IV. Environmental Impact Analysis
G. Hydrology and Water Quality

1. Introduction

This section analyzes the Project's potential impacts on hydrology (drainage flows), surface water quality, groundwater levels, and groundwater quality. The analysis is primarily based on the *Water Resources Technical Report* prepared by Fuscoe Engineering in March 2017 and updated July 2020. This report is included as Appendix F of this Recirculated Draft EIR.

2. Environmental Setting

a. Regulatory Framework

There are several plans, policies, and programs regarding Hydrology and Water Quality at the federal, state, regional, and local levels. Described below, these include:

- Clean Water Act;
- Federal Antidegradation Policy;
- Safe Drinking Water Act;
- National Flood Insurance Program;
- Porter-Cologne Water Quality Act (California Water Code);
- California Antidegradation Policy;
- California Toxics Rule;
- Sustainable Groundwater Management Act of 2014;
- Water Replenishment District of Southern California;
- County of Los Angeles Hydrology Manual;
- NPDES Permit Program;

- Los Angeles River Watershed Master Plan;
- Los Angeles Municipal Code Section 62.105, Construction "Class B" Permit;
- Los Angeles Municipal Code Sections 12.40 through 12.43, Landscape Ordinance;
- Los Angeles Municipal Code Section 64.70, Stormwater and Urban Runoff Pollution Control Ordinance;
- Los Angeles Municipal Code Section 64.72, Stormwater Pollution Control Measures for Development Planning and Construction Activities;
- Low Impact Development Ordinance;
- Water Quality Compliance Master Plan for Urban Runoff; and
- Stormwater Program—Los Angeles County MS4 Permit Citywide Implementation Flood Hazard Management Ordinance.

(1) Federal

(a) Clean Water Act

The Clean Water Act (CWA), formerly known as the Federal Water Pollution Control Act, was first introduced in 1948, with major amendments in the 1960s, 1970s, and 1980s.[1] The CWA authorizes federal, state, and local entities to cooperatively create comprehensive programs for eliminating or reducing the pollution of state waters and tributaries. Amendments to the CWA in 1972 established the National Pollutant Discharge Elimination System (NPDES) permit program, which prohibits discharge of pollutants into the nation's waters without procurement of a NPDES permit from the United States Environmental Protection Agency (USEPA). The purpose of the permit is to translate general requirements of the Clean Water Act into specific provisions tailored to the operations of each organization that is discharging pollutants. Although federally mandated, the NPDES permit program is generally administered at the State and regional levels.

The USEPA NPDES Program requires NPDES permits for: (1) Municipal Separate Storm Sewer Systems (MS4) generally serving, or located in, incorporated cities with 100,000 or more people (referred to as municipal permits); (2) 11 specific categories of industrial activity (including landfills); and (3) construction activity that disturbs 5 acres or more of land. As of March 2003, Phase II of the NPDES Program extended the

[1] *United States Environmental Protection Agency (USEPA), Clean Water Act, November 2002.*

requirements for NPDES permits to numerous small MS4s, construction sites of 1 to 5 acres and industrial facilities owned or operated by small municipal separate storm sewer systems, which were previously exempted from permitting.

(b) Federal Antidegradation Policy

The Federal Antidegradation Policy has been incorporated within the Clean Water Act and requires states to develop statewide antidegradation policies and identify methods for implementing them.[2] Pursuant to the Code of Federal Regulations, state antidegradation policies and implementation methods must, at a minimum, protect and maintain: (1) existing in-stream water uses; (2) existing water quality, where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

(c) Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of the Nation's drinking water.[3] The SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply and its sources, including rivers, lakes, reservoirs, springs, and groundwater wells. Under SDWA, the USEPA sets standards for drinking water quality and oversees the states, localities, and water suppliers that implement those standards. The SDWA regulates contaminants of concern in domestic water supply, including the maximum contaminant levels (MCLs), and that the USEPA has delegated the California Department of Public Health the responsible agency for administering California's drinking water program. MCLs are established under California Code of Regulations (CCR) Title 22, Div. 4, Ch. 15, Article 4 (Title 22 Standards).

(d) National Flood Insurance Program

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate the Federal Emergency Management Agency (FEMA) to evaluate flood hazards.[4] FEMA provides flood insurance rate maps (FIRMs) for local and regional planners to promote sound land use and development practices, by identifying potential

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[2] *USEPA, Water Quality Standards Handbook, 2010, Chapter 4: Antidegradation.*

[3] *United States Code, Title 42—The Public Health and Welfare, Chapter 6A Public Health and Service, Safe Drinking Water Act. 2006 Edition, Supplement 4, https://uscode.house.gov/view.xhtml?path=/prelim@title42/chapter6A/subchapter12&edition=prelim, accessed June 8, 2023.*

[4] *The National Flood Insurance Act of 1968, as amended, and The Flood Disaster Protection Act of 1973, 42 U.S.C. 4001 et. seq.*

flood areas based on the current conditions. To delineate a FIRM, FEMA conducts engineering studies referred to as flood insurance studies (FIS). Using information gathered in these studies, FEMA engineers and cartographers delineate special flood hazard areas (SFHA) on FIRMs.

The Flood Disaster Protection Act requires owners of all structures within identified SFHAs to purchase and maintain flood insurance as a condition of receiving federal or federally related financial assistance, such as mortgage loans from federally insured lending institutions. Community members within designated areas are able to participate in the National Flood Insurance Program (NFIP) afforded by FEMA.

(2) State

(a) Porter-Cologne Water Quality Control Act (California Water Code)

The Porter-Cologne Water Quality Control Act established the legal and regulatory framework for California's water quality control.[5] The California Water Code (CWC) authorizes the State Water Resources Control Board (SWRCB) to implement the provisions of the CWA, including the authority to regulate waste disposal and require cleanup of discharges of hazardous materials and other pollutants. In California, the NPDES stormwater permitting program is administered by the SWRCB.

Under the CWC, the State of California is divided into nine Regional Water Quality Control Boards (RWQCBs), which govern the implementation and enforcement of the CWC and the CWA. The Project Site is located within Region 4, also known as the Los Angeles RWQCB (LARWQCB). The RWQCBs develop and enforce water quality objectives and implement plans that will best protect California's waters, acknowledging areas of different climate, topography, geology, and hydrology. Each RWQCB is required to formulate and adopt a Water Quality Control Plan or Basin Plan for its region. The Basin Plan establishes beneficial use definitions for the various types of water bodies, and serves as the basis for establishing water quality objectives, discharge conditions and prohibitions, and must adhere to the policies set forth in the CWC and established by the SWRCB. In this regard, the LARWQCB issued the Los Angeles Basin Plan on August 29, 2014, for the Coastal Watersheds of Los Angeles and Ventura Counties, with subsequent amendments. The RWQCB is also given authority to issue waste discharge requirements, enforce actions against stormwater discharge violators, and monitor water quality.[6]

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[5] *State Water Resources Control Board, Porter-Cologne Water Quality Control Act, 2018.*

[6] *USEPA, Clean Water Act, December 2016, www.epa.gov/compliance/state-review-framework-compliance-and-enforcement-performance, accessed July 6, 2023.*

(b) California Antidegradation Policy

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High Quality Water in California, was adopted by the SWRCB in 1968.[7] Unlike the Federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the State, not just surface waters. The policy states that, whenever the existing quality of a water body is better than the quality established in individual Basin Plans, such high quality shall be maintained and discharges to that water body shall not unreasonably affect present or anticipated beneficial use of the water resource.

