluation of water quality priorities and source assessment.
 - Availability of new information other than the Permittees’ monitoring program.
 - Regional Water Board recommendations; and
 - Recommendations through a public participation process.
- Based on the results of the adaptive management process, Permittees shall report any modifications necessary to improve the effectiveness of the EWMP in the Annual Report.
- Permittees shall implement any modifications to the EWMP upon approval by the Regional Board or within 60 days of submittal if the LARWQCB expresses no objections.”

2.5 Operation and Maintenance

Once constructed, structural BMPs will require periodic maintenance. The level and frequency of operation and maintenance (O&M) will depend on the BMP type, size, and complexity. BMPs implemented and under the jurisdiction of the City of Los Angeles would be maintained and operated to meet design performance standards and the efficiencies needed to meet the waste load reductions in accordance with the EWMPs. O&M will also include addressing identified minimum mitigation measures to avoid potential impacts.

2.6 Required Approvals

The City will use this addendum to the LACFCD PEIR to consider implementation of the proposed program. As Lead Agency, the City may use this Addendum PEIR to approve the proposed program, make Findings regarding identified impacts, and, if necessary, adopt a Statement of Overriding Considerations regarding these impacts. The LARWQCB has discretionary approval over the EWMPs themselves, while a broad range of responsible agencies have discretionary approval over the BMPs described in the EWMPs. These agencies and their approvals are described in Table 2-17. The specific approvals necessary for each BMP will vary by BMP; for example, BMPs that do not result in fill of jurisdictional waters of the United States will not need a Clean Water Act Section 404 Permit.

Table 2-17. Required Approvals for Implementation of EWMPs.

Approving Agency	Approval
Implementing Agencies	CEQA Approval
LACFCD	CEQA Approval, Encroachment Permit
Caltrans	Encroachment Permit
Local Railroad Authorities	Encroachment Permit
Local Cities/Permitees	Encroachment Permits, Certification of Compliance with Local Historic/Cultural Preservation Policies
U.S. Army Corps of Engineers	Clean Water Act Section 404 Permit, Rivers and Harbors Act Sections 9 and 10 Permits
California Department of Fish and Wildlife	Lake/Streambed Alteration Agreement (1600 Permit)
U.S. Fish and Wildlife Service and National Marine Fisheries Service	Endangered Species Act Consultations for Clean Water Act and Rivers and Harbors Act Permits

California Coastal Commission	Coastal Development Permits
LARWQCB	Clean Water Action Section 401 Water Quality Certification Waste Discharge Requirements for Discharge to Waters of the State or to Land Groundwater Anti-Degradation Analysis Water Recycling Requirements NPDES Permits for Discharges to Waters of the United States Groundwater Recharge Recycled Water Project Approval (Currently Draft Regulations) General Construction Permit/SWPPP Approval

3 Environmental Setting, Impacts, and Mitigation Measures

The following impact analysis is derived from the *LACFCD EWMP PEIR (2015)* as well as from the *Initial Study/Environmental Constraints Evaluation for the Eight Recommended Structural Projects within the Ballona Creek Watershed* (refer to Appendix 4.C of the Ballona Creek EWMP [2015]) and *Initial Study/Environmental Constraints Evaluation for the Eight Recommended Structural Projects within the Upper Los Angeles River Watershed* (refer to Appendix 4.C of the ULAR EWMP [2015]). These documents may be consulted for the complete impact analysis and mitigation measures identified for each resource area. Initial Studies/Constraints Analyses have not yet been conducted for regional projects proposed in the Dominguez Channel EWMP, Marina Del Rey EWMP, or the Santa Monica Bay EWMP.

The intent of this Addendum to the PEIR analysis is to serve as a first-tier programmatic environmental document that focuses on the effects of implementing the City's EWMPs to reduce urban runoff pollution. The Addendum does not focus on the site-specific construction and operation details of each management strategy and project included in the EWMPs because they have not reached that stage of design. The analysis assesses worst case situations where construction or operation of projects may significantly impact environmental resources. The analysis outlines mitigation strategies to be followed by the LACFCD and other implementing agencies (e.g., the City of Los Angeles) that rely on the PEIR impact analysis to avoid or minimize impacts wherever feasible. The determinations of significance after mitigation and the mitigation measures proposed in the PEIR will apply to the City, as it relies on the PEIR. Accordingly, in this section the impacts identified in the PEIR are briefly summarized as they pertain to the City's EWMPs, along with the corresponding mitigation measures applicable for each impact.

As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. The City of Los Angeles would determine the significance after mitigation for potential impacts of their proposed projects. These project-specific CEQA reviews would tie from the County PEIR and this Addendum. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below, however they are entirely consistent with the analysis in the County PEIR and present no new environmental impacts.

With respect to the impact analyses summarized below, the level of significance for each impact was determined using significance criteria (thresholds) developed for each category of impacts; these criteria are presented in the appropriate resource area impact discussion. Significant impacts are those adverse environmental impacts that meet or exceed the significance thresholds; less-than-significant impacts would not exceed the thresholds. The following impact assessment summary also details the measures that will avoid, minimize, or otherwise reduce significant impacts to a less-than-significant level if implemented by the City of Los Angeles.

3.1 Aesthetics

This section addresses the aesthetic and visual quality of the region and potential impacts associated with the implementation of the five EWMPs within the jurisdiction of the City of Los Angeles. It includes a description of existing visual conditions and an evaluation of potential effects on aesthetic resources.

3.1.1 Environmental Setting

Visual resources consist of natural landscapes and scenic views, including landforms, vegetation, and water features, as well as unique elements of the built environment. The proposed EWMPs would be located in various watershed areas. Although much of the areas are densely populated, the regions also have a significant amount of scenic resources, from the coastline to the mountain vistas, including hillsides, scenic viewsheds, and ridgelines. Each Watershed Management Area, and EWMP group, associated with the proposed program has its own unique aesthetic resources depending on its location.

3.1.1.1 Santa Monica Bay Watershed Management Area

The Santa Monica Bay Watershed Management Area includes the Santa Monica Bay Jurisdictions 2 and 3 EWMP, Marina del Rey EWMP, and Ballona Creek EWMP, as well as others, encompassing an area of 414 square miles. Its borders reach from the crest of the Santa Monica Mountains on the north and from the Ventura–Los Angeles County line to downtown Los Angeles. From there it extends south and west across the Los Angeles plain to include the area east of Ballona Creek and north of the Baldwin Hills. The Santa Monica Bay Watershed Management Area includes several watersheds, the two largest being Malibu Creek to the north and Ballona Creek to the south. The Malibu Creek area contains mostly undeveloped mountain areas, large-acreage residential properties, and many natural streams, while Ballona Creek is predominantly channelized and highly developed with both residential and commercial properties (LARWQCB, 2011). There are large industrial centers in El Segundo, Manhattan Beach, Redondo Beach, and Torrance, which serve as a base for aerospace and other high-tech manufacturing. Other concentrated commercial/industrial areas in the watershed include Westchester, Los Angeles Airport (LAX), Playa del Rey, Santa Monica, West Los Angeles, Century City Culver City, Los Angeles Civic Center, and the Highway 101 corridor in Thousand Oaks, Westlake Village (LARWQCB, 2011).

Of the Santa Monica Bay's 414-square-mile watershed, 121 square miles (29 percent) are developed or impervious. The Ballona Creek subwatershed accounts for most of the impervious area, with 72 square miles of impervious surface. The Ballona Creek Wetlands are currently located within the area identified as the Ballona Wetlands Ecological Reserve, which is located at the mouth of Ballona Creek. The Ballona Creek Wetlands encompass approximately 600 acres and is the last remaining major coastal wetland in the Santa Monica Bay. The Ballona Creek Wetlands comprise salt marsh and freshwater wetlands, coastal bluffs, dunes, and upland habitats. Riparian habitat exists along each natural watercourse flowing to the ocean and around the lakes of the watershed. Riparian corridors include those found throughout the Ballona Creek Wetlands. The land in the Santa Monica Mountains to the north is mostly open space and remains in a somewhat natural state, mostly free of alteration or development.

3.1.1.2 Dominguez Channel Watershed Management Area

The Dominguez Channel Watershed Management Area includes the Dominguez Channel EWMP group, as well as portions of other EWMP groups. Approximately 81 percent of the watershed or 93 percent of the land is developed. Residential development covers nearly 40 percent of the watershed, and another 41 percent comprises industrial, commercial, and transportation uses. It is estimated that 62 percent of the land is covered with impervious surfaces (e.g., asphalt, concrete), which represents the highest percentage for any watershed area in Los Angeles County. Parkland and open space are in short supply and generally are deficient in meeting the goal ratio of 0.4 hectare (1 acre) of park per each 1,000 population. Vacant land and open space areas account for 16 percent of the entire watershed. The largest “natural” habitat is associated with the Los Angeles and Long Beach Harbors, which cover 3,289 hectares (8,128 acres), or approximately 9.5 percent of the watershed. The Dominguez Watershed has an extensive transportation system consisting of streets, major highways, and freeways; rail service; three airports; and commercial shipping (Los Angeles County, 2004).

The cities with the largest amount of land in the watershed are Los Angeles (22 percent), Carson (14 percent), and Torrance (13 percent). These communities are dominated by high density and multi-family residential land use types, with a fair amount of active redevelopment. The watershed is also home to several smaller, upscale communities, including Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills, and Rolling Hills Estates, which are characterized by low density residential and equestrian land uses (Los Angeles County, 2004). Approximately 50.6 square kilometers (19.5 square miles) of the Dominguez watershed, including Lomita and portions of Rolling Hills, Rolling Hills Estates, Torrance, and the City of Los Angeles, drains to Machado Lake near the intersection of Vermont Avenue and Anaheim Street in the City of Los Angeles. Much of the Machado Lake subwatershed consists of the hilly regions of Rolling Hills and Rolling Hills Estates. This portion of the watershed is unique for Dominguez by consisting of relatively steep hills with drainage ways in canyons. These drainage ways flow generally northwest from the hills toward Machado Lake (Los Angeles County, 2004). Machado Lake (16 hectares, 40 acres) and the Machado Lake wetlands (25 hectares, 64 acres) are located within the Ken Malloy Harbor Regional Park, in the southeastern corner of the Machado Lake subwatershed.

3.1.1.3 Los Angeles River Watershed Management Area

The Los Angeles River Watershed Management Area includes the Upper Los Angeles River EWMP and a portions of the Rio Hondo/San Gabriel River Quality Group EWMP. The Los Angeles River Watershed is one of the largest in the region. It is also one of the most diverse in terms of land use patterns. Approximately 324 square miles of the watershed are covered by forest or open space land, including the area near the headwaters that originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. The rest of the watershed is highly developed (LARWQCB, 2006).

The river flows through the San Fernando Valley past heavily developed residential and commercial areas. From the Arroyo Seco, north of downtown Los Angeles, to the confluence with the Rio Hondo, the river flows through industrial and commercial areas and is bordered by rail yards, freeways, and major commercial and government buildings. From the Rio Hondo to the Pacific Ocean, the river flows through industrial, residential, and commercial areas, including

major refineries and petroleum products storage facilities, major freeways, rail lines, and rail yards serving the Ports of Los Angeles and Long Beach (LARWQCB, 2006). Also in various parks in the watershed are a number of lakes, including Peck Road Park, Belvedere Park, Hollenbeck Park, Lincoln Park, and Echo Park Lakes as well as Lake Calabasas. These lakes are heavily used for recreational purposes (LARWQCB, 2006).

3.1.1.4 State Scenic Highways

Santa Monica Bay and Los Angeles River watersheds contain both officially designated County scenic highways and Eligible State Scenic Highways not officially designated (State Route 1 and Highway 101). In addition, the Los Angeles River watershed also includes historic parkways. Many roads in Malibu are considered scenic, but only the Pacific Coast Highway has been officially designated as an eligible scenic highway by the California Department of Transportation (Caltrans) (City of Malibu, 1995).

3.1.1.5 Light and Glare

There are two types of light intrusion: the first source emanates from the interior of structures and passes through windows, while the second type emanates from exterior sources such as parking lot lighting and street lamp lighting. Glare is the result of sunlight or an artificial light source being reflected on a flat surface or reflective exterior coatings. Light and glare can disturb wildlife in natural habitat areas and act as a nuisance to adjacent residential areas and motorists.

Light and glare are typical features of urbanized settings, such as the EWMP project areas. The primary sources of light within the project areas are associated with transportation, including car headlights associated with vehicular traffic and commercial and residential land uses.

3.1.2 Regulatory Setting

3.1.2.1 State

State Scenic Highway Program

In 1963, the California legislature created the Scenic Highway Program to protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to the highways. The state regulations and guidelines governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. A highway is designated under this program when a local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway. When a city or county nominates an eligible scenic highway for official designation, it defines the scenic corridor, which is land generally adjacent to and visible to a motorist on the highway.

3.1.2.2 Local

Los Angeles County Existing General Plan, Adopted 1980

The following policy from the Conservation and Open Space Element of the Existing General Plan is relevant to the proposed program:

Policy C/OS 16: Protect the visual quality of scenic areas including ridge-lines and scenic views from public roads, trails and key vantage points.

Los Angeles County 2014 Draft General Plan 2035

The following policies from the Conservation and Natural Resources Element of the Draft General Plan are relevant to the proposed program:

Goal C/NR 13: Protected visual and scenic resources

Policy C/NR 13.1: Protect scenic resources through land use regulations that mitigate development impacts.

Policy C/NR 13.2: Protect ridgelines from incompatible development that diminishes their scenic value.

Policy C/NR 13.3: Reduce light trespass, light pollution and other threats to scenic resources.

City Land Use Regulations and Ordinances

Local regulations and ordinances vary widely in the EWMP project areas. Aesthetic-related policies included in General Plans typically concern protecting valuable scenic resources. Some local jurisdictions incorporate restrictions to their General Plans that pertain to protection of scenic resources and trees in their jurisdictional areas.

3.1.3 Impact Assessment

3.1.3.1 Thresholds of Significance

For the purposes of this Project Environmental Impact Report (PEIR) and consistency with Appendix G of the CEQA Guidelines, the project would have a significant impact on aesthetic resources if it would:

- Create a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.1.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to aesthetic resources identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-1 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-1. Summary of Aesthetic Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance				
	Scenic Vistas	Scenic Highways	Visual Character	Light and Glare	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	AES-1	AES-1	AES-1; AES-2	None Required	AES-1; AES-2
Regional BMPs					
Regional Retention and Infiltration	Yes	No	Yes	No	Yes
Regional Capture, Detention, and Use	Yes	No	Yes	No	Yes
Centralized BMP					
Biofiltration	Yes	No	Yes	No	Yes
Constructed Wetlands	No	No	Yes	No	Yes
Treatment/Low-Flow Diversions	Yes	No	Yes	No	Yes
Creek, River, Estuary Restoration	No	No	Yes	No	Yes
Distributed BMPs					
Site Scale Detention	Yes	No	Yes	No	Yes
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, Downspout Disconnects	Yes	No	Yes	No	Yes
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	Yes	No	Yes	No	Yes
Flow-through Treatment BMPs	Yes	No	Yes	No	Yes
Source Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	Yes	No	Yes	No	Yes
Low-Flow Diversions	Yes	Yes	Yes	No	Yes

NOTE: These conclusions are based on typical size and function of BMPs.

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

AES-1: Aboveground structures shall be designed to be consistent with local zoning codes and applicable design guidelines and to minimize features that contrast with neighboring development.

AES-2: Implementing agencies shall develop BMP maintenance plans that are approved concurrently with each structural BMP approval. The maintenance plans must include measures to ensure functionality of the structural BMPs for the life of the BMP. These plans may include general maintenance guidelines that apply to a number of smaller distributed BMPs.

Structural (Regional, Centralized, and Distributed) BMPs

Impact AES-1: Would the project have a substantial adverse effect on a scenic vista?

The presence of construction equipment and materials would be visible from public vantage points but would not affect any scenic views or vistas for longer than the temporary construction periods. It is anticipated that the majority of structural BMPs would be located underground and not visible once construction is complete. Therefore, construction and operation of the majority of structural BMP improvements would not permanently affect views or scenic vistas. However, impacts to scenic vistas from individual projects could be significant if inappropriately designed or located. Larger structures, such as single-story housing for pump stations and treatment facilities, would be compatible with existing visual character with implementation of Mitigation Measure AES-1. Accordingly, project level analysis may be required for individual projects to determine if any of the sites are located in a scenic vista and if project-related structures would have an adverse effect.

ULAR EWMP Regional Projects

For those projects identified in the ULAR EWMP, the *Initial Study/Environmental Constraints Evaluation* includes an analysis of the eight projects described in the ULAR EWMP (refer to Appendix 4.C of the ULAR EWMP [2015]). This analysis concludes that the priority projects identified within the ULAR EWMP would not result in any adverse impacts to scenic resources, as described below:

- SF01 - Recreation Park. Recreation Park is located in an urbanized portion of the City of San Fernando and is not located within a Scenic Vista. Further, the improvements at this site would likely be buried features with the park surface restored to the same or better condition than currently exists.
- NHP – North Hollywood Park. North Hollywood Park is located in the City of Los Angeles' North Hollywood Community in an urbanized area, and is not located within a Scenic Vista. The improvements at this site would occur underground, and the park surface restored to the same or better condition than currently exists.
- GL01 – Fremont Park. Fremont Park, located in the City of Glendale just north of SR134 and south of the Verdugo Wash, is not located within a Scenic Vista. The improvements would place subsurface structures at this site, with the park surface restored to the same or better condition than currently exists.
- SP01 – Arroyo Park. Arroyo Park is located in South Pasadena along the Arroyo Seco north of the Pasadena Freeway. Although a ridgeline is present along the east side of Arroyo Park, the future improvements at this site would likely be buried and surface features restored to the same or better condition than currently exists. A small area of surface bio-treatment features could be added between the wash and San Ramon Drive. None of the

proposed improvements would block views of the surrounding hillside, and no scenic vistas would be adversely affected.

- SM01 – Lacy Park. Lacy Park is located within a residential neighborhood in the City of San Marino. There are no designated scenic vistas in Lacy Park. The improvements would place subsurface structures at this site, with the park surface restored to the same or better condition than currently exists.
- AL01 – Almansor Park. Almansor Park is located adjacent to a single-family residential area and the Alhambra Golf Course in the City of Alhambra. This park is not located within a Scenic Vista. The improvements at this site would likely be buried and surface features would be restored to the same or better condition than currently exists.
- MP01 – Sierra Vista Park. Sierra Vista Park is located in a mixed residential area in the City of Monterey Park. This park is not located within a Scenic Vista. The improvements at this site would likely be buried and surface features would be restored to the same or better condition than currently exists.
- LAC01 – Franklin D. Roosevelt Park. Franklin D. Roosevelt Park is located in a mixed residential and urbanized area in the southern portion of the County of Los Angeles. This park is not located within a Scenic Vista. The improvements at this site would likely be buried and surface features would be restored to the same or better condition than currently exists.

Because no parks are located in a Scenic vista and ULAR project components would be subterranean, there would be no adverse impacts to scenic vistas resulting from the ULAR EWMP Priority Regional Projects proposed at the time of this report.

Ballona Creek EWMP Regional Projects

The *Initial Study/Environmental Constraints Evaluation for the Eight Recommended Structural Projects within the Ballona Creek Watershed* (refer to Appendix 4.C of the Ballona Creek EWMP [2015]) concludes that the priority projects identified within the Ballona Creek EWMP would not result in any adverse impacts to scenic resources, as described below:

- BH01 - La Cienega Park. La Cienega Park is located in an urbanized portion of the City of Beverly Hills and is not located within a Scenic Vista. Further, the improvements at this site would likely be buried and surface features restored to the same or better condition than currently exists.
- CC04 - Culver Boulevard Median. The Culver Boulevard median is located along Culver Boulevard in an urbanized portion of Culver City, and is not located within a Scenic Vista. The improvements at this site could occur at the surface within the existing median, or a slightly expanded median (to the west); however, the surface improvements would not extend higher than existing landscaping.
- IG01 - Edward Vincent Junior Park. Edward Vincent Jr. Park is located between a residential area and Florence Avenue in the City of Inglewood, and is not located within a Scenic Vista. The improvements at this site could occur at the surface within the park

boundaries. However, the surface improvements would not extend substantially higher than existing landforms.

- LA05 - Lafayette Park. Lafayette Park is located in an urbanized area within the Wilshire Community Plan area in the City of Los Angeles. This park is not located within a Scenic Vista. Further, the improvements at this site would likely be buried and surface features restored to the same or better condition than currently exists.
- LA12 – Rancho Park Golf Course. Rancho Park Golf Course is located amidst a residential area within the West Los Angeles area in the City of Los Angeles. This golf course is not located within a Scenic Vista. The improvements at this site would likely be buried and surface features restored to the same or better condition than currently exists.
- LA20 – Poinsettia Park. Poinsettia Park is located in a mixed residential area with a nearby industrial use (electrical substation) within the Hollywood community in the City of Los Angeles. This park is not located within a Scenic Vista. The improvements at this site would likely be buried and surface features would restored to the same or better condition than currently exists.
- LA21 - Queen Anne Recreation Center. The Queen Anne Recreation Center site is located in a mixed residential area within the Wilshire community in the City of Los Angeles. This park is not located within a Scenic Vista. The improvements at this site would likely be buried and surface features would restored to the same or better condition than currently exists.
- WH01 – Plummer Park. Plummer Park site is located in a mixed residential area within the City of West Hollywood. This park is not located within a Scenic Vista. The improvements at this site would likely be buried and surface features would restored to the same or better condition than currently exists.

Because no parks are located in a Scenic vista and project components would be subterranean, there would be no adverse impacts to scenic vistas resulting from the Ballona Creek EWMP Priority Regional Projects proposed at the time of this report.

Impact AES-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?

There are various State scenic highways and designated scenic roadways within the EWMP areas. Some of the proposed program could be visible from any of these designated scenic highways or other locally designated scenic roadways. The proposed program would not likely involve damage to rock outcroppings or historic buildings because, as noted for AES-1 above, it is anticipated that the majority of structural BMPs would be located underground and would not be visible once construction is complete. However, project level analysis may be required to ensure that the projects do not affect views along a scenic highway because such highways are present within each EWMP.

ULAR EWMP Regional Projects

The *Initial Study/Environmental Constraints Evaluation for the Eight Recommended Structural Projects within the ULAR Watershed* (refer to Appendix 4.C of the ULAR EWMP [2015]) concluded that ULAR EWMP Regional Project improvements would not have the potential to

damage scenic resources within a state scenic highway because none of the activities would be located near an eligible or designated state scenic highway. None of the Regional Projects are visible from either of the nearest State Scenic Highways; therefore, the Regional Projects would not adversely affect the quality of the scenic views from these locations. In addition, the following summarizes specific details regarding scenic resources at each ULAR EWMP Regional Project site:

- SF01 - Recreation Park. Recreation Park is located between industrial development to the east and residential structures along to the west. The buried water quality improvement structures Recreation Park would not be visible, and the surface would be restored to the same or better condition than currently exists following construction. As such, the improvements at Recreation Park are not expected to result in adverse effects to scenic resources or result in significant adverse impacts to visual character of the area.
- NHP – North Hollywood Park. The area of North Hollywood Park proposed for the water quality improvement facilities is a well-used landscaped open space with various mature and less mature trees. The water quality improvements at this site would likely be subsurface facilities that would not be visible. Further, the park surface would be restored to the same or better condition than currently exists following construction. As such, the improvements at North Hollywood Park are not expected to result in adverse effects to scenic resources or result in significant adverse impacts to visual character of the area.
- GL01 – Fremont Park. Fremont Park is landscaped and includes various active and passive recreational uses. There are no designated scenic highways in the City of Glendale. The Open Space and Conservation Element of the General Plan identify several “urban hikeways” in an effort to provide opportunities for citizens and visitors to discover Glendale’s unique urban form. Three self-guided routes cross through downtown Glendale, highlighting the Financial/Fremont Park District, the Brand Shopping District, and the Civic Center District. Although Fremont Park is located along one of the hikeways, the water quality improvements at this site would likely be subsurface facilities that would not be visible, once completed. Further, the park surface would be restored to the same or better condition than currently exists following construction. As such, the improvements at Fremont Park are not expected to result in adverse effects to scenic resources or result in significant adverse impacts to visual character of the area.
- SP01 – Arroyo Park. Arroyo Park is landscaped, and contains active and passive recreational uses. Trees are located throughout the park. This park is not located along a locally designated scenic highway; however, as stated in the City’s Open Space and Resource Conservation element of the General Plan, it is considered a valued resource by the City of South Pasadena. The subsurface water quality improvements at this site would not be visible. There is the potential for surface bio retention improvements to be added between the wash and Stoney Drive; however, these improvements are expected to be consistent with the open space setting of the park and would not introduce incompatible structures. Further, the park surfaces would be restored to the same or better condition than currently exists following construction. As such, the improvements at Arroyo Park are not expected to result in adverse effects to scenic resources or result in significant adverse impacts to visual character of the area.

- SM01 – Lacy Park. Lacy Park is located within a residential neighborhood in the City of San Marino. The center of Lacy Park serves as an open expanse which is highlighted as a resource in the City's General Plan. The proposed improvements would be located beneath the ground surface in the central area of lacy park; however, because the improvements would be subsurface and the park surfaces restored to existing conditions or better, the improvements are not expected to adversely affect the central area as a scenic resource.
- AL01 – Almansor Park. Almansor Park is located adjacent to a single-family residential area and the Alhambra Golf Course in the City of Alhambra. The improvements at this site would likely be buried and surface features would restored to the same or better condition than currently exists, and are not anticipated to result in significant impacts to scenic resources or the visual character of the project area.
- MP01 – Sierra Vista Park. Sierra Vista Park is located in a mixed residential area in the City of Monterey Park. Because the improvements at this site would likely be buried and surface features would restored to the same or better condition than currently exists, significant impacts to scenic resources or visual character of the project area are not anticipated.
- LAC01 – Franklin D. Roosevelt Park. Franklin D. Roosevelt Park is located in a mixed residential and urbanized area in the southern portion of the County of Los Angeles. The improvements at this site would likely be buried and surface features would restored to the same or better condition than currently exists, and are not anticipated to result in significant impacts to scenic resources or the visual character of the project area.

Ballona Creek EWMP Regional Projects

The *Initial Study/Environmental Constraints Evaluation for the Eight Recommended Structural Projects within the Ballona Creek Watershed* (refer to Appendix 4.C of the Ballona Creek EWMP [2015]) concluded that Ballona Creek EWMP Regional Project improvements would not have the potential to damage scenic resources within a state scenic highway because none of the activities would be located near an eligible or designated state scenic highway. None of the Regional Projects are visible from either of the nearest State Scenic Highways; therefore, the Regional Projects would not adversely affect the quality of the scenic views from these locations. In addition, the following summarizes specific details regarding scenic resources at each Ballona Creek EWMP Regional Project site:

- BH01 - La Cienega Park. The only street in the City of Beverly Hills that is designated as a local scenic highway is Santa Monica Boulevard, which is located approximately 1.6 miles to the northwest of La Cienega Park. The buried water quality improvements at La Cienega Park would not be visible, and the surface would be restored. Bio-retention surface improvements are not expected to be inconsistent with the park setting. The improvements would not fall within the viewshed of a scenic highway, and would not adversely affect the park setting. In addition, the City's General Plan has established a policy to protect scenic views from public places (Open Space Element, Policy OS 6.1). The water quality improvements at the La Cienega Park would be subsurface and out of site, or would be located at the surface and consistent with a park setting (bioretention features). As such, the improvements at La Cienega Park are not expected to result in adverse effects to scenic resources. It should be noted that the headquarters for the Academy of Motion Picture Arts and Sciences occupies the building just north of Fenton Field. The building, the former

Beverly Hills Water Treatment Plant No. 1 meets the City of Beverly Hill's criteria for designation as a local Landmark, as required in the City's Historic Preservation Ordinance, and is considered historic (Ostashay & Associates Consulting, 2014). The water quality improvements would not occur on the same site as the Beverly Hills Water Treatment Plant No. 1 building, and would not require removal or physical changes to the historic building. As a consequence, the water quality improvements at the La Cienega Park are not expected to adversely affect a historic resource within a scenic highway corridor.

- CC04 - Culver Boulevard Median. The Culver City General Plan establishes a policy to protect view corridors (Objective 6 of Open Space Element). The Open Space Element also allows for the abandoned rail right-of-way median (southwest of Elenda Street to be used as a linear park, including landscaping, bike and jogging paths, and utilities and infrastructure. The existing median is landscaped and includes a walking and bike path. The water quality improvements at this site would likely be bio retention features that would not be visually inconsistent with existing landscaping along the median. The water quality improvements could also result in slightly expanded median (to the west); however, the surface improvements would not extend higher than existing landscaping and would not result in a substantive adverse impact to scenic resources or visual character of the project area.
- IG01 - Edward Vincent Junior Park. The Edward Vincent Jr. Park is landscaped and includes various active and passive recreational uses. The eastern section of Florence Avenue between Hillcrest Boulevard and the eastern City limit consists of diverse commercial, government, institutional, religious, and recreation (park) uses. Important resources along the eastern section which could be considered City landmarks include the Saint John Chrysostom Church, the Inglewood Park Cemetery, and the Edward Vincent Jr. Park (City of Inglewood General Plan Update Technical Background Report, 2006). Edward Vincent Junior Park is considered to be open space; however, no significant trees or rock outcroppings are present. The improvements at this site could occur at the surface within the park boundaries; and would be consistent with a park setting. Therefore, the water quality improvements at Edward Vincent Jr. Park would not result in substantive impacts to scenic resources or visual character of the project area.
- LA05 - Lafayette Park. Lafayette Park is landscaped, and contains active and passive recreational uses. Trees are located throughout the park. This park is not located along a locally designated scenic highway. Further, because the improvements at this site would likely be buried and surface features restored to the same or better condition than currently exists, significant impacts to scenic resources would not occur. It should be noted that the Felipe De Neve Library, which is a historic resource (Los Angeles Historic Cultural Monument No. 452), is located adjacent to and north of the project site. The water quality improvements would not require removal or physical changes to the library, and as a consequence, are not expected to adversely affect a historic resource within a scenic highway corridor or adversely affect the visual character of the project area.
- LA12 – Rancho Park Golf Course. The Rancho Park Golf Course is largely landscaped as a golf course, but does contain baseball fields at the northeast side. Wilshire Boulevard, Santa Monica Boulevard, and Avenue of the Stars are designated as Scenic Highways in the West Los Angeles Community Plan; however, the golf course is not located within the associated scenic corridors. Because the water quality improvements at this site would likely be buried

and surface features restored to the same or better condition than currently exists, significant impacts to scenic resources or visual character of the project area are not anticipated.

- LA20 – Poinsettia Park. Poinsettia Park is landscaped and developed with active recreational features. No locally designated scenic highways are located along or near this site. Because the water quality improvements at this site would likely be buried and surface features restored to the same or better condition than currently exists, significant impacts to scenic resources or visual character of the project area are not anticipated.
- LA21 - Queen Anne Recreation Center. The Queen Anne Recreation Center site is landscaped and developed with active and passive recreational features. Some trees are located onsite away from the active recreational fields. Because the water quality improvements at this site would likely be buried and surface features restored to the same or better condition than currently exists, significant impacts to scenic resources or visual character of the project area are not anticipated.
- WH01 – Plummer Park. Plummer Park site is a well-developed park with smaller green-spaces dispersed throughout the site and a large parking lot at the north end. Because the water quality improvements at this site would likely be buried at the north end and surface features restored to the same or better condition than currently exists, significant impacts to scenic resources or visual character of the project area are not anticipated.

Impact AES-3: Would the proposed project substantially degrade the existing visual character or quality of the site and its surroundings?

Construction activities associated with all structural BMP projects would require the use of construction equipment and storage of materials on-site, thus introducing contrasting features into the visual landscape that would affect the visual quality of project sites and/or their surroundings. Contrasting features would include demolition materials, excavated areas, stockpiled soils, and other materials generated and stored on-site during construction. However, adverse effects to visual character associated with project construction would be temporary and are considered less than significant.

Aboveground structures within urban areas would be constructed on or adjacent to existing developed and built-up landscapes. Small aboveground pump stations and supporting ancillary facilities would have no significant effect on the visual character of the area. Larger structures, such as single-story housing for pump stations and treatment facilities, would be compatible with existing visual character with implementation of Mitigation Measure AES-1.

BMP maintenance is also important when considering long-term impacts on aesthetics. Poorly maintained BMPs, such as wet ponds or constructed wetlands, may be unsightly as a result of excess algal growth or public littering. With proper maintenance of all implemented BMPs as required in Mitigation Measure AES-2, impacts would be less than significant.

Impact AES-4 Would the proposed project Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

No Impact

Security lighting used during the construction of all structural BMP projects, if necessary, may introduce new sources of light and glare to the immediate project areas; however, nighttime construction is not anticipated. If security lighting is needed, it can be shielded and directed away from surrounding light-sensitive land uses, consistent with implementing agency design standards. Temporary impacts associated with light and glare during construction activities would be less than significant.

It is not anticipated that the structural BMP projects would involve the installation of permanent new outdoor lighting for the distributed, centralized, and regional structural watershed control measures. Impacts associated with light and glare would be less than significant.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek EWMP Regional Projects would involve the placement of buried infiltration or storage structures, with surface features restored. Exterior lighting of such structures are not anticipated. Water quality improvements such as bio-retention of runoff and stormwater could be placed at ground level in one area of Arroyo Park in South Pasadena; however, lighting, if any, is not expected to be substantial. Some low intensity security lighting could be included; however, such lighting would not be intrusive and would not represent a substantial source of new lighting. As a consequence, adverse impacts related to new lighting sources are not anticipated.

Non-Structural (Institutional) BMPs

Non-structural BMPs consist of policies, actions, and activities aimed at preventing pollutants from entering stormwater runoff; there would not be a physical impact to the environment. The non-structural BMPs associated with the proposed program would not create a substantial adverse effect on a scenic vista or visual quality of the sites and surroundings, nor would they substantially damage scenic resources or create a new source of light or glare.

3.2 Air Quality

3.2.1 Environmental Setting

The proposed EWMPs are located in Los Angeles County (County), the majority of which is highly urbanized and consists of several cities, communities, and unincorporated areas. The program area is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin is an approximately 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east.

The California Air Resources Board (CARB) and the United States Environmental Protection Agency (USEPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable or breathable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM₁₀), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less (PM_{2.5}), and lead. The pollutants are referred to as “criteria air pollutants” since they are the

most prevalent air pollutants known to be harmful to human health, and extensive health-effects criteria documents are available about their effects on human health and welfare. Standards have been established for each criteria pollutant to meet specific public health and welfare criteria set forth in the federal Clean Air Act (CAA). California has generally adopted more stringent ambient air quality standards for the criteria air pollutants (referred to as State Ambient Air Quality Standards, or state standards) and has adopted air quality standards for some pollutants for which there is no corresponding national standard.

Concentrations of toxic air contaminants (TACs), or in federal parlance, hazardous air pollutants (HAPs), are also used as indicators of ambient air quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

According to The California Almanac of Emissions and Air Quality (CARB, 2009), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (diesel particulate matter). Diesel particulate matter differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel particulate matter is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

SCAQMD maintains monitoring stations within district boundaries that monitor air quality and compliance with associated ambient standards. The Enhanced Watershed Management Program (EWMP) areas are all located within in the Basin. Given the large geographic region of the EWMP areas, an extensive listing of the air quality monitoring data collected by each SCAQMD monitoring station located within the EWMP areas is not provided. As individual EWMP projects are not assessed separately in this PEIR, the presentation of the air quality data collected by the monitoring stations relevant to each EWMP project is more applicable for inclusion in the environmental documents for future individual EWMP projects.

3.2.2 Regulatory Setting

The EWMP areas are located in Los Angeles County within the Basin. Air quality in the County is regulated by USEPA, CARB, and SCAQMD. The County of Los Angeles General Plan also contains an Air Quality Element in their 2014 draft document. This element summarizes air quality issues and outlines the goals and policies in the General Plan that will improve air quality and reduce greenhouse gas emissions (Los Angeles County, 2014). Los Angeles County's adopted General Plan has not yet been updated to include this element.