(c) California Toxics Rule

In 2000, the California Environmental Protection Agency (CalEPA) promulgated the California Toxics Rule, which establishes water quality criteria for certain toxic substances to be applied to waters in the State.[8] CalEPA promulgated this rule based on CalEPA's determination that the numeric criteria of specific concentrations of regulated substances are necessary for the State to protect human health and the environment. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water, such as inland surface waters and enclosed bays and estuaries, that are designated by the LARWQCB as having beneficial uses protective of aquatic life or human health.

(d) Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014 (SGMA) requires the designation of groundwater sustainability agencies (GSAs) by one or more local agencies and the adoption of groundwater sustainability plans (GSPs) for basins designated as medium- or high-priority by the California Department of Water Resources (DWR). SGMA grants new powers to GSAs, including the power to adopt rules, regulations, ordinances, and resolutions; regulate groundwater extractions; and to impose fees and assessments. SGMA also allows the State Water Resources Control Board (SWRCB) to intervene if local agencies will not or do not meet the SGMA requirements, in addition to mandating that critically overdrafted basins be sustainable by 2040, and medium- or high-priority by 2042.

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[7] *California State Water Resources Control Board, State Board Resolution No. 68-16, October 1968.*

[8] *USEPA, Water Quality Standards, Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, February 2001, www.epa.gov/wqs-tech/water-quality-standards-establishment-numeric-criteria-priority-toxic-pollutants-state, accessed June 8, 2023.*

(3) Regional

(a) Water Replenishment District of Southern California

The City of Los Angeles is included within the Water Replenishment District of Southern California (WRD). The WRD service area is categorized as a High Priority basin and pursuant to the SGMA must either: (a) form a GSA to prepare and submit a groundwater sustainability plan; or (b) directly submit an Alternative Analysis in lieu of forming a GSA. The WRD, in conjunction with key stakeholders including the Los Angeles Department of Water and Power (LADWP), has prepared and submitted an Alternative Analysis that satisfies the requirements of the SGMA.[9] The Alternative Analysis demonstrates compliance with applicable portions of the CWC and provides adequate information to show that the applicable, underlying Central Subbasin has operated within its sustainable yield over a period of at least 10 years; and that the Alternative Analysis satisfies SGMA's objectives by promoting sustainable management of the groundwater in the Central Subbasin.

(b) County of Los Angeles Hydrology Manual

Drainage and flood control in the City of Los Angeles (City) are subject to review and approval by the Department of Public Works, Bureau of Engineering (Bureau of Engineering). Storm drains within the City are constructed by both the City and the Los Angeles County Flood Control District (County Flood Control). The County Flood Control constructs and has jurisdiction over regional facilities, such as major storm drains and open flood control channels, while the City constructs and is responsible for local interconnecting tributary drains.

Per the City's Special Order No. 007-1299, December 3, 1999, the City has adopted the Los Angeles County Department of Public Works' Hydrology Manual as its basis of design for storm drainage facilities.[10] The Department of Public Works' Hydrology Manual requires that a storm drain conveyance system be designed for a 25-year storm event and that the combined capacity of a storm drain and street flow system accommodate flow from a 50-year storm event. Areas with sump conditions are required to have a storm drain conveyance system capable of conveying flow from a 50-year storm event. The County also limits the allowable discharge into existing storm drain (MS4) facilities based on the County's MS4 Permit, which is enforced on all new developments that discharge directly into the County's MS4 system.

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[9] *Board of Directors of the Water Replenishment District of Southern California, Resolution No. 16-1048, December 8, 2016.*

[10] *Los Angeles County Department of Public Works, Hydrology Manual, January 2006.*

Drainage and flood control structures and improvements within the City are subject to review and approval by the City's Department of Public Works and Department of Building and Safety. As required by the Department of Public Works, all public storm facilities must be designed in conformity with the standards set forth by Los Angeles County. The Department of Public Works reviews and approves MS4 plans prior to construction. Any proposed increases in discharge directly into County facilities, or proposed improvements of County-owned MS4 facilities, such as catch basins and drainage lines, require approval from County Flood Control to ensure compliance with the County's Municipal NPDES Permit requirements.

(c) NPDES Permit Program

As indicated above, in California, the NPDES stormwater permitting program is administered by the SWRCB through its nine RWQCBs. This NPDES permit, General Permit for Stormwater Discharges from Construction Activities by the SWRCB (Construction General Permit), establishes a risk-based approach to stormwater control requirements for construction projects.

(i) Construction: Stormwater Pollution Prevention Plan

For all construction activities disturbing 1 acre of land or more, California mandates the development and implementation of Stormwater Pollution Prevention Plans (SWPPP). The SWPPP documents the selection and implementation of best management practices (BMPs) to prevent discharges of water pollutants to surface or groundwater. The SWPPP also charges owners with stormwater quality management responsibilities. The developer or contractor for a construction site subject to the Construction General Permit must prepare and implement a SWPPP that meets the requirements of the Construction General Permit.[11] The purpose of an SWPPP is to identify potential sources and types of pollutants associated with construction activity and list BMPs that would prohibit pollutants from being discharged from the construction site into the public stormwater system. BMPs typically address stabilization of construction areas, minimization of erosion during construction, sediment control, control of pollutants from construction materials, and post-construction stormwater management (e.g., the minimization of impervious surfaces or treatment of stormwater runoff). The SWPPP is also required to include a discussion of the proposed program to inspect and maintain all BMPs.

A site-specific SWPPP could include, but not be limited to the, following BMPs:

[11] *Construction Stormwater Program, State Water Resources Control Board, October 30, 2019, www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html, accessed July 6, 2023.*

- Erosion Control BMPs—to protect the soil surface and prevent soil particles from detaching. Selection of the appropriate erosion control BMPs would be based on minimizing areas of disturbance, stabilizing disturbed areas, and protecting slopes/channels. Such BMPs may include, but would not be limited to, use of geotextiles and mats, earth dikes, drainage swales, and slope drains.

- Sediment Control BMPs—are treatment controls that trap soil particles that have been detached by water or wind. Selection of the appropriate sediment control BMPs would be based on keeping sediments on-site and controlling the site boundaries. Such BMPs may include, but would not be limited, to use of silt fences, sediment traps, and sandbag barriers, street sweeping and vacuuming, and storm drain inlet protection.