Federal

At the federal level, USEPA has been charged with implementing national air quality programs. USEPA's air quality mandates are drawn primarily from the federal CAA, which was enacted in 1970. The most recent major amendments to the CAA were made by Congress in 1990. The CAA requires USEPA to establish National Ambient Air Quality Standards (NAAQS). USEPA

has established primary and secondary NAAQS for the following “criteria air pollutants”: ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead. The CAA also requires each state to prepare an air quality control plan, referred to as a state implementation plan (SIP). USEPA also has programs for identifying and regulating HAPs.

State

CARB, a department of the California Environmental Protection Agency, oversees air quality planning and control throughout California. CARB is responsible for coordination and oversight of state and local air pollution control programs in California and for implementation of the California Clean Air Act (CCAA). The CCAA requires all local air districts in the state to endeavor to achieve and maintain the CAAQS by the earliest practical date. Among CARB’s other responsibilities are overseeing compliance by local air districts with California and federal laws; approving local air quality plans; submitting SIPs to USEPA; monitoring air quality; determining and updating area designations and maps; and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels. CARB Air quality regulations also focus on TACs.

SCAQMD attains and maintains air quality conditions in the Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of SCAQMD includes preparation of plans for attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution.

SCAQMD and the Southern California Association of Governments (SCAG) are responsible for preparing the air quality management plan (AQMP), which addresses federal and state CAA requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin.

County of Los Angeles

The Conservation and Open Space Element of the 1980 County of Los Angeles General Plan sets the policy direction for management of the County’s natural resources, including air quality. The Air Quality Element of the Draft 2014 County of Los Angeles General Plan summarizes air quality issues and outlines goals and policies that will improve air quality and reduce greenhouse gas emissions.

City General Plans

The numerous cities encompassed by the EWMP project areas all have their own respective city General Plans, some of which may contain policies that address air quality. As implementation of the individual structural BMP projects proceed, specific policies and objectives pertaining to air quality from applicable city General Plans will be identified and evaluated on a project-by-project basis during subsequent California Environmental Quality Act (CEQA) environmental processes.

3.2.3 Impact Assessment

3.2.3.1 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, impacts related to air quality may be considered significant if the proposed program would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

As guided by Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. As such, the significance thresholds and analysis methodologies in SCAQMD's CEQA Air Quality Handbook are used in evaluating project impacts.

3.2.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to air quality resources identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-2 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-2. Summary of Air Quality Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance				
	Air Quality Plan	Air Quality Standards	Nonattainment Criteria Pollutants	Sensitive Receptors	Objectionable Odors
Applicable Mitigation Measures:	None Required	AIR-1; AIR-2	AIR-1; AIR-2	AIR-3	AES-2; AIR-4
Regional BMPs					
Regional Detention and Infiltration	No	Yes	Yes	Yes	Yes
Regional Capture, Detention and Use	No	Yes	Yes	Yes	Yes
Centralized BMP					
Bioinfiltration	No	Yes	Yes	Yes	Yes
Constructed Wetlands	No	Yes	Yes	Yes	Yes
Treatment/Low-Flow Diversions	No	Yes	Yes	Yes	Yes
Creek, River, Estuary Restoration	No	Yes	Yes	Yes	Yes
Distributed BMPs					
Site-Scale Detention	No	No	No	No	Yes
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, Downspout Disconnects	No	No	No	No	Yes
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	No	No	No	Yes
Flow-through Treatment BMPs	No	No	No	No	Yes
Source-Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	No	No	No	Yes
Low-Flow Diversions	No	No	No	No	Yes

NOTE: These conclusions are based on typical BMP size and location.

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

AIR-1: Implementing agencies shall require for large regional or centralized BMPs the use of low-emission equipment meeting Tier II emissions standards at a minimum and Tier III and IV emissions standards where available as CARB-required emissions technologies become readily available to contractors in the region.

AIR-2: For large construction efforts that may result in significant air emissions, implementing agencies shall encourage contractors to use lower-emission equipment through the bidding process where appropriate.

AIR-3: For large construction efforts associated with regional or centralized BMPs, implementing agencies shall conduct a project-specific LST analysis where necessary to determine local health impacts to neighboring land uses. Where it is determined that construction emissions would exceed the applicable LSTs or the most stringent applicable federal or state ambient air quality standards, the structural BMP project shall reduce its daily construction intensity (e.g., reducing the amount of equipment used daily, reducing the amount of soil graded/excavated daily) to a level where the structural BMP project's construction emissions would no longer exceed SCAQMD's LSTs or result in pollutant emissions that would cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards.

AIR-4: During planning of structural BMPs, implementing agencies shall assess the potential for nuisance odors to affect a substantial number of people. BMPs that minimize odors shall be considered the priority when in close proximity to sensitive receptors.

Structural (Regional, Centralized, and Distributed) BMPs

Impact AQ-1 Would the project conflict with or obstruct implementation of the applicable air quality plans?

Implementation of the proposed program would involve the installation of structural control measures that would be constructed as BMPs to reduce the impact of stormwater and nonstormwater on receiving water quality within the EWMP areas. As such, the proposed program is not a land use project and its implementation would not induce any additional growth within the EWMP areas in the County. Therefore, the proposed program would not conflict with, or obstruct, implementation of the AQMP. Overall, this impact would be less than significant. A significant impact could occur if the proposed project is inconsistent with the AQMP or the applicable General Plan.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek EWMP Regional Projects would place water quality improvements below each of the sites or at their surface, and would not require permanent changes in uses of the parks (or median). Rather, the ULAR and Ballona Creek EWMP Regional projects are deemed to be consistent with the planned and existing uses at each site and with the applicable general plan. Therefore, the ULAR and Ballona Creek EWMP Regional Projects are not expected to conflict with or obstruct implementation of the applicable air quality plan and no impact is anticipated.

Impact AQ-2 Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Development of the proposed structural BMPs would generally involve construction phases such as site preparation, grading and excavation, and construction of the structural control

measure. Construction activities associated with each structural BMP (regional, centralized, and distributed) would generate pollutant emissions from the following general activities: (1) site preparation, grading, and excavation; (2) construction workers traveling to and from a BMP site; (3) delivery and hauling of construction supplies to and soil and debris from the structural BMP site; (4) fuel combustion by on-site construction equipment; and (5) construction of the structural BMP. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. Construction activities involving site preparation and grading would primarily generate PM10 emissions. Mobile source emissions (use of diesel-fueled equipment on-site, and traveling to and from a BMP site) would primarily generate NOX emissions. The amount of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring at the same time.

Individual structural BMP developments associated with the proposed program would be reviewed on a case-by-case basis to ascertain whether an individual development would generate potentially significant air quality impacts during construction, and, where it is necessary, will require the implementation of mitigation measures to minimize air emissions and reduce potentially significant impacts. For BMPs that may result in significant air emissions as determined by implementing agencies, Mitigation Measures AIR-1 and AIR-2 would need to be implemented to reduce construction emissions to less than significant levels, as described in the PEIR.

ULAR and Ballona Creek EWMP Regional Projects

The *Initial Study/Environmental Constraints Evaluation* for the ULAR and Ballona Creek EWMPs (refer to Appendix 4.C of the ULAR EWMP [2015] and Appendix 4.C of the Ballona Creek EWMP [2015] respectively) conclude that a significant impact would occur if the ULAR or Ballona Creek EWMP Regional Projects result in construction or operational emissions that exceed the SCAQMD thresholds of significance for criteria pollutants generated during construction and operation. Construction is likely to require heavy equipment such as loaders, and excavators, and substantial amounts of soil would require export from the sites. As a consequence, there is a possibility for construction emissions to exceed the SCAQMD significance thresholds, even with mitigation, depending on the construction phasing and schedule.

Implementation of the proposed program would not result in substantial long-term regional emissions of criteria air pollutants. Operation of the proposed Project would occur either passively, or if pumping is required, would not likely utilize a substantial amount of energy or require more than nominal operational activities. The proposed structural BMPs are not land use projects and, therefore, would not generate daily vehicle-exhaust emissions by the motor vehicles traveling to and from the individual project areas.

ULAR and Ballona Creek EWMP Regional Projects

Operation of the ULAR and Ballona Creek Regional EWMP Regional Projects would occur either passively, or if pumping is required, would not likely utilize a substantial amount of energy or require more than nominal operational activities, and therefore, are not likely to result in emission in excess of the SCAQMD significance thresholds for operation. Therefore, operation

of the ULAR or Ballona Creek EWMP Regional Projects would not likely pose environmental constraints.

Impact AQ-3 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

As the Basin is currently in nonattainment for ozone, PM10, and PM2.5, cumulative development consisting of the proposed program along with other reasonably foreseeable future projects in the Basin as a whole could violate an air quality standard or contribute to an existing or projected air quality violation. However, based on SCAQMD's cumulative air quality impact methodology, SCAQMD recommends that if an individual project results in air emissions of criteria pollutants (ROG, CO, NOx, SOx, PM10, and PM2.5) that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the proposed program region is in nonattainment under an applicable federal or state ambient air quality standard. As discussed above, under conditions where multiple structural BMPs would be constructed concurrently in the EWMP areas, it is anticipated that the total aggregate construction emissions generated from these multiple structural BMP projects on a daily basis would exceed the SCAQMD's significance thresholds for criteria pollutants. Therefore, cumulative impacts would be significant and unavoidable.

With respect to operational emissions, program implementation would not result in substantial long-term regional emissions of criteria air pollutants and would not exceed the SCAQMD thresholds of significance for criteria pollutants. As such, the proposed program's operational emissions would not be cumulatively considerable and cumulative air quality impacts would be less than significant.

ULAR and Ballona Creek EWMP Regional Projects

Construction of the Regional Projects identified in the ULAR and Ballona Creek EWMPs, in conjunction with construction of other water quality and related improvements, could result in cumulative air quality impacts. Cumulative impacts would be addressed as part of the County's Program EIR or in site specific environmental compliance documentation (under the California Quality Act) and would pose the same environmental constraint as described above under AQ-2.

Impact AQ-4 Would the project expose sensitive receptors to substantial pollutant concentrations?

Construction and operation of new developments that would occur under the proposed program could potentially expose sensitive receptors in the EWMP areas of the County to localized air quality impacts from criteria pollutants and TACs. While construction-related traffic on the local roadways would occur during construction of each structural BMP project, the net increase of construction worker vehicle trips to the existing traffic volumes on the local roadways would be relatively small and would not result in CO hotspots. Thus, because trip-generating land uses are not associated with the proposed program and the amount of maintenance visits to the

structural BMP sites would be minimal, impacts associated with CO hotspots would be less than significant and no mitigation is required.

Given that a large part of the EWMP area is highly urbanized with a variety of land use types, the proposed programs would be located in various watersheds across the County that span multiple jurisdictions, existing sensitive uses such as residences, schools, hospitals, daycare centers, etc., may be located within and in proximity to the EWMP areas. During construction of the individual structural BMP projects in the EWMP areas, existing sensitive receptors that happen to be located adjacent to or near these structural BMP construction sites could be exposed to significant adverse localized air quality impacts. The construction emissions generated by a new structural BMP project could potentially cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards at the existing sensitive uses located in the vicinity of that project. For individual structural BMP projects that would fit this scenario, Mitigation Measure AIR-3 would be implemented. With implementation of Mitigation Measures AIR-3, this impact would be reduced to less than significant. For smaller BMPs, including distributed BMPs, air emissions would not be significant and would not require mitigation measures.

Operation of the structural BMPs would not involve TAC-emitting equipment, as the majority of the structural BMPs would operate passively without the use of mechanized equipment. While some of the centralized and regional structural BMPs may require the use of pump stations and associated components, such equipment would be electrically driven and would not result in direct emissions at the individual structural BMP sites. Therefore health risks from TAC emissions associated with project operations would not occur.

ULAR and Ballona Creek EWMP Regional Projects

The *Initial Study/Environmental Constraints Evaluation* for the ULAR and Ballona Creek EWMPs (refer to Appendix 4.C of the ULAR EWMP [2015] and Appendix 4.C of the Ballona Creek EWMP [2015] respectively) conclude that there is a potential for construction of the ULAR and Ballona Creek EWMP Regional Projects to result in emissions in excess of the applicable LSTs, which would require project-level environmental analysis and have the effect of increasing the length of time required for individual project approvals for CEQA compliance.

Impact AQ-5 Would the project create objectionable odors affecting a substantial number of people?

During the construction phases for each of the new structural BMP projects that would occur in the EWMP areas over the course of the implementation period, exhaust from construction equipment, primarily diesel emissions, may produce discernible odors typical of most construction sites. Diesel odors are common in urbanized environments. Such odors would be a temporary source of nuisance to adjacent uses, but because they are temporary and intermittent in nature, would not be considered a significant environmental impact. Therefore, impacts associated with objectionable odors during construction would be less than significant.

Some structural BMPs may involve retaining intermittent stormwater or dry weather flows on a site that may result in organic odors as water levels fluctuate and decomposition occurs in saturated mud. Restored creeks and estuaries may be permanently wet, resulting in odors from

saturated mud or algal blooms. If these facilities are near sensitive receptors such as residential areas, these odors may result in a severe nuisance, particularly during night time hours. Regular maintenance may be sufficient to reduce odors in some situations. Mitigation Measure AES-2 requires implementing agencies to prepare and implement maintenance plans for all BMPs installed. Implementation of Mitigation Measure AIR-4 promotes the consideration of odors when siting BMP locations and types.

ULAR and Ballona Creek EWMP Regional Projects

The *Initial Study/Environmental Constraints Evaluation* for the ULAR and Ballona Creek EWMPs (refer to Appendix 4.C of the ULAR EWMP [2015] and Appendix 4.C of the Ballona Creek EWMP [2015] respectively) conclude that construction of the ULAR and Ballona Creek EWMP Regional Projects would result in some odors associated with diesel emissions from construction equipment. Diesel odors are common in urbanized environments, and during project construction, would be temporary and localized, and not expected to result in substantial odor impacts. Air emissions, including odors, during operation are anticipated to be absent or minimal, as surface water would not be stagnant, and storage and infiltration units would be located underground. Therefore, construction and operation of the Regional Projects is not expected to result in substantial odors.

Non-Structural (Institutional) BMPs

As discussed in Section 2.0, Project Description, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, no impacts associated with implementation of the SCAQMD's AQMP would result. In addition, no project-specific or cumulative impacts associated with exposure of sensitive receptors to substantial pollutant emissions or odors would result.

3.3 Biological Resources

The EMP areas are each located within Los Angeles County (County), which exhibits native habitats corresponding with the California Floristic Province. The County experiences a Mediterranean climate, which is generally characterized by relatively heavy winter precipitation and dry summers. The County hosts one of the most dense and populous urban metropolises in the country, which has substantially altered the native habitats. However, within the foothill areas and some drainage areas, native habitats still remain.

The EWMP areas contain an array of coastal habitats such as: marine, intertidal, estuarine, coastal salt marsh, and beach dunes; freshwater aquatic habitat such as marshes, lakes, and ponds; riverine aquatic habitat including streambeds and associated riparian areas; and upland communities such as coastal sage scrub, chaparral, foothill woodlands, and coniferous forests in the mountains. The dominant native plant community in Los Angeles County is chaparral (Los Angeles County, 2012a). In general, communities that are relatively undisturbed and have connectivity to other open space areas function as higher-quality habitat for sensitive plants and wildlife. Non-native, disturbed, and/or isolated habitats generally provide lower-quality wildlife habitat, though some sensitive plants and wildlife are known to occur in such areas.

3.3.1 Environmental Setting

The Ballona Creek, Marina Del Rey and Santa Monica EWMP areas are dominated by urbanized inland and beach communities with high-density residential and commercial land uses throughout the watersheds. Sensitive habitats in these areas include coastal drainages, coastal lagoons, and dune scrub. However, the most of the drainages in these watersheds have been channelized with hard-bottom channels such as Ballona Creek and provide minimal habitat value to sensitive species. Most of the coastal creeks have been rechannelized and are largely underground. The value of riparian and aquatic resources in these urbanized areas is generally low.

The Dominguez Channel EWMP area is characterized by high-density inland communities and an industrial shoreline. Much of the drainages are urbanized and underground or otherwise concrete-lined, with notable exceptions such as Machado Lake. The Dominguez Channel is tidally influenced but is a man-made rip-rap or concrete-lined channel. Some vegetation occurs in localized drainages and some tributary drainages are being restored for wetland values. However, outside of the restoration areas and recreation features (such as Machado Lake), habitat values in this urban and industrial area are low.

The Upper Los Angeles River EWMP area traverses a large diverse area of the Los Angeles Basin characterized by dense urbanization. The predominant urbanization results in limited biological value in the watershed. The natural hydrology of the Los Angeles River watershed has been altered by channelization and the construction of dams and flood control reservoirs. The Los Angeles River and many of its tributaries are lined with concrete for most or all of their length. Soft-bottomed segments of the Los Angeles River occur where groundwater upwelling prevents armoring of the river bottom. Numerous soft-bottom tributary streams feed into the river from the mountainous perimeter. Because of persistent dry-weather flows caused by irrigation run off and wastewater treatment plant discharges, vegetation within these drainages is common. The Los Angeles County Flood Control District routinely clears the vegetation from most of the vegetated drainages under permits from the U.S. Army Corps of Engineers (USACE) and California Department of Fish and Wildlife (CDFW). However, several stream segments exhibiting high-value habitats remain throughout this watershed, including Compton Creek and Bull Creek. When not cleared for flood control purposes, these areas can develop into substantial riparian habitats supporting sensitive species such as least Bell's vireo and southwest flycatcher as well as other diverse ecological communities. Lower in the watershed where perennial flows are substantial because of wastewater discharges, aquatic habitats occur that support waders, ducks, and gulls.

Special-Status Species

Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to habitat loss or population decline, are recognized by federal, state, or other agencies. Some of these species receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively

as “special-status species”. Wildlife movement corridors are critical for the survivorship of ecological systems

Wildlife Movement

Habitat linkages are contiguous areas of open space that connect two larger habitat areas. Linkages provide for both diffusion and dispersal for a variety of species within the landscape. In addition, linkages can serve as primary habitat for some smaller species.

Jurisdictional Resources

Wetlands and permanent and intermittent drainages, creeks, and streams identified as waters of the United States are subject to the jurisdiction of USACE and Regional Water Quality Control Board (RWQCB) under Section 404 and Section 401, respectively, of the Federal Clean Water Act. All of the rivers and flood control drainages that flow to the ocean within the EWMP area are within the jurisdiction of these agencies.

Streambeds are subject to regulation by the CDFW under Section 1602 of the California Fish and Game Code. A stream is defined under these regulations as a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. This definition includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. CDFW jurisdiction typically extends to the edge of the riparian vegetation canopy.

3.3.2 Regulatory Setting

3.3.2.1 Federal

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) administers the federal Endangered Species Act (FESA) that provides a process for listing species as either threatened or endangered, and methods of protecting listed species. Species are listed as either endangered or threatened under Section 4 of the FESA that defines “endangered” as any plant or animal species that is in danger of extinction throughout all or a significant portion of its range and “threatened” if a species is likely to become endangered in the foreseeable future.

Pursuant to the FESA, USFWS and National Marine Fisheries Service (NMFS) have designated critical habitat for several endangered and threatened species within Los Angeles County. Critical habitat is identified as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or take any migratory bird listed in Title 50 of the Code of Federal Regulations Part 10.

Although impacts to migratory birds are highly unlikely because of the disturbed nature of the proposed project’s site locations, the applicant will be required to either avoid impacts to Environmental Setting, Impacts, and Mitigation Measures

migratory birds and their nests, or to obtain a permit from the USFWS providing for the take of a migratory bird. Should the nesting of any migratory bird occur on or adjacent to the project site during grading or construction activities, a USFWS-qualified biological monitor would have the authority to halt all work activities and notify the city and corresponding resource agency.

Clean Water Act Section 404

Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level. Under Section 404 of the Clean Water Act (CWA), USACE is responsible for regulating the discharge of dredged or fill material into waters of the United States. The term “waters” includes wetlands and non-wetland bodies of water that meet specific criteria as defined in the Code of Federal Regulations.

3.3.2.2 State

California Endangered Species Act

The CDFW administers the California ESA. State threatened, endangered, and candidate species are protected against take, which under the CESA is restricted to direct killing or harm of individual animals and does not apply to the loss of habitat as it does under FESA.

Clean Water Act Section 401 Certification or Waiver, and State Discharge Permit under the Porter-Cologne Act

The State of California regulates water quality related to discharge of fill material into waters of the State pursuant to Section 401 of the CWA. Section 401 compliance is a federal mandate regulated by the State. The local RWQCBs have jurisdiction over all those areas defined as jurisdictional under Section 404 of the CWA. Where a 404 permit is required, a 401 water quality certification from the RWQCB is also required.

Section 1602 Lake and Streambed Alteration Agreement

Jurisdictional authority of the CDFW over the bed, bank, or channel of a river, stream, or lake is established under Section 1600 et seq. of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The Fish and Game Code stipulates that it is unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream, or lake resulting in a substantial effect on a fish or wildlife resource without notifying the CDFW and completing the Streambed Alteration Agreement process.

Fish and Game Code of California

All birds, and raptors specifically, and their nests, eggs, and parts thereof are protected under Sections 3503.5 of the Fish and Game Code of California. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered a violation of this code.

Non-Listed Species Management and Conservation Concerns

Species of Special Concern is an informal designation used by CDFW for some declining wildlife species that are not proposed for listing as threatened or endangered. This designation

does not provide legal protection, but signifies that these species are recognized as declining by CDFW.

3.3.2.3 Local

Los Angeles County Significant Ecological Areas

As part of the General Plan Conservation/Open Space and Land Use elements, the County has identified and adopted policies for Significant Ecological Areas (SEAs). The purpose of establishing a SEA is to maintain biological diversity by establishing natural biological parameters, including species, habitat types, and linkages. The County General Plan includes recommended management practices for each SEA.

Santa Monica Mountains Conservancy

The Santa Monica Mountains Conservancy was established by the California State Legislature in 1980. The Conservancy's Comprehensive Plan outlines conservation priorities and recreational opportunities in the Santa Monica Mountains. Development projects in the Santa Monica Mountains (Santa Monica Bay EWMP) area subject to review by the County for consistency with the Comprehensive Plan.

Los Angeles County Oak Tree Ordinance and City Tree Preservation Ordinances

Title 22, Part 16, of the Los Angeles County Code of Ordinances is the Oak Tree Ordinance. The ordinance was established to recognize oak trees within the County as a historical, aesthetic, and ecological resource. The ordinance applies to all unincorporated areas of the County. Several cities within the County may have adopted this or a similar ordinance. The ordinance, in particular, prohibits a person to "cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any tree of the oak genus" that is 8 inches or more in diameter.

Los Angeles County Oak Woodland Management Plan

Los Angeles County adopted a California Oak Woodlands Conservation Management Plan pursuant to the requirements of Assembly Bill (AB) 242 in 2011. The Los Angeles County Oak Woodlands Conservation Management Plan provides consistent policy for the management of oak woodlands that can be incorporated into the Los Angeles County General Plan and other relevant planning documents, developing a comprehensive and cohesive strategy for dealing with loss, and creating opportunities for recovering oak woodlands.

3.3.3 Impact Assessment

3.3.3.1 Thresholds of Significance

To determine the level of significance of an identified impact, the criteria outlined in the CEQA Guidelines were used. CEQA Guidelines Section 15065 directs lead agencies to find that a project may have a significant effect on the environment if it has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory. CEQA Guidelines Section 15206 further specifies that a

project shall be deemed to be of statewide, regional, or area-wide significance if it would substantially affect sensitive wildlife habitats including, but not limited to, riparian lands, wetlands, bays, estuaries, marshes, and habitats for rare and endangered species as defined by the Fish and Game Code Section 903. CEQA Guidelines Section 15380 provides that a plant or animal species, even if not on one of the official lists, may be treated as “rare or endangered” if, for example, it is likely to become endangered in the foreseeable future. Additional criteria to assess significant impacts to biological resources due to the proposed project are specified in CEQA Guidelines Section 15382 (Significant Effect on the Environment) “...a *substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.*”

Appendix G of the CEQA Guidelines indicates that a project would have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

3.3.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to biological resources identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-3 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix

4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-3. Summary of Biological Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance						
	Sensitive Species	Sensitive Habitats	Wetland Habitats	Wildlife Movement	Local Policies and Ordinances	Habitat Conservation Plans	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	BIO-1 through BIO-8	BIO-1 through BIO-8	BIO-1 through BIO-9	None Required	BIO-10	None Required	None Required
Regional BMPs							
Regional Retention and Infiltration	Yes	Yes	Yes	No	No	No	Yes
Regional Capture, Detention and Use	Yes	Yes	Yes	No	No	No	Yes
Centralized BMPs							
Bioinfiltration	Yes	Yes	Yes	No	No	No	Yes
Constructed Wetlands	Yes	Yes	Yes	No	No	No	Yes
Treatment/LFDs	Yes	Yes	Yes	No	No	No	Yes
Creek, River, Estuary Restoration	Yes	Yes	Yes	No	No	No	Yes
Distributed BMPs							
Site Scale Detention	Yes	Yes	Yes	No	No	No	Yes
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	No	No	No	No	No	No	No
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	No	No	No	No	No	No
Flow through Treatment BMPs	No	No	No	No	No	No	No
Source Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	No	No	No	No	No	No
Low-Flow Diversion	No	No	No	No	No	No	No

NOTE: These conclusions are based on typical sizes and locations of BMPs.

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

BIO-1: Prior to approving a regional or centralized BMP, the Permittee shall conduct an evaluation of the suitability of the BMP location. Appropriate BMP sites should avoid impacting large areas of native habitats including upland woodlands and riparian forests that support sensitive species to the extent feasible. The evaluation shall include an assessment of potential downstream impacts resulting from flow diversions.

BIO-2: Prior to ground-disturbing activities in areas that could support sensitive biological resources, a habitat assessment shall be conducted by a qualified biologist to determine the potential for special-status wildlife species to occur within affected areas, including areas directly or indirectly impacted by construction or operation of the BMPs.

BIO-3: If a special-status wildlife species is determined to be present or potentially present within the limits of construction activities, a qualified biologist shall conduct preconstruction surveys of proposed work zones and within an appropriately sized buffer around each area as determined by a qualified biologist within 14 days prior to ground disturbing activities. Any potential habitat capable of supporting a special-status wildlife species shall be flagged for avoidance if feasible.

BIO-4: If avoidance of special-status species or sensitive habitats that could support special-status species (including, but not limited to, critical habitat, riparian habitat, and jurisdictional wetlands/waters) is not feasible, the Permittee shall consult with the appropriate regulating agency (USACE/USFWS or CDFW) to determine a strategy for compliance with the Endangered Species Act, California Fish and Game Code, and other regulations protecting special-status species and sensitive habitats. The Permittee shall identify appropriate impact minimization measures and compensation for permanent impacts to sensitive habitats and species in consultation with regulatory agencies. Construction of the project will not begin until the appropriate permits from the regulatory agencies are approved.

BIO-5: If construction and vegetation removal is proposed between February 1 and August 31, a qualified biologist shall conduct a pre-construction survey for breeding and nesting birds and raptors within 500-feet of the construction limits to determine and map the location and extent of breeding birds that could be affected by the project. Active nest sites located during the pre-construction surveys shall be avoided until the adults and young are no longer reliant on the nest site for survival as determined by a qualified biologist.

BIO-6: All construction areas, staging areas, and right-of-ways shall be staked, flagged, fenced, or otherwise clearly delineated to restrict the limits of construction to the minimum necessary near areas that may support special-status wildlife species as determined by a qualified biologist.

BIO-7: Prior to construction in areas that could support special-status plants, a qualified botanist shall conduct a pre-construction floristic inventory and focused rare plant survey of project areas to determine and map the location and extent of special-status plant species populations within disturbance areas. This survey shall occur during the typical blooming periods of special-status plants with the potential to occur. The plant survey shall follow the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (November 24, 2009).

BIO-8: If temporary construction-related impacts to special-status plant populations are identified within a disturbance area, the implementing agencies shall prepare and implement a special-status species salvage and replanting plan. The salvage and replanting plan shall include measures to salvage, replant, and monitor the disturbance area until native vegetation is re-established under the direction of CDFW and USFWS.

BIO-9: Prior to construction, a qualified wetland delineator shall be retained to conduct a formal wetland delineation in areas where potential jurisdictional resources (i.e., wetlands or drainages) subject to the jurisdiction of USACE, RWQCB, and CDFW may be affected by the project. If jurisdictional resources are identified in the EWMP area and would be directly or indirectly impacted by individual projects, the qualified wetland delineator shall prepare a jurisdictional delineation report suitable for submittal to USACE, RWQCB, and CDFW for purposes of obtaining the appropriate permits. Habitat mitigation and compensation requirements shall be implemented prior to construction in accordance with Mitigation Measure BIO-4.

BIO-10: Oak trees and other protected trees shall be avoided to the extent feasible. If trees may be impacted by project construction, a certified arborist shall conduct a tree inventory of the construction impact area. If any oak trees or other protected trees will be impacted by BMP construction, the implementing agency shall obtain any required County or City permits.

Structural (Regional, Centralized, and Distributed) BMPs

Impact BIO-1 Would the project have a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Construction of structural Best Management Practices (BMPs) would occur primarily within high-density urban, commercial, industrial, and transportation areas where they will either replace or improve upon existing stormwater infrastructure. Since most of the BMPs would be located in existing drainages, each individual BMP could affect riparian vegetation during installation. Most of the smaller BMPs would avoid impacting high-value habitats during construction. Upland scrubs and native oak forests would be only incidentally affected if at all. In stream effects could occur to riparian scrub and aquatic habitats. Construction of structural BMPs, regional and centralized BMPs may affect large open space or riparian habitats that would have a higher

potential to support special-status wildlife species. Implementation of the structural BMPs may result in temporary loss of foraging habitat for migratory birds, including raptor species. Similarly, proposed construction activities could impact nesting birds or roosting bats. Potential bat roost sites in the vicinity of the project areas may include abandoned structures and bridges.

Mitigation Measure BIO-1 requires that implementing agencies evaluate the suitability of potential BMP sites for their potential to impact valued habitats such as oak woodland and riparian willow forests. Mitigation Measures BIO-2 through BIO-8 require impact characterization, minimization and compensation for impacts to highly valued habitats in consultation with the USFWS and CDFW. Implementation of mitigation measures requiring careful consideration of suitable sites would reduce impacts to natural habitats on a regional scale to less-than-significant levels.

With regard to BMP operations, maintenance of BMPs may involve accessing drainages through habitat areas or clearing vegetation. Since drainages are within the CDFW jurisdiction, any vegetation-clearing activities would be subject to permits from CDFW as well as potentially the Los Angeles RWQCB and USACE. These permits would include provisions to avoid and mitigate impacts to sensitive habitats and species. Adherence to these conditions of approval would ensure that impacts to natural resources from maintenance would be less than significant

If BMPs designed to retain dry-weather flows reduced the wetted area of drainages or completely eliminated flows in certain drainages that support riparian habitat, impacts to sensitive species would be significant. The more urbanized watersheds, such as those under City of Los Angeles jurisdiction, would be less likely to experience impacts to riparian vegetation from low-flow retention, with some noted exceptions such as the Ballona wetlands.

ULAR EWMP Regional Projects

No candidate, sensitive, or special-status species are known to occur on the Upper Los Angeles EWMP Regional Project sites. Sites SF01 is located within the USGS San Fernando quadrangle; NHP within the Van Nuys quadrangle; GL01 within the Burbank quadrangle; SP01 within the Los Angeles quadrangle; SM01, AL01, and MP01 within the El Monte quadrangle; and LAC01 within the South Gate quadrangle. Federal and state listed threatened and endangered species have been found in each of the quadrangles in the past (CNDDDB, 2015); however it is very unlikely that such habitat existing at any of the ULAR EWMP Regional Project sites, as those sites are all developed and actively used urban recreational areas. In addition, there are no Significant Ecological Areas (SEAs) in the vicinity of the ULAR EWMP Regional Project sites (LA County, 2014). Project level environmental analysis would not be required for these sites.

Ballona Creek EWMP Regional Projects

No candidate, sensitive, or special-status species are known to occur on the Ballona Creek EWMP Regional Project sites. Sites LA05, LA20, LA21, and WH01 are located within the USGS Hollywood Quadrangle; sites LA12 and CC04 in the Beverly Hills quadrangle, and portions of site BH in both quadrangles. Federal and state listed threatened and endangered species are found in the Beverly Hills and Hollywood Quadrangles (CNDDDB, 2014); however it is very unlikely that such habitat existing at any of the Ballona Creek EWMP Regional Project sites, as

those sites are all developed and actively used urban recreational areas. In addition, there are no Significant Ecological Areas (SEAs) in the vicinity of the Ballona Creek EWMP Regional Project sites (LA County, 2014).

Impact BIO-2 Would the project have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Sensitive natural communities tracked by the CNDDDB occur within the EWMP area. In addition, Significant Ecological Areas are considered sensitive natural communities as identified by the Los Angeles County General Plan. While some regional and centralized structural BMPs (i.e., floodplain management and stream restoration projects) could occur within or adjacent to SEAs, riparian habitat or other sensitive natural communities, these types of BMPs would provide multi-beneficial water quality and habitat restoration improvements to the applicable EWMP watershed. Further, each development proposed within a designated SEA must undergo a performance review process for compliance with the SEA design compatibility criteria and other standards for approval by the Los Angeles County Department of Regional Planning (County of Los Angeles 2012). Future project-level environmental review processes would consider all proposed projects on a case-by-case basis to determine whether an individual project would impact riparian or other sensitive natural communities and where it is necessary, would require the implementation of site-specific mitigation measures.

ULAR EWMP Regional Projects

There is no riparian habitat or wetlands located at any of the ULAR EWMP Regional Project sites or the immediate vicinity, as all of the sites are developed are recreational areas. Open drainage channels that are concrete lined are located adjacent to NHP (Tujunga Wash), GL01 (Verdugo Wash), and SP01 (Arroyo Seco); however, these drainages are devoid of riparian habitat and are not expected to be physically modified. Each ULAR EWMP Regional Project site is designated in its respective general plan as recreation, open space, or other public use. In addition, no SEAs are located in the vicinity of the Regional Project sites. Project level environmental review may be required for future projects.

Ballona Creek EWMP Regional Projects

There is no riparian habitat or wetlands located at any of the Ballona Creek Regional Project sites or the immediate vicinity, as all of the sites are developed are recreational areas. IG01 had an existing drainage feature onsite; however, this drainage is lined with concrete and is devoid of riparian habitat. Each Regional Project site is designated in its respective general plan as recreation, open space, or other public use. In addition, no SEAs are located in the vicinity of the Regional Project sites. Project level environmental review may be required for future projects.

Impact BIO-3 Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

Construction through areas within or adjacent to waterways (creeks, stream, reservoir) or wetland features would require approval from one or more of the following: USACE, RWQCB, or CDFW. Wetlands occur throughout the EWMP Areas ranging from isolated segments of improved urban channels to the open river segments of the Los Angeles River. Once project facility locations and designs are determined, exact locations and acreages of jurisdictional areas located within or adjacent to impact areas shall be determined through a formal jurisdictional delineation. Future project level environmental analysis may be required.

For projects impacting native vegetation within jurisdictional drainages, the implementing agency would be required to obtain California Fish and Game Code Section 1602 compliance and Section 404 compliance from the USACE and Section 401 Certification from the RWQCB. In addition, implementation of Mitigation Measures BIO-1 through BIO-9 would ensure compliance with state and federal regulations relating to potentially jurisdictional features, including wash habitat vegetation that may fall under CDFW jurisdiction.

ULAR and Ballona Creek EWMP Regional Projects

There is no riparian habitat or wetlands located at any of the Regional Project sites or the immediate vicinity, as all of the sites are developed are recreational areas and adjacent washes are lined with concrete. Additional project-level environmental review may be required for future projects.

Impact BIO-4 Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

There are no established wildlife movement corridors within the EWMP area as described within the Los Angeles County General Plan directly affected by implementation of the EWMPs. The EWMPs would not reduce open water features used by migratory birds or reduce fresh water flows that support sensitive fish species. Implementation of the EWMP would not be expected to interfere with wildlife movement or any migratory corridor/linkage, and would not be constructed within a native wildlife nursery site. Project-level environmental analysis would not be required.

ULAR EWMP Regional Projects

There are no known terrestrial migration corridors within the vicinities of the ULAR EWMP Regional Project sites. The sites are located in urban areas, and are not connected with other open space areas via undeveloped or natural corridors. Although wildlife may visit the Regional Project sites, introduction of subsurface facilities at the ULAR EWMP Regional Project sites would not otherwise impede migration. None of the Regional Project sites have water courses that can be used by migratory fish. Therefore, the ULAR EWMP Regional Projects would not interfere with wildlife migration.