- Wind Erosion Control BMPs—consist of applying water to prevent or minimize dust nuisance.

- Tracking Control BMPs—consist of preventing or reducing the tracking of sediment off-site by vehicles leaving the construction area. These BMPs include street sweeping and vacuuming. Project sites are required to maintain a stabilized construction entrance to prevent off-site tracking of sediment and debris.

- Non-Stormwater Management BMPs—also referred to as "good housekeeping practices," involve keeping a clean, orderly construction site.

- Waste Management and Materials Pollution Control BMPs—consist of implementing procedural and structural BMPs for handling, storing, and disposing of wastes generated by a construction project to prevent the release of waste materials into stormwater runoff or discharges through the proper management of construction waste.

The SWRCB adopted a General Permit for Stormwater Discharges from Construction Activities on September 2, 2009, and amended the permit on July 17, 2012, (Order No. 2012-0006-DWQ, General NPDES Permit No. CAS000002). The Construction General Permit regulates construction activity, including clearing, grading, and excavation of areas 1 acre or more in size, and prohibits the discharge of materials other than stormwater, authorized non-stormwater discharges, and all discharges that contain a hazardous substance, unless a separate NPDES permit has been issued for those discharges.

To obtain coverage under the Construction General Permit, a developer is required to file a Notice of Intent (NOI) with the appropriate RWQCB and provide proof of the NOI prior to applying for a grading or building permit from the local jurisdiction, and must prepare a State SWPPP that incorporates the minimum BMPs required under the permit as well as appropriate project-specific BMPs. The SWPPP must be completed and certified

by the developer and BMPs must be implemented prior to the commencement of construction, and may require modification during the course of construction as conditions warrant. When project construction is complete, the developer is required to file a Notice of Termination with the RWQCB certifying that all the conditions of the Construction General permit, including conditions necessary for termination, have been met.

(ii) NPDES Permit for Discharges of Groundwater from Construction and Project Dewatering

Dewatering operations are practices that discharge non-stormwater, such as groundwater, that must be removed from a work location to proceed with construction into the drainage system. Discharges from dewatering operations can contain high levels of fine sediments, which if not properly treated, could lead to exceedance of the NPDES requirements. An NPDES Permit for dewatering discharges was adopted by the LARWQCB on September 13, 2018 (Order No. R4-2018-0125, General NPDES Permit No. CAG994004. Similar to the Construction General Permit, to be authorized to discharge under this permit, the developer must submit a NOI to discharge groundwater generated from dewatering operations during construction in accordance with the requirements of this Permit and shall continue in full force until it expires November 13, 2023.[12] In accordance with the NOI, among other requirements and actions, the discharger must demonstrate that the discharges shall not cause or contribute to a violation of any applicable water quality objective/criteria for the receiving waters, perform reasonable potential analysis using a representative sample of groundwater or wastewater to be discharged. The discharger must obtain and analyze (using appropriate methods) a representative sample of the groundwater to be treated and discharged under the Order. The analytical method used shall be capable of achieving a detection limit at or below the minimum level. The discharger must also provide a feasibility study on conservation, reuse, and/or alternative disposal methods of the wastewater and provide a flow diagram of the influent to the discharge point.[13]

(iii) Operation: Los Angeles County Municipal Stormwater NPDES Program

The County of Los Angeles and the City are two of the Co-Permittees under the Los Angeles County MS4 Permit (Order No. R4-2012-0175, NPDES Permit No. CAS004001).

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[12] *Los Angeles Regional Water Quality Control Board, Order No. R4-2018-0125, General NPDES Permit No. CAG994004, Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties, September 13, 2018.*

[13] *Los Angeles Regional Water Quality Control Board, Order No. R4-2013-0095, General NPDES Permit No. CAG994004, Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties, June 6, 2013.*

The Los Angeles County MS4 Permit has been determined by the SWRCB to be consistent with the requirements of the Clean Water Act and the Porter-Cologne Act for discharges through the public storm drains in Los Angeles County to statutorily-defined waters of the U.S. (33 United States Code [USC] §1342(p); 33 CFR Part 328.11). On September 8, 2016, the LARWQCB amended the Los Angeles County MS4 Permit to incorporate modifications consistent with the revised Ballona Creek Watershed Trash Total Maximum Daily Load (TMDL) and the revised Los Angeles River Watershed Trash TMDL, among other TMDLs incorporated into the Los Angeles County MS4 Permit and the Basin Plan for the Coastal Waters of Los Angeles and Ventura Counties.

Under the amended Los Angeles County MS4 Permit, permittees are required to implement a development planning program to address stormwater pollution. This program requires project applicants for certain types of projects to implement a Low Impact Development (LID) Plan. The purpose of the LID Plan is to reduce the discharge of pollutants in stormwater by outlining BMPs, which must be incorporated into the design of new development and redevelopment. These treatment control BMPs must be sufficiently designed and constructed to treat or retain the greater of an 85th percentile rain event or first 0.75 inch of stormwater runoff from a storm event.

Under the Los Angeles County MS4 Permit, permittees are required to implement a development planning program to address stormwater pollution. This program requires project applicants for certain types of projects to implement a Low Impact Development (LID) Plan, except where the Standard Urban Stormwater Mitigation Plan (SUSMP) is proven applicable. The purpose of the LID Plan is to reduce the discharge of pollutants in stormwater by outlining BMPs, which must be incorporated into the design of new development and redevelopment. These treatment control BMPs must be sufficiently designed and constructed to treat or retain the greater of an 85th percentile rain event or first 0.75 inch of stormwater runoff from a storm event.

The Los Angeles County MS4 Permit (Part VI.D.7.c, New Development/ Redevelopment Project Performance Criteria) includes design requirements for new development and substantial redevelopment. These requirements apply to all projects that create or replace more than 5,000 square feet of impervious cover. Where redevelopment results in an alteration to more than 50 percent of impervious surfaces of a previously existing development and the existing development was not subject to post-construction stormwater quality control requirements, the entire project would be subject to post-construction stormwater quality control measures.

This Enhanced Watershed Management Program for the Upper Los Angeles River (ULAR EWMP) describes a customized compliance pathway that participating agencies will

follow to address the pollutant reduction requirements of the Los Angeles County MS4 Permit.[14] By electing the optional compliance pathway in the MS4 Permit, the Upper Los Angeles River Watershed Management Group (EWMP Group) has leveraged this EWMP to facilitate a robust, comprehensive approach to stormwater planning for the Upper Los Angeles River watershed. The objective of the EWMP Plan is to determine the network of control measures (BMPs) that will achieve required pollutant reductions while also providing multiple benefits to the community and leveraging sustainable green infrastructure practices. The Permit requires the identification of Watershed Control Measures, which are strategies and BMPs that will be implemented through the EWMP, individually or collectively, at watershed-scale to address the Water Quality Priorities. The EWMP Implementation Strategy is used as a recipe for compliance for each jurisdiction to address Water Quality Priorities and comply with the provisions of the MS4 Permit. The EWMP Implementation Strategy includes individual recipes for each of the 18 jurisdictions and each watershed/assessment area—Los Angeles River above Sepulveda Basin, Los Angeles River below Sepulveda Basin, Compton Creek, Rio Hondo, Verdugo Wash, Arroyo Seco, Burbank Western Channel, Tujunga Wash, Bull Creek, Aliso Wash, Bell Creek, McCoy-Dry Canyon, and Browns Canyon Wash. Implementation of the EWMP Implementation Strategy will provide a BMP-based compliance pathway for each jurisdiction under the MS4 Permit. The permit specifies that an adaptive management process will be revisited every two years to evaluate the EWMP and update the program. The EWMP strategy will evolve based on monitoring results by identifying updates to the EWMP Implementation Plan to increase its effectiveness.

The Los Angeles County MS4 Permit contains provisions for implementation and enforcement of the Stormwater Quality Management Program. The objective of the Stormwater Quality Management Program is to reduce pollutants in urban stormwater discharges to the "maximum extent practicable," to attain water quality objectives and protect the beneficial uses of receiving waters in Los Angeles County. Special provisions are provided in the Los Angeles County MS4 Permit to facilitate implementation of the Stormwater Quality Management Program. In addition, the Los Angeles County MS4 Permit requires that permittees implement a LID Plan, as discussed above, that designates BMPs that must be used in specified categories of development projects to infiltrate water, filter, or treat stormwater runoff; control peak flow discharge; and reduce the post-project discharge of pollutants into stormwater conveyance systems. In response to the Los Angeles County MS4 Permit requirements, the City adopted Ordinance No. 173,494 (Stormwater Ordinance), as authorized by LAMC Section 64.72.

[14] *Upper Los Angeles River Watershed Management Group, Enhanced Watershed Management Program, January 2016.*

The City supports the requirements of the Los Angeles County MS4 Permit through the City of Los Angeles' *Development Best Management Practices Handbook, Low Impact Development Manual, Part B: Planning Activities* (5th edition, May 2016) (LID Handbook), [15] which provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities comply with the Developing Planning Program regulations of the City's Stormwater Program. The LID Handbook assists developers with the selection, design, and incorporation of stormwater source control and treatment control BMPs into project design plans, and provides an overview of the City's plan review and permitting process.

The City implements the requirement to incorporate stormwater BMPs, including LID BMPs, through the City's plan review and approval process. During the review process, project plans are reviewed for compliance with the City's General Plan, zoning ordinances, and other applicable local ordinances and codes, including stormwater requirements. Plans and specifications are reviewed to ensure that the appropriate BMPs are incorporated to address stormwater pollution prevention goals.

(d) Los Angeles River Watershed Master Program

The Los Angeles River Master Plan recognizes the river as a resource of regional importance and that those resources must be protected and enhanced. The Los Angeles River Master Plan was adopted in 1996, and is intended to maintain the river as a resource that provides flood protection and opportunities for recreational and environmental enhancement, improves the aesthetics of the region, enriches the quality of life for residents, and helps sustain the economy of the region.[16] Environmental goals of the Watershed Master Plan are to preserve, enhance, and restore environmental resources in and along the river, including improving water quality and cleanliness of the river. Soil contamination on riverfront lands that have supported railroads and other industries is cited as an issue of concern.

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[15] *City of Los Angeles Department of Public Works, Bureau of Sanitation, Watershed Protection Division, Planning and Land Development for Low Impact Development (LID), Part B: Planning Activities, 5th Edition, May 2016.*

[16] *City of Los Angeles, The Los Angeles River Revitalization Master Plan, April 2007, https://boe.lacity.org/lariverrmp/CommunityOutreach/masterplan_download.htm, accessed June 8, 2023.*

(4) Local

(a) Los Angeles Municipal Code Section 62.105, Construction "Class B" Permit

Proposed drainage improvements within the street rights-of-way or any other property owned by, to be owned by, or under the control of the City, require the approval of a B-permit (LAMC Section 62.105). Under the B-permit process, storm drain installation plans are subject to review and approval by the Bureau of Engineering. Additionally, connections to the MS4 system from a property line to a catch basin or a storm drain pipe require a storm drain permit from the Bureau of Engineering.

(b) Los Angeles Municipal Code Sections 12.40 through 12.43, Landscape Ordinance

In 1996, Ordinance No. 170,978 amended LAMC Sections 12.40 through 12.43 to establish consistent landscape requirements for new projects within the City. LAMC Section 12.40 contains general requirements, including a point system for specific project features and techniques in order to determine compliance with the ordinance, and defines exemptions from the ordinance. LAMC Section 12.41 sets minimum standards for water delivery systems (irrigation) to landscapes. LAMC Section 12.43 defines the practices addressed by the ordinance, of which two are applicable to stormwater management. The Heat and Glare Reduction practice states among its purposes the design of vehicular use areas that reduce stormwater runoff and increase groundwater recharge. The Soil and Watershed Conservation practice is intended to encourage the restoration of native areas that are unavoidably disturbed by development; to conserve soil and accumulated organic litter and reduce erosion by utilization of a variety of methods; and to increase the "residence time of precipitation" (i.e., the time between the original evaporation and the returning of water masses to the land surface as precipitation) within a given watershed. Implementation guidelines developed for the ordinance provide specific features and techniques for incorporation into projects, and include water management guidelines addressing runoff, infiltration, and groundwater recharge. This ordinance is incorporated into the LID Ordinance discussed below.

(c) Los Angeles Municipal Code Section 64.70, Stormwater and Urban Runoff Pollution Control Ordinance

LAMC Section 64.70, the Stormwater and Urban Runoff Pollution Control Ordinance, was added by Ordinance No. 172,176 in 1998 and prohibits the discharge of unauthorized pollutants in the City. The Watershed Protection Program (Stormwater Program) for the City is managed by the Bureau of Sanitation along with all City Flood Protection and Pollution Abatement (Water Quality) Programs, including but not limited to, regulatory compliance, implementation, operations, reporting and funding. Section 64.70 sets forth uniform requirements and prohibitions for discharges and places of discharge into the

storm drain system and receiving waters necessary to adequately enforce and administer all federal and state laws, legal standards, orders and/or special orders that provide for the protection, enhancement and restoration of water quality. Through a program employing watershed-based approaches, the regulation implements the following objectives:

1. To comply with all Federal and State laws, lawful standards and orders applicable to stormwater and urban runoff pollution control;
2. To prohibit any discharge which may interfere with the operation of, or cause any damage to the storm drain system, or impair the beneficial use of the receiving waters;
3. To prohibit illicit discharges to the storm drain system;
4. To reduce stormwater runoff pollution;
5. To reduce non-stormwater discharge to the storm drain system to the maximum extent practicable; and
6. To develop and implement effective educational outreach programs designed to educate the public on issues of stormwater and urban runoff pollution.