Ballona Creek EWMP Regional Projects

There are no known terrestrial migration corridors within the vicinities of the Regional Project sites. The sites are located in urban areas, and are not connected with other open space areas via undeveloped or natural corridors. None of the Ballona Creek EWMP Regional Project sites have water courses that can be used by migratory fish. Therefore, the Regional Projects would not interfere with wildlife migration.

The Ballona Creek EWMP Regional Project sites include landscaped open space areas, including trees that could be used as nesting sites. Impacts to migratory birds and active nests are prohibited under the Federal Migratory Bird Treaty Act (MBTA), 50 C.F.R. Part 10, and Sections 3500 through 3705 of the California Fish and Game Code protect most migratory bird species and active nests from harm or destruction. Nearly all native North American bird species are on the MBTA list. The nesting season varies according to species, but is generally February 15th through August 15th for most birds and January 31st through September 1st for raptors. If tree and vegetation removal would occur during nesting months at any Ballona Creek EWMP Regional Project site, a confirmation bird survey at each of the sites should be performed to prevent disturbance of active nests. Such surveys are standard mitigation applied during site specific environmental documentation. The requirements for bird surveys are not expected to result in substantial environmental constraints.

Impact BIO-5 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project would mainly be constructed within highly urbanized and disturbed areas within existing infrastructure. Any impacts to oak trees within Los Angeles County would be required to comply with the Oak Tree Preservation Ordinance (or other tree ordinances established by the local city). A tree permit may be required if impacts to oak trees or other protected trees are determined to be necessary. No impacts to oak trees or other protected tree species is anticipated. However, the exact locations of many BMP projects have not been established. Implementation of Mitigation Measure BIO-10 would reduce any potential impacts to protected tree species to a less-than-significant level.

ULAR EWMP Regional Projects

The County of Los Angeles protects oak trees and requires a permit prior to any oak tree removals. The City of Los Angeles also protects the following trees within its jurisdiction:

- Oak tree including valley oak
- Southern California Black Walnut
- California Live Oak
- Western Sycamore
- Any other oak genus indigenous to California but excluding the scrub oak,
- California Bay

There is a potential for the ULAR EWMP Regional Projects to result in some tree removal, depending on the specific locations and parameters of the water quality improvements, which

would require permits or other approvals from the respective jurisdiction. The jurisdictions could apply conditions of approval, including tree replacements, or other measure that mitigate the removals. Project level environmental analysis would be needed to determine oak tree ordinance compliance requirements.

Ballona Creek EWMP Regional Projects

In addition to the tree species protected within its jurisdiction, the City of Los Angeles also designates trees of importance as Heritage Trees. At Lafayette Park (LA05), the City has designated a Firewheel tree (located near Wilshire Boulevard) as a Heritage Tree (Los Angeles, 2014).

There is a potential for the Ballona Creek Regional Projects to result in some tree removal, depending on the specific locations and parameters of the water quality improvements, which would require permits or other approvals from the respective jurisdiction. In the case of LA05, it does not appear that the water quality improvements would adversely affect the Firewheel Tree; however, this should be addressed in any site-specific environmental document for LA05. The jurisdictions could apply conditions of approval, including tree replacements, or other measure that mitigate the removals. Project level environmental analysis may be needed to determine oak tree ordinance compliance requirements.

Impact BIO-6 Would the project conflict with the provisions of an adopted habitat conservation plan, natural communities conservation plan, or any other approved local, regional, or state habitat conservation plan?

The EWMP areas are not located within an adopted federal or state habitat conservation plan area, but several SEAs are located within the boundary of the EWMP area. The majority of the structural BMPs would occur in developed or disturbed areas that are expected to be outside of adopted SEAs. BMPs would provide multi-beneficial water quality and habitat restoration improvements to the applicable EWMP watershed. Each development proposed within a designated SEA must undergo a performance review process for compliance with the SEA design compatibility criteria and other standards for approval by the Los Angeles County Department of Regional Planning (County of Los Angeles 2012). Therefore, conflicts with the management policies for each SEA are not anticipated, and impacts would be less than significant.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek EWMP Regional Project sites are located within urbanized areas and are developed as parks and recreational facilities. The sites are not located within an adopted Natural Communities Conservation Plan (NCCP) or Habitat Conservation Plan (HCP). In addition, the sites are not located in or near any SEA. Additional project level environmental review may be required if a future project is located in an SEA.

Non-Structural (Institutional) BMPs

As discussed in Section 2.0, Project Description, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no direct impacts to special-status species or their habitats or riparian or other sensitive natural communities. The

non/structural BMPs would also not result in impacts related to the movement of native resident or migratory fish or wildlife species or impacts related to conflicts with an adopted conservation plan or the Los Angeles County General Plan. However, many of the non-structural BMPs would result in the reduction of dry-weather urban runoff that could reduce perennial flows in local drainages. Returning the local hydrology to a more natural condition would occur overtime and would reduce overall wetted areas within minor drainages and swales throughout the region. Local riparian and lake features that rely on urban runoff could gradually shift from riparian and marsh to upland and sparse riparian. Shorelines may shift and wetted areas may decrease over time as more water is retained in the upper watershed, but these changes would not significantly degrade biological resources in the region as a whole since the revised hydrology would be a more natural condition for the arid region. Groundwater seepage would continue to support the major riparian corridors in the Malibu, Santa Clara, Upper Los Angeles, and San Gabriel watersheds. Retention of flows in the upper watershed would even augment these groundwater resources, offsetting any impacts from surface flow reductions. Moreover, improved water quality in the region's drainages and lagoons would be beneficial to habitat health. Overall, implementation of nonstructural BMPs will not significantly impact sensitive species in the EWMP areas.

3.4 Cultural Resources

3.4.1 Environmental Setting

This chapter addresses the potential impacts of the proposed program on cultural resources. Cultural resources include prehistoric and historic sites, structures, districts, places, and landscapes, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason. For the purposes of this analysis, cultural resources may be categorized into the following groups: archaeological resources, historic resources (including architectural/engineering resources), contemporary Native American resources, human remains, and paleontological resources.

Prior to urban development and the channeling of the Los Angeles River, much of the program area was likely covered with marshes, thickets, dense woodland, and grassland. The abundant and diverse environmental resources of the coastal Los Angeles basin have attracted human inhabitants from the earliest times. While people are known to have inhabited Southern California beginning at least 13,000 years Before Present (B.P.) (Arnold et al., 2004), the first evidence of human occupation of the Los Angeles area dates to at least 9,000 B.P. Archaeological evidence suggests that the margins of rivers, marshes, and swamps within the Los Angeles River drainage, with their rich variety of resources, served as locations of prehistoric settlement and travel during this period. Settlement around the Ballona Lagoon increased significantly during this period.

The EWMP program areas are located in a region traditionally occupied by the Takic-speaking Gabrielino-Tongva Indians. The term "Gabrielino" is a general term that refers to those Native Americans who were administered by the Spanish at the Mission San Gabriel Arcángel. The Gabrielino-Tongva Indians were hunter-gatherers and lived in permanent communities located near the presence of a stable food supply. Community populations generally ranged from 50 to 100 inhabitants.

Although Spanish explorers made brief visits to the region in 1542 and 1602, sustained contact with Europeans did not commence until the onset of the Spanish Period. In the late 18th century, the Spanish began establishing missions in California and forcibly relocating and converting native peoples. The Mexican Period began when Mexico won its independence from Spain in 1821. Mexico continued to promote settlement of California with the issuance of land grants. When the discovery of gold in Northern California was announced in 1848, a huge influx of people from other parts of North America flooded into California. The city of Los Angeles would experience its greatest growth in the 1880s when two more direct rail connections to the East Coast were constructed.

A project's probability for encountering archaeological resources depends upon three factors: (1) original formation of an archaeological deposit, (2) post-depositional (mainly geomorphic) processes following deposition of archaeological remains, and (3) project-specific ground disturbances.

If the various EWMP projects and approaches may be likened to different types of infrastructure development, then their potential effects to archaeological deposits can be understood in terms of human activity impacts. Program actions that would result in large areas of deep ground disturbance would have a greater probability for encountering and impacting buried archaeological deposits than approaches resulting in more limited horizontal and vertical disturbances.

The archaeological potential of the program area will be highly variable depending on local conditions. The low-lying alluvial plain and coastlines would be expected to have been preferred areas for past subsistence and occupation, and archaeological sites in these areas may have been subject to substantial burial. However, the extensive urbanization of these areas makes it likely that a high percentage of archaeological sites that once existed have been subject to disturbance or destruction by humans. On the other hand, while foothills and mountains may have been less favored for occupation because of their steeper slopes and more limited access to water, these areas have generally been subject to less development

Society for Vertebrate Paleontology (SVP) has outlined criteria for screening the paleontological potential of rock units and has established assessment and mitigation procedures tailored to accommodating such potential. The SVP established four categories of paleontological sensitivity (potential) for rock units: high, undetermined, low, and no potential. Section 3.4 of the PEIR identifies paleontologically sensitive geologic formations within the region.

3.4.2 Regulatory Setting

3.4.2.1 Federal

National Historic Preservation Act of 1966

Enacted in 1966, the NHPA declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the federal, state, and local levels. Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any

historic property that is included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) and that the ACHP must be afforded an opportunity to comment.

National Register of Historic Places

The NRHP was established by the NHPA of 1966, as “an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment”.

Federal Paleontological Resources Regulations

A variety of federal statutes specifically address paleontological resources. They are generally applicable to a project if that project includes federally owned or federally managed lands, or involves a federal agency license, permit, approval, or funding. Federal legislative protection for paleontological resources stems from the Antiquities Act of 1906 (PL 59-209; 16 United States Code 431 et. seq.; 34 Stat. 225), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands.

3.4.2.2 State

California Register of Historical Resources

California Register of Historical Resources (CRHR) was created in 1992 and implemented in 1998 as “an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.”

California Historical Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance.

California Points of Historical Interest

California Points of Historical Interest (PHIs) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value.

Senate Bill 18

Senate Bill 18 (SB 18) requires local governments (city and county) to consult with Native American Tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process.

State Paleontological Resources Regulations

Paleontological resources are explicitly afforded protection by CEQA, specifically in Section V(c) of Appendix G, the “Environmental Checklist Form,” which addresses the potential for adverse impacts to “unique paleontological resource[s] or site[s].” PRC Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California

Penal Code Section 622.5 sets the penalties for the damage or removal of paleontological resources.

3.4.2.3 Local

General Plans

The Conservation and Open Space Element of the 2008 Los Angeles County General Plan governs the natural and cultural resources of the county. If a CEQA analysis determines that a project will impact a cultural resource area (historic, cultural, or paleontological), the County General Plan provides a set of guidelines that must be adhered to. The numerous cities encompassed by the EWMP program area all have their own respective city General Plans, some of which may contain policies that address cultural resources.

3.4.3 Impact Assessment

3.4.3.1 Thresholds of Significance

For the purposes of this Program Environmental Impact Report (PEIR) and consistency with Appendix G of the CEQA Guidelines, applicable local plans, and agency and professional standards, the program would have a significant impact on cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- Disturb any human remains, including those interred outside of a formal cemetery.

The CEQA guidelines state that a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired. Actions that would materially impair the significance of a historical resource are any actions that would demolish or adversely alter those physical characteristics of a historical resource that convey its historical significance and qualify it for inclusion in the CRHR or in a local register or survey that meet the requirements of PRC Sections 5020.1(k) and 5024.1(g).

Identified cultural resources that may be impacted by individual structural BMP projects would be evaluated for eligibility for listing on the CRHR or local historic register. Cultural resources that are eligible for the CRHR or local historic register are considered to be significant historic resources. Cultural resources would also be evaluated for their qualification as a unique archaeological resource under CEQA. Cultural resources that are identified within individual structural BMP project areas subject to federal approval, permits, or funding would also be evaluated for eligibility for listing on the NRHP. Cultural resources determined to be eligible for listing on the NRHP are automatically eligible for listing on the CRHR and are considered to be significant cultural resources. Paleontological resources are also afforded protection by CEQA. Appendix G (Part V) of the CEQA Guidelines provides guidance relative to significant impacts

on paleontological resources. A project will have a significant impact on the environment if it adversely affects a paleontological resource or site, or a unique geological feature.

3.4.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to cultural resources identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-4 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-4. Summary of Cultural Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance					
	Built Environment Resources	Archaeological and Other Cultural Resources	Unique Archaeological Resources	Paleontological Resources	Human Remains	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	CUL-1 through CUL-4	CUL-1 through CUL-4	CUL-2; CUL-3; CUL-4	CUL-5 and CUL-6	CUL-7	CUL-1 through CUL-7
Regional BMPs						
Regional Detention and Infiltration	Yes	Yes	Yes	Yes	Yes	Yes
Regional Capture, Detention and Use	Yes	Yes	Yes	Yes	Yes	Yes
Centralized BMP						
Bioinfiltration	Yes	Yes	Yes	Yes	Yes	Yes
Constructed Wetlands	Yes	Yes	Yes	Yes	Yes	Yes
Treatment/Low-Flow Diversions	Yes	Yes	Yes	Yes	Yes	Yes
Creek, River, Estuary Restoration	Yes	Yes	Yes	Yes	Yes	Yes
Distributed BMPs						
Site-Scale Detention	Yes	Yes	Yes	Yes	Yes	Yes
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	Yes	Yes	Yes	Yes	No	Yes
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes ⁽¹⁾	Yes	Yes	Yes	No	No	Yes
Flow-through Treatment BMPs ⁽¹⁾	Yes	Yes	Yes	Yes	No	Yes
Source-Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices) ⁽¹⁾	Yes	Yes	Yes	No	No	Yes
Low-Flow Diversions	Yes	Yes	Yes	Yes	No	Yes

⁽¹⁾ These type of BMPs are generally built as retrofits to existing MS4 systems and would require in most cases little or no excavation.

NOTE: These conclusions are based on typical location and need for ground disturbance.

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

CUL-1: For individual EWMP projects that could impact buildings or structures (including infrastructure) 45 years old or older, implementing agencies shall ensure that a historic built environment survey is conducted or supervised by a qualified historian or architectural historian meeting the Secretary of the Interior’s

Professional Qualification Standards for Architectural History. Historic built environment resources shall be evaluated for their eligibility for listing in the CRHR or local register prior to the implementing agency's approval of project plans. If eligible resources that would be considered historical resources under CEQA are identified, demolition or substantial alteration of such resources shall be avoided. If avoidance is determined to be infeasible, the implementing agency shall require the preparation of a treatment plan to include, but not be limited to, photo-documentation and public interpretation of the resource. The plan will be submitted to the implementing agency for review and approval prior to implementation.

CUL-2: Implementing agencies shall ensure that individual EWMP projects that require ground disturbance shall be subject to a Phase I cultural resources inventory on a project-specific basis prior to the implementing agency's approval of project plans. The study shall be conducted or supervised by a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, and shall be conducted in consultation with the local Native American representatives expressing interest. The cultural resources inventory shall include a cultural resources records search to be conducted at the South Central Coastal Information Center; scoping with the NAHC and with interested Native Americans identified by the NAHC; a pedestrian archaeological survey where deemed appropriate by the qualified archaeologist; and formal recordation of all identified archaeological resources on California Department of Parks and Recreation 523 forms and significance evaluation of such resources presented in a technical report following the guidelines in Archaeological Resource Management Reports (ARMR): Recommended Contents and Format, Department of Parks and Recreation, Office of Historic Preservation, State of California, 1990. If potentially significant archaeological resources are encountered during the survey, the implementing agency shall require that the resources are evaluated by the qualified archaeologist for their eligibility for listing in the CRHR and for significance as a historical resource or unique archaeological resource per CEQA Guidelines Section 15064.5. Recommendations shall be made for treatment of these resources if found to be significant, in consultation with the implementing agency and the appropriate Native American groups for prehistoric resources. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred manner of mitigation to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, project reroute or redesign, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, which may include data recovery or other appropriate measures, in consultation with the implementing agency, and any local Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological

resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

CUL-3: The implementing agency shall retain archaeological monitors during ground disturbing activities that have the potential to impact archaeological resources qualifying as historical resources or unique archaeological resources, as determined by a qualified archaeologist in consultation with the implementing agency, and any local Native American representatives expressing interest in the project. Native American monitors shall be retained for projects that have a high potential to impact sensitive Native American resources, as determined by the implementing agency in coordination with the qualified archaeologist.

CUL-4: During project-level construction, should subsurface archaeological resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, project reroute or redesign, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

CUL-5: For individual structural BMP projects that require ground disturbance, the implementing agency shall evaluate the sensitivity of the project site for paleontological resources. If deemed necessary, the implementing agency shall retain a qualified paleontologist to evaluate the project and provide recommendations regarding additional work, potentially including testing or construction monitoring.

CUL-6: In the event that paleontological resources are discovered during construction, the implementing agency shall notify a qualified paleontologist. The paleontologist will evaluate the potential resource, assess the significance of the find, and recommend further actions to protect the resource.

CUL-7: The implementing agency shall require that, if human remains are uncovered during project construction, work in the vicinity of the find shall cease

and the County Coroner shall be contacted to evaluate the remains, following the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the Coroner will contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC will then designate a Most Likely Descendant of the deceased Native American, who will engage in consultation to determine the disposition of the remains.

Structural (Regional, Centralized, and Distributed) BMPs

Impact CUL-1 Would the project cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines §15064.5?

Ground disturbance for distributed BMPs is typically less than 1 to 2 acres in extent, but may extend in some limited applications up to 5 acres where space is available. Centralized and regional structural BMPs require greater footprints for construction and implementation. Implementation of structural BMPs occurring under the proposed program could impact significant historic built environment resources that exist within the program area. Significant archaeological resources have been recorded throughout the program area, and numerous Native American village sites are known to have existed within the program area (Altschul et al., 2003; Gumprecht, 2001; McCawley, 1996). Known archaeological resources, as well as unknown and unrecorded archaeological resources that may be unearthed during construction activities associated with implementation of structural BMPs, could be impacted by individual projects. If previously undiscovered artifacts or buried archaeological resources are uncovered during excavation or construction, significant impacts could occur. Implementation of Mitigation Measures CUL-1-4 would reduce impacts to archaeological and other cultural resources that qualify as historical resources. Project-level environmental analysis may be required to determine if any historic, archaeological or paleontological resources are present and whether mitigation is required.

ULAR EWMP Regional Projects

The ULAR EWMP Regional Projects would be located at community parks, or on a center median. None of the locations where water quality improvements would occur at the Regional Project sites are developed with structures over the age of 50-years that would be directly affected, and therefore, none of the ULAR EWMP Regional Projects would result in demolition or relocation of any historic structure. However, there is one historic resource north of GL01, Fremont Park, and one historic structure located at the east end of Lacy Park (SM01) in San Marino. Project level environmental review may be required for future sites. The following summarizes the cultural resources at GL01 and SM01:

- SM01 – Lacy Park. Lacy Park was originally Wilson Lake in 1875, and the land was purchased by the city in 1925 and dedicated as a park. Many of the tree species, planted nearly 100 years ago, are the result of the designer, Mr. William Hertrich and its first Park Superintendent, Mr. Armin Thurnher. The City considers the Thurnher house, located at the east end of the Park, to be a historic resource. In addition, the San Marino War Memorial is located at the east end of the Park. The water quality improvements would be subsurface

and confined to center area of the Park and are not expected to not result in physical changes to the Thurnher house or the War memorial.

- GL01 – Fremont Park. Fremont Park is bounded by Kenilworth Avenue on its east boundary. Approximately 200 feet to the north of the northern boundary of Fremont Park, the Kenilworth Avenue Bridge crosses over the Verdugo Wash. This bridge is listed as a historic resource in the City of Glendale’s Register of Historic Resources. The water quality improvements would be confined to Fremont Park and would not result in physical changes to the bridge, or its context.

Ballona Creek EWMP Regional Projects

The Regional Projects would be located at community parks, or on a center median. None of the Regional Project sites are developed with structures over the age of 50-years that would be directly affected, and therefore, none of the Regional Projects would result in demolition or relocation of any historic structure. However, one historic structure is located close to each of two sites, BH01 and LA05. Project level environmental review may be required for future sites. The following summarizes the cultural resources at BH01 and LA05:

- BH01 - La Cienega Park. The headquarters for the Academy of Motion Picture Arts and Sciences occupies the building just north of Fenton Field. The building, the former Beverly Hills Water Treatment Plant No. 1 meets the City of Beverly Hill’s criteria for designation as a local Landmark, as required in the City’s Historic Preservation Ordinance, and is considered historic. Since Fenton Field could include a buried tank or infiltration unit and the field is located in close proximity to the historic building, there is the potential for construction activities to indirectly affect the historic structure, depending on the specific location, depth, and construction methods for the water quality improvements. In order to address this potential environmental constraint, an appropriately licensed engineer should review the improvements at Fenton Field and develop, as necessary, means and measures to avoid damage related to proximity of construction to the historic structure.
- LA05 - Lafayette Park. The Felipe De Neve Library, which is a historic resource (Los Angeles Historic Cultural Monument No. 452), is located adjacent to and north of the project site. The water quality improvements would not require removal or physical changes to the library, and as a consequence, are not expected to directly adversely affect the historic resource. However, since buried tanks and/or infiltration units could be placed in Lafayette Park in close proximity to the historic building, there is the potential for construction activities to indirectly and affect the historic structure, depending on the specific location, depth, and construction methods for the water quality improvements. In order to address this potential environmental constraint, an appropriately licensed engineer should review the improvements at Lafayette Park and develop, as necessary, means and measures to avoid damage related to proximity of construction to the historic structure.

Impact CUL-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines §15064.5?

The program area should be considered sensitive for archaeological resources. Archaeological sensitivity varies across the program area based on specific environmental factors. but archaeological resources could potentially be present in any individual structural BMP project

area. Known archaeological resources, as well as unknown and unrecorded archaeological resources that may be unearthed during construction activities associated with implementation of structural BMPs, could be impacted by individual EWMP projects. Any structural BMP which involves grading, trenching, excavation, vegetation removal, or other form of ground disturbance could impact archaeological resources, some of which may qualify as unique archaeological resources. Implementation of Mitigation Measures CUL-2, CUL-3, and CUL-4 would require that unique archaeological resources be treated in accordance with the provisions of Section 21083.2, which would reduce impacts to unique archaeological resources to a less-than-significant level. Project level environmental review may be needed to determine if mitigation is required.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek EWMP Regional Project sites would be constructed within the boundaries of community parks and recreation sites. The surfaces of these sites are developed for active recreational uses (fields and courts) and passive recreational uses (picnic areas, etc.), and are not intensively developed. Because the development history of these sites is unknown and the onsite development is low intensity, there could be undisturbed soils below the sites which contain archaeological resources. In addition, in the case of the Culver Boulevard median (CC04 - Ballona Creek EWMP), there could be artifacts related to its previous historic uses (railroad right-of-way). Based on this, site-specific cultural resource investigations, including a cultural resources records search and field survey by a qualified archaeologist) should be conducted, either prior to or as part of the site-specific environmental documentation for each Regional Project. Mitigation that may be applied in the site-specific environmental document may include monitoring of excavation work by a qualified archaeologist with the authority to halt construction, and the subsequent evaluation and curation of any discovered resources.

Impact CUL-3 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The program area is underlain by a number of high or undetermined paleontological sensitivity units. These sensitive geological formations/units may contain significant paleontological resources. The Los Angeles County General Plan Conservation Element requires that a paleontologist be retained to mitigate potential impacts to nonrenewable paleontological resources. However, significant paleontological resources can be uncovered even in areas of low sensitivity, and it is possible that ground-disturbing construction activities associated with implementation of the program could result in the inadvertent discovery of paleontological resources, which could be a significant impact. Implementation of Mitigation Measures CUL-5 and CUL-6 would reduce these impacts to less-than-significant levels at this program-level of analysis. Project level environmental analysis may be required.

ULAR and Ballona Creek EWMP Regional Projects

Similar to the discussion under archaeological resources, the development history of the Regional Project sites is unknown and the onsite development is low intensity. There could be undisturbed subsurface geological units suitable for containing paleontological resources. A site-specific paleontological records search should be conducted by the County's Natural History Museum to determine whether paleontological resources can be present at the depths that would occur at each site, either prior to or as part of the site-specific environmental

documentation for each Regional Project. Mitigation that may be applied in the site- specific environmental document may include monitoring of excavation work by a qualified paleontologist with the authority to halt construction, and the subsequent evaluation and curation of any discovered resources.

Impact CUL-4 The program could disturb any human remains, including those interred outside of a formal cemetery.

Program-level development involving ground disturbance within the program area could impact human remains. In the event that human remains are discovered, including those interred outside of formal cemeteries, the human remains could be inadvertently damaged, which could be a significant impact. Implementation of Mitigation Measure CUL-7 would reduce impacts to less than- significant levels at this program-level of analysis. Project level environmental analysis may be required.

ULAR and Ballona Creek EWMP Regional Projects

No cemeteries or burial sites are known to have occurred at the Regional Project site; however, it is still possible that human remains exist in the subsurface. California Health and Safety Code Section 7050.5 requires that in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbances must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives. Sections 5097.94 and 5097.98 of the Public Resources Code specify a protocol to be followed when the Native American Heritage Commission receives notification of a discovery of Native American human remains from a county coroner. Compliance with existing laws regarding the handling of human remains discovered outside of formal cemeteries are expected to address any issues associated with the unanticipated discovery of human remains during project construction.

Non-Structural (Institutional) BMPs

As discussed in Section 2.0, Project Description, non-structural/institutional BMPs do not include the construction of new facilities, demolition, or any ground disturbance. Consequently, implementation of non-structural BMPs would not impact historical resources, unique archaeological resources or impact human remains.

3.5 Geological and Mineral Resources

3.5.1 Environmental Setting

The project area is located in the center portion of the Transverse Ranges Geomorphic Province. This province consists of an east-west trending series of steep mountain ranges and valleys that deviate from the normal northwest trend of other Coastal California geomorphic provinces due to intense north-south compression squeezing the ranges within this province. The east-west structure of the Transverse Ranges is oblique to the normal northwest trend of coastal California, hence the name "Transverse." The eastern extension, the San Bernardino Mountains, has been displaced to the south along the San Andreas Fault. As a result, this is one of the most rapidly rising regions on earth and it is seismically active. Cenozoic petroleum-rich sedimentary rocks have been folded and faulted, making this an important oil-producing

area in the United States. The Los Angeles Basin is in the southern part of the province and separates the Transverse Ranges Province from the Peninsular Ranges Provinces to the south.

Topography in the EWMP areas varies regionally from sea level at the coast to several thousand feet in the surrounding mountains. The project area geology consists of Tertiary and older (1.6 million years and older) bedrock mountain ranges and hills surrounding and separating Quaternary and younger (1.6 million years and younger) sediment-filled basins and valleys, Regional Geology (U.S. Geological Survey [USGS], 1990). To the northwest of the project area, the Santa Monica Mountains have a granitic and metamorphic core covered with marine sedimentary sandstone, shale, and conglomerate rocks. To the northeast of the project area, the San Gabriel Mountains consist mostly of granitic rocks with some metamorphic gneiss and schist rocks. Several lower hills separate the Los Angeles Basin and the San Fernando and Santa Clara Valleys. Marine sediments and erosion of the surrounding mountain ranges and hills within the project area have filled the intervening basins and valleys with thick deposits of sediments. The recent surface sediments are mostly sand and silt. Much of the basin and valley areas have been highly disturbed through development and much of the surface materials consist of undocumented fills

The State of California defines an active fault as one that has had surface displacement within Holocene time (the last 11,000 years). The project area is located in a seismically active region of California. Major earthquakes have affected the region in the past and are expected to occur in the near future on one of the active faults in the area. The San Andreas transform fault system, which forms the boundary between the North American and Pacific tectonic plates, is responsible for the highly seismic nature of Southern California.

Seismic hazards are generally classified into two categories: primary seismic hazards (surface fault rupture and groundshaking) and secondary seismic hazards (liquefaction and other types of seismically induced ground failure, along with seismically induced landslides). Geologic hazards include land movement of problematic soils, including landslides and other slope failures, expansive soils, erosion, settlement and subsidence, and sinkholes. These geologic hazards are discussed below. Detailed descriptions of seismic hazards and geologic hazards are provided in the PEIR (Section 3.5.1)

Mineral resources include commercially viable oil and gas deposits, and nonfuel mineral resources deposits. Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate, including sand, gravel, and crushed stone. California is the largest producer of sand and gravel in the nation and the greater Los Angeles area is the nation's leading producer for its geographical size. The County has large quantities of sand and gravel, which are located close to the market.

3.5.2 Regulatory Setting

3.5.2.1 State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act protects structures for human occupancy from the hazard of surface faulting (Bryant and Hart, 2007). In accordance with the Act, the State

Geologist established regulatory zones—called earthquake fault zones— around the surface traces of active faults, and published maps showing these zones. Cities and counties must regulate certain development projects within the zones, which includes withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement. Surface fault rupture is not necessarily restricted within an Alquist-Priolo Zone. This applies to the project because structural Best Management Practices (BMPs) would be either prohibited within these fault zones or a geotechnical investigation would be required to develop design features to limit the impact from a seismic event.

Seismic Hazard Mapping Act

The Seismic Hazards Mapping Act was passed to reduce threats to public health and safety and to minimize property damage caused by earthquakes, strong ground shaking, liquefaction, landslides, or other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones, and Cities, Counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation must be conducted and appropriate mitigation measures incorporated into the project's design. This act applies to the program because structural BMPs would be either prohibited within these seismic hazard zones or a geotechnical investigation would be required to develop design features to limit the impact from a seismic event.

California Building Code

The purpose of the CBC is to regulate and control the design, construction, quality of materials, use occupancy, location, and maintenance of all building and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

NPDES Construction General Permit

Construction associated with the proposed program would disturb more than one acre of land surface for centralized and regional structural BMPs (and possibly for those distributed structural BMPs larger than one acre), affecting the quality of stormwater discharges into waters of the United States. The proposed program would therefore be subject to the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit [CGP]), as amended by Order 2010-0014-DWQ and Order 2012-0006-DWQ). The CGP regulates discharges of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface.

The CGP requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off-site into receiving waters. The

SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area.

California Geological Survey

Based on guidelines adopted by CGS, areas known as Mineral Resource Zones (MRZs) are classified according to the presence or absence of significant nonfuel mineral resources deposits. The classification of these mineral resources is a joint effort of the State and local governments. It is based on geologic factors and requires that the State Geologist classify the mineral resources area as one of the four MRZs. Much of the area within the MRZ sites in Los Angeles was developed with structures prior to the MRZ classification and, therefore, is unavailable for extraction.

3.5.2.2 Local

County of Los Angeles General Plan

The proposed Enhanced Watershed Management Programs (EWMPs, or “program”) would be subject to the local plans and policies of the areas in which they are located. The Los Angeles General Plan is described in detail in the PEIR.

The numerous cities encompassed by the EWMP area all have their own respective city General Plans, which may contain policies that address geology and minerals. As implementation of the individual structural BMP projects proceeds, specific policies and objectives pertaining to geology and minerals from applicable city General Plans would be identified and evaluated on a project-by-project basis during subsequent CEQA environmental processes.

The County of Los Angeles (County) prepared the 2014 Low Impact Development Standards Manual (LID Standards) to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit for stormwater and non-stormwater discharges from the MS4 within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4-2012-0175), referred to as the 2012 MS4 Permit (County of Los Angeles, 2014b). The LID Standards provide guidance for the implementation of stormwater quality control measures in new development and redevelopment projects in unincorporated areas of the County with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges. The November 2013 LID Ordinance became effective December 5, 2013.

In addition, In November 2011, the City of Los Angeles adopted the Stormwater Low Impact Development (LID) Ordinance #181899). The City institutionalized the use of LID techniques for development and redevelopment projects. Subsequent to the adoption of the Stormwater LID Ordinance, the City prepared the Development Best Management Practices Handbook, Low Impact Development Manual, dated June 2011, to describe the required BMPs (City of Los Angeles, 2011). Various other cities within the County also have LID standards or guidance. The goals, objectives, and content of the LID document are similar to that of the County and City of Los Angeles, and are not referenced here.

3.5.3 Impact Assessment

3.5.3.1 Thresholds of Significance

For the purposes of this PEIR and consistency with Appendix G of the CEQA Guidelines, the project would have a significant impact on geologic resources if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist- Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
 - Strong seismic groundshaking;
 - Seismic-related ground failure, including liquefaction; or
 - Landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
- Be located on expansive soils, as defined in 24 CCR 1803.5.3 of the 2013 CBC 2013
- Have soils incapable of adequately supporting the use of a septic tank or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

The project would have a significant impact on mineral resources if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan

3.5.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to geologic and mineral resources identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-5 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the

ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-5. Summary of Geologic and Mineral Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance						
	Exposure to Seismic-Related Hazards	Soil Erosion or Topsoil Loss	Soil Stability	Expansive Soils	On-Site Wastewater Treatment Systems	Mineral Resources	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	None Required	None Required	GEO-1	None Required	None Required	None Required	GEO-2
Regional BMPs							
Regional Detention and Infiltration	No	No	No	No	No	No	Yes
Regional Capture, Detention and Use	No	No	No	No	No	No	Yes
Centralized BMP							
Bioinfiltration	No	No	No	No	No	No	Yes
Constructed Wetlands	No	No	No	No	No	No	Yes
Treatment/Low-Flow Diversions	No	No	No	No	No	No	Yes
Creek, River, Estuary Restoration	No	No	No	No	No	No	Yes
Distributed BMPs							
Site-Scale Detention	No	No	No	No	No	No	Yes
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, Downspout Disconnects	No	No	No	No	No	No	Yes
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	No	No	No	No	No	Yes
Flow through Treatment BMPs	No	No	No	No	No	No	Yes
Source-Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	No	No	No	No	No	Yes
Low-Flow Diversions	No	No	No	No	No	No	Yes

NOTE: These conclusions are based on typical BMP size and location.

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

GEO-1: Prior to approval of infiltration BMPs, implementing agencies shall conduct a geotechnical investigation of each infiltration BMP site to evaluate infiltration suitability. If infiltration rates are sufficient to accommodate an infiltration BMP, the geotechnical investigation shall recommend design

measures necessary to prevent excessive lateral spreading that could destabilize neighboring structures. Implementing agencies shall implement these measures in project designs.

GEO-2: Prior to installing BMPs designed to recharge local groundwater supplies, the Implementing Agency shall notify local groundwater managers including the Upper Los Angeles River Area Water Master, the Water Replenishment District of Southern California, or the San Gabriel Water Master as well as local water producers such as local municipalities and water companies. The Implementing Agency shall coordinate BMP siting efforts with groundwater managers and producers to mitigate high groundwater levels while increasing local water supplies.

Structural (Regional, Centralized, and Distributed) BMPs

Impact GEOL-1 Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: (1) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, (2) strong seismic groundshaking, or (3) seismically induced liquefaction or landslides, which could expose people, structures, or habitat to potential risk of loss, damage, injury, or death.

The EWMP area lies in a region that is seismically active and includes numerous active faults. In the event of an earthquake, fault rupture and seismic groundshaking could be experienced in the project area, as is typical throughout Southern California. Facilities constructed on or within up to 500 feet of an active fault trace could be damaged by fault rupture. Seismic groundshaking and seismically induced liquefaction, landslides, or other slope failure could result in structural damage to facilities, which in turn could affect operation of related systems. Damage to facilities could result in threats to the safety of people in downslope areas or damage to other downslope facilities. To ensure impacts to public safety are minimized, prior to construction of each specific project, a design-level geotechnical investigation may be required. The geotechnical evaluation would identify the potential geologic and seismic hazards and would recommend site-specific design criteria to abate seismic hazards, such as special foundations and structural setbacks, and these recommendations would be incorporated into the design of individual proposed projects.

In addition, the County of Los Angeles LID Standards, as well as LID Standards for the various cities, require that all structural BMPs (regional, centralized, and distributed) that include ground disturbance activities, regardless of size; conduct a site assessment; and identify design considerations. Completion of a comprehensive design-level geotechnical investigation, adherence to the current CBC, LID Standards, and local ordinances and laws regulating construction, and the application of proven seismic design criteria as standard engineering practice would ensure that structures are designed to withstand seismic events without sustaining substantial damage or collapsing. Therefore, this impact is considered less than significant.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek Regional Projects would include subsurface storage basins and structures, and potentially some surface improvements. As a standard practice during the design process for any structure or facility, a geotechnical study is performed of each site that evaluates and identifies faults and fault zones that could affect the project, and that would make recommendations regarding project design based on the geotechnical considerations. Because geotechnical considerations are addressed during the design phase, the ULAR and Ballona Creek Regional Projects would not result in exposure of people or structures to substantial geotechnical hazards, including ground shaking, or seismic-related ground failure, including liquefaction; additional project level environmental review would not be needed. In addition, the Regional Projects would be constructed and operated on various community park sites and a center median. The project sites are relatively flat with no substantial natural or graded slopes. The Regional Projects are not located near any landslide hazard areas; therefore, there would be no environmental constraints.

Impact GEOL-2 Would the project result in substantial soil erosion or the loss of topsoil?

Construction activities for proposed program facilities such as excavation and grading could result in soil erosion or loss of topsoil during rain or high-wind events. Erosion could damage facilities, pose risk to people, or damage habitat or improvements downslope of a proposed program, resulting in potentially significant impacts. However, each BMP type would generally serve to slow down or fully retain stormwater runoff. This would act to reduce erosion potential compared with existing conditions. Discharge points from centralized and distributed BMPs would be designed to minimize scour potential, and in any case improve scour potential from existing conditions.

To prevent erosion and runoff from construction sites, the CGP requires the preparation and implementation of a SWPPP that would include BMPs to control erosion and off-site sedimentation from construction sites. The required compliance with the SWPPP and implementation of erosion control BMPs would ensure that soil erosion and loss of topsoil would be minimized to levels considered less than significant. Proposed projects that are smaller than one acre would be required to comply with the BMPs identified in the Los Angeles County MS4 Permit (RWQCB Order No. R4-2010-0175), which would implement minimum-control BMPs to provide erosion control and sediment control strategies for small construction sites (see Section 3.8, Surface Hydrology and Water Quality, for a more detailed explanation of the MS4 Permit.). Compliance with SWPPPs and runoff BMPs (will vary with the area of disturbance, construction vehicles used, site grade, and duration of project) would ensure less than significant erosion during construction. Additional project level review would not be required.

ULAR EWMP Regional Projects

The majority of ULAR EWMP Regional Projects would involve storage structures beneath community recreation areas, and would not result in erosion. The ULAR EWMP Regional Projects at Arroyo Park (SM01) could place bio-retention features at the ground surface; however, these improvements would be engineered and constructed in a manner that infiltrates captured stormwater, rather than conveys it offsite. These design features would limit the potential for erosion, and would not represent an environmental constraint.

Ballona Creek EWMP Regional Projects

The majority of Regional Projects would involve storage structures beneath community recreation areas, and would not result in erosion. Some Regional Projects would place bio-retention features at the ground surface (BH01, IG01, and CC04); however, these improvements would be engineered and constructed in a manner that infiltrates captured stormwater, rather than conveys it offsite. These design features would limit the potential for erosion, and would not represent an environmental constraint.

Impact GEOL-3 Is the project located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse?

Non-seismically-induced geologic hazards such as landslides, lateral spreading, settlement, and slope failure can be caused by unstable soils. Infiltration of water into surficial soils can increase soil instability. Distributed structural BMPs would be smaller, site- or parcel-specific structures and would therefore be less vulnerable to geologic hazards. Although distributed structural BMPs that include above ground components (e.g., sides or levees to basins, planter boxes, rain barrels, water clarifiers) could be damaged by geologic hazards, the resulting release of water would be smaller and less likely to cause significant damage such that no project level environmental analysis would be required.

The regional and centralized structural BMPs that include the construction of larger physical structures would be more susceptible to unstable soils. To ensure that structural BMPs are not undermined by unstable soils or impact adjacent infrastructure and buildings, Mitigation Measure GEO-1 requires that each specific project would require a design-level geotechnical investigation. The geotechnical evaluation would identify the potential for geologic hazards and would recommend site-specific design criteria to abate geologic hazards that would be incorporated into the design of individual proposed projects. Implementing the design requirements in the CBC and local (County and city) ordinances and recommendations of geotechnical investigations would ensure that all structures are constructed in compliance with the applicable laws, regulations, and policies, including the LID Ordinances. Therefore, this impact is considered less than significant, and project level environmental analysis would not be required.

ULAR and Ballona Creek EWMP Regional Projects

Although no unstable geologic conditions are known to occur at the ULAR and Ballona Creek Regional Project sites, a geotechnical study for each Regional Project would be prepared as a standard practice to address geotechnical considerations during the Project design phase. Recommendations would be incorporated into the project design, which would keep the Regional Projects from resulting in substantive geotechnical hazards or risk exposure. As such, project level environmental analysis would not be needed.

Impact GEOL-4 Is the project located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Some areas within the project area have expansive soil. Soil expansion can occur in expansive soils that have not been removed or properly conditioned. The differential ground movement that occurs through soil expansion could result in structural damage to facilities over the long

term, which in turn could affect operation of related systems. Damage to the facilities could result in threats to the safety of people at or near the facilities. Completion of a comprehensive design-level geotechnical investigation, implementing the design requirements in the CBC and local (County and city) ordinances, and ensuring that all structures are constructed in compliance with the applicable laws, regulations, and policies, including the LID Ordinances, would ensure that structural BMPs are constructed in a manner that avoids impacts from expansive soils. Therefore, this impact is considered less than significant and no project-level environmental analysis would be needed.

ULAR and Ballona Creek EWMP Regional Projects

As discussed above, a geotechnical study for each Regional Project would be prepared to address geotechnical considerations (including expansive soils) as a standard practice during the Project design phase, and recommendations would be incorporated into Project designs to keep the ULAR or Ballona Creek EWMP Regional Projects from resulting in substantial risks to life or property.

Impact GEOL-5 Would the project have soils that are incapable of supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Implementation of the proposed program would not include facilities that require the use of septic systems or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater. Therefore, no impact would occur related to soil suitability for septic or alternative wastewater disposal systems; no project level environmental analysis would be required.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek EWMP Regional Projects are water quality improvement projects that do not generate wastewater. Therefore, the ULAR and EWMP Regional Projects would not result in environmental constraints related to alternative wastewater disposal methods; no project level environmental analysis would be required.

Impact GEOL-6 The proposed program could result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or a locally important mineral resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan.

Typical distributed structural BMPs would be constructed within areas that are already urbanized and disturbed, and would therefore not be available for mineral resource activities. Regional or centralized structural BMPs could be constructed in locations that are not already urbanized and are located within a designated Mineral Resource Zone. Siting projects within designated MRZs could be conducted if the BMPs do not impede access to the mineral resources. In any case, siting large and small BMPs would need to comply with local and County General Plan zoning restrictions; additional project-level environmental review may be needed. Compliance with local General Plans and the County of Los Angeles General Plan would ensure that impacts to mineral resources would be less than significant.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek Regional Projects would be located within existing community parks or a center median, and none of the sites are designated as containing important mineral resources.

Non-Structural (Institutional) BMPs

As discussed in Section 2.0, Project Description, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no new facility that would result in impacts relating to geologic hazards, erosion, or expansive soils, or mineral resources.

3.6 Greenhouse Gas Emissions

The proposed program is located in the County of Los Angeles within the Basin, which has a distinctive climate determined by its terrain and geographic location. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds.

Various gases in the earth's atmosphere, classified as GHGs, play a critical role in determining its surface temperature. Emissions of CO₂ are by-products of fossil fuel combustion. Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), chlorofluorocarbons (CFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Much of the scientific literature suggests that human caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of earth's climate.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one year to several thousand years).

3.6.1 Regulatory Setting

3.6.1.1 Federal

The federal Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (USEPA) to define national ambient air quality standards to protect public health and welfare in the United States. The CAA does not specifically regulate GHG emissions; however, on April 2, 2007, the U.S. Supreme Court in *Massachusetts v. U.S. Environmental Protection Agency* determined that GHGs are pollutants that can be regulated under the CAA. Currently, there are no federal regulations that establish ambient air quality standards for GHGs.

Specific GHG regulations that USEPA has adopted to-date are as follows:

40 CFR Part 98. Mandatory Reporting of Greenhouse Gases Rule. This rule requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 metric tons of CO₂e emissions per year (USEPA, 2011).

40 CFR Part 52. Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule. USEPA recently mandated to apply Prevention of Significant Deterioration (PSD) requirements to facilities whose stationary source CO₂e emissions exceed 75,000 tons per year (USEPA, 2010).

The USEPA also recently released a proposed rule which would regulate GHG emissions from existing power plants across the nation. The proposed rule establishes state-by-state 2030 GHG goals.

3.6.1.2 State

The California Air Resources Board (CARB) is the agency responsible for coordination and oversight of state and local air pollution control programs in California. There are currently no state regulations in California that establish ambient air quality standards for GHGs. However, California has passed laws directing CARB to develop actions to reduce GHG emissions, and several state legislative actions related to climate change and GHG emissions have come into play in the past decade.

Assembly Bill 1493 (Pavley)

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493 required that CARB develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the state.” To meet the requirements of AB 1493, in 2004 CARB approved amendments to the California Code of Regulations (CCR) adding GHG emissions standards to California’s existing standards for motor vehicle emissions.

Executive Order S-03-05

the Executive Order established total GHG emission targets. Specifically, emissions were to be reduced to the 2000 level by 2010 and are to be reduced to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012.

Senate Bill 1368

Senate Bill (SB) 1368 is the companion bill of AB 32 and was signed by Governor Schwarzenegger in September 2006. SB 1368 required the California Public Utilities Commission (CPUC) to establish a GHG emission performance standard for baseload generation from investor-owned utilities.

Executive Order S-1-07

Executive Order S-1-07 proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020.

Senate Bill 97

SB 97 acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. The bill directs the California Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency, guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009.

CARB Climate Change Scoping Plan

CARB adopted its Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations (CARB, 2008). CARB's Scoping Plan contains the main strategies California will implement to reduce CO₂e emissions by 169 MMT, or approximately 28.4 percent, from the state's projected 2020 emissions level of 596 MMT of CO₂e under a "business-as-usual" (BAU) scenario. CARB's Scoping Plan also breaks down the amount of GHG emissions reductions CARB recommends for each emissions sector of the state's GHG inventory

3.6.1.3 Local**SCAQMD**

As an interim method for determining significance under CEQA until statewide significance thresholds are established, SCAQMD developed a draft tiered flowchart in 2008 for determining significance thresholds for GHGs for projects where SCAQMD is acting as the lead agency. The SCAQMD flowchart uses a tiered approach in which a proposed program is deemed to have a less-than-significant impact related to GHG emissions when any of the following conditions are met:

- GHG emissions are within GHG budgets in an approved regional plan.
- Incremental increases in GHG emissions due to the project are below the defined Significance Screening Levels, or mitigated to less than the Significance Screening Levels.
- Performance standards are met by incorporating project design features and/or implementing emission reduction measures.
- Carbon offsets are made to achieve target significance screening level.

General Plans

County of Los Angeles General Plan does not address GHG emissions and climate change. However, the Conservation and Open Space Element contains policies that would contribute to the reduction of GHG emissions, as does the Air Quality Element. The numerous cities encompassed by the Enhanced Watershed Management Program (EWMP) area all have their

own respective city General Plans, some of which may contain policies that address GHG emissions and climate change.

County of Los Angeles Community Climate Action Plan

The County of Los Angeles released its Final Draft Community Climate Action Plan (CCAP) in July 2014, which serves to mitigate and avoid GHG emissions associated with community activities in unincorporated Los Angeles County. The CCAP addresses emissions from building energy, land use and transportation, water consumption, and waste generation. The measures and actions outlined in the CCAP ties together the County's existing climate change initiatives and provide a blueprint for a more sustainable future. Ultimately, the CCAP and associated GHG reduction measures will be incorporated into the Air Quality Element of the Los Angeles County General Plan 2035.

3.6.2 Impact Assessment

3.6.2.1 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant effect on GHG emissions if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Currently, LACFCD has not adopted any thresholds for GHG emissions. Additionally, while SCAQMD has issued proposed standards and guidelines, there is no adopted state or local standard for determining the cumulative significance of the proposed program's GHG emissions on global climate change. Construction of the structural BMPs would incrementally contribute to GHG emissions along with past, present and future activities. As such, impacts of GHG emissions are analyzed here on a cumulative basis. For the purposes of this analysis, because the BMPs (structural and non-structural) associated with the proposed program are not residential, commercial, mixed-use, or industrial projects, the most appropriate threshold that would apply to the proposed program would be, although not formally adopted, the 3,000 MTCO_{2e}/year criteria recommended by SCAQMD.

3.6.2.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts relating to greenhouse gas emissions identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-6 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek

EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-6. Summary of Greenhouse Gas Emissions Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance		
	GHG Emissions	Consistency with Plans	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	None Required	None Required	None Required
Regional BMPs			
Regional Detention and Infiltration	No	No	No
Regional Capture, Detention and Use	No	No	No
Centralized BMP			
Bioinfiltration	No	No	No
Constructed Wetlands	No	No	No
Treatment/Low Flow Diversions	No	No	No
Creek, River, Estuary Restoration	No	No	No
Distributed BMPs			
Site Scale Detention	No	No	No
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	No	No	No
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	No	No
Flow through Treatment BMPs	No	No	No
Source Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	No	No
Low Flow Diversions	No	No	No

NOTE: These conclusions are based on typical BMP size and location

No mitigation measures would be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Structural (Regional, Centralized, and Distributed) BMPs

The proposed program would primarily generate GHG emissions during construction of the proposed structural BMP projects in the EWMP areas. It is expected that the construction activities for the structural BMPs in the EWMP areas would occur intermittently throughout the course of the program implementation period. Construction-related GHG emissions associated with each structural BMP development would be short-term in nature and limited to the period of time when construction activity is taking place for that particular development. As it is

anticipated that only periodic worker trips to the structural BMP sites throughout the year would be required for inspection and maintenance activities, and the mobile GHG emissions generated by these worker trips would be negligible. Thus, because the total GHG emissions generated by the largest structural BMP projects (i.e., regional structural BMPs) under a worst-case scenario would not exceed the 3,000 MTCO₂e/year benchmark, impacts associated with GHG emissions generated by the structural BMPs in the EWMP areas under the proposed program would be less than significant. No Project level environmental review would be required.

In addition, the BMPs are water quality improvement projects that would not generate substantial greenhouse gas emissions. Therefore, the EWMP Projects are not expected to conflict with any applicable plans, policies, or regulations adopted by the state and local jurisdictions for the purposes of reducing GHG emissions and impacts would be less than significant. No Project level environmental review would be required.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek Regional Projects would generate criteria pollutant emissions during construction, including CO₂ and equivalents. Construction emissions are amortized over 30-years, and are not likely to result in substantive annual greenhouse gas emissions. In addition, operation of the ULAR and Ballona Creek EWMP Regional Projects would consist of the pumping of stormwater to the treatment devices, and are not expected to generate substantial levels of greenhouse gasses. No Project level environmental review would be required.

Non-Structural (Institutional) BMPs

As discussed in Section 2.0, Project Description, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no impacts related to program-generated GHG emissions, nor would there would be no conflicts with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

3.7 Hazards and Hazardous Materials

3.7.1 Environmental Setting

A hazardous material is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment (Health and Safety Code §25501(o)). The term “hazardous materials” refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases).

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been spent, discarded, discharged, spilled, contaminated, or are being stored until they can be disposed of properly (22 California Code of Regulations [CCR] Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific 22 CCR criteria. While hazardous substances are regulated by

multiple agencies, as described in the Regulatory Framework below, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

Preschools, schools, daycare centers, nursing homes, and hospitals are considered sensitive receptors for hazardous material issues because children and the elderly are more susceptible than adults to the effects of many hazardous materials. There are numerous sensitive receptors located throughout the proposed EWMPs or “program” service area.

Urban Runoff

Within the EWMP area, much of the environment has been developed, resulting in large areas of impervious surfaces that include rooftops, highways and roads, and other hardscapes. Stormwater and urban runoff from these impervious surfaces tends to pick up trash, sediment, and other pollutants. Impacted stormwater and urban runoff that is then directed to a structural Best Management Practices (BMPs) to retain and filter or infiltrate the runoff may accumulate concentrations of chemicals in the upper soils and/or filter media.

Hazardous Material Sites

Hazardous materials are currently stored and used at numerous facilities and locations within the EWMP area for a variety of purposes. Some facilities within the area that use or store hazardous materials or hazardous wastes may have experienced unauthorized releases into soil or groundwater, and these releases may or may not have been reported to the appropriate agency or agencies. In California, regulatory databases listing hazardous materials sites provided by numerous federal, state, and local agencies are consolidated in the “Cortese List” pursuant to Government Code Section 65962.5. The SWRCB GeoTracker database includes leaking underground storage tanks (LUSTs), permitted underground storage tanks (USTs), and Spills, Leaks, Investigations, and Cleanup Database (SLIC) sites. The DTSC EnviroStor database includes federal and state response sites; voluntary, school, and military cleanups and corrective actions; and permitted sites.

The Los Angeles County Fire Department (LACFD) is the designated Los Angeles County Certified Unified Program Agency (LAC CUPA). The LAC CUPA is responsible for the regulatory oversight of aboveground storage tanks (ASTs) and USTs, county hazardous materials and waste programs, and the California Accidental Release Prevention (CalARP) Program. The LAC CUPA would be the primary source of information regarding hazardous materials use and hazardous waste disposal for facilities that are at or near proposed program within the EWMP area. The DTSC delegated corrective action oversight authority to LAC CUPA under Chapter 6.5 of Division 20 of California Health and Safety Code to implement corrective action under consent agreement at LAC CUPA facilities within its jurisdiction.

Schools are considered sensitive receptors for hazardous materials because children are more susceptible than adults to the effects of hazardous materials. The proximity of a proposed project to day care centers would also need to be considered. Aviation safety hazards can result if projects are sited on or in the vicinity of airports. Specifically, the land use compatibility plans at airports have land use restrictions.

Wildfires

Both the State of California and the County of Los Angeles Fire Department map the Fire Hazard Severity Zones (FHSZs) within Los Angeles County. The FHSZs are based on an evaluation of fire history, existing and potential fuel, flame length, blowing embers, terrain, weather, and the likelihood of buildings igniting (California Department of Forestry and Fire Protection, 2012). The very high FHSZ areas tend to be outside of the urban developed areas in areas with flammable vegetation, such as brush.

3.7.2 Regulatory Setting

3.7.2.1 Federal

Primary federal agencies with responsibility for hazardous materials management include the USEPA, Department of Labor (Federal Occupational Health and Safety Administration [OSHA]), and Department of Transportation (DOT). Major federal laws and issue areas include the following statutes (and regulations promulgated there under):

Resources Conservation and Recovery Act (RCRA) 42 USC 6901 et seq. – RCRA is the principal law governing the management and disposal of hazardous materials. RCRA is considered a “cradle to grave” statute for hazardous wastes in that it addresses all aspects of hazardous materials from creation to disposal. Federal regulations for USTs derive from RCRA. RCRA applies to this program because RCRA is used to define hazardous materials.

Emergency Planning and Community Right-to-Know Act (EPCRA from SARA Title III) – EPCRA improved community access to information regarding chemical hazards and facilitated the development of business chemical inventories and emergency response plans. EPCRA also established reporting obligations for facilities that store or manage specified chemicals. EPCRA applies to this program because the contractors that construct the structural BMPs will be required to prepare and implement written emergency response plans to properly manage hazardous materials during construction and respond to accidental spills.

DOT Hazardous Materials Transportation Act (49 USC 5101) – DOT, in conjunction with the USEPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to safe storage and transportation of hazardous materials. The Code of Federal Regulations (CFR) 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials. This Act applies to this program because contractors will be required to comply with its storage and transportation requirements that would reduce the possibility of spills.

The FAA Advisory Circular No: 150/5200-33B – The FAA Advisory Circular provides guidance on development projects affecting aircraft movement near hazardous wildlife attractants (FAA, 2007). This Circular applies to this program because BMPs will be required to comply with its restrictions if at or near airports.

3.7.2.2 State

The primary State agencies with jurisdiction over hazardous chemical materials management are the DTSC and the RWQCB. Other State agencies involved in hazardous materials management are the Department of Industrial Relations (State OSHA implementation), State

Office of Emergency Services (OES)—CalARP implementation, California Air Resources Board (CARB), California Department of Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA—Proposition 65 implementation) and California Integrated Waste Management Board (CIWMB). Hazardous materials management laws in California include the following statutes and regulations promulgated there under.

Hazardous Waste Control Act (HWCA; California Health and Safety Code, Section 25100 et seq.) – The HWCA is the state equivalent of RCRA and regulates the generation, treatment, storage, and disposal of hazardous waste. This act implements the RCRA “cradle-to-grave” waste management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small-quantity generators, transportation and permitting requirements, as well as in its penalties for violations. HWCA applies to this program because contractors will be required to comply with its hazardous waste requirements that would reduce the possibility of spills.

California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) – The Business Plan Act requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state. Local agencies are responsible for administering these regulations.

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including CalEPA and the California Emergency Management Agency. The California Highway Patrol and Caltrans enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roadways.

The Business Plan Act applies to this program because contractors will be required to comply with its handling, storage, and transportation requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

California Division of Occupational Safety and Health (Cal/OSHA) – Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans, and provides specific regulations to limit exposure of construction workers to lead. OSHA applies to this program because contractors will be required to comply with its handling and use requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

California Vehicle Code Section 38366 – The California Vehicle Code, Section 38366, requires spark-arresting equipment on vehicles that travel off-road. This code applies to the program

because the vehicles that construct structural BMPs in off-road areas will be required to have spark-arresting equipment to reduce the risk of wildfires.

3.7.2.3 Local

Certified Unified Program Agency - In 1993, Senate Bill (SB) 1082 was passed by the State Legislature to streamline the permitting process for those businesses that use, store, or manufacture hazardous materials. The passage of SB 1082 provided for the designation of a CUPA that would be responsible for the permitting process and collection of fees. The CUPA would be responsible for implementing at the local level the Unified Program, which serves to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities.

Los Angeles County Operational Area Emergency Response Plan

In 1998, the County of Los Angeles adopted the Los Angeles County Operational Area Emergency Response Plan, which provides emergency planning for the Los Angeles County Operational Area, an area that includes the project area.

Los Angeles County Fire Department Wildfire Action Plan

In 2009, the LACFD adopted a Wildfire Action Plan, which contains guidelines that recommend fire prevention measures such as creating defensible space and completing fire-resistive retrofits in homes (LACFD, 2009). In addition, this plan provides residents with information regarding emergency preparedness and planning in the event of a wildfire.

Los Angeles County General Plan and other City General Plans

LA County and the numerous cities encompassed by the EWMP area all have their own respective city General Plans, some of which may contain policies that address hazards and hazardous materials.

Los Angeles County and Other Cities LID

LA County and various other cities within the County also have LID standards or guidance. The goals, objectives, and content of the LID document are similar to that of the County and City of Los Angeles, and are not referenced here.

3.7.3 Impact Assessment

3.7.3.1 Thresholds of Significance

Implementation of the proposed program may result in a potentially significant impact if any one of the following conditions would occur:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

3.7.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts relating to hazards and hazardous materials identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-7 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-7. Summary of Hazards and Hazardous Material Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance							
	Transport, use or disposal of hazardous materials	Accumulation of hazardous materials	Hazardous emissions near schools	Located on hazardous materials site	Vicinity of airport or airstrip	Impair implementation of emergency response plan	Exposure to wildland fires	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	None Required	HAZ-1	HAZ-1	HAZ-2	HAZ-3	None Required	None Required	HAZ-1 and HAZ-2
Regional BMPs								
Regional Retention and Infiltration	No	Yes	Yes	Yes	Yes	No	No	Yes
Regional Capture, Detention and Use	No	Yes	Yes	Yes	Yes	No	No	Yes
Centralized BMP								
Bio-filtration	No	Yes	Yes	Yes	Yes	No	No	Yes
Constructed Wetlands	No	Yes	Yes	Yes	Yes	No	No	Yes
Treatment/Low-Flow Diversions	No	Yes	Yes	Yes	Yes	No	No	Yes
Creek, River, Estuary Restoration	No	Yes	Yes	Yes	Yes	No	No	Yes
Distributed BMPs								
Site-Scale Detention	No	Yes	Yes	Yes	Yes	No	No	Yes
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	No	Yes	Yes	Yes	Yes	No	No	Yes
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	Yes	Yes	Yes	Yes	No	No	Yes
Flow-through Treatment BMPs	No	Yes	Yes	Yes	Yes	No	No	Yes
Source-Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	Yes	Yes	Yes	Yes	No	No	Yes
Low-Flow Diversion	No	Yes	Yes	Yes	Yes	No	No	Yes

NOTE: These conclusions are based on typical size and function of BMPs.

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

HAZ-1: Implementing agencies shall prepare and implement maintenance practices that include periodic removal and replacement of surface soils and media that may accumulate constituents that could result in further migration of constituents to sub-soils and groundwater. A BMP Maintenance Plan shall be prepared by Implementing Agencies upon approval of the individual BMP projects that identifies the frequency and procedures for removal and/or replacement of accumulated debris, surface soils and/or media (to depth where constituent concentrations do not represent a hazardous conditions and/or have the potential to migrate further and impact groundwater) to avoid accumulation of hazardous concentrations and the potential to migrate further to sub-soils and groundwater. The BMP Maintenance Plan may consist of a general maintenance guideline that applies to several types of smaller distributed BMPs. For smaller distributed BMPs on private property, these plans may consist of a maintenance covenant that includes requirements to avoid the accumulation of hazardous concentrations in these BMPs that may impact underlying sub-soils and groundwater. Structural BMPs shall be designed to prevent migration of constituents that may impact groundwater.

HAZ-2: Prior to the initiation of any construction requiring ground-disturbing activities in areas where hazardous material use or management may have occurred, the implementing agencies shall complete a Phase I Environmental Site Assessment (ESA) in accordance with American Society for Testing and Materials (ASTM) Standard E1527-13 for each construction site. Any recommended follow up sampling (Phase II activities) set forth in the Phase I ESA shall be implemented prior to construction. The results of Phase II studies, if necessary, shall be submitted to the local overseeing agency and any required remediation or further delineation of identified contamination shall be completed prior to commencement of construction.

HAZ-3: Implementing Agencies shall require that those BMPs that are within an airport land use plan area are compatible with criteria specified in FAA Advisory Circular No: 150/5200-33B (FAA, 2007). If the proposed BMP is within the minimum separation criteria, the Implementing Agency shall consult with the airport and collaboratively evaluate whether the potential increase in wildlife hazards can be mitigated.

Structural (Regional, Centralized, and Distributed) BMPs

Impact HAZ-1 Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The potentially hazardous materials used at the BMP sites would mostly be chemicals, fuels, oils, and lubricants, all of which are relatively common to store, transport, and handle. In the unlikely event of a spill, these petroleum products are relatively easy to clean up, treat, or

biodegrade. Hazardous materials that are more difficult to treat, such as solvents and metals, would not be expected to be used or released in large quantities. Centralized structural BMPs that are treatment facilities may use treatment chemicals, such as chlorine depending on the treatment techniques (other options include ozone, ultraviolet, or electrocoagulation), and the structures may be painted. However, chlorination and dechlorination uses should consider proximity to residential areas for safety reasons, as well as access for chemical deliveries. The implementing agency and construction contractor would be required to comply with all relevant and applicable federal, state, and local laws and regulations that pertain to the transport, storage, use, and disposal of hazardous materials and waste during construction of the proposed program; therefore, construction impacts would be less than significant.

Operation of proposed structural BMPs would generally require minimal to no transport, usage, or disposal of hazardous materials for activities such as maintenance. The implementing agency would be required to comply with all relevant and applicable federal, state, and local laws and regulations that pertain to the transport, storage, use, and disposal of hazardous materials and waste during operation of the proposed program. Moreover, under the Unified Program, the CalARP Program requires facilities that use regulated substances to develop a Risk Management Plan (RMP). A RMP would be required for the proposed program that uses hazardous materials, in addition to a Hazardous Materials Release Response Plan within a Hazardous Materials Business Plan (HMBP).

Due to the factors described above, potential risks to the public and environment due to accidental release of hazardous materials would be less than significant; no additional project level analysis would be required.

ULAR EWMP Regional Projects

Several sites were identified near two ULAR EWMP Regional Project sites (SF01 and AL01) that have indications of past contamination. None of the other ULAR EWMP Regional Project sites were documented to have been subject to past contamination, leaks, or remediation efforts. Based on this, ULAR EWMP Regional Projects NHP, GL01, SP01, SM01, MP01, and LAC01 are not expected to create a hazard to the public or environment during construction. The following summarizes the contamination present at SF01 and AL01:

- **SF01 – Recreation Park.** The water quality improvement are within Recreation Park is located about 350 feet west of a site (located just east of Parkside Drive) potentially contaminated with lead. The Envirostor database identifies this site as “San Fernando Playground” and as in need of evaluation. Because this site is in need of evaluation, the extent of contamination present is unknown, and due to its proximity to SF01, further due diligence may be required during the Project planning and design phase. This potential constraint could also have the effect of increasing the length of time required for individual project approvals and CEQA compliance.
- **AL01 – Almansor Park.** Geotracker identifies a leaking underground fuel tank located at 900 New Avenue that is owned by the City of Alhambra. Although Geotracker displayed the site location at the intersection of New Avenue and East Adams Avenue, the actual location of the tank may be at the City’s Fire Training Facility approximately 900 feet east of the area of Almansor Park where the water quality improvements would occur. Due to the distance of

the leaking underground fuel tank from this Regional Project site and given that the tank location is at a lower elevation than Almansor Park, it is unlikely that leaked fuel has traveled to the Project site. In addition, Geotracker has identified several reported leaks from auto repair facilities (in 2000). Geotracker shows these sites located at the north end of Almansor Street (extended) and the railroad right-of-way; however, Geotracker appears to be displaying these locations incorrectly, and the actual locations of these facilities are north of the railroad right-of-way and west of the project site. Because of this, these facilities are not likely to have contaminated the project site or potential storm drain tie-in locations near the railroad right-of-way.

Based on the above, there appears to be a low potential for contaminated soils or groundwater to be present beneath the Project site

Ballona Creek EWMP Regional Projects

The Ballona Creek EWMP Regional Projects would be located on or beneath community parks, or in the case of CC04, on or beneath the center median. The Ballona Creek EWMP Regional Project park sites are primarily located in residential or mixed commercial residential areas. Various hazardous materials and contamination databases were reviewed (Geotracker and Envirostor), and two Ballona Creek EWMP Regional Project sites were identified as having past actions to remediate contamination, BH01 and IG01. None of the other Regional Project sites were documented to have been subject to past remediation efforts. Based on this, Regional Projects LA05, LA12, LA20, LA21, and WH01 are not expected to create a hazard to the public or environment during construction.

- **BH01 - La Cienega Park.** Regional Project site BH01 includes a small parcel at the northeast corner of Olympic Boulevard and La Cienega Boulevard (APN 5088-001-001), which is outside of the La Cienega Park. The small parcel is currently vacant, but a gas station was present on the site in the past (Geotracker, 2014). A gasoline leak was discovered at the site in 1989, was investigated in the early 2000s, and subsequently remediated. A final closure was issued by the Regional Water Quality Control Board (RWQCB) in 2007 and the case was closed. Residual contaminants may still be present at the southern parcel, and as such, could be encountered during construction if a water quality improvement is proposed for this parcel. Additional project-level environmental review may be required.
- **IG01 - Edward Vincent Junior Park.** Approximately 1.4 acres of the Edward Vincent Jr. Park was used by the Gas Co. for the production of "manufactured gas" in the early 1900s. Gas was manufactured at the site from coal and oil. The byproducts from this operation were tars, oils, sludges, lampblack etc, which were sold to various industrial uses. Some of these byproduct residues were found in soils (1995), including polycyclic aromatic hydrocarbons (PAH). Elevated levels of heavy metals such as lead and arsenic were also found. The Department of Toxic Substances (DTSC) subsequently entered into a Removal Action Consent Order with the Southern California Gas Company for the Inglewood Manufactured Gas Plant site, and oversaw the remediation of the contamination, which included the excavation of 5,824 tons of soil contaminated from former MGP operations. Excavated soil was recycled by thermal treatment. Sampling verified the achievement of cleanup goals. Clean soil was imported, backfilled, compacted and resodded. The

remediation was completed in February of 1995 and this section of the public park. Residual contaminants could potentially still be present at the southern parcel, and as such, could be encountered during construction if a buried water quality improvement is proposed for the western portion of the Edward Vincent Jr. Park (where the gas plant was located). Additional project-level environmental review may be required.

- **CC04 - Culver Boulevard Median.** The Culver Boulevard median is a former rail right-of-way, and although no contamination releases have been identified through the databases, there is a potential for subsurface railroad-related contamination to be present in the median, such as hydrocarbons, metals, and other substances. Additional project-level environmental review may be required.

Impact HAZ-B: Would the project create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

Operation of structural BMPs would not increase the potential for accidental releases of hazardous materials into the environment. Because of their function as water conveyance systems, the entire storm sewer system, as augmented by structural BMPs would collect and retain sediment and chemicals from urban runoff, along with any accidental or illicit spills of hazardous materials. Pretreatment of source water in areas with the potential for heavy contaminant loading would be implemented as a required design feature for regional and centralized BMPs to assist in reducing long-term loading. In addition, non-structural source control BMPs would help reduce contaminant loading over time. The LID Standards for the County of Los Angeles and the various cities participating in the EWMP provide protocols for designing regional and centralized BMPs that minimize the potential for contaminant loading. To address the accumulation of contaminants in soil at BMPs, operations and maintenance plans for BMPs that might accumulate constituents in surface soils and media will be developed and implemented, as described in the County PEIR mitigation measure HAZ-1.

Impact HAZ-3 The proposed program could emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing school.

Individual BMP projects would be required to comply with regulations that would avoid or minimize the potential for releases of hazardous materials during the construction of the BMPs, in response to accidental spills either during the construction of the BMP, or as a result of the BMP collecting contaminants from an off-site spill. Therefore, the potential impacts to nearby schools are considered less than significant and no additional project-level environmental review would be required.

Impact HAZ-4 Is the project located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

If a BMP were to be located on a hazardous materials site, construction workers, the public, and the environment could be exposed to hazardous materials during earth-moving activities. This could be considered a significant impact requiring mitigation, as described below; project level

analysis would be required. Implementation of Mitigation Measure HAZ-2 would reduce the potential impact to less than significant.

ULAR and Ballona Creek EWMP Regional Projects

Based on the reviews of the specific lists that currently comprise the Cortese List, none of the ULAR or Ballona Creek EWMP Regional Project sites are contained on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. However, project level environmental review may be required for other sites as they are identified and selected.

Impact HAZ-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

None of the proposed structural BMPs would result in the construction of structures of significant height or generating significant glare or distracting light. Larger regional or centralized BMPs, such as treatment facilities or larger aboveground detention basins would not be permitted within the landing and takeoff flight paths. However, some structural BMPs, such as detention basins that store water for a period of time or constructed wetlands that would increase or improve wildlife habitat, could be constructed on or near airports and could result in attracting wildlife. Deer and birds are known wildlife hazards to airports. If the proposed project is at or near an airport, this could increase hazards to aircraft from wildlife. Project level environmental review may be required if the project is within 2 miles of an airport land use plan.

Mitigation Measure HAZ-3, as described in the PEIR, for all BMPs that are within the airport land use plan area, regardless of whether the airport receives federal funding, would reduce the potential impact to less than significant.

ULAR EWMP Regional Projects

The ULAR EWMP Regional Project site that is closest to a public airport is SF01, which is located approximately 1.4 miles northwest of the Whiteman Airport runway. None of the other ULAR EWMP Regional Projects are located within 2 miles of a public use airport, therefore, there would be no environmental constraints at those sites.

Ballona Creek EWMP Regional Projects

The proximity of the heliports to any of the Ballona Creek EWMP Regional Projects would not result in a safety hazard for people working in the Project area, as the Ballona Creek EWMP Regional Project would have no effect on air transport activities or their flight paths and would not result in any safety hazards for people in the vicinity of the sites.