The ordinance applies to all dischargers and places of discharge that discharge stormwater or non-stormwater into any storm drain system or receiving waters. While this practice is prohibited under the County's Municipal NPDES Permit, adoption of the ordinance allows enforcement by the Department of Public Works, as well as the levy of fines for violations. General Discharge Prohibitions require that no person shall discharge, cause, permit, or contribute to the discharge any hazardous materials and substances (liquids, solids, or gases) into to the storm drain system or receiving waters that constitute a threat and/or impediment to life and the storm drain system, singly or by interaction with other materials. A specific list of prohibited substances can be found under LAMC Section 64.70.

Under LAMC Section 64.70.02 D, Requirement to Prevent, Control, and Reduce Stormwater Pollutants, any owner of a facility engaged in activities or operations as listed in the Critical Sources Categories, Section III of the Board's Rules and Regulations shall be required to implement BMPs as promulgated in the Rules and Regulations. The owner/ developer of a property under construction shall be required to implement the stormwater pollution control requirements for construction activities as depicted in the project plans approved by the Department of Building and Safety. In the event a specified BMP proves to be ineffective or infeasible, the additional and/or alternative, site-specific BMPs or conditions deemed appropriate to achieve the objectives of this ordinance as defined in LAMC Section 64.70 B.

(d) Los Angeles Municipal Code Section 64.72, Stormwater Pollution Control Measures for Development Planning and Construction Activities

LAMC Section 64.72, Stormwater Pollution Control Measures for Development Planning and Construction Activities, was added by Ordinance 173,494 (LID Ordinance) in 2000 and sets forth requirements for construction activities and facility operations of development and redevelopment projects to comply with the requirements of the NPDES permit requirements. The provisions of this section contain requirements for construction activities and facility operations of development and redevelopment projects to comply with the Land Development requirements of the Los Angeles County MS4 permit through integrating LID practices and standards for stormwater pollution mitigation, and maximize open, green and pervious space on all developments and redevelopments consistent with the City's Landscape Ordinance and other related requirements in the Development Best Management Practices Handbook.

(e) Low Impact Development Ordinance (No. 181,899)

In 2011, the City adopted a Citywide Low Impact Development Ordinance (LID Ordinance) that amended the City's existing Stormwater Ordinance (LAMC Section Nos. 64.70 and 64.72, discussed above). The LID Ordinance, effective May 12, 2012, and updated in September 2015 (Ordinance No. 183,833), enforces the requirements of the Los Angeles County MS4 Permit. LID is a stormwater management strategy with goals to mitigate the impacts of increased runoff and stormwater pollution as close to their source as possible; and that promotes the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater.

The goal of LID practices is to remove nutrients, bacteria, and metals from stormwater while also reducing the quantity and intensity of stormwater flows. Through the use of various infiltration strategies, LID is aimed at minimizing impervious surface area. Where infiltration is not feasible, the use of bioretention, rain gardens, green roofs, and rain barrels that will store, evaporate, detain, and/or treat runoff can be used.[17]

The intent of LID standards is to:

- Require the use of LID practices in future developments and redevelopments to encourage the beneficial use of rainwater and urban runoff;
- Reduce stormwater/urban runoff while improving water quality;

[17] *City of Los Angeles Department of Public Works, Bureau of Sanitation, Watershed Protection Division, Planning and Land Development for Low Impact Development (LID), Part B: Planning Activities, 5th Edition, May 2016.*

- Promote rainwater harvesting;
- Reduce off-site runoff and provide increased groundwater recharge;
- Reduce erosion and hydrologic impacts downstream; and
- Enhance the recreational and aesthetic values in our communities.

The Citywide LID strategy addresses land development planning, as well as storm drain infrastructure. Toward this end, LID is implemented through BMPs that fall into four categories: site planning BMPs, landscape BMPs, building BMPs, and street and alley BMPs. While the LID Ordinance and the BMPs contained therein comply with Los Angeles County MS4 Permit requirements for stormwater management, the MS4 requirements apply only to proposed new development and redevelopment of a certain size, primarily address stormwater pollution prevention as opposed to groundwater recharge, and vary over time as the permit is reissued every five years. The LID Ordinance provides a consistent set of BMPs that apply to existing, as well as new, development and emphasize natural drainage features and groundwater recharge in addition to pollution prevention in receiving waters. The LID Ordinance requires the capture and management of the greater of an 85th percentile rain event or the first 0.75 inch of runoff flow during storm events defined in the City's LID BMPs, through one or more of the City's preferred LID improvements in priority order: on-site infiltration, capture and reuse, or biofiltration/ biotreatment BMPs, to the maximum extent feasible.

Per the City's 2016 LID Manual's Figure 3.3 and Section 4.1, the City's preferred LID improvement is on-site infiltration of stormwater, site since it allows for groundwater recharge and reduces the volume of stormwater entering municipal drains.[18] If Project Site conditions are not suitable for infiltration, the City requires on-site retention via stormwater capture and reuse. Should capture and reuse be deemed technically infeasible, high efficiency bio-filtration/bioretention systems should be utilized. Lastly, under the LID Ordinance (LAMC Section 64.72 C.6), as interpreted in the LID Manual, if no single approach listed in the LID Manual is feasible, then a combination of approaches may be used.[19]

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[18] *City of Los Angeles Department of Public Works, Bureau of Sanitation, Watershed Protection Division, Planning and Land Development for Low Impact Development (LID), Part B: Planning Activities, 5th Edition, May 2016.*

[19] *City of Los Angeles Department of Public Works, Bureau of Sanitation, Watershed Protection Division, Planning and Land Development for Low Impact Development (LID), Part B: Planning Activities, 5th Edition, May 2016.*

The LID Ordinance applies first to a project in lieu of SUSMP. If a large project cannot meet the requirements of the LID Ordinance, then SUSMP applies instead.

(f) Water Quality Compliance Master Plan for Urban Runoff

The Water Quality Compliance Master Plan for Urban Runoff (Water Quality Compliance Master Plan)[20] was developed by the Department of Public Works, Bureau of Sanitation, Watershed Protection Division, and was adopted in April 2009.

The Water Quality Compliance Master Plan addresses planning, budgeting, and funding for achieving clean stormwater and urban runoff for the next 20 years and presents an overview of the status of urban runoff management within the City. The Water Quality Compliance Master Plan identifies the City's four watersheds; summarizes water quality conditions in the City's receiving waters as well as known sources of pollutants; summarizes regulatory requirements for water quality; describes BMPs required by the City for stormwater quality management; and discusses related plans for water quality that are implemented within the Los Angeles region, particularly TMDL Implementation Plans and Watershed Management Plans in Los Angeles.