Impact HAZ-6 The proposed program could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Construction activities associated with implementation of structural BMPs may include installations of pipelines or other infrastructure within roadway rights-of-way. These construction activities could potentially result in temporary lane or roadway closures or block access to roadways and driveways for emergency vehicles. Such construction-related impacts, although temporary, could potentially impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Impacts to access would be possible

during the construction of larger scale regional or centralized BMPs, and less likely for the smaller-scale distributed BMPs. Notification to emergency services providers would ensure that emergency responsiveness was not impaired. Once installed, the BMPs would have no effect on emergency response plans or evacuations plans.

ULAR EWMP Regional Projects

The ULAR EWMP Regional Project sites are currently used for recreational activities (active and passive), with the exception of the Culver Boulevard median (CC04), which has a walking/bike path and is landscaped. The ULAR EWMP Regional Projects may require construction within the streets surrounding each site that may require the temporary closure of one or more lanes while street work is occurring. However, street work would occur under permit from the applicable City or County, and appropriate notifications would be made to local emergency providers so that alternative routes can be planned for in the event of an emergency. Aside from the temporary street work, no other disruptions to the local transportation system would occur, and substantial interruptions to emergency access are not anticipated. As such, no additional project Level environmental analysis would be required.

Impact HAZ-7 Would the project expose people or structures to the risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The grading of unimproved areas could require the use of mechanized equipment with internal combustion engines. Parts of the engines and exhaust systems could get hot enough to ignite dry vegetation and cause a wildfire and expose people or structures to significant risk. CAL FIRE fire hazard severity zone maps identify areas within the EWMP areas with high and very high fire hazard severity categories. Structural BMPs conducted within these areas would have the added potential of causing wildfires. However, the requirements of the DOT and California Vehicle Code for spark arrester protection on vehicles would reduce the potential risk. Therefore, adherence to federal and state regulations would reduce the potential impacts from wildfires to less than significant. No mitigation measures would be required. No project level environmental analysis would be required.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek EWMP Regional Project sites are developed as community parks and recreation areas, or landscaped center median, and no wildlands are present at the Regional Project sites. The areas immediately surrounding the ULAR and Ballona Creek EWMP Regional Project sites are urbanized, and no increased wildland fire hazard is expected as a result of the water quality improvements at each site.

Non-Structural (Institutional) BMPs

As discussed in Section 2.0, Project Description, non-structural/institutional BMPs do not include the construction of new facilities. As a result, there would be no new facilities that would require additional or new use of hazardous materials. Therefore, there would be no impact relative to schools, known hazardous materials sites, airports, emergency evacuation plans, wildfires, or the accidental release of hazardous materials.

3.8 Hydrology and Water Quality

3.8.1 Environmental Setting

Los Angeles County Watersheds

The portion of Los Angeles County covered by the EWMPs is divided into distinct watersheds, including: the Los Angeles River, Dominguez Channel, and coastal drainages including Ballona Creek, Santa Monica and Marina Del Rey. The 5 EWMP areas were identified as portions of these greater watersheds that contain impaired water bodies needing structural Best Management Practices (BMPs) to comply with stormwater discharge permit requirements.

Los Angeles River

The 51-mile Los Angeles River stretches from its headwaters in the upper San Fernando Valley to its mouth in San Pedro Bay, draining the Santa Susana and San Gabriel Mountains and San Fernando Valley. Following several catastrophic and deadly floods in the early 1900s, the U.S. Army Corps of Engineers channelized and armored the river levees and numerous tributaries with concrete to mitigate future flooding concerns. The channelization of this stream, completed in the 1960s, ended ongoing flooding concerns and provided land for the construction of homes and businesses within the previous floodplain.

The Upper Los Angeles River EWMP watershed traverses a large diverse area of the Los Angeles Basin but for most part it is characterized by greater urbanization. The greater urbanization also results in additional priority pollutants and includes nutrients, trash, metals, bacteria, and sediment impacted by metals and organic compounds (DDT, PCBs, PAHs). The strategy for the locations and types of BMP is to use remaining available sites for retention and infiltration that takes advantage of the favorable infiltration rates of this area. Because of the greater extent and number of pollutant priorities, the BMP strategy in the Upper Los Angeles River watershed includes well over a hundred planned regional and centralized retention and infiltration BMPs that take advantage of the favorable groundwater recharge characteristics in defined areas of the watershed. Also planned are centralized treatment wetlands and bioinfiltration BMPs in parks and open spaces with favorable subsurface soils that promote higher infiltration rates. The BMP strategy also includes distributed smaller BMPs located throughout the urbanized areas of the watershed as retrofits in existing developments and streets. LFDs to comply with dryweather bacteria TMDLs will also be included..

Dominguez Channel

Named for the Juan Jose Dominguez family who owned a tract of 75,000 acres of land (Rancho San Pedro) from the Los Angeles River west to the Pacific Ocean in the late 1700s, the channel is a 15.7-mile-long waterway that drains a 110 square miles. The headwaters begin in Hawthorne and eventually empty into the East Basin of the Port of Los Angeles. Today, the Dominguez Channel watershed is 96 percent developed.

This watershed includes the Dominguez Channel EWMP. This watershed is differentiated by a larger area of industrial land use. Because of the high density of development and industrial land uses, large regional and centralized infiltration-type BMPs will be limited. The structural BMP strategy will be more LFDs, both large (centralized) and small (distributed), located at MS4 outfalls near the channelized Dominguez Channel. The other BMP strategy is the use of smaller

distributed BMPs that include the low-impact development (LID) type of BMPs, such as green streets and biofiltration BMPs. These distributed BMPs will be retrofit type BMPs that treat runoff from already developed properties and are located in street rights-of-way, parking lots, and limited open areas on public and private parcels. Distributed flow-through treatment BMPs will also be the other predominant BMP that will be retrofitted to the existing MS4 systems.

Coastal Drainages

All along the Los Angeles County coastline, distinct drainages flow from uplands to the ocean. The Santa Monica Mountains are generally short, steep, and relatively natural channels. In the urbanized areas along Santa Monica Bay, the streams have been channelized. Ballona Creek is a 9-mile-long waterway that drains the Santa Monica Mountains on the north and the Baldwin Hills on the south. Ballona Creek flows through Culver City until emptying into Santa Monica Bay between Marina del Rey and Playa del Rey. Following damaging flooding events, the Los Angeles County Flood Control District (LACFCD) concreted Ballona Creek and its tributaries during the 1930s. The Ballona Wetlands at the mouth of the creek are one of the last significant coastal wetland areas in Los Angeles County.

Because of the tidal influence of the marina to most of the Marina Del Rey watershed, regional projects will be located near the upstream end of the watershed, where groundwater depths are favorable. The tidally influenced areas will consist of mostly treatment distributed BMPs including bioinfiltration or tree wells. Regional infiltration BMPs will be well distributed throughout the Ballona Creek EWMP watershed and will be incorporated with distributed BMPs consisting mostly of treatment BMPs such as green streets. LFDs may also be pursued to comply with dry weather TMDL requirements. Many efforts have already been completed for the Santa Monica Bay J2/J3 watershed, including LFDs and reuse facilities. The group will investigate the possibility of more regional projects that are able to capture and reuse the flow. Remaining areas will be subject to distributed BMPs.

Effects of Urbanization on Streamflows

Most of the historic hydrologic processes have been fundamentally changed throughout the Los Angeles Basin due to urbanization. The replacement of native soils with largely impermeable surfaces such as concrete and asphalt has dramatically altered storm hydrographs (graph showing the flow rate in a stream or channel over the storm event), increasing runoff rates and flood volumes that have to be safely routed away from people, homes, businesses, and infrastructure. Floodplain and wetland habitats that formerly provided water quality treatment and groundwater recharge functions have been largely eliminated from the landscape, accelerating the transport of flows from higher to lower areas of the watersheds. Hydromodification reduces base-flow (groundwater flow into streams) and increases peak discharge rates into streams and rivers. BMPs such as retention basin are implemented that capture urbanized storm flows and release these flows under reduced flows to return the hydrograph close to predevelopment conditions. In addition, urbanization can increase dry-weather flows in local streams that were historically ephemeral as a result of irrigation runoff and wastewater treatment plant discharges.

Surface Water Quality

Surface water quality in Los Angeles is largely influenced by the intensive urban land uses of the region. Key sources of surface water contamination include landscape irrigation runoff conveying sediment, nutrients, pesticides, metals, oil and grease, and pathogens to receiving waters. Other dry-weather runoff from industrial activities can add organic compounds and petroleum hydrocarbons. The State Water Resources Control Board (SWRCB) has identified stream segments in each of the EWMP Areas that are considered impaired under the Clean Water Act (CWA) in the State Section 303d list. Once placed on the State §303d list, the water body or segment is then subject to the development of a TMDL. The PEIR provides a list of the currently impaired water bodies, TMDLs and the references to existing TMDL Implementation Plans.

Existing Stormwater Recharge

Stormwater recharge facilities currently augment local groundwater supplies in the region by an estimated 477,000 acre-feet per year (MWD, 2014). One of the primary goals of the EWMP program is to increase the amount of stormwater that is recharged into groundwater, particularly in portions of the Central Basin that experience a high degree of hydraulic connectivity between surface water and groundwater. Infiltration BMPs proposed within the EWMPs are expected to increase the rates and amounts of groundwater recharge—the degree to which these increase is dependent upon project-specific attributes such as size, location, and the size of the contributing watershed.

Groundwater Basins

Los Angeles County is located in the South Coast Hydrologic Region. The South Coast HR is divided into numerous smaller groundwater basins and subbasins; the two largest and most critical among them are the Central Basin and the West Coast Basin. The 140-square-mile West Coast Basin underlies much of the Dominguez Channel and Marina del Rey EWMP Areas. The 270-square-mile Central Basin underlies portions of the Los Angeles River, EWMP areas. The Central and West Coast Basins are characterized by aquifers that are generally confined by relatively impermeable clay layers over most of the area. Recharge to the Central Basin occurs primarily by engineered recharge of stormwater. Recharge to the West Coast Basin occurs primarily by injection of imported water and reclaimed water into wells of the seawater intrusion barrier and by underflow from the Central Basin. The Dominguez Channel Spreading Grounds (DGSG) are located along the Los Angeles River near the boundary between the West Coast and Central Basins. The sources of water for the spreading grounds are controlled flows from the Los Angeles River low-flow channel and uncontrolled flows from storm drains. The West Coast Basin includes two seawater intrusion barriers, the West Coast Basin Seawater Intrusion Barrier (WCBB) and Dominguez Gap Seawater Intrusion Barrier, also fed by treated imported water and advanced water treatment recycled water.

Groundwater Quality

In general, groundwater in the main producing aquifers of the West Coast and Central basins is of good quality. Localized areas of marginal to poor quality water exist, primarily at the basin margins where seawater intrusion occurred in the past and also in mostly shallow groundwater near environmental release sites. Groundwater has also been impacted by industrial activities

that have introduced highly mobile man-made organic compounds such as solvents and fuel additives. Excessive overpumping in the basins caused severe overdraft (i.e., lowered groundwater levels) and created a hydraulic gradient that resulted in seawater intrusion, which contaminated the coastal groundwater aquifers. To address this problem and halt the intrusion, three seawater intrusion barriers were constructed. While the water injection activities at the barriers were successful in halting further seawater intrusion, these efforts could not address the seawater that had already intruded into the Central and West Coast Basins before the barriers were constructed. These large plumes of saline water, referred to as “saline plumes,” are trapped inland of the injection wells, thereby degrading significant volumes of groundwater with high concentrations of chloride and total dissolved solids (TDS) and decreasing the ability of affected aquifers to provide groundwater storage.

As a highly urban area, commercial and industrial activities have resulted in contamination due to leaking aboveground and underground storage tanks, leaking sewer and oil pipelines, spills, and illegal discharges. Many groundwater contamination plumes consist of priority contaminants

3.8.2 Regulatory Setting

3.8.2.1 Federal

Clean Water Act

The Federal Water Pollution Control Act (33 U.S.C. 1251 et. sec.) as amended by the Federal Water Pollution Control Act Amendments of 1972, also known as the CWA, states that the discharge of pollutants to waters of the United States from any point source is unlawful, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. CWA Section 402 regulates discharges to surface waters of the United States through the NPDES program. In California, the USEPA authorizes the SWRCB to oversee the NPDES program through the Regional Water Quality Control Boards. Construction activities disturbing one acre of land or greater must be covered under the SWRCB General Construction Activity Stormwater Permit. The permit requires preparation of a Stormwater Pollution Prevention Plan (SWPPP) for construction activities. Section 303(d) of the CWA requires that each state identify water bodies or segments of water bodies that are “impaired and need further attention to support their beneficial uses. Once the water body or segment is listed, the state is required to establish TMDL for the pollutant. Section 401 of the federal CWA requires that any activity, including the crossing of rivers or streams during road, pipeline, or transmission line construction, that might result in discharges of dredged or fill material into a state water body, be certified by the RWQCB. This certification ensures that the proposed activity does not violate state or federal water quality standards. Under Section 404 of the CWA, the ACOE is responsible for regulating the discharge of dredged or fill material into waters of the United States. The term “waters of the United States” includes wetlands and non-wetland bodies of water that meet specific criteria as defined in the Code of Federal Regulations.

3.8.2.2 State

Porter-Cologne Water Quality Act

The Porter-Cologne Act (Division 7 of the California Water Code) provides the basis for water quality regulation within California and defines water quality objectives as the limits or levels of water constituents that are established for reasonable protection of beneficial uses.

California Ocean Plan

The Ocean Plan identifies beneficial uses of ocean waters and provides water quality objectives that are protective of these uses. The plan provides objectives for bacteriological, physical, chemical, biological, and radioactive characteristics, as well as general requirements for the management of waste discharges to the Pacific Ocean. The USEPA relies upon the water quality objectives of the Ocean Plan for the purposes of regulating discharges from point sources that discharge into the Pacific (e.g. WWTP ocean outfalls) as well as the water quality of streams and channels that flow into the ocean.

The SWRCB has proposed to amend the California Ocean Plan and the forthcoming Inland Surface Waters, Enclosed Bays, and Estuaries Plan to address trash in waterways, including waterways regulated by the Los Angeles County MS4 (SWRCB, 2014). A central element of the proposed Trash Amendments is a compliance approach that utilizes land use to target high trash generating areas (priority land uses), such as high-density residential, industrial, and commercial, mixed urban, and public transportation land uses.

National Pollutant Discharge Elimination Program

The NPDES permit program is administered in the State of California by the RWQCBs, and was first established under the authority of the CWA to control water pollution by regulating point sources that discharge pollutants into waters of the United States. If discharges from industrial, municipal, and other facilities go directly to surface waters, those project applicants must obtain permits. The SWRCB also has issued General Waste Discharge Requirements (WDRs) under Order No. R8-2003-0061, NPDES No. CAG 998001 (Dewatering General Permit) governing nonstormwater construction-related discharges from activities such as dewatering, water line testing, and sprinkler system testing. The discharge requirements include provisions mandating notification, testing, and reporting of dewatering and testing-related discharges. The Construction General Permit (CGP) requires the development and implementation of an SWPPP that includes specific BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off-site into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area.

3.8.2.3 Local Regulations

Los Angeles Regional Water Quality Control Plan

The preparation and adoption of water quality control plans (Basin Plans) is required by the California Water Code (Section 13240) and supported by the CWA. Section 303 of the CWA requires states to adopt water quality standards which “consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses.”

County of Los Angeles Stormwater Pollution Control Requirements for Construction Activities

To comply with the Phase II General Construction Permit, the County of LA has established a set of BMPs with which all permitted construction activities on unincorporated county lands must comply.

City of Los Angeles Development Construction Model Program

The City of LA's Development Construction Model Program addresses NPDES Phase II requirements on construction sites within incorporated City lands. BMPs for construction (as well as source control and treatment) are detailed in the City's Reference Guide for Stormwater Best Practices.

County and City Low Impact Development Manual

The County of Los Angeles (County) prepared the 2014 Low Impact Development Standards Manual (LID Standards Manual, County of Los Angeles, 2014b) to comply with the requirements of the 2012 MS4 Permit. The LID Standards Manual provides guidance for the implementation of stormwater quality control measures in new development and redevelopment projects in unincorporated areas of the County with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges. Some of the other cities within the County also have LID ordinances and manuals.

3.8.3 Impact Assessment

3.8.3.1 Thresholds of Significance

For the purposes of this PEIR and consistency with Appendix G of the CEQA Guidelines, applicable local plans, and agency and professional standards, the project would have a significant impact on aesthetic resources if it would:

- Violate any water quality standards or waste discharge requirements.
- Otherwise substantially degrade water quality.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site.
- Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map.
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows.
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

- Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow.

3.8.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to hydrology and water quality resources identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-8 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-8. Summary of Hydrology and Water Quality Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance						
	Surface Water Quality	Groundwater	Erosion	Storm Drain System	Flood Hazards	Tsunami, Seiche, Mudflows	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	None Required	HYDRO-1; HYDRO-2; HYDRO-3	None Required	None Required	None Required	None Required	None Required
Regional BMPs							
Regional Detention and Infiltration	No	Yes	No	No	No	No	No
Regional Capture, Detention and Use	No	Yes	No	No	No	No	No
Centralized BMP							
Bioinfiltration	No	Yes	No	No	No	No	No
Constructed Wetlands	No	Yes	No	No	No	No	No
Treatment/LFDs	No	Yes	No	No	No	No	No
Creek, River, Estuary Restoration	No	Yes	No	No	No	No	No
Distributed BMPs							
Site Scale Detention	No	Yes	No	No	No	No	No
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	No	Yes	No	No	No	No	No
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	No	No	No	No	No	No
Flow-through Treatment BMPs	No	No	No	No	No	No	No
Source Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	No	No	No	No	No	No
Low-Flow Diversions	No	No	No	No	No	No	No

NOTE: These conclusions are based on typical size and locations of BMPs.

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

HYDRO-1: Prior to approving an infiltration BMP, the Permittee shall conduct an evaluation of the suitability of the BMP location. Appropriate infiltration BMP sites should avoid areas with low permeability where recharge could adversely affect neighboring subsurface infrastructure.

HYDRO-2: Prior to approving an infiltration BMP, the Permittee shall identify pre-treatment technologies, type, and depth of filtration media; depth to groundwater; and other design considerations necessary to prevent contaminants from impacting groundwater quality. The design shall consider stormwater quality data within the BMP's collection area to assess the need and type of treatment and filtration controls. Local design manuals and ordinances requiring minimum separation distance to groundwater shall also be met as part of the design.

HYDRO-3: Prior to the installation of an infiltration BMP, the Permittee shall conduct a database review for contaminated groundwater sites within a quarter mile of the proposed infiltration facility. The Permittee shall identify whether any contaminated groundwater plumes are present and whether coordination with the local and state environmental protection overseeing agency and responsible party is warranted prior to final design of infiltration facility.

Structural (Regional, Centralized, and Distributed) BMPs**Impact WR-1 Would the proposed project violate water quality standards or waste discharge requirements or further degrade water quality?**

BMPs, particularly larger centralized and regional BMPs, could lead to ground disturbance and polluted runoff. However, as described above, the NPDES CGP requires that any actions that disturb an acre or more of ground must develop an SWPPP to prevent the transport of polluted runoff. SWPPPs will most likely be necessary for the construction of regional and centralized BMPs, particularly those that are larger, multi-benefit projects such as greenway redevelopments. Projects under an acre in size, which will include most distributed BMPs, must comply with NPDES Phase II requirements and incorporate construction BMPs mandated by the jurisdiction within which the project falls. Compliance with the CGP would ensure that the construction of BMPs would have no temporary or permanent impact to water quality. Implementation of the proposed BMPs would have no adverse impacts to surface water quality. Additional Project-level environmental review would not be required.

ULAR and Ballona Creek EWMP Regional Projects

There is a remote potential for subsurface contamination to be present for SF01 (Upper LA River) and BH01, CC04, and IG01 (Ballona Creek). If such subsurface contamination is present and infiltration would occur in areas where the contamination is present, then there is a potential for adverse water quality impacts to groundwater.

Impact WR-2 Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-

existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

Regional BMPs would recharge stormwater into the groundwater basin and could raise local groundwater levels following major storm events. In areas with shallow groundwater tables or impermeable soils, recharge could result in mounding that affects subsurface infrastructure such as building or bridge foundations. Mitigation Measure HYDRO-1 requires Permittees to evaluate the suitability of BMP locations for groundwater recharge. Project Level environmental review may be required.

In addition, infiltration of stormwater runoff could increase contaminant loading in shallow soils and groundwater. Pre-treatment of source water in areas with the potential for heavy contaminant loading would be implemented as a required design feature for regional and centralized BMPs to assist in reducing long-term loading. The LID standards for the County of Los Angeles and the various cities participating in the EWMP provide protocols for designing regional and centralized BMPs that minimize the potential for contaminant loading. With compliance with these protocols and implementation of Mitigation Measure HYDRO-2 which would require the implementing agencies to evaluate the need for pretreatment at each infiltration BMP, impacts to groundwater quality would be less than significant.

Proposed projects that recharge the shallow aquifers have the potential to mobilize shallow contamination and alter groundwater flow directions. Mitigation Measure HYDRO-3 would require that infiltration BMPs would be required to evaluate site conditions and the existence of contaminated groundwater plumes during planning stages prior to construction of infiltration galleries, trenches, and basins. Project Level environmental review would be required.

ULAR EWMP Regional Projects

The ULAR EWMP Regional Projects would not be located in areas used for groundwater recharge and therefore would not interfere with groundwater recharge. The ULAR EWMP Regional Projects would divert runoff and stormwater from the storm drain system in the ULAR watershed, and treat and infiltrate some of the diverted stormwater. As a consequence, the ULAR EWMP Regional Projects are considered to provide beneficial effects to groundwater by increasing infiltration above baseline conditions.

Impact WR-3 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?

The proposed structural BMPs would be designed to minimize off-site discharge of urban runoff pollutants including siltation and sedimentation. Many of the structural BMPs would include onsite infiltration of stormwater runoff which would also be effective in minimizing erosion or transport of sedimentation into receiving waters. Through increased infiltration prior to discharge into receiving waters, flows within existing streams or rivers would receive reduced stormwater flow volumes thereby decreasing flow energies. As a result, the potential for erosion or siltation within existing streams or rivers would be reduced and the potential impact less than significant. Additional Project-level review would not be required.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek EWMP Regional Projects would be located within community parks or a center median, and would not result in physical changes to a stream or river. All ULAR and Ballona Creek Regional Project sites would be restored following construction. Infiltration would occur subsurface and would not result in erosion. Bio-retention features would be designed to properly manage the diverted runoff and storm water, and would not result in erosion. Additional Project-level review would not be required.

Impact WR-4 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?

The proposed structural BMPs include features that would increase stormwater retention and encourage on-site infiltration to reverse the impacts from urbanization on the natural hydrograph. Therefore, the potential impact would be less than significant. Additional Project-level review would not be required.

Impact WR-5 Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The proposed structural BMPs whether regional, centralized or distributed would have an overall effect of reducing off-site stormwater flows through on-site infiltration and detention. The structural BMPs would also provide improvements to water quality of receiving waters. Therefore, these impacts would be less than significant. Additional Project-level review would not be required.

Impact WR-6 Would the project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map or other flood hazard delineation map?

The proposed structural BMPs would not include the construction of any housing and therefore there would be no impact related to placement of housing in a flood hazard area. Additional Project-level review would not be required.

Impact WR-7 Would the project place within a 100-year floodplain structures that would impede or redirect flood flows?

In general, the majority of the structural BMPs would consist of either features with a very low profile in terms of having any effect on flood flows (e.g., drainage swales, infiltration trenches, galleries, ponds, planter boxes and pervious pavement) or features that are subterranean (e.g., cisterns, detention basins, dry wells). However, structural BMPs could include above ground detention basins. Above ground detention basins would be required to adhere to any local flood zone construction permitting requirements such that they would not be impede or redirect flood flows. As a result, the impact of structural BMPs would be less than significant. Additional Project-level review would not be required.

ULAR and Ballona Creek EWMP Regional Projects

The water quality improvements under the ULAR and Ballona Creek EWMP Regional Projects would be either buried infiltration or storage units, or surface bio-retention features, neither of which would impede site runoff or flood flows.

Impact WR-8 Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

The majority of the structural BMPs would consist of features with a very low profile and would be designed to aid in the conveyance of runoff and high flows. Structural BMPs could also include above ground detention basins. Above ground detention basins would not be staffed and not likely to be susceptible to substantive damage in the event of a catastrophic failure of a levee or dam based on the general characteristics of how above ground detention basins are constructed. As a result, the impact of structural BMPs would be less than significant. Additional Project-level review would not be required.

ULAR EWMP Regional Projects

Based on a review of the safety elements of the general plans of the Cities of Glendale, Los Angeles, Monterey Park, Pasadena, and South Pasadena, Regional Project sites SF01, NHP, SP01, and LAC01 appear to be within potential inundation or flood areas, including areas subject to flooding in the event of a dam failure. However, the Regional Projects would not house people or otherwise increase the risk of exposure to risks related to potential flooding. In addition, the Regional Projects are stormwater management projects that are expected to result in beneficial effects to downstream conveyance capacity in the event of a flood. Additional Project-level review would not be required.

Ballona Creek EWMP Regional Projects

Based on a review of the safety elements of the general plans of the City of Beverly Hills, Culver City, Inglewood, Los Angeles and West Hollywood, Regional Projects BH01, CC04, LA20, LA21, and WH01 appear to be within potential inundation or flood areas, including areas subject to flooding in the event of a dam failure. However, the Regional Projects would not house people or otherwise increase the risk of exposure to risks related to potential flooding. In addition, the Regional Projects are stormwater management projects that are expected to result in beneficial effects to downstream conveyance capacity in the event of a flood. Additional Project-level review would not be required.

Impact WR-9 Would the project expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?

The project area includes coastal areas and areas that are adjacent to enclosed bodies of water that could be subject to seiche, tsunami, or mudflow. However, the BMP structures would not be staffed and any potential damage that a seiche, tsunami, or mudflow might incur would likely be relatively easily repaired. As a result, the potential impact to structures subject to inundation by seiche, tsunami, or mudflow would be less than significant. Additional Project-level review would not be required.

ULAR and Ballona Creek EWMP Regional Projects

The ULAR and Ballona Creek EWMP Regional Project sites are not located within a tsunami hazard zone, or near inland water bodies that could be subject to a seiche. In addition, the sites are relatively flat and are not subject to mudflows. Additional Project-level review would not be required.

Non-Structural (Institutional) BMPs

Non-structural BMPs policies, actions, and activities intended to prevent pollutants from entering stormwater runoff, thus eliminating the source of the pollutants. These BMPs would not involve any earthwork disturbance or construction activities, and similar to the Structural BMPs, once implemented, would aid in minimizing off-site discharge of urban runoff pollutants. As a result, they would have no adverse impact on water quality standards or waste discharge requirements. As discussed above, increased infiltration from local LID drainage features are not as likely to result in substantive increases in groundwater levels or increase the potential for erosion and siltation and therefore would have a less than significant impact with respect to these issues. The non-structural BMPs would similarly provide the policies, actions, and activities to encourage the use of drainage features that either infiltrate or detain stormwater runoff on-site. Drainage patterns would change through implementation of these non-structural institutional BMPs but would be designed to improve water quality and reduce stormwater flow volumes. Therefore, the potential impact to the capacity of drainage systems would be less than significant as well as the potential to provide additional sources of polluted runoff.

Similar to above, the non-structural BMPs would not include the construction of any housing and therefore there would be no impact related to placement of housing in a flood hazard area. Non-structural BMPs would not include the construction of any structures and therefore there would be no impact related to impeding or redirecting flood flows, or impacts relating to failure of a levee or dam, inundation by seiche, tsunami, or mudflow.

3.9 Land Use and Agriculture

The proposed program is located wholly within Los Angeles County, which covers an area of about 4,083 square miles and comprises 88 cities and approximately 2,650 square miles of unincorporated areas. The majority of the County is highly urbanized and consists of several cities, communities and unincorporated areas. Land uses within the County are widely varied and include open space, residential, commercial, mixed-use, public and semi-public, and industrial land uses. The proposed program would be located in various watersheds across Los Angeles County that span multiple jurisdictions with varying land use regulations. The EWMP agencies have no jurisdiction over the land that is owned by the State of California (i.e., California Department of Fish and Wildlife, the State Lands Commission, and the California Department of Transportation) or the U.S. Government.

3.9.1 Environmental Setting

3.9.1.1 Upper Los Angeles River

The Upper Los Angeles River EWMP area covers the upper reaches of the Los Angeles River Watershed. The Permittees within this EWMP are: the Cities of Alhambra, Burbank, Calabasas, Glendale, Hidden Hills, La Cañada Flintridge, Los Angeles, Montebello, Monterey Park,

Pasadena, Rosemead, San Gabriel, San Marino, South Pasadena, and Temple City; the County of Los Angeles; and LACFCD.

The area included in the Upper Los Angeles River Watershed EWMP is approximately 479 square miles, or 57.43 percent of the total watershed area. Table 3-9 provides the size and percentage of each participating member's jurisdiction within the watershed. Figure 3-1 shows land uses in the Upper Los Angeles River EWMP area and the location of planned and priority regional/centralized BMPs. The location of distributed BMPs would be throughout the urbanized areas of the watershed.

To the north of the Los Angeles River EWMP group is the Angeles National Forest, which offers outdoor activities such as hiking trails, campgrounds, and picnic areas. Angeles National Forest covers approximately 1,024 square miles just outside of the highly urbanized cities of Los Angeles County. While it is very close, it is not inside the Los Angeles River EWMP group boundary.

Table 3-9. Upper Los Angeles River Land Distribution

Agency	Land area (acres)	Percent of EWMP Area
City of Los Angeles	18,934.64	75.02%
City of Alhambra	4,884.31	1.80%
City of Burbank	11,095.20	3.62%
City of Calabasas	4,005.68	1.31%
City of Glendale	19,587.50	6.40%
City of Hidden Hills	961.03	0.31%
City of La Canada Flintridge	5,534.46	1.81%
City of Montebello	5,356.38	1.75%
City of Monterey Park	4,951.51	1.62%
City of Pasadena	14,805.30	4.84%
City of Rosemead	3,310.87	1.08%
City of San Gabriel	2,644.87	0.86%
City of San Marino	2,409.64	0.79%
City of South Pasadena	2,186.20	0.71%
City of Temple City	2,576.50	0.84%
Los Angeles County	40,553.34	13.25%

SOURCE: Upper Los Angeles River EWMP Work Plan, 2014.

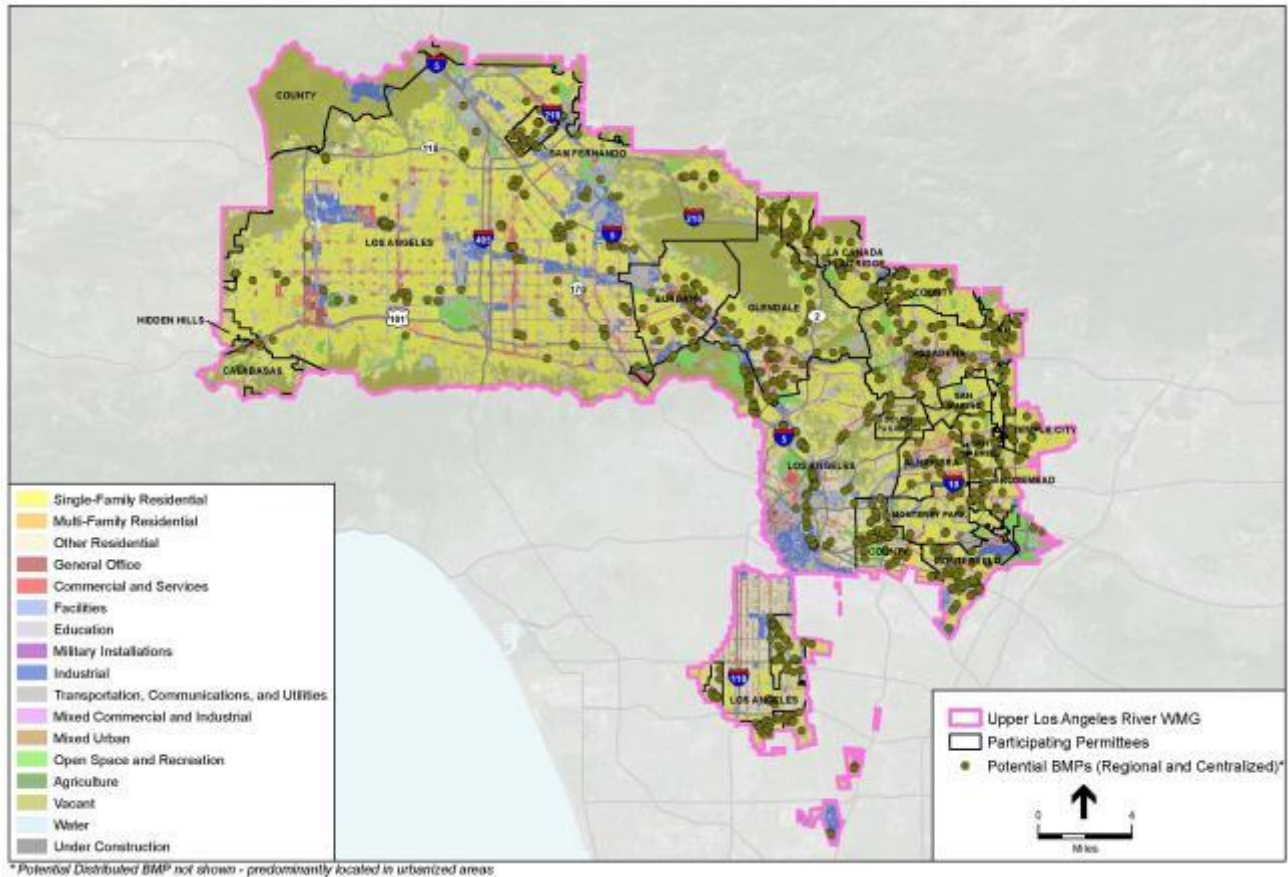


Figure 3-1. Upper Los Angeles River EWMP Area Land Use.

3.9.1.2 Ballona Creek

The Ballona Creek EWMP area covers the Ballona Creek Watershed. The Permittees within this EWMP are: the Cities of Beverly Hills, West Hollywood, Los Angeles, Inglewood, Culver City, Santa Monica; the County of Los Angeles; and LACFCD. The Ballona Creek Watershed comprises the cities of Beverly Hills, Culver City, and West Hollywood and parts of Inglewood, Los Angeles and Santa Monica as well as small unincorporated areas of Los Angeles County. Collectively, the Municipal Separate Stormwater Sewer Systems (MS4) Permittees in the Ballona Creek Watershed have jurisdiction over 123 square miles or 96 percent of the total watershed area. A breakdown of areas by MS4 Permittees is provided below

BALLONA CREEK WATERSHED LAND AREA DISTRIBUTION

Agency	Land Area (Acres)	Percent of EWMP Area
City of Los Angeles	65,272.89	83.21%
County of Los Angeles	3,164.76	4.03%
City of Beverly Hills	3,618.95	4.61%
City of Culver City	3,125.00	3.98%
City of Inglewood	1,907.72	2.43%
City of West Hollywood	1,135.00	1.45%
City of Santa Monica	217.31	0.28%
Total	78,441.63	100.00%

SOURCE: Ballona Creek EWMP Work Plan, 2014.

The population in the Ballona Creek Watershed is approximately 1.6 million people (LADPW, 2004). The predominant land use in the Ballona Creek Watershed is residential, representing 63.7 percent of the total land area, including multi-family residential uses covering 18 percent of the area. Although open space areas represent 16.7 percent, this category may include parks and other open areas not generally open to the public, including vacant land and golf courses (LADPW, 2004). Commercial, public, light industrial, other urban and unknown land uses represents 19.6 percent of the total land area. Figure 3-2 shows land uses in the Ballona Creek Watershed and the location of planned and priority regional/centralized Best Management Practices (BMPs). The location of distributed BMPs would be throughout the urbanized areas of the watershed.

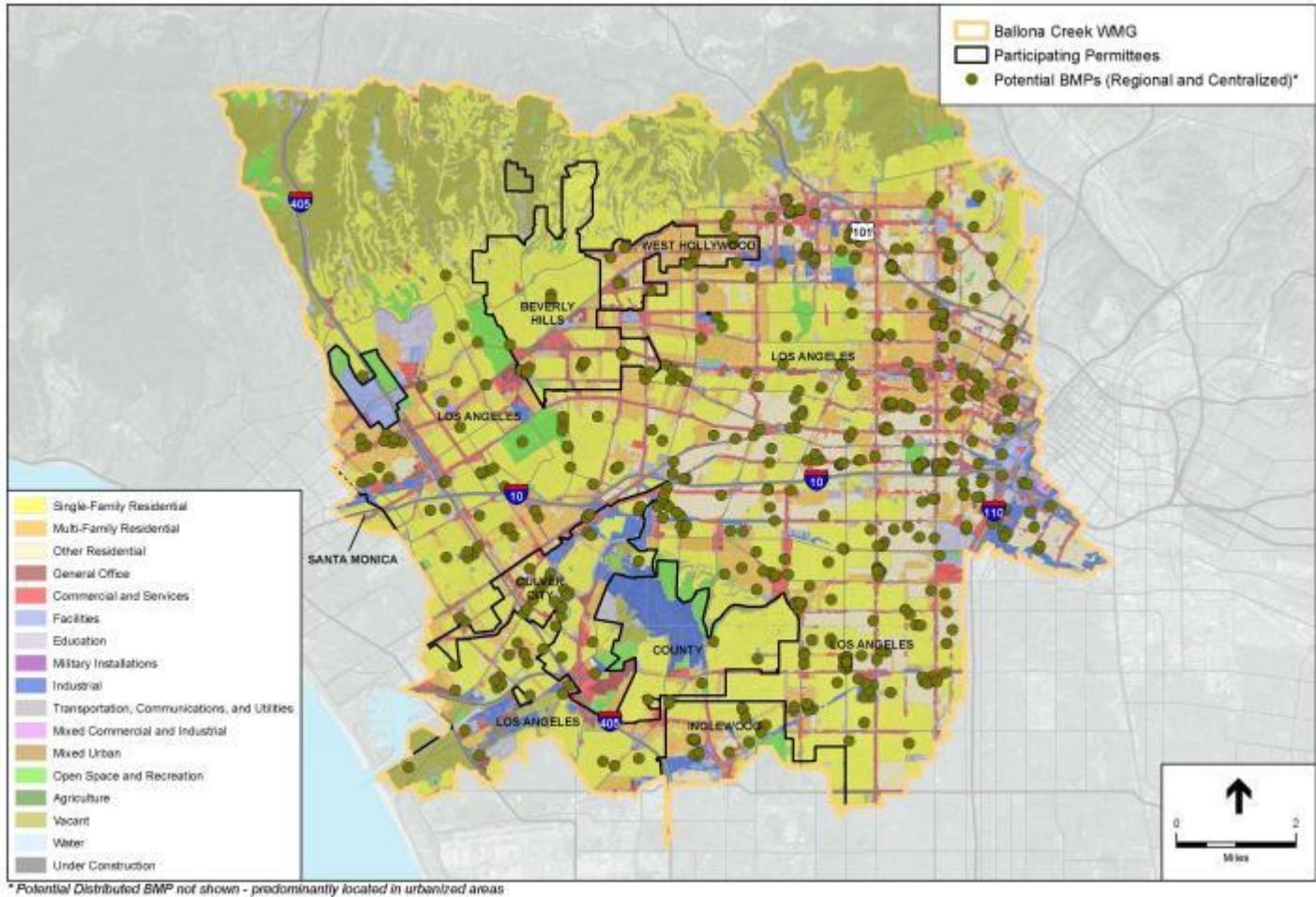


Figure 3-2. Ballona Creek EWMP Area Land Use.

3.9.1.3 Dominguez Channel

The Dominguez Channel EWMP area covers portions of the Dominguez Channel Watershed and the Machado Lake and the Los Angeles/Long Beach Harbor subwatersheds. The Dominguez Channel EWMP addresses approximately 36,410 acres, or 47.45 percent of the total 133-squaremile watershed. The Permittees within this EWMP are: the Cities of El Segundo, Hawthorne, Inglewood, Lomita, and Los Angeles; the County of Los Angeles; and the LACFCD. A breakdown of areas by MS4 Permittee and other agencies is provided in Table 3-10 below. Figure 3-3 shows land uses in the Dominguez Channel Watershed and the location of planned and priority regional/centralized Best Management Practices (BMPs).

Table 3-10. Dominguez Channel Watershed Land Area Distribution

Agency	Area in Machado Lake Watershed (acres)	Area in Dominguez Channel Watershed (acres)	Area in LA/LB Harbors Watershed (acres)	Total Area in EWMP (acres)	Percent of EWMP Area
City of El Segundo	0	1,252.18	0	1,252.18	3.44%
City of Hawthorne	0	3,891.91	0	3,891.91	10.69%
City of Inglewood	0	3,884.28	0	3,884.27	10.67%
City of Lomita		1,227.70			3.26%
City of Los Angeles	1,998.42	19,243.25	11,258.12	19,243.20	52.85%
Los Angeles County	1,250.87	6,755.77	134.23	8,140.87	22.36%

SOURCE: Dominguez Channel EMWP Work Plan and Notice of Intent, 2014.

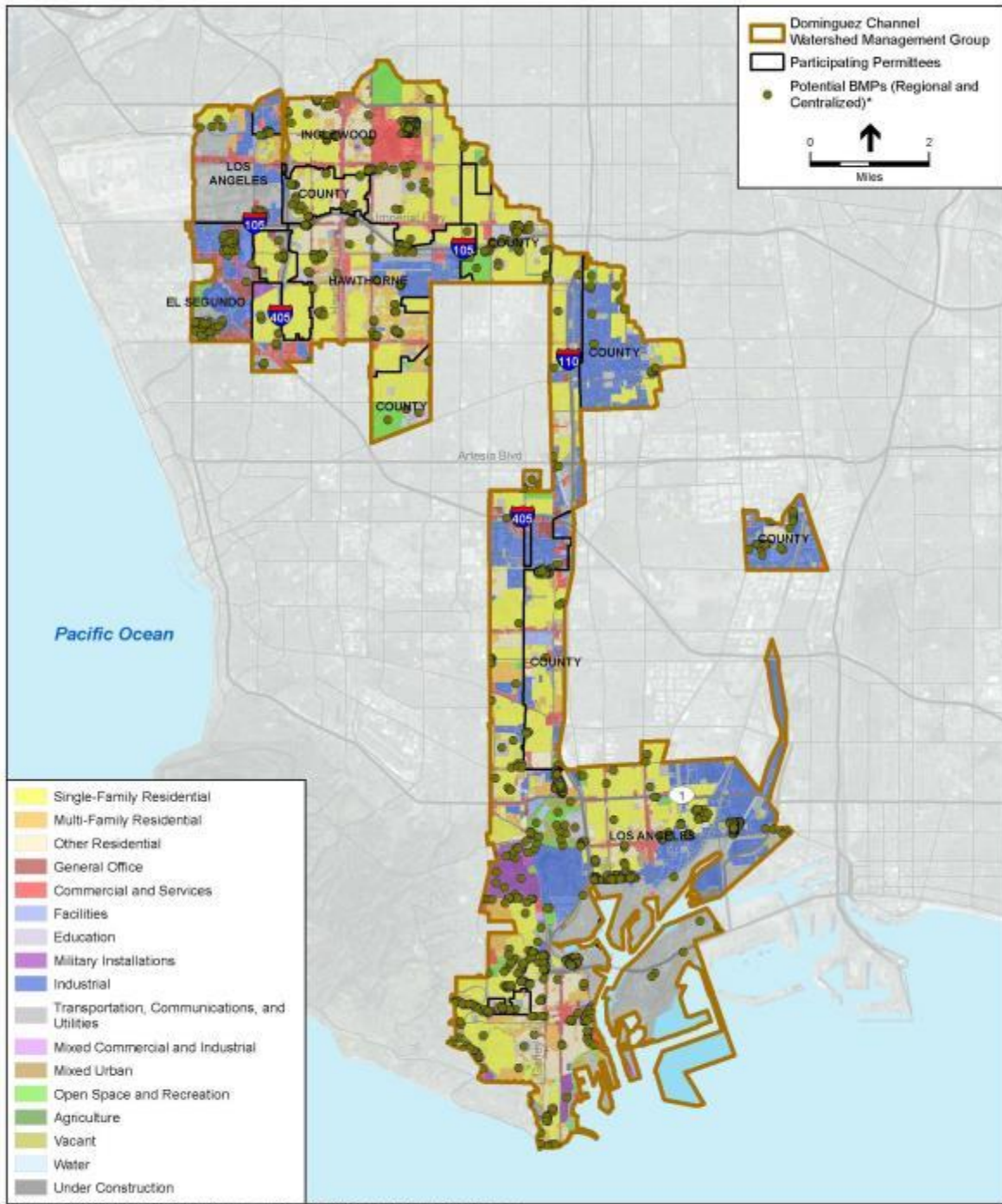


Figure 3-3. Dominguez Channel EWMP Area Land Use.

3.9.1.4 Marina del Rey

The Marina del Rey EWMP area covers the Marina del Rey Watershed. The Permittees within this EWMP are: the Cities of Los Angeles and Culver City; the County of Los Angeles; and LACFCD. Land uses within the Marina del Rey Watershed are 52 percent residential, 46 percent commercial and 2 percent open space (LADPW, 2014a). A breakdown of areas by MS4

Permittee and other agencies is provided in Table 3-11. Figure 3-4 shows land use in the Marina del Rey Watershed EWMP area and the location of planned and priority regional/centralized BMPs. The location of distributed BMPs would be throughout the urbanized areas of the watershed.

Table 3-11. Marina Del Rey Watershed Land Area Distribution.

Agency	Total Area (acres)	Percent of EWMP Area
City of Los Angeles	971.3	69%
City of Culver City	42.2	3%
County of Los Angeles	395.7	28%
Total	1,409	100%

SOURCE: Marina del Rey EMWP Work Plan, 2014.

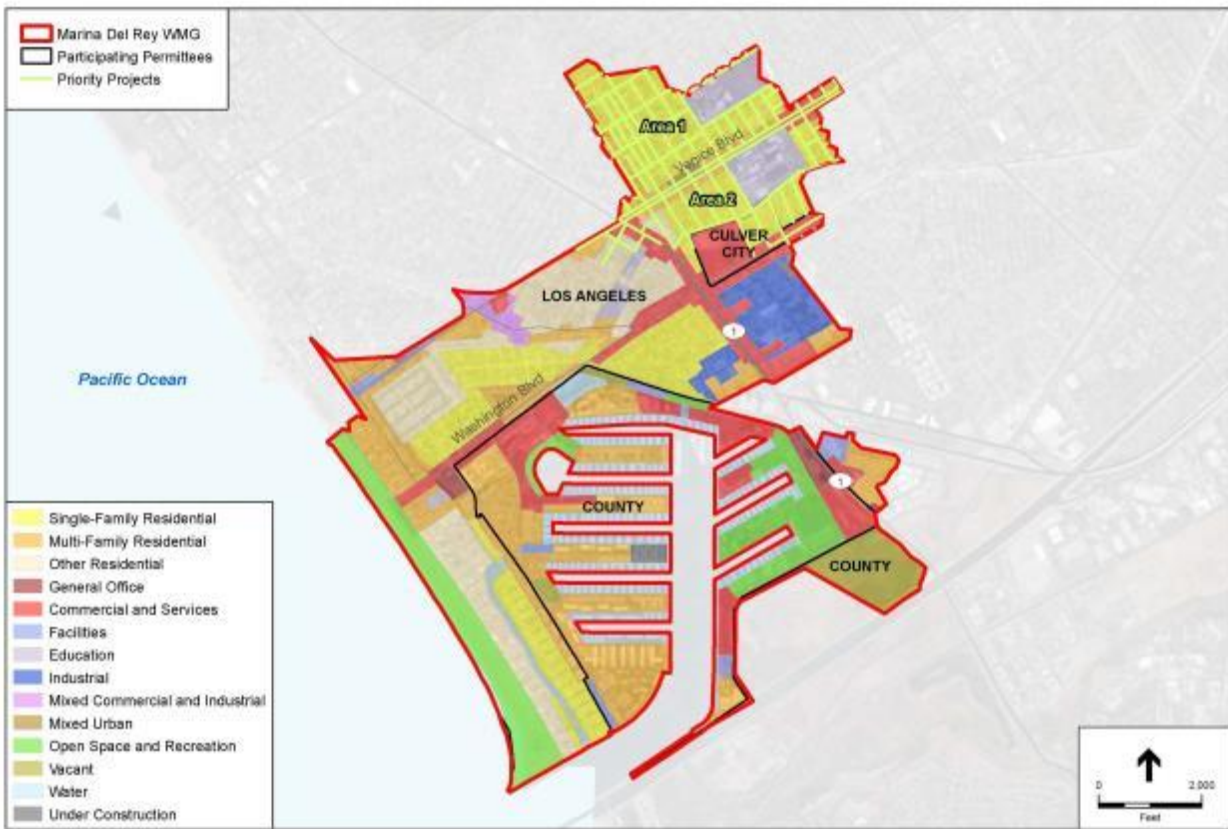


Figure 3-4. Marina Del Rey EWMP Area Land Use.

3.9.1.5 Santa Monica Bay Jurisdictional Groups 2 & 3

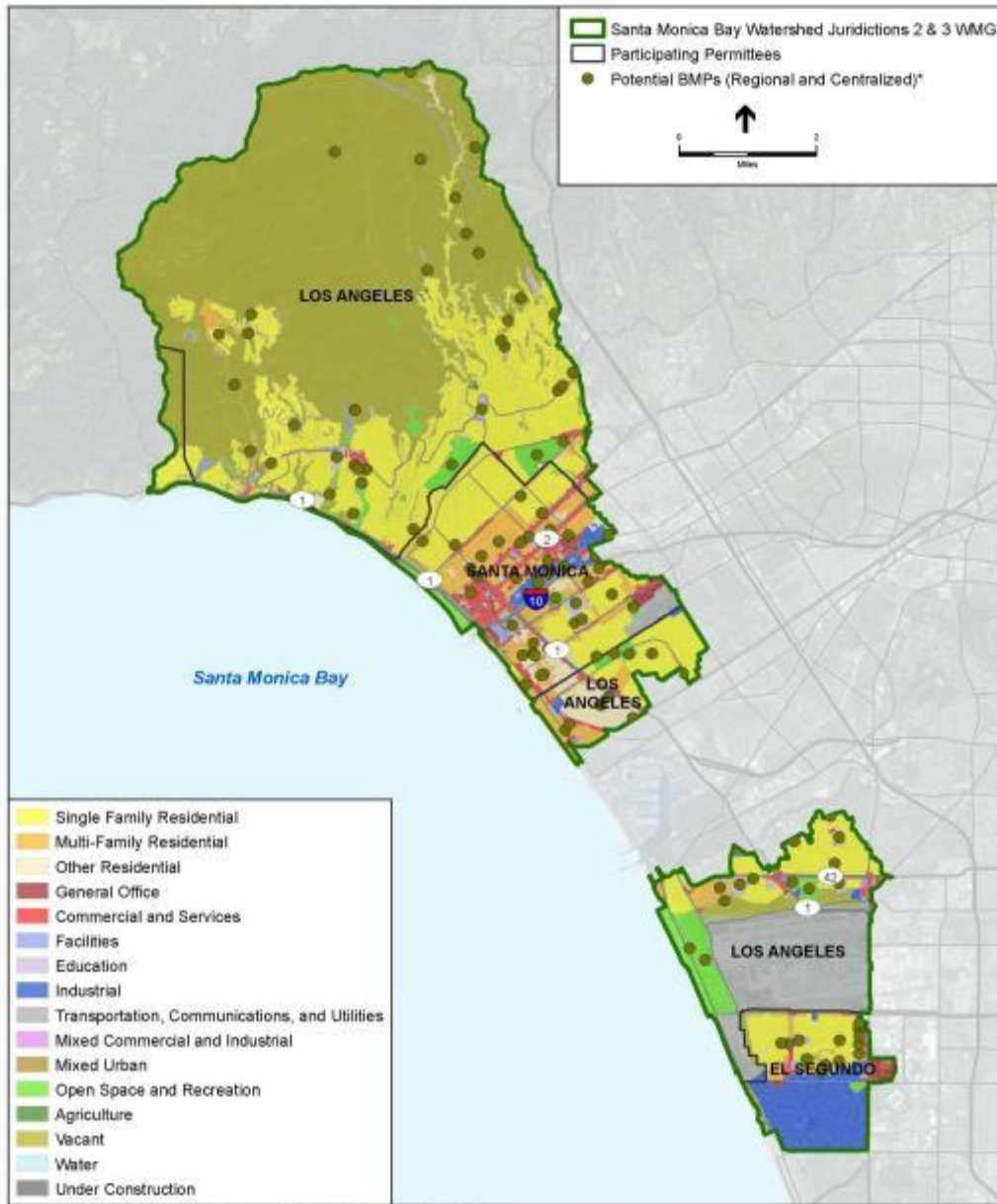
The Santa Monica Bay EWMP area covers the central region of the Santa Monica Bay Watershed (JG2 and JG3) and includes the urbanized Dockweiler and Santa Monica subwatersheds, as well as natural open space located in the Castle Rock, Pulga Canyon, Temescal Canyon, and Santa Monica Canyon subwatersheds. The Permittees within this EWMP include the Cities of Los Angeles, Santa Monica, and El Segundo; the County of Los Angeles; and LACFCD.

The Santa Monica Bay EWMP Group area covers 34,362 acres. Approximately 49 percent of the Santa Monica Bay EWMP Group area is open space, and approximately 93 percent of the open space is located the northern subwatersheds and approximately 7 percent is located in the Dockweiler subwatershed. Approximately 67 percent of the Santa Monica Bay EWMP Group area is pervious according to geographic information system (GIS) data from the Los Angeles County Department of Public Works, the large majority of which comes from the northern-most subwatersheds of Castle Rock, Pulga Canyon, Temescal Canyon, and Santa Monica Canyon.

**TABLE 3.9-12
SANTA MONICA BAY LAND AREA DISTRIBUTION**

Agency	Land area (acres)	Percent of EWMP Area
City of Los Angeles	18,934.64	75.02%
City of Santa Monica	4,987.47	19.76%
City of El Segundo	1,185.63	4.70%
Los Angeles County	130.40	0.52%

SOURCE: Santa Monica Bay EMWP Work Plan, 2014.



3.9.2 Regulatory Setting

3.9.2.1 State

California Coastal Commission

The California Coastal Commission (CCC) is a state agency that works in conjunction with local cities and counties to plan and regulate the use of land and water in the coastal zone. The coastal zone covers the entire shoreline of California and varies in width depending on the region. The CCC regulates development activities in the coastal zone.

Southern California Association of Governments Regional Comprehensive Plan

SCAG is the federally mandated Metropolitan Planning Organization representing six counties: Los Angeles, Imperial, Orange, Riverside, San Bernardino, and Ventura. The SCAG Regional Comprehensive Plan addresses important regional issues such as housing, traffic/transportation, water, and air quality and serves as an advisory planning document to support and encourage local agencies in their planning efforts.

California Farmland Mapping and Monitoring Program

The California Department of Conservation, under the Division of Land Resource Protection, has established the Farmland Mapping and Monitoring Program. The Farmland Mapping and Monitoring Program monitors the conversion of the state's farmland to and from agricultural use and reports on the amount of land converted from agricultural to non-agricultural use.

3.9.2.2 Local

Low Impact Development Manuals

The County of Los Angeles (County) prepared the 2014 Low Impact Development Standards Manual (LID Standards) to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) MS4 Permit for stormwater and non-stormwater discharges from the MS4 within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4-2012-0175). In addition, in November 2011, the City of Los Angeles adopted the Stormwater Low Impact Development Ordinance #181899. Various other cities within the County also have LID standards or guidance.

County of Los Angeles General Plan and City General Plans

A General Plan is a basic planning document that, alongside the zoning code, governs development in a city or county. The State requires each city and county to adopt a General Plan with seven mandatory elements: land use, open space, circulation, housing, noise, conservation, and safety, along with any number of optional elements as appropriate. The proposed EWMPs would be subject to local plans and policies of the areas in which they are located.

The numerous cities encompassed by the EWMP area all have their own respective city General Plans, which may contain policies that address land use and agriculture. As implementation of the individual structural BMP projects proceed, specific policies and objectives pertaining to land use and agriculture from applicable city General Plans will be identified and evaluated on a project-by-project basis during subsequent CEQA environmental processes.

3.9.3 Impact Assessment

3.9.3.1 Thresholds of Significance

For the purposes of this PEIR and consistency with Appendix G of the CEQA Guidelines, the program would have a significant impact on land uses if it would:

- Physically divide an established community.

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

The program would have a significant impact on agriculture land uses if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).
- Result in the loss of forest land or conversion of forest land to non-forest use.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

3.9.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to land use and agriculture resources identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-12 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-12. Summary of Land Use and Agriculture Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance						
	Division of an Established Community	Land Use Plan, Policy or Regulation Confliction	Habitat Conservation Plan Confliction	Agricultural and Forestry Resources	Existing Agricultural Zoning or Williamson Act Contract Confliction	Forest Land Confliction	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	None Required	None Required	None Required	None Required	None Required	None Required	None Required
Regional BMPs							
Regional Detention and Infiltration	No	No	No	No	No	No	No
Regional Capture, Detention, and Use	No	No	No	No	No	No	No
Centralized BMP							
Bioinfiltration	No	No	No	No	No	No	No
Constructed Wetlands	No	No	No	No	No	No	No
Treatment/Low-Flow Diversions	No	No	No	No	No	No	No
Creek, River, Estuary Restoration	No	No	No	No	No	No	No
Distributed BMPs							
Site-Scale Detention	No	No	No	No	No	No	No
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, Downspout Disconnects	No	No	No	No	No	No	No
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	No	No	No	No	No	No
Flow-through Treatment BMPs	No	No	No	No	No	No	No
Source Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	No	No	No	No	No	No
Low-Flow Diversions	No	No	No	No	No	No	No

NOTE: These conclusions are based on typical BMP size and location.

Distributed BMPs are most likely to be implemented in high-density urban, commercial, industrial, and transportation areas where they would either replace or improve upon existing stormwater infrastructure. Ground disturbance for distributed BMPs is typically less than 1 to 2 acres in extent, but may extend in some limited applications up to 5 acres where space is available, generally on municipally owned lands such as parks and schools, which would not divide a community. No project level environmental review would be required.

Some BMPs may require easements, conditional use permits, variances, or General Plan amendments. Approval by local jurisdictions of these land use conditions would ensure consistency with local plans. Implementation of BMPs to enhance water quality in the region would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. No additional project level environmental review would be needed.

There are no habitat conservation plans or natural community conservation plans in the EWMP areas. There are no Significant Ecological Areas, Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance, land with Williamson Act contracts, or land zoned as forest land or timberland, within the EWMP areas. The structural BMPs associated with the proposed program would be constructed on urbanized land primarily on streets, sidewalks, and in parks or other city-owned lands, and would therefore not conflict with existing land zoned for agricultural, forest land, timberland, or Timber Production use. Therefore, no impact would occur and no additional project level environmental analysis would be required.

ULAR EWMP Regional Projects

The Regional Projects would be placed within community parks that are designated as open space or public facilities, and are considered to be consistent with planned and existing uses. It should be noted that for the water quality improvements under SP01, part of the site located west of Arroyo Seco appears to fall within the City of Los Angeles, and another portion within the City of South Pasadena. Regardless, the improvements at SP01 are not expected to conflict with either jurisdiction's applicable land use plan.

Ballona Creek EWMP Regional Projects

The Regional Projects would be placed within community parks that are designated as open space or public facilities, and are considered to be consistent with planned and existing uses. Regarding Regional Project WH01, a master plan has been prepared for Plummer Park, and the water quality improvements do not appear to conflict with the master plan.

No mitigation measures would be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

3.10 Noise

3.10.1 Environmental Setting

As the EWMP areas are located throughout Los Angeles County, existing noise levels in the EWMP areas would consist of various noise sources typically associated with highly urbanized environments. These noise sources commonly include, but are not limited to, traffic,

construction work, commercial operations, human activities, emergency vehicles, aircraft overflights, etc. Of these sources, transportation-related noise associated with vehicular traffic is generally the constant, dominating noise source that comprises an urban environment's ambient noise levels.

Aside from periodic construction work that may occur throughout the County where the EWMP areas are located, other sources of groundborne vibration in the County include heavy-duty vehicular travel (e.g., refuse trucks, delivery trucks, and transit buses) on local roadways.

Land uses such as residences, hotels, schools, rest homes, libraries, churches, and hospitals are generally more sensitive to noise than commercial and industrial land uses. As such, these types of land uses are considered to be noise-sensitive receptors. Given that the majority of the County is highly urbanized with a variety of land use types (e.g., open space, residential, commercial, mixed-use, public and semi-public, and industrial uses), and that the proposed program would be located in various watersheds across the County that span multiple jurisdictions, existing noise-sensitive uses such as residences, schools, guest lodging, hospitals, churches, parks, etc. would be located within and in proximity to the EWMP areas.

3.10.2 Regulatory Setting

3.10.2.1 Federal

Federal Noise Standards

There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the proposed program. With regard to noise exposure and workers, the Office of Safety and Health Administration (OSHA) regulations safeguard the hearing of workers exposed to occupational noise. Federal regulations also establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 Code of Federal Regulations (CFR), Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

Federal Transit Authority Vibration Standards

The FTA has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. In addition, the FTA has also adopted standards associated with human annoyance for groundborne vibration impacts for the following three land-use categories: Vibration Category 1 – High Sensitivity, Vibration Category 2 – Residential, and Vibration Category 3 – Institutional.

3.10.2.2 State

California Department of Health Services Noise Standards

The California Department of Health Services (DHS) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. In addition, Section 65302(f) of the California Government Code requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(g) requiring a noise element to be included in the general plan. The State of California also establishes noise limits for vehicles licensed to operate on public roads.

State Vibration Standards

There are no state vibration standards applicable to the proposed program.

3.10.2.3 Local

County of Los Angeles General Plan Noise Element

The California Government Code Section 65302(g) requires that a noise element be included in the General Plan of each county and city in the state. The Noise Element of the County of Los Angeles General Plan was established as a planning tool to develop strategies and action programs that address the multitude of noise sources and issues throughout the County.

County of Los Angeles Municipal Code

Chapter 12.08, Noise Control, of the County of Los Angeles Municipal Code serves as the Noise Ordinance for the County and establishes noise standards to control unnecessary, excessive, and annoying noise and vibration in the County. The noise standards are based on the duration of the noise; i.e., the louder the noise, the shorter the time it is allowed to last.

City General Plans and Municipal Codes

The EWMP areas associated with the proposed program are located in multiple jurisdictions of Los Angeles County. Each of these cities has their own independent General Plan and municipal code that regulates noise levels from various sources within their jurisdictional boundaries.

County of Los Angeles Groundborne Vibration Regulation

With respect to vibration, the County Noise Ordinance identifies a presumed perception threshold of 0.01 inches per second over the range of 1 to 100 hertz . Section 12.08.560 of the County Noise Ordinance prohibits the operation of any device that creates vibration above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way

Upper Los Angeles River

Construction noise is typically governed by ordinance in each jurisdiction, and the following summarizes the construction noise regulations.

- **City of Los Angeles Noise Regulations.** The City of Los Angeles (municipal Code, Chapter IV, Article 1, Section 41.40) allows construction Monday through Friday between 7:00 a.m. to 9:00 p.m., Saturdays and National Holidays between 8:00 a.m. to 6:00 p.m., and prohibits construction on Sundays (except for residents). The noise regulations also prohibit night construction if related noise can disturb persons occupying sleeping quarters in any dwelling, hotel, or residence. Major public works projects conducted by the City are exempt from this weekend and holiday restriction.
- **City of Glendale Construction Noise Regulations.** The City of Glendale (Municipal Code section 8.36.080) prohibits construction for projects within 500 feet of a residential zone between the hours of 7:00 p.m. one day and 7:00 a.m. the next day; 7:00 p.m. Saturday to

7:00 a.m. Monday; and from 7:00 p.m. preceding a holiday to 7:00 a.m. following such holiday.

- City of South Pasadena Noise Regulations. The City of South Pasadena (Municipal Code 19A.13) prohibits construction within or within 500 feet of a residential before 8:00 a.m. and after 7:00 p.m. on Monday through Friday, on Saturday before 9:00 a.m. and after 7:00 p.m., and Sunday before 10 a.m. and after 6:00 p.m.
- City of San Marino Noise Regulations. The City of San Marino (Municipal Code Section 25.01.02) prohibits construction between the hours of 6:00 p.m. and 7:00 a.m. Monday through Friday, on Saturdays, before 9:00 a.m. and after 4:00 p.m., and on Sunday and National holidays. City of Alhambra. The City of Alhambra regulates noise sources in its jurisdiction (Municipal Code Chapter 18.02), but exempts construction on public property or by public entities or their authorized representatives from the noise regulations.
- City of Monterey Park. The City of Monterey Park regulate noise sources in its jurisdiction (Municipal Code 9.53.010 - 9.53.070), but exempts construction conducted between the hours of 7:00 a.m. and 7:00 p.m. on weekdays and the hours of 9:00 a.m. and 6:00 p.m. on Saturdays, Sundays and holidays.
- County of Los Angeles. The County of Los Angeles regulates noise within its jurisdiction (Code section 12.08.440) and prohibits construction activities between the hours of 7:00 p.m. and 7:00 a.m. and on Sundays and national holidays. The Code also establishes specific noise level limits at residential receptors for different categories of construction (mobile equipment operated for short durations, and stationary equipment operated for longer durations); however, the construction noise levels of the proposed project are exempt from the noise limits of the County Noise Control Ordinance as specified in the County Noise Control Ordinance Part 5 Exemptions, H: 5, which includes all transportation, flood control, and utility company maintenance and construction operations at any time on public right of way, and those situations, which may occur on private real property deemed necessary to serve the best interest of the public and to protect the public's health and well-being.

Ballona Creek.

- Beverly Hills Construction Noise Regulations. The City of Beverly Hills (Municipal Code section 5-1-205) restricts construction between the hours of 6:00 PM and 8:00 AM of any day, or at any time on a Sunday or public holiday, as well as construction within a residential zone, or within 500 feet of a residential zone, at any time on a Saturday.
- Culver City Noise Regulations. Culver City (Municipal Code 9.04.020[D][2]) prohibits construction between the hours of 7:00 PM. and 8:00 AM. Monday through Friday, between 7:00 PM. and 9:00 AM on Saturday, and between 7:00 PM. and 10:00 AM. on Sunday.
- City of Inglewood Noise Regulations. The City of Inglewood (Municipal Code Section 5-41) prohibits construction between the hours of 8:00 PM. and 7:00 AM. every day if construction occurs within a residential zone or within 500 feet of a residence.
- City of Los Angeles Noise Regulations. The City of Los Angeles (municipal Code, Chapter IV, Article 1, Section 41.40) allows construction Monday through Friday between 7:00 AM to 9:00 PM, Saturdays and National Holidays between 8:00 AM to 6:00 PM, and prohibits construction on Sundays (except for residents). The noise regulations also prohibit night

construction if related noise can disturb persons occupying sleeping quarters in any dwelling, hotel, or residence. Major public works projects conducted by the City are exempt from this weekend and holiday restriction.

- City of West Hollywood. The City of West Hollywood allows construction allowed Monday through Friday between 8:00 AM to 7:00 PM, and on Saturdays from 8:00 AM to 7:00PM (for interior work only). Work is prohibited on Sundays or City holidays.

3.10.3 Impact Assessment

3.10.3.1 Thresholds of Significance

For the purposes of this PEIR and consistency with Appendix G of the CEQA Guidelines, the proposed program would have a significant noise impact if it would:

- Result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within 2 miles of a public airport or public use airport, expose people residing or working in the area to excessive noise levels.
- For a project located in the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

3.10.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to noise resources identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-13 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-13. Summary of Noise Impacts Requiring Mitigation Measures Identified in County PEIR.

Regional BMPs	Thresholds of Significance				
	Exceed Noise Standards	Vibration	Ambient Noise	Exposure to Airport Noise	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	NOISE-1; NOISE-2	None Required	NOISE-1	None Required	NOISE-1; NOISE-2
Regional Detention and Infiltration	Yes	Yes	Yes	No	Yes
Regional Capture, Detention and Use	Yes	Yes	Yes	No	Yes
Centralized BMP					
Bioinfiltration	Yes	Yes	Yes	No	Yes
Constructed Wetlands	No	No	No	No	No
Treatment/Low Flow Diversions	No	No	No	No	No
Creek, River, Estuary Restoration	No	No	No	No	No
Distributed BMPs					
Site Scale Detention	No	No	No	No	No
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	No	No	No	No	No
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	No	No	No	No
Flow through Treatment BMPs	No	No	No	No	No
Source Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	No	No	No	No
Low Flow Diversions	No	No	No	No	No

NOTE: These conclusions are based on typical size and function of BMPs.

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

NOISE-1: The implementing agencies shall implement the following measures during construction as needed:

- Include design measures necessary to reduce the construction noise levels where feasible. These measures may include noise barriers, curtains, or shields.

- Place noise-generating construction activities (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise-sensitive land uses.
- Locate stationary construction noise sources as far from adjacent noise-sensitive receptors as possible.
- If construction is to occur near a school, the construction contractor shall coordinate the with school administration in order to limit disturbance to the campus. Efforts to limit construction activities to non-school days shall be encouraged.
- For the centralized and regional BMP projects located adjacent to noise-sensitive land uses, identify a liaison for these off-site sensitive receptors, such as residents and property owners, to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations.
- For the centralized and regional BMP projects located adjacent to noise-sensitive land uses, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least 2 weeks prior to groundbreaking.

NOISE-2: All structural BMPs that employ mechanized stationary equipment that generate noise levels shall comply with the applicable noise standards established by the implementing agency with jurisdiction over the structural BMP site. The equipment shall be designed with noise-attenuating features (e.g., enclosures) and/or located at areas (e.g., belowground) where nearby noise-sensitive land uses would not be exposed to a perceptible noise increase in their noise environment.

Structural (Regional, Centralized, and Distributed) BMPs

Construction of the various structural BMPs proposed in the EWMP is anticipated to occur intermittently over the program implementation period. Construction activities may include site preparation, grading, and excavation, which would have the potential to generate noise and low levels of groundborne vibration. The construction noise and vibration impacts associated with each individual structural BMP project would be short-term in nature and limited to the period of time when construction activity is taking place for that particular project. Construction activity noise levels at and near each structural BMP construction site would fluctuate depending on the particular type, number, and duration of usage of various pieces of construction equipment. While construction noise levels may be exempt from the noise regulations of most of the implementing agencies, there may also be instances where some of the implementing agencies have their own established numerical noise standard for construction noise levels, such as the County of Los Angeles, City of Los Angeles, and the City of El Segundo. Although it is generally anticipated that construction of the structural BMPs would comply with such construction noise standards, there may be scenarios where these local numerical noise standards could potentially be exceeded. As a result, under these conditions, construction noise impacts would be potentially significant. Project level environmental review may be required, and Mitigation Measure NOISE-1 may be necessary to reduce noise impacts, as described in the PEIR.

Because of the possibility that certain structural BMP projects may exceed noise levels established by their respective local jurisdictions, this impact would be significant and unavoidable. For the types of construction methods required to construct the various structural BMPs, vibration levels at nearby sensitive receptors would not approach the Caltrans damage thresholds. Although some vibration may be experienced locally, vibration-related impacts from implementation of structural BMPs would be less than significant.

The majority of the distributed, centralized, and regional structural BMPs would operate passively in the sense that they would not require the use of mechanized stationary equipment for their operation; however, it is anticipated that some of the centralized and regional structural BMPs would require the use of irrigation pump stations and associated components to divert the collected stormwater. As a stationary noise source, the pumping equipment used at a structural BMP site would be required to comply with the applicable exterior noise standards and/or regulations established by the implementing agency that has jurisdiction over the site. Additionally, it is anticipated that many of the irrigation pumps would be located belowground and all other noise-producing components (e.g., generators) would be enclosed. As such, the noise levels generated by on-site pumps and associated components at structural BMP sites associated with the project would not exceed or violate noise standards and regulations established by implementing agencies in the EWMP areas. Furthermore, with implementation of Mitigation Measure NOISE-1, which would require the stationary mechanized equipment employed at each structural BMP site to comply with the local noise standards established by the responsible implementing agency with jurisdiction over the site, and for the equipment to be designed and located in a manner such that neighboring sensitive land uses would not be exposed to a perceptible noise increase in their environment (Mitigation Measure NOISE-2), this impact would be less than significant. Additional project level environmental review may be required if the BMP involves above-ground pumping equipment to determine if mitigation is necessary.