(g) Stormwater Program—Los Angeles County MS4 Permit Citywide Implementation

The Watershed Protection Division of the Department of Public Works, Bureau of Sanitation is responsible for stormwater pollution control throughout the City in compliance with the Los Angeles County MS4 Permit. The Watershed Protection Division administers the City's Stormwater Program, which has two major components: Pollution Abatement and Flood Control. The Watershed Protection Division publishes the two-part Development Best Management Practices Handbook that provides guidance to developers for compliance with the Los Angeles County MS4 permit through the incorporation of water quality management into development planning.[21] The Development Best Management Practices Handbook, Part A: Construction Activities, provides specific minimum BMPs for all construction activities. The Development Best Management Practices Handbook, Low Impact Development Manual, Part B: Planning Activities (5th edition, May 2016) (LID Handbook) provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities comply with the Developing Planning Program

[20] *City of Los Angeles Department of Public Works, Bureau of Sanitation, Watershed Protection Division, Planning and Land Development for Low Impact Development (LID), Part B: Planning Activities, 5th Edition, May 2016.*

[21] *City of Los Angeles Department of Public Works, Bureau of Sanitation, Watershed Protection Division, Planning and Land Development for Low Impact Development (LID), Part B: Planning Activities, 5th Edition, May 2016.*

regulations of the City's Stormwater Program.[22] The LID Handbook assists developers with the selection, design, and incorporation of stormwater source control and treatment control BMPs into project design plans, and provides an overview of the City's plan review and permitting process. The LID Handbook addresses the need for frequent and/or regular inspections of infiltration facilities in order to ensure on-site compliance of BMP standards, soil quality, site vegetations, and permeable surfaces. These inspections are required to guarantee that facilities follow all proprietary operation and maintenance requirements.

During the development review process, project plans are reviewed for compliance with the City's General Plan, zoning ordinances, and other applicable local ordinances and codes, including stormwater requirements. Plans and specifications are reviewed to ensure that the appropriate BMPs are incorporated to address stormwater pollution prevention goals.

(h) Flood Hazard Management Ordinance

Effective April 19, 2021, Ordinance 186,952 amends the Specific Plan for the Management of Flood Hazards, established by Ordinance No. 154,405 and amended by Ordinance Nos. 163,913 and 172,081, to update it to meet current federal standards and to rename it the Flood Hazard Management Ordinance (Ordinance). The Ordinance applies to all public and private development and provides for the establishment, management and regulatory control of Flood Hazard areas. For properties within areas of Special Flood Hazard Areas as identified by FEMA in the Flood Insurance Study (FIS) for The Los Angeles County dated December 2, 1980, the Ordinance establishes certain polices that include development and construction standards and regulations that may require additional permitting and discretionary review. Being hazard-specific, the provisions of the Ordinance deal with the unique problems of each hazard in addition to the Citywide policies and goals.

b. Existing Conditions

(1) Surface Water Quality

(a) Regional

The Project Site is located within the Ballona Creek Watershed, although the northern portion of the Project Site discharges into the Marina del Rey Watershed. The Ballona Creek Watershed includes the cities of Beverly Hills and West Hollywood; portions

[22] *City of Los Angeles Department of Public Works, Bureau of Sanitation, Watershed Protection Division, Planning and Land Development for Low Impact Development (LID), Part B: Planning Activities, 5th Edition, May 2016.*

of the cities of Los Angeles, Culver City, Inglewood, and Santa Monica; unincorporated areas of Los Angeles County; and areas under the jurisdiction of Caltrans. The Marina del Rey Watershed includes runoff from portions of the cities of Culver City, Los Angeles, as well as portions of unincorporated areas of Los Angeles County.

According to the Water Resources Technical Report included in Appendix F of this Recirculated Draft EIR, both the Ballona Creek Estuary and the Marina del Rey Watershed are impaired. As previously discussed, pursuant to Section 303(d) of the federal Clean Water Act, the state and RWQCBs identify impaired bodies of water that do not meet water quality standards and prioritizes and schedules them for development of Total Maximum Daily Loads (TMDLs). A TMDL specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. The Los Angeles RWQCB has adopted wet-weather TMDLs in the Ballona Creek Estuary for silver, zinc, shellfish harvesting advisory, sediment toxicity, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), lead, dichlorodiphenyltrichloroethane (DDT), copper, coliform bacteria, chlordane, and cadmium. The Marina del Rey Watershed has wet-weather TMDLs for chlordane, copper, fish consumption advisory, indicator bacteria, lead, PCBs, and zinc.[23]

(b) Local

In general, urban stormwater runoff occurs during and shortly following precipitation events. The volume of runoff flowing into the drainage system depends on the intensity and duration of the rain event and soil moisture. Contaminants that may be found in stormwater from developed areas include sediments, trash, bacteria, metals, nutrients, organics and pesticides. The source of contaminants includes surface areas where precipitation falls, as well as the air it falls through. Contaminants on surfaces such as roads, maintenance areas, parking lots, and buildings, which are usually contained in dry weather conditions, may be carried by rainfall runoff into drainage systems. As discussed above, as part of Proposition O, the City has installed catch basins with screens to capture debris before entering the storm drain system. In addition, the City conducts routine street cleaning operations as well as periodic cleaning and maintenance of catch basins to reduce stormwater pollution within the City.[24]

[23] *Paseo Marina Water Resources Technical Report, Fuscoe Engineering, Inc., July 2020.*

[24] *Paseo Marina Water Resources Technical Report, Fuscoe Engineering, Inc., July 2020.*

(c) On-Site

Based on the existing operations within the Project Site, the on-site runoff likely contains the following pollutants of concern: total suspended solids, oil and grease, heavy metals, nutrients, pesticides, and trash. The Project Site currently includes one structural pretreatment BMP at the northwest corner of the Project Site, near the hotel driveway. The BMP is a CDS hydrodynamic separator unit which uses swirl concentration and continuous deflective separation to screen, separate, and trap trash, debris, sediment, and hydrocarbons from stormwater runoff. These systems are specified as pretreatment BMPs to primary BMPs because they only remove larger items and particles from stormwater and cannot address finer pollutants like nutrients and metals. Therefore, these systems do not fully satisfy current water quality requirements. In addition to the CDS unit, there are also a range of non-structural BMPs and environmental water quality policies that are currently used at the Project Site to minimize the impact of pollutant sources. These include general housekeeping practices such as regular trash collection and street sweeping; proper storage of hazardous materials and wastes; and substituting environmentally friendly products for environmentally hazardous products, such as soaps, solvents, and pesticides. In addition, stormwater runoff from existing pervious surfaces is naturally treated to some extent by existing vegetation and the absorptive properties of the existing soils.