While some of these structural BMPs could potentially occur at paved areas of airports and the undeveloped buffer zones around airports, no permanent residents or workers would be introduced to these areas under the proposed program. While maintenance and inspection of the structural BMPs would occur, these activities would only occur periodically and would be minimal during project operations. Therefore the proposed program would not introduce permanent future residents or workers to the structural BMP areas and as such would not expose persons to excessive airport-related noise levels. Exposure to airport noise would be a less than significant impact. No future project level environmental analysis would be required.

ULAR and Ballona Creek EWMP Regional Projects

Construction of the ULAR and Ballona Creek EWMP Regional Projects would occur within the hours allowed for in the applicable noise regulations, or would be exempt from the noise regulations. It should be noted that several schools (Martha Baldwin Elementary School and Emmaus Lutheran Preschool) are located close to Almanson Park, and a Head Start preschool is located at the central portion of Franklin D. Roosevelt Park, and some noise reducing measures may be prudent during construction despite compliance with noise regulations. Additional Project-level environmental analysis may be required.

For construction projects in the City of Los Angeles that last more than 10 days within a three-month period, the City recommends using the threshold of significance of 5 dBA or more increase in noise levels over existing ambient community noise equivalent level (CNEL), which is a type of 24-hour average noise level. Given the extent of construction, the anticipated construction durations, and the surrounding noise receptors, it is likely that construction of the EWMP Projects in the City of Los Angeles (NHP, LA05, LA12, LA20, and LA21) would result in temporary elevations of the CNEL in excess of the 5dBA threshold. In such instances, project-level environmental review may be required.

Construction at Recreation Park would comply with the construction time restrictions (no construction between the hours of 6:00 p.m. to 7:00 a.m. Monday through Friday, or at any time on Saturdays and Sundays); however construction noise at the property line of the park could exceed the 70 dBA restriction level established in this area. As such, construction of the water quality improvements at Recreation Park could conflict with the City's noise regulations. Additional project level environmental review may be required.

Operation of the water quality improvements would be automated and pump systems required to convey stormwater to the buried facilities would either be subsurface or placed in small housing units. Noise from operations is not expected to be noticeable, and would not result in elevations in ambient noise levels at the Regional Project sites or vicinities. The water quality improvements would require periodic maintenance; however, maintenance activities would not result in substantial elevation in ambient noise.

The Regional Project site that is closest to a public airport is SF01, which is located approximately 1.4 miles northwest of the Whiteman Airport runways. Although SF01 is located within 2 miles of an airport, the water quality improvements would be automated, and would not expose people to excessive noise related to proximity to an airport. None of the other Regional Project sites are located within an airport land use plan or within 2 miles of a public airport. No impact would occur.

Non-Structural (Institutional) BMPs

Non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no impacts related to groundborne vibration or noise. Additional Project Level environmental analysis would not be required.

3.11 Population and Housing and Environmental Justice

3.11.1 Environmental Setting

The proposed program is located in Los Angeles County, which has a population of approximately 10,017,068 people (U.S. Census Bureau, 2013). Like much of the Southern California region, Los Angeles County has experienced a population increase over the past decade. Between 2000 and 2012, the County experienced a growth rate of 3.8 percent, roughly two and a half times below the rest of the Southern California Association of Governments (SCAG) Region (10.4 percent) (SCAG, 2013). The County's population is estimated to grow to 11,353,000 by 2035 (SCAG, 2012).

According to the 2008–2012 ACS 5-year estimates data, the racial breakdown of Los Angeles County's population is as follows:

- 27.8 percent White
- 47.7 percent Hispanic or Latino of any race
- 13.7 percent Asian
- 8.2 percent Black/African American
- 0.2 percent American Indian and Alaska Native
- 0.2 percent Native Hawaiian and Other Pacific Islander
- 2.2 percent Other (two or more races; some other race)

The general distribution of demographics around the County based on 2010 census data shows that the Hispanic and Black/African American populations are most highly concentrated within the center of the County's coastal basin, with the Black/African American population most highly concentrated within the cities of Baldwin Hills, Inglewood, Compton, and Carson. White populations within the County are most concentrated along the coastal western County boundary from Malibu down to Palos Verdes and along the coastal southern County boundary from Long Beach to Los Alamitos. The White populations are also concentrated along the Santa Monica Mountains and northern County limits, interspersed with mainly Hispanic and Asian populations in the central San Fernando Valley. Concentrations of the Asian populations exist around South San Gabriel and North El Monte, as well as around mid-city Los Angeles, Westwood, Torrance, and Norwalk (Cable, 2013).

In the County of Los Angeles, the median household income is \$56,241 according to the 2008-2012 ACS 5-Year Estimates data. Between the years of 2000 and 2012, the median household income for the County increased by an average of \$11,691 annually. Median household income levels vary widely by census tract throughout the County, with lower-income tracts primarily located in central, east, and south Los Angeles. Santa Monica Bay Jurisdictions 2 and 3 and the Ballona Creek EWMP areas are primarily high income areas and Upper Los Angeles River, Ballona Creek, and Dominguez Channel EWMPs are primarily low income areas.

There are approximately 3,441,416 housing units in Los Angeles County, with an average household size of 3.19 for owner-occupied units and 2.84 for renter-occupied units (U.S. Census Bureau, 2008–2012). As for housing tenure, 47.3 percent of County units are owner-occupied and 52.7 percent are renter-occupied units. The County homeowner vacancy rate is 1.7 percent and the rental vacancy rate is 4.5 percent; these vacancy rates are much lower than the national rates (2.3 percent of homeowners and 7.5 percent of rentals). Vacancy rates are an indicator of housing market balance in the County, where high vacancy rates demonstrate low demand and/or high prices, and low vacancy rates demonstrates high demand and/or low prices in the housing market. The County's vacancy rates are relatively low compared to the national level, indicating a relatively high demand for housing in the region.

3.11.2 Regulatory Setting

3.11.2.1 Federal

Executive Order 12898 outlines federal actions to address environmental justice in minority populations and low-income populations. Executive Order 12898 states that agencies shall identify and address disproportionately high and adverse human health or environmental effects on minority and low-income populations. A new working group was created to develop strategies for programs and policies regarding minority and low-income populations to: promote enforcement of all health and environmental statutes, improve research and data collection in relation to health and environment, identify different patterns of consumption of natural resources, and ensure greater public participation.

3.11.2.2 Local

County of Los Angeles General Plan and Other General Plans

A General Plan is a basic planning document that, alongside the zoning code, governs development in a city or county. The Housing Element is a required section of the General Plan, and serves to address the existing and projected housing needs of a city or county, including their share of the regional housing need. The EWMP areas associated with the proposed program are located in multiple jurisdictions of Los Angeles County, which each have their own independent General Plan and municipal code that regulates housing.

3.11.3 Impact Assessment

3.11.3.1 Thresholds of Significance

For the purposes of this PEIR and consistency with Appendix G of the CEQA Guidelines, the project would have a significant impact on population and housing if it would:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Implementation of the proposed project may result in a potentially significant impact to environmental justice if the projects would:

- Affect the health or environment of minority or low-income populations disproportionately.

3.11.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to population, housing, and environmental justice identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-14 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the

complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-14. Summary of Population, Housing, and Environmental Justice Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance				
	Population Growth	Displaced Housing	Displaced Population	Disproportionate Impact on Minority Populations	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	None Required	None Required	None Required	None Required	None Required
Regional BMPs					
Regional Retention and Infiltration	No	No	No	No	No
Regional Capture, Detention and Use	No	No	No	No	No
Centralized BMP					
Biofiltration	No	No	No	No	No
Constructed Wetlands	No	No	No	No	No
Treatment/Low-Flow Diversions	No	No	No	No	No
Creek, River, Estuary Restoration	No	No	No	No	No
Distributed BMPs					
Site Scale Detention	No	No	No	No	No
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	No	No	No	No	No
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	No	No	No	No
Flow-through Treatment BMPs	No	No	No	No	No
Source Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	No	No	No	No
Low-Flow Diversions	No	No	No	No	No

NOTE: These conclusions are based on typical size and function of BMPs.

Structural (Regional, Centralized, and Distributed) BMPs

The structural BMPs are not habitable structures and would not provide new homes or businesses. In addition, the structural BMPs would generally be located within existing urbanized areas; the implementation of structural BMPs within existing stormwater infrastructure would not indirectly induce growth as the BMPs do not provide growth opportunities. Structural BMPs may be constructed on private parcels, but would not displace existing housing or necessitate replacement housing elsewhere. Although a property owner may decide to modify the structures on their property, that a structural BMP would not displace existing housing.

The construction work force anticipated to support implementation of the proposed projects would be drawn from the local Los Angeles region workforce and would not require housing. Because of the relatively short construction durations (typically less than one year) of the various types of structural BMPs and large available construction workforce in the Los Angeles Region, it is assumed that construction workers would not have to travel far or add traffic to roads outside of the vicinity of the project sites.

The amount of water potentially recharged would not be enough to indirectly support population growth. This potential additional recharge would contribute to local water supplies, but would not alter population demographics. Therefore, there would be no impact on population growth, either directly or indirectly. No future project level environmental assessment would be required.

Structural BMPs would be located throughout the County and cities based on water quality priorities and site suitability, factors of which include space, soil type, proximity/connectivity to other BMPs, etc. Structural BMPs are not expected to be concentrated in any one area or city in particular within the EWMP areas. The structural BMPs are expected to be located on public lands (e.g., schools, parks, sidewalks, and road rights-of-way) throughout the EWMP areas. The structural BMPs would treat surface water runoff in a manner that would not result in human contact with surface flows that are potentially harmful to health. Structural BMPs would not disproportionately affect the health or environment of minority or low-income populations. Impacts would be less than significant.

No mitigation measures would be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant. No additional project level review would be required.

Non-Structural (Institutional) BMPs

Non-structural BMPs consist of policies, actions, and activities aimed at preventing pollutants from entering stormwater runoff; therefore, no physical impacts would occur in the EWMP areas. Non-structural BMPs would not include any direct or indirect population growth-inducing measures and would not displace people or housing. Similar to structural BMPs, non-structural BMPs are expected to be implemented throughout the County area, with no concentration in any area in particular. Non-structural BMPs would consist of policies and measures taken to prevent surface water pollution, and by their non-structural and preventative nature are not expected to introduce a threat to the environmental or public health, much less a disproportionate threat to minority or low-income populations. Street sweeping is a non-structural BMP that requires temporary parking restrictions to allow for effective collection and removal of debris and sediment from the streets. Curb parking spaces tend to be used more in

higher-density, predominantly rental communities. Prior to implementation of increased street sweeping activities to improve effectiveness of these measures, the impact on street parking would be assessed and frequency of restriction on street parking assessed to avoid impacts to these communities that rely more heavily on street parking for residences and small businesses. Impacts would be less than significant.

3.12 Public Services and Recreation

3.12.1 Environmental Setting

The Los Angeles County Fire Department (LACFD) serves unincorporated areas as well as many of the cities within the County. In addition to fire suppression, the LACFD also provides fire prevention services, emergency medical services, hazardous materials services, and urban search and rescue services. EWMP participating Permittees also run city-owned fire departments.

The Los Angeles County Sheriff's Department (LASD) provides law enforcement services to more than one million people living within 90 unincorporated communities and to more than four million residents living within 40 contract cities. LASD comprises 11 divisions, including 3 patrol divisions and the Office of Homeland Security. In addition to proactive enforcement of criminal laws, the LASD also provides investigative, traffic enforcement, accident investigation, and community education functions. Some cities within the EWMP areas run their own city police departments.

Within the County there are more than two thousand public schools (not including colleges) that serve over 1.5 million students. The largest public school district in the County is Los Angeles Unified School District (LAUSD), which has a service area of over 720 square miles and includes the City of Los Angeles, 31 smaller municipalities, and unincorporated areas. LAUSD has more than nine hundred schools and 640,000 students. There are several other smaller school districts in the EWMP study areas.

The County of Los Angeles Department of Parks and Recreation owns, operates, and maintains nearly 174 parks and recreational facilities (LADPR, 2014). The local park system encompasses approximately 609 total acres, and includes community parks (10 to 20 acres in size), neighborhood parks (3 to 10 acres in size), pocket parks (less than 3 acres in size), and park nodes (small pieces of open space that provide breaks to the urban landscape). Local parks serve neighborhoods within a maximum of a 2-mile radius of the park. The regional park system makes up 68,986 acres and includes regional parks (greater than 100 acres), community regional parks (20 to 100 acres), and special-use facilities (single-use facilities serving greater recreational or cultural needs). The parks in the regional park system provide service for areas within a 20- to 25- mile radius. Other recreational facilities available to County residents include trails, multi-benefit parks, school sites, city parks and facilities, private recreational facilities, and greenways (LADPR, 2014).

The County goal for the provision of parkland is 4 acres of local parkland per 1,000 residents of the population in the unincorporated areas, and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County (LADPR, 2014). Section 21.24.340 of the County Code has a standard of 3 acres of local and 5 acres of regional parkland per 1,000 residents. In

Addition, many of the cities/Permittees within the EWMP areas have city-owned and -operated parks.

3.12.2 Regulatory Setting

3.12.2.1 Local

Los Angeles County General Plan

State law requires every city and county to include an Open Space Element in their General Plan. Both the existing and draft County of Los Angeles General Plan include a Parks and Recreation Element that discusses recreational facilities available within the County boundaries, and goals and policies addressing the growing and diverse recreation needs of the region. The following are the parks and recreation goals and policies.

State law also requires the inclusion of a Safety Element that addresses environmental hazards and other safety concerns and aims to reduce the potential risk of death, injury, and economic damage resulting from natural and man-made hazards.

Los Angeles County Strategic Fire Plan

LACFD provides fire, safety, and emergency medical services to the unincorporated areas, as well as to several cities in the County. Their strategic plan is updated yearly and includes department goals and policies the department implements to ensure safety of residents and to carry out the County's public safety mission.

3.12.3 Impact Assessment

3.12.3.1 Thresholds of Significance

For the purposes of this PEIR and consistency with Appendix G of the CEQA Guidelines, the project would have a significant impact on public services if the project would:

- Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
 - Fire protection
 - Police protection
 - Schools
 - Parks
 - Other public facilities

Implementation of the proposed project may result in a potentially significant impact to recreational resources if the projects would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

3.12.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to public services and recreation resources identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-15 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-15. Summary of Public Services and Recreation Impacts Requiring Mitigation Measures Identified in County PEIR.

	Thresholds of Significance					
	Adverse physical impacts due to new or altered fire protection facilities	Adverse physical impacts due to new or altered police facilities	Adverse physical impacts due to new or altered schools	Increased use of recreational facilities	Construction of recreational facilities	Cumulative Impacts
Structural BMPs						
<i>Applicable Mitigation Measures:</i>	PS-1	None Required	None Required	None Required	None Required	PS-1
Regional BMPs						
Regional Retention and Infiltration	Yes	No	No	No	No	Yes
Regional Capture, Detention and Use	Yes	No	No	No	No	Yes
Centralized BMP						
Biofiltration	Yes	No	No	No	No	Yes
Constructed Wetlands	Yes	No	No	No	No	Yes
Treatment/Low-Flow Diversions	Yes	No	No	No	No	Yes
Creek, River, Estuary Restoration	Yes	No	No	No	No	Yes
Distributed BMPs						
Site Scale Detention	Yes	No	No	No	No	Yes
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	Yes	No	No	No	No	Yes
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	Yes	No	No	No	No	Yes
Flow-through Treatment BMPs	Yes	No	No	No	No	Yes
Source Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	Yes	No	No	No	No	Yes
Low-Flow Diversions	Yes	No	No	No	No	Yes
NOTE: These conclusions are based on typical size and function of BMPs.						

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

PS-1: The Permittee implementing the EWMP project shall provide reasonable advance notification to the service providers such as fire, police, local businesses, home owners and residents of adjacent to and within areas potentially affected by the proposed EWMP project about the nature, extent and duration of construction activities. Interim updates should be provided to inform them of the status of the construction activities.

Structural (Regional, Centralized, and Distributed) BMPs

The EWMP BMPs are water quality improvement projects that would not increase housing or induce population growth that could in turn increase the need for new fire protection services. The structural BMPs are not habitable structures, would not be constructed with flammable materials, and would not require fire protection services. However, construction of new structural BMPs in streets, sidewalks, parkland, school facilities, or other facilities (these may include public service facilities such as police stations, fire stations, and municipal maintenance yards) within existing high-density urban, commercial, industrial, and transportation areas, as well as associated staging areas, could temporarily disrupt the provision of fire services, resulting in potentially significant impacts. As such, implementing the EWMP project shall provide reasonable advance notification to service providers such as fire, police, and emergency medical services as well as to local businesses, homeowners, and other residents adjacent to and within areas potentially affected by the proposed EWMP project about the nature, extent, and duration of construction activities. Project level environmental analysis may be required to determine if such notification is necessary.

Once constructed, the structural BMPs would be in-ground or compatible with open space uses. The structural BMPs would operate passively and consist of mostly unobtrusive structures such as bioinfiltration cells, bioswales, porous pavement and filter strips, low-flow diversions, detention ponds, treatment wetlands, and stream/creek restoration projects. Because the construction will be temporary, the physical deterioration of park and recreational facilities to which recreational activities were diverted would not be substantial. The structural BMPs operated as part of the proposed program would be compatible with recreational and park-set activities and would not likely affect the operation of existing school facilities because of the relatively small scale and design of these structural BMPs. Impacts would be less than significant. Project-level environmental analysis would not be required.

ULAR EWMP Regional projects

The ULAR EWMP Regional Projects would construct and operate water quality improvement facilities at specific community parks. Construction is estimated to take up to 18 months, and would result in the temporary disruption of park activities within the construction zone. The likely disruption to recreational uses at each ULAR EWMP Regional Project site are discussed below.

- SF01 – Recreation Park. The water quality improvement features at Recreation Park include buried storage basins and infiltration units within southern portion of the park. The improvements, depending on where they would be located, would require substantial excavation of the main park site, which could result in temporary closure of the softball field and other areas within the south end of the park. The closures would occur for the duration

of construction (estimated to be 12-18 months) and the amount of time it would take to restore the fields, and other affect recreational features (estimated at 1-2 months). The temporary loss of recreational areas of Recreation Park is likely to require close coordination between the City of San Fernando, local residents, and community stakeholders to develop suitable mitigation options for addressing the temporary loss of recreational uses; additional project-level CEQA review may be required.

- NHP – North Hollywood Park. The water quality improvements at North Hollywood Park would likely be subsurface infiltration and/or storage structures. Construction of these facilities would result in the temporary closure of some existing walking paths areas used for passive recreation. The temporary closure of a large portion of North Hollywood Park during construction is likely to require close coordination between the City of Los Angeles, local residents, and community stakeholders to develop suitable mitigation options for addressing impacts to passive recreational uses of the park; additional project-level CEQA review may be required.
- GL01 - Fremont Park. The water quality improvements proposed for the Fremont Park include a subsurface infiltration or storage facility within the southeastern portion of the park (beneath the active field). The improvements would require the temporary closure (up to approximately 18 months) of this portion of the park, including the active field and potentially relocation of other recreational facilities within the park. The temporary closure of a portion of Fremont Park during construction will likely to require close coordination between the City of Glendale, local residents, and community stakeholders to develop suitable mitigation options for addressing impacts to Fremont Park; additional project-level CEQA review may be required.
- SP01 – Arroyo Park. The water quality improvement facilities at Arroyo Park would include buried infiltration structures storage basins beneath the 3 baseball and softball fields in the northern part of the park, beneath the baseball field at the portion of the park west of the Arroyo Seco, and potential surface bio- retention improvements east of the Arroyo Seco to Stoney Drive. This latter area contains vegetation and does not appear to be used for active recreation. The improvements are likely to require substantial excavation within the park, which would result in temporary closure of multiple active areas (baseball and softball fields) and the periphery. Other park uses such as picnic areas and playgrounds may require relocation to elsewhere in the park. The closures would occur for the duration of construction (estimated to be up to 18 months) and the amount of time it would take to restore the fields and recreational areas. The temporary closure of the recreational uses within Arroyo Park is likely to require close coordination between the City of South Pasadena, City of Los Angeles (a small section of the park west of the Arroyo Seco is located within the City of Los Angeles), local residents, and community stakeholders to develop suitable mitigation options for addressing the temporary loss of recreational uses; additional project-level CEQA review may be required.
- SM01 – Lacy Park. The water quality improvement facilities at Lacy Park would include buried infiltration and/or storage basins in approximately the center of the park. The improvements would require substantial excavation, which could result in temporary closure of the ball field and potentially several picnic areas around the periphery of the central green space. The temporary closure would occur for the duration of construction (estimated to up

to 18 months) plus the amount of time it would take to restore the central green space area (estimated at 1-2 months). The temporary closure of the central portion of Lacy Park is likely to require close coordination between the City of San Marino, local residents, and community stakeholders to develop suitable mitigation options for addressing the temporary closure; additional project-level CEQA review may be required.

- AL01 – Almansor Park. The water quality improvement facilities proposed for Almansor Park include buried infiltration units and storage basins beneath the ball fields. The improvements would require substantial excavation, which would result in temporary closure of the ball fields for the duration of construction (estimated to be up to 18 months) plus the amount of time it would take to restore the fields, and other affect recreational features (estimated at 1-2 months). The temporary closure of the recreational uses within Almansor Park is likely to require close coordination between the City of Alhambra, local residents, and community stakeholders to develop suitable mitigation options for addressing the temporary loss of recreational uses; additional project-level CEQA review may be required.
- MP01 – Sierra Vista Park. The water quality improvement facilities proposed for Sierra Vista Park include buried infiltration units and/or storage basins at the southern end of the park, beneath the softball field. The improvements would require substantial excavation, which would result in temporary closure of the softball field and tennis courts. The closures would occur for the duration of construction (estimated to be up to 18 months) plus the amount of time it would take to restore the field, and other affect recreational features (estimated at approximately 1 month). The temporary closure of the recreational uses within Sierra Vista Park is likely to require close coordination between the City of Monterey Park, local residents, and community stakeholders to develop suitable mitigation options for addressing the temporary loss of recreational uses; additional project-level CEQA review may be required.
- LAC01 – Franklin D. Roosevelt Park. The water quality improvement facilities proposed for the Franklin D. Roosevelt Park would include buried infiltration units and/or storage basins beneath the northern, middle, and southern areas of the Park. The improvements are likely to require substantial excavation and result in temporary closure of these areas of the park, which include soccer fields, ball fields, basketball courts, and picnic areas. The closures would occur for the duration of construction (estimated to be up to 18 months) plus the amount of time it would take to restore the affected recreational areas (estimated at 1-2 months). The temporary closure of large portions of Franklin D. Roosevelt park will require close coordination between the County of Los Angeles, local residents, and community stakeholders to develop suitable mitigation options for addressing the temporary loss of recreational areas; additional project-level CEQA review may be required.

Ballona Creek EWMP Regional Projects

The Ballona Creek EWMP Regional Projects would construct and operate water quality improvement facilities at specific community parks (and a center median) in the City of Beverly Hills, Culver City, City of Inglewood, City of Los Angeles, and the City of West Hollywood. Because the community parks and center median are utilized by the Public for recreation and because the excavation would be required, some of the recreational uses at each Regional Project site would be temporarily disrupted, and are discussed below.

- BH01 - La Cienega Park. The water quality improvement features at La Cienega Park include buried storage basins and infiltration units at the main park site (east of La Cienega Boulevard), either a buried structure or surface bio-retention feature at Fenton Field (west of La Cienega Boulevard), and a buried unit at the parcel located at the northeast corner of Olympic Boulevard and La Cienega Boulevard. The improvements on the parcel would not affect any park or recreational uses, as the parcel is not a part of the La Cienega Park. The improvements, depending on where they would be located, would require substantial excavation of the main park site, which could result in temporary closure of one or more active fields, playground, and/or running path. The closures would occur for the duration of construction (estimated to be 12-18 months) and the amount of time it would take to restore the fields, and other affect recreational features (estimated at 1-2 months). If the water quality improvement at Fenton Field would be buried unit, the field would be temporary closed for up to 18 months during construction. If the improvement is a surface bio-retention feature, the use of Fenton Field would be restricted on an on-going basis during wet weather, and for additional periods to allow for the field to drain (infiltration). These temporary and seasonal loss (Fenton Field) of recreational areas of La Cienega Park are likely to require close coordination between the City of Beverly Hills and stakeholders to develop suitable mitigation options for addressing the temporary and seasonal loss of recreational uses; additional project-level CEQA review may be required.
- CC04 - Culver Boulevard Median. The water quality improvements at the Culver Boulevard median would likely be a surface bio-retention type of improvement which would require rebuilding the median. This would result in a closure of the existing walking/bike path on the median during construction and rebuilding. It is unclear at this time whether the walking/bike path would be restored on the median, or relocated. The temporary closure Culver Boulevard median recreational features during construction, and potential permanent changes to the bike and walking path along the median are likely to require close coordination between Culver City and stakeholders to develop suitable mitigation options for addressing impacts to recreational uses of the median; additional project-level CEQA review may be required.
- IG01 - Edward Vincent Junior Park. The water quality improvements proposed for the Edward Vincent Jr. Park include surface features such as bio-retention along existing drainage contours. The improvements could require the temporary closure of some passive recreational uses, closure of the active fields, and potentially their relocation within the Park. In addition, the water quality improvements could span a large portion of the Park in an east-west direction, and when water is captured and before it infiltrates, they could restrict further use of the park. The potential of water quality improvements to adversely affect park uses are likely to require close coordination between the City of Inglewood and stakeholders to develop suitable mitigation options for addressing impacts to recreational uses within Edward Vincent Jr. Park; additional project-level CEQA review may be required.
- LA05 - Lafayette Park. The water quality improvement features at Lafayette Park include buried storage basins and infiltration structures throughout the main park site. The improvements are likely to require substantial excavation of the main park site, which could result in temporary closure of one or more active areas (soccer field and basketball courts), skate park, and passive recreational areas (picnic and landscaped areas). The closures would occur for the duration of construction (estimated to be 12-18 months) and the amount

of time it would take to restore the fields, and other affect recreational features (estimated at 1-2 months). These temporary closure of the recreational uses within Lafayette Park are likely to require close coordination between the City of Los Angeles and stakeholders to develop suitable mitigation options for addressing the temporary loss of recreational uses; additional project-level CEQA review may be required.

- LA12 – Rancho Park Golf Course. The water quality improvement features at Rancho Park include buried storage basins and infiltration units at the northeast end of the park (beneath the baseball fields), and at the southwest end of the park (near the Rancho Park Golf Course). The improvements would require substantial excavation, which could result in temporary closure of the baseball fields, and potentially a small section of the southwestern end of the golf course. The closures would occur for the duration of construction (estimated to be 12-18 months) and the amount of time it would take to restore the fields, and other affect recreational features (estimated at 1-2 months). The temporary closure of the recreational uses within Rancho Park and the golf course are likely to require close coordination between the City of Los Angeles and stakeholders to develop suitable mitigation options for addressing the temporary loss of recreational uses; additional project-level CEQA review may be required.
- LA20 – Poinsettia Park. The water quality improvement features at Poinsettia Park include buried storage basins and infiltration units at the north end of the park (beneath the baseball fields). The improvements would require substantial excavation, which could result in temporary closure of the baseball fields, and potentially one or more tennis courts in order to make connections to the storm drain located in North Poinsettia Place. The closures would occur for the duration of construction (estimated to be 12-18 months) and the amount of time it would take to restore the fields, and other affect recreational features (estimated at 1-2 months). The temporary closure of the recreational uses within Poinsettia Park are likely to require close coordination between the City of Los Angeles and stakeholders to develop suitable mitigation options for addressing the temporary loss of recreational uses; additional project-level CEQA review may be required.
- LA21 - Queen Anne Recreation Center. The water quality improvement features at the Queen Anne Recreation Center include buried storage basins and/or infiltration units at the northern end of the park (beneath the baseball fields), and potentially beneath the tennis courts. The improvements would require substantial excavation, which could result in temporary closure of the baseball fields and tennis courts. The closures would occur for the duration of construction (estimated to be 12-18 months) and the amount of time it would take to restore the fields, and other affect recreational features (estimated at 1-2 months). The temporary closure of the recreational uses within Queen Anne Recreation Center are likely to require close coordination between the City of Los Angeles and stakeholders to develop suitable mitigation options for addressing the temporary loss of recreational uses; additional project-level CEQA review may be required.
- WH01 – Plummer Park. The water quality improvement features at the Plummer Park site include buried storage basins and/or infiltration unit at the northern end of the Park beneath the parking lot. The improvements are likely to require substantial excavation at the north parking area and result in temporary closure of the parking lot. The closures would occur for the duration of construction (estimated to be at least one year) and the amount of time it

would take to restore the parking lot (estimated at 1-2 months). The Helen Albert Certified Farmers' Market runs every Monday from 9:00 AM to 2:00 PM, including most holidays, at the north parking lot. In addition, a master plan has been prepared for Plummer Park, and is currently being reviewed by the City. The anticipated master plan improvements at the park would take about 22 months to construct, and it is the City's intent to keep the park open during construction and utilize the north parking lot for park visitors during master plan construction. These temporary closure of the north parking lots at Plummer Park will require close coordination between the City of West Hollywood and stakeholders to develop suitable mitigation options for addressing the temporary loss of park parking, temporary relocation of the farmers market, and to address construction issues associated with either overlapping or sequential construction of the master plan improvements and the water quality improvements; additional project-level CEQA review may be required.

Non-Structural (Institutional) BMPs

The non-structural BMPs associated with the proposed program would consist of standards and policies related to development and maintenance activities in mostly urban areas. The non-structural BMPs would not contribute to an increase in population within the project area, and would therefore not result in the need for new or physically altered fire protection facilities. They would also not result in substantial increases of criminal activity and would not result in the need for new or physically altered police protection facilities, nor would they result in the need for new or physically altered school facilities. The non-structural BMPs would also not specifically result in the construction of new or expansion of existing recreational facilities. The non-structural BMPs associated with the proposed program would include programs that would lead to the establishment of various standards and/or physical maintenance activities, such as street sweeping. These BMPs would be preventative of water quality degradation and would not directly result in population growth or displace any existing recreational resources that would thereby result in the increased use of neighborhood or regional recreational resources. Therefore, they would not result in physical deterioration of existing facilities. There would be no impact.

3.13 Transportation and Circulation

3.13.1 Environmental Setting

Regional and Local Roadways

The network of regional and local roadways in the potentially affected areas of the EWMP areas consists of interstate freeways (e.g., I-405, I-710, and I-210), state highways (e.g., State Route [SR] 1, and SR 60), and numerous local roads that are under the jurisdiction of a particular city or Los Angeles County Department of Public Works. Local roads provide access to the individual project work sites and also provide a connection between local land uses and major thoroughfares.

Public Transportation

Public transit service is provided by various agencies in the study area; for example, the Los Angeles County Metro, Torrance Transit, and the Los Angeles Department of Transportation Transit Service. Buses serve local and regional needs for public transportation with varying frequencies.

Bicycle and Pedestrian Transportation

The regional network of bicycle facilities includes a variety of Class I (bicycle paths), Class II (bicycle lanes, striped in roads), and Class III (bicycle routes without striping) bikeways within the cities and communities in the EWMP study areas. Pedestrian facilities consist of sidewalks and intersection crosswalks in built-up areas.

Truck Routes

Cities often develop a truck route plan, which designates truck routes to provide contractors with the preferred travel roadways to and from connecting local roadways. For example, the cities of Torrance and Los Angeles have such plans. Los Angeles County has a similar system of truck routes for unincorporated areas.

3.13.2 Regulatory Setting

3.13.2.1 State

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining all state highway and interstate freeway systems. As a result, any change to the state roadway system requires an Encroachment Permit from Caltrans. Caltrans' construction practices require temporary traffic control planning "during any time the normal function of a roadway is suspended" (Caltrans, 2012). In addition, Caltrans has the discretionary authority to issue special permits for the movement of vehicles/loads exceeding statutory limitations on the size, weight, and loading of vehicles contained in Division 15 of the California Vehicle Code. Requests for such special permits require the completion of an application for a Transportation Permit.

3.13.2.2 Local

County and City Land Use Regulations and Ordinances

Local regulations and ordinances vary widely in the program area. Traffic-related policies included in General Plans typically concern traffic resulting from project operation rather than project construction. However, some local jurisdictions incorporate restrictions to their General

Plans that pertain to construction activities in or through their jurisdictional areas, such as assigning truck traffic routes or requiring the development of Traffic Control Plans.

3.13.3 Impact Assessment

3.13.3.1 Thresholds of Significance

An impact related to transportation would be considered significant if it would result in any of the following, which are from Appendix G of the CEQA Guidelines:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

3.13.3.2 Summary of Impacts

The following discussion of environmental impacts is limited to those potential impacts that could result in some level of potentially significant environmental change, as defined by CEQA. The project site is located in the County of Los Angeles, which has established level-of-service standards and a congestion management program that are intended to monitor and address longterm traffic impacts resulting from future development, but do not apply to temporary impacts associated with construction projects (bullet 2 in the list of guidelines). In addition, implementation of the proposed program would not affect air traffic patterns of airports in the program area (bullet 3 above). Therefore, no impact would occur under these categories, and these categories are not discussed further within this section.

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to transportation and circulation identified in the PEIR that would require mitigation with respect to the above thresholds are summarized in Table 3-16 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-16. Summary of Transportation and Circulation Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance			
	Traffic Circulation	Traffic Safety	Emergency Access	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	TRAF-1	None Required	None Required	TRAF-1
Regional BMPs				
Regional Detention and Infiltration	Yes	No	No	Yes
Regional Capture, Detention and Use	Yes	No	No	Yes
Centralized BMPs				
Bioinfiltration	Yes	No	No	Yes
Constructed Wetlands	No	No	No	No
Treatment/Low-Flow Diversions	No	No	No	No
Creek, River, Estuary Restoration	No	No	No	No
Distributed BMPs				
Site Scale Detention	No	No	No	No
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	No	No	No	No
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	No	No	No
Flow-through Treatment BMPs	No	No	No	No
Source Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	No	No	No
Low-Flow Diversions	No	No	No	No

NOTE: These conclusions are based on typical size of BMPs and the need for hauling materials off-site during construction.

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

TRAF-1: For projects that may affect traffic, implementing agencies shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:

- Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
- Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving

conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.

- Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.

Structural (Regional, Centralized, and Distributed) BMPs

The construction activities for the proposed distributed, centralized, and regional structural BMPs would generally require similar processes such as removal of existing aboveground and/or surface materials, ground disturbance (e.g., site preparation and grading), and construction of the structural control measure. The intensity and nature of the construction activity required for the different structural BMPs would vary, and the number of vehicle trips generated by that activity would similarly vary. The added traffic would be most apparent on the local roadways serving the facility sites. Although project related traffic would be temporary, supplemental project-level analysis of potential site-specific impacts would be required to determine if addition of project-generated traffic could be considered substantial in relation to traffic flow conditions on local roadways. To reduce the potential construction traffic impacts associated with the structural BMP projects, Mitigation Measure TRAF-1 would be implemented; it would require all construction activities to be conducted in accordance with an approved construction traffic control plan. Specific requirements of the traffic control plans would be determined based on project-level analysis.

The construction activities for the proposed distributed, centralized, and regional structural BMPs would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. Construction trucks generated by the individual structural BMP projects would interact with other vehicles on project area roadways, including emergency vehicles, but would not alter the physical configuration of the existing roadway network serving the area. Lane closures would be subject to local Departments of Traffic requiring coordination with emergency providers. Implementation of the proposed program would not directly or indirectly eliminate existing or planned alternative transportation corridors or facilities (bicycle paths, lanes, bus turnouts, etc.), include changes in policies or programs that support alternative transportation, or construct facilities in locations in which future alternative transportation facilities are planned. Impacts would be less than significant. No project level environmental analysis would be required.