(2) Surface Water Hydrology

(a) Regional

As previously noted, the Project Site is located within the Ballona Creek Watershed in the County of Los Angeles and directly adjacent to the Marina del Rey Watershed. The Ballona Creek Watershed covers approximately 130 square miles in the coastal plain of the Los Angeles Basin. Its boundaries are the Santa Monica Mountains to the north, the Harbor Freeway (I-110) to the east, and the Baldwin Hills to the south. Ballona Creek flows as an open channel for just under 10 miles from mid-Los Angeles (south of Hancock Park) through Culver City, reaching the Pacific Ocean at Playa del Rey (Marina del Rey Harbor). The Estuary portion (from Centinela Avenue to the outlet) is soft bottomed, while the remainder of the creek is concrete lined. Ballona Creek is fed by a network of underground storm drains, which reaches north into Beverly Hills and West Hollywood. The average dry weather flow at the Ballona Watershed's terminus in Playa del Rey is 25 cubic feet per second. The average wet weather flow is ten times higher or more during large storms. The southern portion and the majority of the Project Site discharges to the Ballona Creek Watershed.

The northern portion of the Project Site discharges into the Marina del Rey Watershed. The watershed consists of the harbor water area, including the docks, back basins, Marina Beach, Oxford Retention Basin (Oxford Basin) and the land adjacent to the harbor back basins including portions of Los Angeles County unincorporated area parcels,

streets, and other facilities. The harbor area consists of the Main Channel and eight back basins (A-H). The Project Site discharges into back basin "E" which has impairments to water quality due to poor circulation and tidal.

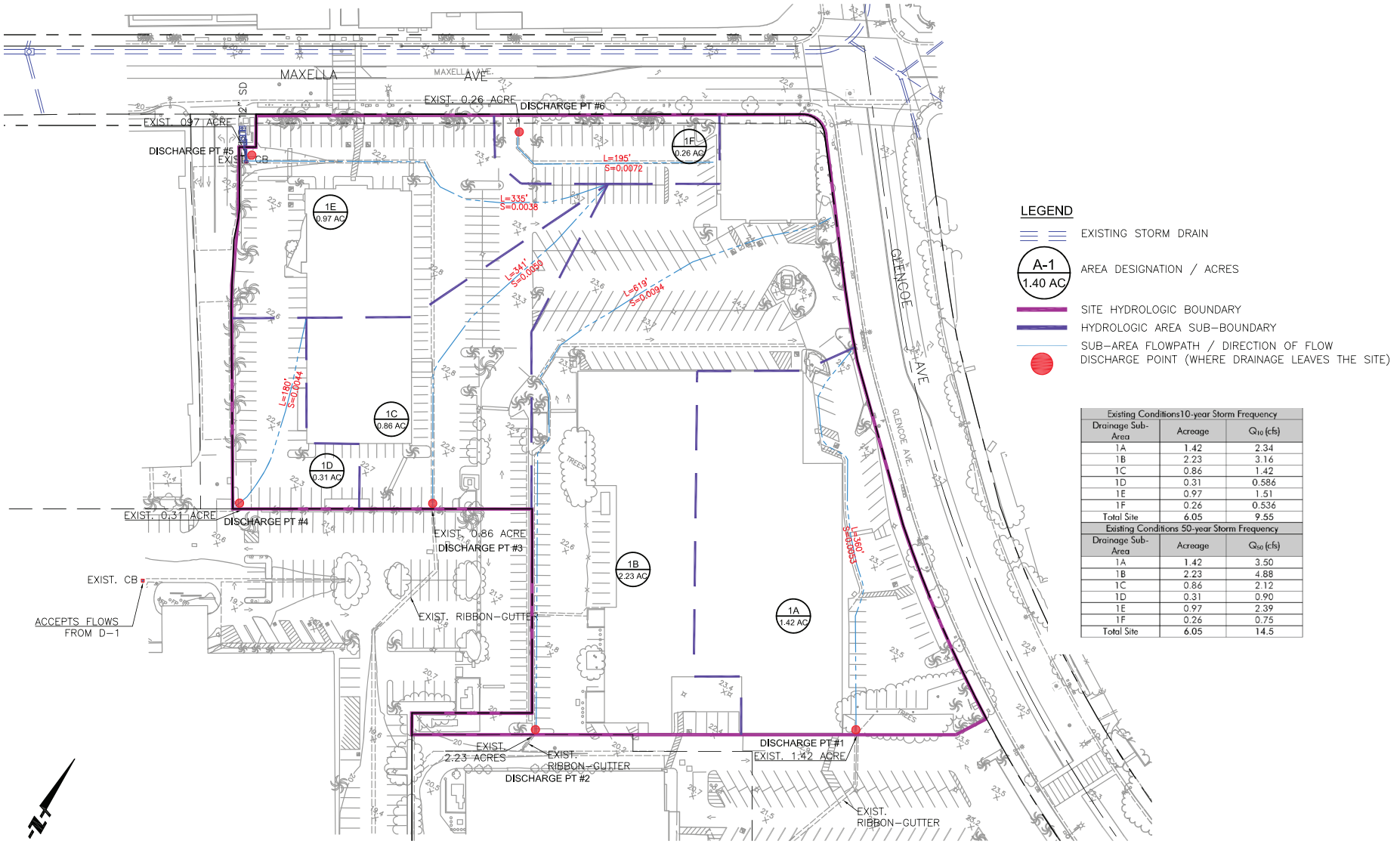
(b) Local

Stormwater runoff is collected from the Project Site and conveyed through off-site storm drain facilities along the public streets surrounding the Project Site. Stormwater flows northwest to Maxella Avenue or southeast and west to ribbon gutters within adjacent parking lots off-site that ultimately connect to a channel under State Route 90. The storm drain facilities along Maxella Avenue are owned and maintained by the Los Angeles County Flood Control District (LACFCD). The storm drain along Maxella Avenue flows in a southwesterly direction and connects to the storm drain along Berkley Drive, which flows westerly and discharges into the Marina del Rey Harbor. The southeast and southwesterly flows ultimately discharge into Ballona Creek located to the southeast.

(c) On-Site

The Project Site is currently built out with approximately 96 percent impervious surfaces associated with large expanses of surface parking, buildings, and limited landscaping. A portion of the Project Site drains toward Maxella Avenue, and the remainder of the Project Site drains to ribbon gutters within adjacent parking lots off-site that ultimately connect to a channel under State Route 90. The Project Site drains to various discharge points, including the western portion of the Project Site, the eastern corner of the Project Site, and the two south corners of the Project Site. Existing underground drainage facilities within the Project Site include an inlet and water quality structure at the northwest corner of the Project Site, near the hotel driveway, which collects and conveys drainage from the northwest portion of the Project Site. The drainage on the other portions of the Project Site is conveyed off-site via surface gutters.

As shown in Figure IV.G-1 on page IV.G-22, based on the existing contours of stormwater runoff, the Project Site has been divided into six drainage subareas (referred to herein as drainage subareas 1A through 1F) served by various storm drains both on- and off-site. An existing Los Angeles County Department of Public Works (LACDPW) 45-inch storm drain on Maxella Avenue (north side of roadway) drains in a westerly direction from Glencoe Avenue toward Del Rey Avenue. This storm drain currently collects drainage from an on-site inlet, located at the northwest corner of the Project Site. The 45-inch storm drain ultimately drains to the northern portion of the Marina del Rey harbor at Basin E. As shown in Figure IV.G-1, drainage subareas 1E and 1F drain in a westerly direction to catch basins and connect to the 45-inch storm drain along Maxella Avenue.