ULAR and Ballona Creek EWMP Regional Projects

In the case of the water quality improvements to the Culver Boulevard median (CC04), within the Ballona Creek EWMP, the median could be slightly widened to the north (along the residential side of Culver Boulevard); however, this widening would not substantively reduce the capacity of Culver Boulevard (the north side only serves the adjacent residences). The Culver Boulevard median (CC04) Regional Project, would result in the temporary closure of the bike lane and walking path in the center median, and could potentially result in the relocation of the bike path, depending on the specific details of CC04. The temporary closure Culver Boulevard median bike path and its potential relocation are likely to require close coordination between

Culver City and stakeholders to develop suitable mitigation options for addressing impacts to recreational uses of the median. Additional project-level review may be required in the future.

Non-Structural (Institutional) BMPs

As discussed in Section 2.0, Project Description, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no impacts related to transportation and traffic.

3.14 Utilities Service Systems and Energy

3.14.1 Environmental Setting

Water Agencies

Several water agencies participate in delivering water from its source to retail customers and households in Los Angeles County. Water supplies include local surface and groundwater, imported surface water, captured and recharged stormwater, and recycled water. The California Department of Water Resources operates and maintains the State Water Project that imports water from the Sacramento River Delta to Southern California. The Metropolitan Water District (Metropolitan) buys imported State Water Project water, imports water from the Colorado River through the Colorado River Aqueduct, and wholesales water to its member agencies. In addition, water wholesalers provide water to retail customers; some are agencies of cities or counties, some are private companies, and some are special districts. There are several water purveyors that supply water to the Enhanced Watershed Management Program (EWMP) areas of Los Angeles County.

According to Metropolitan, approximately 55 percent of water supplies in Southern California are imported, and 45 percent are supplied by local groundwater basins that are recharged naturally from rainfall and through constructed recharge facilities (MWD, 2010).

Table 3-17 EWMP AREA WATER PURVEYORS

EWMP	Water Agency
Ballona Creek	Beverly Hills Public Works; Central Basin Municipal Water District; West Basin Municipal Water District; Santa Monica Public Works; LADWP
Dominguez Channel	West Basin Municipal Water District; LADWP
Marina Del Rey	West Basin Municipal Water District; LADWP
Santa Monica Bay Watershed Jurisdictions 2 and 3	West Basin Municipal Water District; LADWP; Santa Monica Public Works
Upper Los Angeles River	Alhambra Public Works Department; Burbank Water and Power; Foothill Municipal Water District; Glendale Water and Power; Crescenta Valley Water District; Las Virgenes Municipal Water District; LADWP; Central Basin Municipal Water District; Upper San Gabriel Valley Municipal Water District; California-American Water Company

Wastewater

Several wastewater agencies participate in providing wastewater collection and treatment for the EWMP areas. The EWMP areas fall within the Sanitation Districts of Los Angeles County, and the City of Los Angeles Bureau of Sanitation wastewater system service areas. The Sanitation Districts are a partnership of 24 independent special districts that serve the wastewater and solid waste management needs of approximately 5.5 million people in Los Angeles County (County). The Sanitation Districts' service area covers approximately 824 square miles and encompasses 78 cities and unincorporated territory within the County. The City of Los Angeles Bureau of Sanitation provides wastewater treatment to the City of Los Angeles, as well as several unincorporated areas next to the City of Los Angeles.

Stormwater

The Los Angeles County Flood Control District (LACFCD) encompasses more than 3,000 square miles, 85 cities, and approximately 2.1 million land parcels. It includes the vast majority of drainage infrastructure within incorporated and unincorporated areas in every watershed, including 500 miles of open channel, 2,800 miles of underground storm drains, and an estimated 120,000 catch basins. In addition to the County maintaining regional storm drain structures, many of the cities within the EWMP study areas maintain storm drains within their respective city boundaries.

Solid Waste Management

The EWMP areas are served by various landfills and recycling centers operated by cities, the County, and private facility operators. Sanitation Districts of Los Angeles County (LACSD) serves the solid waste management needs of a large portion of Los Angeles County with several landfills, recycle centers, materials recovery/transfer facilities, and energy recovery facilities (LACSD, 2014).

Energy

Southern California Edison (SCE) provides electricity for the majority of the County. The Los Angeles Department of Water and Power provides over 23 million megawatt-hours (MWh) for the 1.4 million customers in the City of Los Angeles

3.14.2 Regulatory Setting

3.14.2.1 State

California Health and Safety Code

The California Health and Safety Code, Division 104, Part 12, Chapter 5, Article 2, Section 116815, requires all pipes carrying recycled water to be colored purple or wrapped in purple tape. This requirement stems from a concern in cross contamination and potential public health risks similar to those discussed for Title 17 (Public Health) of the California Code of Regulations.

Protection of Underground Infrastructure

The California Government Code Section 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations.

Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (Public Resources Code, Division 30) enacted through AB 939 emphasizes conservation of natural resources through reduction, recycling, and reuse of solid waste. AB 939 requires that all cities and counties divert 25 percent of solid waste streams from landfills by 1995 and 50 percent by 2000.

2005 California Energy Action Plan II

The California Energy Commission's California Energy Action Plan II is the state's principal energy planning and policy document. The plan identifies state-wide energy goals, describes coordinated implementation plan for state energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound.

California Urban Water Management Planning Act of 1983

The act states that every publicly and privately owned urban water service provider that serves 3,000 or more customers or that supplies over 3,000 acre-feet of water annually is required to prepare an Urban Water Management Plan (UWMP) every 5 years. The goal of an UWMP is to ensure a reliable level of water service sufficient to meet the needs of customers during normal, dry, and multiple dry years.

NPDES Construction General Permit

Construction associated with the proposed program would disturb more than one acre of land surface for centralized and regional structural Best Management Practices (BMPs) (and possibly for those distributed structural BMPs larger than one acre), affecting the quality of stormwater discharges into waters of the United States. The proposed program would therefore be subject to the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit [CGP]), as amended by Order 2010-0014-DWQ and Order 2012-0006-DWQ).

3.14.2.2 Local

Los Angeles County Municipal Separate Storm Sewer System Permit

The current Municipal Separate Storm Sewer System (MS4) Permit for Los Angeles County (Order No. R4-2012-0175) became effective December 28, 2012 and contains requirements that are necessary to improve efforts to reduce the discharge of pollutants in stormwater runoff to the maximum extent practicable and achieve water quality standards.

Enhanced Watershed Management Programs

The MS4 Permit allows Permittees the flexibility to develop EWMPs to implement the requirements of the Permit on a watershed scale through customized strategies, control measures, and BMPs.

Los Angeles County Construction and Demolition Debris Recycling and Reuse Program

On January 1, 2011, Los Angeles County adopted the Green Building Standards Code, which sets forth recycling requirements for construction and demolition projects in the unincorporated areas of Los Angeles County. These requirements apply to any project requiring a construction, demolition or grading permit.

Los Angeles County General Plan

The LA County General Plan includes a Water and Waste Management Element, and Public Services and Facilities Element.

3.14.3 Impact Assessment

3.14.3.1 Thresholds of Significance

For the purposes of this Program Environmental Impact Report (PEIR) and consistency with Appendix G of the CEQA Guidelines, applicable local plans, and agency and professional standards, the proposed program would have a significant effect on utilities and service systems if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB).
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or would require new or expanded water supply resources or entitlements.
- Result in a determination (by the wastewater treatment provider that serves or may serve the project) that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Be served by a landfill with insufficient permitted capacity to accommodate the project solid waste disposal needs.
- Not comply with federal, state, and local statutes and regulations related to solid waste.
- Cause a substantial increase in overall or per capita energy consumption or cause wasteful or unnecessary consumption of energy.
- Require construction of new sources of energy supplies or additional energy infrastructure capacity, the construction of which could cause significant environmental effects.
- Conflict with applicable energy efficiency policies or standards

3.14.3.2 Summary of Impacts

The following impact analysis tiers from the analyses provided in the County PEIR. The impacts to utility service systems and energy resources identified in the PEIR that would require

mitigation with respect to the above thresholds are summarized in Table 3-17 below. In general, impacts associated with the implementation EWMPs within the jurisdiction of the City of Los Angeles would be the same as those identified in the County PEIR (refer to PEIR for the complete impact discussion). As individual projects identified in the EWMPs are fully developed, the City of Los Angeles (i.e., the Permittee responsible for implementing the project within the jurisdiction over watershed areas within the City of Los Angeles) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA. For the regional projects proposed in the Ballona Creek EWMP and the ULAR EWMP, an *Initial Study/Environmental Constraints Evaluation* has been performed (refer to Appendix 4.C of the Ballona Creek EWMP [2015], and Appendix 4.C of the ULAR EWMP [2015]). The impacts and mitigation measures identified for those specific projects are incorporated into the impact discussions below.

Table 3-18. Summary of Utility Service Systems and Energy Impacts Requiring Mitigation Measures Identified in County PEIR.

Structural BMPs	Thresholds of Significance					
	Wastewater Facilities and Discharge Requirements	Stormwater Facilities	Water Supply	Solid Waste	Energy	Cumulative Impacts
<i>Applicable Mitigation Measures:</i>	None Required	None Required	UTIL-1	UTIL-2	None Required	UTIL-1; UTIL-2
Regional BMPs						
Regional Detention and Infiltration	No	No	Yes	Yes	No	Yes
Regional Capture, Detention and Use	No	No	Yes	Yes	No	Yes
Centralized BMP						
Bioinfiltration	No	No	Yes	Yes	No	Yes
Constructed Wetlands	No	No	Yes	No	No	Yes
Treatment/Low-Flow Diversions	No	No	Yes	No	No	Yes
Creek, River, Estuary Restoration	No	No	Yes	No	No	No
Distributed BMPs						
Site-Scale Detention	No	No	Yes	No	No	No
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	No	No	Yes	No	No	No
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green Roofs, Planter Boxes	No	No	Yes	No	No	No
Flow-through Treatment BMPs	No	No	No	No	No	No
Source Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, Gross Solids-Removal Devices)	No	No	No	Yes	No	Yes
Low flow diversions	No	No	No	Yes	No	Yes

NOTE: These conclusions are based on typical need for excavation, generation of construction debris, and trash collection

The following details the mitigation measures that will be required to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant.

Mitigation Measures:

UTIL-1: Prior to approval of BMPs, implementing agencies shall evaluate the potential for impacts to downstream beneficial uses including surface water rights. Implementing agencies shall not approve BMPs that result in preventing access to previously appropriated surface water downstream.

UTIL-2: Implementing agencies shall encourage construction contractors to recycle construction materials and divert inert solids (asphalt, brick, concrete, dirt, fines, rock, sand, soil, and stone) from disposal in a landfill where feasible. Implementing agencies shall incentivize construction contractors with waste minimization goals in bid specifications where feasible.

Structural (Regional, Centralized, and Distributed) BMPs

The implementation of the proposed program would comply with the MS4 Permit issued by the RWQCB. Existing discharge permits for individual facilities such as publically owned treatment works, or for general actions such as construction and industrial activities, would not be affected by the implementation of proposed structural BMPs. Each Permittee would be required to comply with existing discharge permit limitations, as is the case under existing conditions. Implementation of facilities meant to improve water quality and meet water quality objectives of the MS4 Permit would be consistent with RWQCB discharge requirements. The proposed program consists of improvements to existing storm drainage facilities as well as new storm drain facilities within the EWMP program areas. New facilities proposed would likely be installed within existing sidewalks, streets, parks, municipally owned lands, or drainage easements. The County PEIR contains an analysis on the potential environmental effects that might result from the installation of storm drainage facilities identified in the proposed EWMPs and has concluded that impacts would be less than significant. No additional project-level review would be required.

Implementation of the EWMPs would not increase water demands. Construction of the majority of the structural BMPs would require some minor water usage for dust control and concrete washout activities. However, the construction periods for BMPs are expected to be relatively short-term and the water demand during construction is not expected to be substantial enough to require new or expanded water supply resources. No adverse impacts related to new or expanded water supply resources or entitlements would occur. The urbanization of the County has resulted in channelization of many drainages that are owned and managed by LACFCD. Any detention of storm flows upstream would not substantially reduce storm flows downstream or significantly impede access to storm flow. Dry-weather flows in coastal streams and foothills are largely fed by groundwater seepage or wastewater discharges. These flows would not be affected by infiltration BMPs. However, implementation of Mitigation Measure UTIL-1 would ensure that downstream water rights would not be affected by upstream diversions.

Construction activities associated with the structural BMPs would include excavation and demolition of some existing infrastructure, which would produce solid waste requiring disposal in the nearest landfill. The largest potential source of solid waste during construction would be excavated soil. The exact quantity of waste materials to be disposed of in nearby landfills (which includes construction debris, demolition materials, and excavation spoils) would not be known until each project undergoes a detailed evaluation as part of separate, project-level CEQA

review. The County of Los Angeles and many participating cities have construction and demolition debris recycling and reuse programs. According to the County of Los Angeles, except under unusual circumstances, it is feasible to recycle or reuse at least 50 percent of construction and demolition debris (RWQCB, 2008). Development of a waste management or recycling plan (Mitigation Measure UTIL-2) would reduce this impact. Impacts related to insufficient permitted landfill capacity from implementation of the proposed program is anticipated be less than significant. In addition, the program would comply with all federal, state, and local statutes and regulations related to solid waste, including the Los Angeles County Construction and Demolition Debris Recycling and Reuse Program. Impacts regarding noncompliance solid waste regulations would be less than significant.

Construction of BMPs would require use of non-renewable energy in the form of gasoline and diesel to power construction equipment. However, use of this fuel for construction would not be at such a large scale that it could be seen as wasteful or as affecting local or regional energy supplies. Impacts to energy supplies for construction would be less than significant.

Some of the centralized and regional structural BMPs may require the installation of pump stations and ancillary components that would be electrically powered. Operation of the proposed pump station facilities would require new connections to the local electrical transmission system. Plans for the pump station facilities have not been finalized, and thus the energy requirements for operation of the proposed pump stations have not been determined. Operation of the pump stations may be variable in response to seasonal fluctuations. Energy for the pump stations would be provided by LADWP and SCE. The use of energy anticipated for the proposed program is minor when compared to the County-wide use of electricity. In addition, the proposed program would be supporting water conservation efforts and water quality requirements of the MS4 Permit, which would not result in wasteful consumption, affect local and regional energy supplies, or conflict with applicable energy efficiency policies or standards. Impacts to energy supplies for operation would be less than significant. Additional Project level review would not be required.

Non-Structural (Institutional) BMPs

The non-structural BMPs associated with the proposed program would include programs and policies that would entail development guidelines and activities designed to prevent surface water quality degradation. Examples include construction stormwater management programs, municipal pollutant reduction programs, IC/ID detection programs, smart growth planning and LID practices, and public education programs. These BMPs would not increase local populations and would not contribute to an increased generation of wastewater exceeding wastewater treatment requirements of the RWQCB. Consequently, the structural BMPs would not require construction or the expansion of any water or wastewater treatment facilities or construction of new stormwater drainage facilities or expansion of existing facilities. There would be no impact.

The non-structural BMPs associated with the proposed EWMPs would not involve the construction of new facilities that would generate a new solid waste disposal need. However, the non-structural BMPs would include a broad range of municipal practices such as street cleaning, landscape management, storm drain operation, and more, which produce debris and

trash for disposal. Regular street sweeping is one of the most cost-effective non-structural BMPs used to remove sediment, metals, petroleum products, trash, and vegetation that accumulate on streets. Maintaining a regular street sweeping schedule reduces the buildup of trash on streets and prevents trash from entering catch basins and the storm drain system. Street sweeping can also improve the appearance of roadways and urban areas. Based on the existing and planned trash disposal and recycling facilities available to the Los Angeles region, the additional solid waste would not exceed disposal capacity or require additional disposal facilities. As a result, impacts related to insufficient permitted landfill capacity would be less than significant.

4 Cumulative Impacts

4.1 Introduction

This chapter presents CEQA requirements for cumulative impact analysis and analyzes the potential for the proposed program to have significant cumulative effects when combined with other past, present, and reasonably foreseeable future projects in each resource area's cumulative geographic scope.

CEQA Guidelines Section 15130(a) requires that an EIR discuss the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," meaning that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. A consideration of actions included as part of a cumulative impact scenario can vary by geographic extent, time frame, and scale.

4.2 Related Projects

Geographic Scope

Cumulative impacts are assessed for related projects within a similar geographic area. This geographic area may vary, depending upon the issue area discussed and the geographic extent of the potential impact. For example the geographic area associated with construction noise impacts is limited to areas directly adjacent to construction sites, whereas the geographic area that is affected by construction-related air emissions may include the larger air basin. Construction impacts associated with increased noise, dust, erosion, and access limitations tend to be localized but could be exacerbated if other development or improvement projects are occurring within the same or adjacent locations as the proposed program.

Geographically, the proposed program is located in the Los Angeles basin. For the purposes of this analysis, the PEIR considered planned EWMP projects within the service area of LACFCD and all participating permittees, along with the adopted general plans or related planning documents for the EWMP areas, when evaluating potential cumulative impacts due to construction and operation of the proposed program.

Project Timing

In addition to the geographic scope, cumulative impacts also take into consideration the timing of related projects relative to the proposed program. The implementation schedule is particularly important for construction-related impacts; for a group of projects to generate cumulative construction impacts, they must be temporally as well as spatially proximate. The EWMP projects that will be included in the proposed EWMPs along with other reasonably foreseeable future projects in the EWMP areas may or may not occur simultaneously. However, this analysis assumes some the EWMP projects and other local projects would be implemented concurrently, between 2015 and 2035.

Type of Projects Considered

As described throughout Chapter 3 of this PEIR, the impacts associated with implementation of the proposed program include both short-term, temporary construction-related impacts and longterm impacts related to program operation.

Cumulative effects could result when considering the effects of the proposed program in combination with the effects of other construction projects in the area. For this PEIR, the analysis of cumulative construction impacts assumes that throughout the EWMP areas, planned future development projects will be on-going simultaneously with the proposed program, including other local major residential construction, small-scale construction project, and projects that have not yet been identified.

Cumulative effects could result when considering the effects of the proposed program in combination with the effects of operating other projects in the EWMP areas.

4.3 Plan Consistency

Construction of structural BMPs and adoption of non-structural BMPs would occur throughout each of the EWMP areas. Each city has adopted land use plans and zoning codes covering development within their jurisdictions. Many cities including the City of Los Angeles have adopted LID ordinances that promote new development of storm flow retention and water quality BMPs. Each implementing agency would be required to evaluate the consistency of each BMP with local zoning codes. Compliance with city codes for placement of BMPs would ensure that the cumulative impact of installing multiple BMPs throughout the County would not conflict with local plans and policies. The Los Angeles County General Plan includes land use designations covering development throughout the County. The installation of multiple BMPs throughout the County would be consistent with the County General Plan goals promoting LID infrastructure and improved storm water quality.

In addition to the municipalities and County, resource management agencies mitigate cumulative effects of development on the environment. Several regional agencies including SCAQMD, Water Replenishment District, LARWQCB, Department of Toxic Substances Control, wildlife agencies, Coastal Conservancy, Coastal Commission, National Parks, National Forest Service, Santa Monica Mountains Conservancy, and Metropolitan Water District of Southern California manage resources cumulatively impacted by regional development. Each of these resource managers prepare resource management plans to mitigate potentially significant cumulative impacts. Consistency with these management plans minimizes impacts to cumulative impacts.

4.4 Cumulative Impacts and Mitigation Measures

For some impact issue areas (i.e., air quality, traffic, and water supply), the cumulative setting is defined by specific regional boundaries (air basin, regional roadway network, etc.) or projected regional or area-wide conditions, contributing to cumulative impacts. For the remaining impact issue areas, the cumulative setting is based on development anticipated within the vicinity of the EWMP project.

Implementation of the BMPs would result in cumulative significant impacts to air quality, cultural resources, and noise.

4.4.1 Aesthetics

The introduction of structural BMPs in these areas would result in minor changes to the community character and visual appearance of the applicable EWMP areas. In addition, many of the structural BMPs are anticipated to result in more open space areas and less pavement and concrete, thereby enhancing the level of greenness in the watersheds. These BMPs contribute to the natural open space character compared to the more built environment that these BMPs are replacing. Overall, implementation of the structural BMPs is anticipated to have a positive impact on the aesthetic environment.

4.4.2 Air Quality

As the Basin is currently in nonattainment for ozone, PM10, and PM2.5, cumulative development consisting of the proposed program along with other reasonably foreseeable future projects in the Basin as a whole could violate an air quality standard or contribute to an existing or projected air quality violation. Under conditions where multiple structural BMPs would be constructed concurrently in the EWMP areas, it is anticipated that the total aggregate construction emissions generated from these multiple structural BMP projects on a daily basis would exceed the SCAQMD's significance thresholds for criteria pollutants. None the less, pollutant emissions could, in conjunction with other past, current, and probable future projects, be cumulatively considerable, and cumulative impacts would be significant and unavoidable.

With respect to operational emissions, program implementation would not result in substantial long-term regional emissions of criteria air pollutants and would not exceed the SCAQMD thresholds of significance for criteria pollutants.

4.4.3 Biological Resources

Cumulatively, implementation of BMPs would benefit the water quality of the region's aquatic and coastal habitats, as well as the plants and wildlife dependent on them. Although some drainage segments may exhibit reduced riparian habitat or wetlands over time due to the reduced dry-weather flow, the cumulative effect would be offset by increased groundwater recharge and seepage supporting expanded wetland and riparian vegetation supporting local flora and fauna populations. Therefore, the program's potential contribution to cumulative effects on biological resources is considered less than significant.

4.4.4 Cultural Resources

Regional and centralized BMPs will not be well distributed throughout the watershed because of the limited feasible and applicable sites; however, distributed BMPs, which may comprise the majority of the BMPs implemented under the EWMPs, will be better distributed. Therefore, while the distributed BMPs may have limited or no impact on cultural resources on a project-by-project basis, when taken together, they may impact cultural resources on a regional scale.

Los Angeles County contains a significant archaeological and historical record that, in many cases, has not been well documented or recorded. There is the potential for ongoing and future development projects in the vicinity to disturb landscapes that may contain known or unknown historical resources. Thus, potential construction impacts of the implementation of the proposed program, in combination with other projects in the area, could contribute to a cumulatively significant impact on historical resources. Mitigation measures proposed in the PEIR would

reduce impacts to archaeological and paleontological resources to less than significant and therefore cumulative impacts would be less than significant.

4.4.5 Geological Resources

Although the EWMP area is located within a seismically active region, with a wide range of geologic and soil conditions, these conditions can vary greatly within a short distance, making the cumulative context for potential impacts one that is typically more localized. Consequently, most projects would have minimal potential to impact or be impacted by other projects. Impacts would be largely contained within the footprint of each individual proposed project.

Many infiltration projects could be implemented within each watershed. This would result in a significant amount of water infiltrated into the subsurface, which would saturate some shallow soils below the infiltration basins and raise groundwater levels, which may increase the potential for impacts to existing infrastructure and buildings. However, each specific project would require a design-level geotechnical investigation that would provide site-specific design criteria which would reduce impacts to less than significant. In addition, the cumulative effect of multiple infiltration projects could increase the severity of the perched or migrating water, but this impact would be reduced to less than significant by avoiding areas with the potential for perched groundwater or migration.

Finally, groundwater managers in each of the watersheds currently manage pumping effectively to prevent impacts to structural foundations resulting from groundwater mounding from existing recharge efforts. Under existing conditions, in areas with chronically high groundwater levels, dewatering operations are installed, and the water is beneficially used wherever possible. To prevent cumulative impacts, Implementing Agency would notify groundwater managers of local infiltration projects to provide better coordination between stormwater retention and groundwater levels management.

In sum, overall cumulative impacts with regard to geological resources would be less than significant with mitigation.

4.4.6 Greenhouse Gases

CEQA considers a project's impacts related to GHG emissions inherently cumulative. As concluded in Section 3.6, because the GHG emissions generated by the individual structural BMP projects in the EWMP areas would not exceed SCAQMD's recommended threshold of 3,000 MT CO₂e /year for non-industrial projects, the BMPs implemented under the proposed program would not result in substantial GHG emissions into the environment. Additionally, because the proposed BMPs under the program would serve to capture, treat, and manage stormwater runoff in the EWMP areas, the program would also be consistent with the applicable actions and measures of the CARB's Scoping Plan and County's CCAP, respectively. Overall, the proposed program would result in less than significant GHG and climate change cumulative impacts.

4.4.7 Hazards and Hazardous Materials

Most of the distributed BMPs would be small in scale and would not result in cumulatively significant impacts due to increased hazards from construction or operation. However, the

combination of BMPs throughout the region would change the flow paths of stormwater and urban runoff that currently occurs in the region, resulting in the retention of pollutants generally within the soil of the BMPs that use soil for filtration and retention. Cumulatively, throughout the region, the retention and treatment of pollutants within each watershed and the reduction of pollutant loading in waterways will substantially benefit water and sediment quality. Therefore, the project's potential contribution to cumulative effects on hazards and hazardous materials is considered beneficial.

4.4.8 Hydrology and Water Quality

Implementation of the proposed structural BMPs, together with past, present, and other reasonably foreseeable future projects across the different watersheds of the region would result in improved stormwater quality and reduced non storm flows. As BMPs are incrementally installed, the Los Angeles region will experience reduced dry-weather runoff, a more natural hydrology, and improved receiving water quality. In addition, new infiltration projects will incrementally augment groundwater drinking water supplies. Implementation of the EWMPs will beneficially impact local surface water quality and groundwater supplies.

4.4.9 Land Use and Agriculture

BMP locations would be required to be consistent with local zoning and General Plan designations. Furthermore, the BMPs would be supportive of LID Ordinance goals and objectives. The incremental effect on cumulative land use and planning during construction and operation of the proposed program would be less than significant and would not contribute to cumulative impacts.

In addition, the proposed program would not impact agricultural and forest lands since structural BMPs would be implemented largely in urbanized areas and focus on improving existing facilities. Therefore, the contribution is not cumulatively considerable and would not result in a cumulative impact on agricultural resources.

4.4.10 Noise

Structural BMP projects would be generally spread over a large geographic area under City of Los Angeles Jurisdiction. These structural BMPs in combination with other current and planned projects in the County would result in an increase in construction-related noise levels, which would temporarily increase the ambient noise levels of the existing noise environment in areas where a construction project would occur. This would result in significant and unavoidable impacts for construction, but less than significant for operation.

4.4.11 Population and housing and Environmental Justice

The proposed program would not result in a direct or indirect increase in population or housing or displace existing people or housing. There would be no impacts to population and housing; therefore, there would be no cumulative impacts to population and housing.

4.4.12 Public Services and Recreation

None of the BMP facilities individually or cumulatively would increase population; require additional police, fire, or emergency services; or result in construction of new schools. The BMPs may provide multiple benefits by increasing public open space in urban areas. Therefore,

the program's potential contribution to cumulative effects on public services and recreation is considered less than significant.

4.4.13 Transportation and Circulation

Given the dispersion of individual structural BMP project construction vehicle trips over the study area, and the fact that the trips would occur over the course of each workday, the project-related traffic on any one roadway during any hour of the day would not be substantial, and the contribution to cumulative traffic conditions would be less than significant.

However, where another local project is located in proximity to a structural BMP site and is constructed concurrently with the structural BMP, the combined construction traffic levels could have a cumulative effect on nearby roadways. Thus, under circumstances where these simultaneous construction activities would occur in proximity to roads with existing congestion, the cumulative traffic impacts related to a substantial temporary or periodic increase in ambient traffic levels could be cumulatively considerable. However, implementation of circulation and detour plans, traffic control devices, and scheduling truck trips outside of peak morning and evening commute hours would reduce the project's contribution to the cumulative impacts from construction to a minor level. Once constructed, no impacts to traffic would result. Therefore, the contribution of structural BMPs to cumulative traffic conditions is less than significant.

4.4.14 Utilities, Service Systems and Transportation

Use of BMP treatment systems throughout the region would result in cumulatively improved water quality. Impacts to the existing water supplies are anticipated to be beneficial as a result of the stormwater and non-stormwater runoff infiltration and conservation BMPs implemented across the EWMP areas.

Construction and operation of the structural BMPs would generate solid waste; however, landfills serving the program area are expected to have sufficient capacity to accommodate the amount of waste generated. Disposal of the solid waste generated during construction and operation would comply with all pertinent regulations and statutes, as would all other projects implemented in the area. Therefore, cumulative impacts would be less than significant.

The use of energy anticipated for the proposed program is minor when compared to the Countywide use of electricity. The proposed program would use energy-efficient equipment and would not result in wasteful consumption. Cumulative impacts would be less than significant.

5 Alternatives Analysis

5.1 Introduction

According to CEQ Guidelines, an EIR must describe a reasonable range of alternatives to a proposed project that could feasibly attain most of the basic project objectives, and would avoid or substantially lessen any of the proposed project's significant environmental effects.

"Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

EIR must identify the environmentally superior alternative. The "no project" alternative may be environmentally superior to the proposed program based on the minimization or avoidance of physical environmental impacts. However, the "no project" alternative must also achieve the project objectives in order to be selected as the environmentally superior alternative.

5.2 Review of Proposed Program Goals and Objectives

The alternatives presented in this chapter were analyzed for their abilities to reduce significant program impacts and meet the objectives of the proposed program, which are:

- To collaborate among agencies (Permittee jurisdictions) across the watershed to promote more cost-effective and multi-beneficial water quality improvement projects to comply with the MS4 Permit.
- To develop watershed-wide EWMPs that will, once implemented, remove or reduce pollutants from dry- and wet-weather urban runoff in a cost-effective manner.
- To reduce the impact of stormwater and non-stormwater on receiving water quality.

5.3 Alternatives Analysis

In accordance with the CEQA "rule of reason," an EIR is required to consider a range of alternatives that permit a reasoned choice and that are "limited to ones that would avoid or substantially lessen any of the significant effects of the project" (CEQA Guidelines Section 15126.6(f)). The Lead Agency conducted an alternatives screening process to identify feasible alternatives to the proposed program. The screening process for identifying viable alternatives included consideration of the following criteria:

- Ability to meet the program objectives
- Ability to reduce significant environmental effects of the proposed program
- Economic and engineering feasibility

Based on these criteria, the Lead Agency has identified the following alternatives:

- No Program Alternative
- Non-Structural Best Management Practices (BMPs) Only Program Alternative

- Distributed Structural BMPs Only Program Alternative (no centralized and regional)

5.3.1 No Project Alternative

The CEQA Guidelines require an analysis of the specific alternative of “no project” (CEQA Guidelines, Section 15126.6). Specifically, the CEQA Guidelines state that “[t]he purpose of describing and analyzing a ‘no project’ alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.” The “no project” alternative is not necessarily the same as the baseline used to determine the environmental impacts of the proposed program. The analysis of the no project alternative includes the existing baseline environmental conditions as well as “what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services” (CEQA Guidelines, Section 15126.6 (e)(2)). The analysis of impacts related to the no project alternative includes projecting what would reasonably be expected to occur “in the foreseeable future if the project were not approved.”

The No Program Alternative would result in the non-implementation of the EWMP approach allowed in the MS4 Permit. Although this would not necessarily result in noncompliance with MS4 Permit since preparation of the EWMPs is an optional compliance method, each Permittee would be required to reach water quality objectives for MS4 discharges on their own, with no clear compliance strategy. The collaborative approach outlined in the MS4 Permit would not be available to each Permittee. Under the No Project Alternative, each Permittee would construct BMPs necessary to achieve compliance, some of which would be similar to the proposed alternative. This includes the construction of distributed, centralized, and regional BMPs necessary to achieve local discharge compliance.

Ability to Meet Program Objectives

The No Program Alternative would not meet the EWMP objective to collaborate among agencies across the watershed to promote more cost-effective and multi-beneficial water quality improvement projects, but it would meet the other objectives to remove or reduce pollutants from dry- and wet-weather urban runoff and reduce the impact of stormwater and non-stormwater on receiving water quality through implementation of structural and non-structural BMPs. The No Program Alternative would not necessarily avoid the potential environmental impacts that would occur as a result of implementing the EWMPs, as compliance with the MS4 Permit is still required. However, to achieve compliance with the MS4 Permit, each of the BMPs would need to be installed rapidly to avoid permit violations. There would be less coordination within each watershed, which could result in inefficient or redundant BMPs based on municipal boundaries rather than watershed boundaries.

No Program Alternative Impact Analysis

The impact analysis concludes that the No Program alternative would result in “similar impacts” as the Proposed Program for all resource areas with the exception of Air Quality and Hydrology/Water Quality. The analysis concludes the Air Quality impacts would be slightly

greater because the BMPs would need to be installed rapidly and because more BMPs would likely be required as a result of the inefficiencies of municipal boundaries, slightly more construction emissions would result. Moreover, with regard to hydrology and water quality the analysis finds that under the No Program Alternative achieving water quality objectives required in the MS4 Permit immediately would be difficult, since the permit does not allow for an installation grace period outside of the EWMP. The potential for noncompliance with the MS4 Permit under this alternative would result in a significant impact compared to that of the proposed alternative.

5.3.2 Non-Structural BMPs Only Project Alternative

The Non-Structural BMPs Only Project Alternative would involve implementation of the proposed program and its associated non-structural BMPs only. No structural BMPs would be implemented as such the significant and unavoidable impacts that are generally related to construction activities associated with the structural BMPs would be eliminated. For example, the significant and unavoidable air quality, noise, and cultural resources impacts would be avoided through implementation of nonstructural BMPs only because non-structural BMPs would not result in construction activities.

The proposed program would focus on implementation of policies, actions, and activities that are intended to prevent pollutants from entering stormwater runoff, thus eliminating the source of the pollutants.

Ability to Meet Program Objectives and Environmental Analysis

The Non-Structural BMPs Only Project Alternative would avoid the potential environmental impacts that would occur as a result of implementing the proposed program. The Non-Structural BMPs Only Project Alternative would avoid construction impacts and would therefore result in fewer impacts for a large number of resource areas, or similar impacts for those resource categories for which construction would have no impact. While these measures would help to improve water quality in the EWMP areas, sole reliance on these nonstructural BMPs may not provide the level of water quality treatment needed to meet the water quality objectives of the Regional Water Quality Control Board Basin Plan and as required by the MS4 Permit. Therefore, greater impacts would occur with water quality and hydrology. The Non-Structural BMPs Only Project Alternative may not meet the objectives of the proposed program to collaborate among agencies to promote more cost-effective and multibeneficial water quality improvement projects because Non-Structural BMPs are generally implemented individually in each jurisdiction, so collaboration efforts for cost-effective solutions diminishes with implementation of non-structural BMPs only.

5.3.3 Distributed Structural and Non-Structural BMPs Only Program Alternative (No Centralized or Regional)

The Distributed Structural BMPs Only Project Alternative would involve implementation of the proposed program and only its associated distributed structural BMPs and non-structural BMPs. Since much of the impacts of program implementation would occur during construction of the large-scale regional and centralized BMPs, this alternative would result in fewer construction impacts than the proposed project.

Ability to Meet Program Objectives

The Distributed Structural BMPs Only Program Alternative would meet the objectives of the proposed program to collaborate among agencies to promote more cost-effective and multi-beneficial water quality improvement projects. However, because distributed structural BMPs tend to be smaller in nature and typically are distributed widely throughout the watershed, more BMPs may be necessary to meet water quality objectives in the MS4 Permit. The ability to meet the water quality objectives would be less certain under this alternative.

Constructing fewer large-scale BMPs would result in fewer impacts or similar impacts for a number of resource categories for which construction impacts were unidentified in Section 3. The water quality benefit provided by the large-scale regional BMPs would be eliminated under this alternative. Achieving water quality objectives required in the MS4 Permit with a greater number of small-scale BMPs may be unlikely if larger regional BMPs are not constructed. The potential for noncompliance with the MS4 Permit under this alternative would result in a significant impact compared to that of the proposed alternative. In addition, with regard to Land use, the large-scale BMPs would be located in areas with sufficient developable space. Eliminating use of these large open-space areas would disperse land use acquisition and compatibility impacts throughout the watershed. Impacts would be greater under this alternative.

5.4 Environmentally Superior Alternative

Under the No Program alternative, the distributed Structural and Non-Structural BMPs Only Program, and the Non-structural BMP program alternative, the ability to achieve compliance with MS4 Permit water quality objectives would be reduced without the larger-scale centralized and regional BMPs, and impacts to water quality would be greater under this alternative. As a result, since the proposed alternative of approving the EWMPs for submittal to the LARWQCB would provide the best chance of achieving regional water quality objectives, it is considered the environmentally superior alternative.

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