Existing Conditions10-year Storm Frequency		
Drainage Sub-Area	Acreage	Q_{10} (cfs)
1A	1.42	2.34
1B	2.23	3.16
1C	0.86	1.42
1D	0.31	0.586
1E	0.97	1.51
1F	0.26	0.536
Total Site	6.05	9.55
Existing Conditions 50-year Storm Frequency		
Drainage Sub-Area	Acreage	Q_{50} (cfs)
1A	1.42	3.50
1B	2.23	4.88
1C	0.86	2.12
1D	0.31	0.90
1E	0.97	2.39
1F	0.26	0.75
Total Site	6.05	14.5

Figure IV.G-1
Existing Hydrology

Source: Fuscoe Engineering, 2020.

There are also two existing 18-inch storm drains and one existing 24-inch storm drain beyond the southern end of the Project Site along State Route 90. Runoff from drainage subarea 1A flows off-site through a system of gutters and connects to the 24-inch storm drain. Drainage flows from drainage subareas 1B and 1C flow to the two 18-inch storm drains along State Route 90. Drainage flows from drainage subarea 1D flow southwest off-site to a system of gutters ultimately discharging to the 54-inch City drain off-site along Route 1/Pacific Coast Highway. Table IV.G-1 on page IV.G-24 provides 10-year and 50-year storm frequency flows for the Project Site from each drainage subarea.[25]

(3) Groundwater Quality

(a) Regional

In general, due to historical activities and practices, groundwater quality in the City has been substantially degraded. The degradation of regional groundwater is a result of seepage into the subsurface of fertilizers and pesticides from agricultural uses, nitrogen and pathogenic bacteria from septic tanks, and various hazardous substances from leaking aboveground and underground storage tanks and industrial-type operations. The City overlies the Los Angeles Coastal Plain Groundwater Basin. This basin falls under the jurisdiction of the LARWQCB. According to LARWQCB's Basin Plan, water quality objectives applying to all ground waters of the region include those concerning bacteria, chemical constituents and radioactivity, mineral quality, nitrogen (nitrate and nitrite), and taste and odor.[26]

(b) Local

The Project Site specifically overlies the Santa Monica Groundwater Subbasin within the Los Angeles Coastal Plain Groundwater Basin. Based upon LARWQCB's Basin Plan, constituents of concern listed for the Santa Monica Groundwater Subbasin include total dissolved solids (TDS), sulfate, chloride, and boron.[27]

(c) On-Site

Though it is possible for surface water borne contaminants to percolate into groundwater and affect groundwater quality, as the Project Site is currently primarily

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[25] *Paseo Marina Water Resources Technical Report, Fuscoe Engineering, Inc., July 2020*

[26] *Los Angeles Regional Water Quality Control Board. Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, various updates from 2014–2019.*

[27] *Los Angeles Regional Water Quality Control Board. Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, various updates from 2014–2019.*

Table IV.G-1
Existing Drainage Stormwater Runoff Calculations

Drainage Area	Area (acres)	Percent Impervious	10-Year Storm		50-Year Storm	
			Time of Conc. (min)	Volumetric Flow Rate Q_{10} (cfs)	Time of Conc. (min)	Volumetric Flow Rate Q_{50} (cfs)
1A	1.42	96%	8	2.34	7	3.50
1B	2.23	96%	11	3.16	9	4.88
1C	0.86	96%	8	1.42	7	2.12
1D	0.31	96%	6	0.586	5	0.90
1E	0.97	96%	9	1.51	7	2.39
1F	0.26	96%	5	0.536	5	0.75
Total	**6.05**	**96%**	**—**	**9.55**	**—**	**14.50**

Source: Fuscoe Engineering, 2020.

impervious in the existing condition (96 percent impervious), no appreciable infiltration of potential contaminants is expected to occur. Additionally, the good housekeeping practices previously described and compliance with all existing hazardous waste regulations further reduce this potential. Therefore, groundwater quality is not impacted by existing activities at the Project Site.

Other types of risk such as underground storage tanks (USTs) have a greater potential to impact groundwater. As discussed in Section IV.F, Hazards and Hazardous Materials, of this Recirculated Draft EIR, there is no evidence of existing USTs on the Project Site.

(4) Groundwater Hydrology

(a) Regional

Groundwater use for domestic water supply is a beneficial use of groundwater basins in Los Angeles County. The City of Los Angeles overlies the Los Angeles Coastal Plain Groundwater Basin. The Los Angeles Coastal Plain Groundwater Basin comprises the Hollywood, Santa Monica, Central, and West Coast Groundwater Subbasins. Groundwater flow in the Los Angeles Coastal Plain Groundwater Basin is generally south-southwesterly and may be restricted by natural geological features. Replenishment of groundwater basins occurs mainly by percolation of precipitation throughout the region via permeable surfaces, spreading grounds, and groundwater migration from adjacent basins, as well as injection wells designed to pump freshwater along specific seawater barriers to prevent the intrusion of salt water.

(b) Local

Within the Los Angeles Coastal Plain Groundwater Basin, the Project Site specifically overlies the Santa Monica Subbasin, which is located in the northwestern part of the Los Angeles Coastal Plain Groundwater Basin. The Santa Monica Subbasin is bounded on the north by impermeable rocks of the Santa Monica Mountains, the Newport-Inglewood fault to the east, the Pacific Ocean to the west, and the Ballona Escarpment to the south. Extensive faulting within the Santa Monica Subbasin further separates the Subbasin into five subbasins. These include the Arcadia, Olympic, Coastal, Charnock, and Crestal subbasins. The Santa Monica Subbasin is a natural groundwater basin that encompasses a surface area of approximately 50.2 square miles and is estimated to have a total storage capacity of approximately 1.1 million acre-feet. Replenishment of groundwater in the Santa Monica Basin is mainly by percolation of precipitation and surface runoff onto the subbasin from the Santa Monica Mountains.

(c) On-Site

The Project Site is relatively flat, with slopes varying from about 0.5 percent to approximately 1 percent. The highest elevation of the Project Site is 23 feet near the Maxella Avenue/Glencoe Avenue intersection, while the lowest elevation of the Project Site is 18 feet located at the southern corner of the Project Site.[28] Due to the elevation differences across the Project Site, a singular groundwater elevation does not apply to the Project Site. Rather, groundwater can be found at various elevations within the Project Site while it may not be encountered in other portions of the Project Site. Data from the California Division of Mines and Geology indicate the historic high groundwater level on the Project Site is approximately 6 feet below ground surface.[29] As part of the geotechnical analysis included in Appendix D of this Recirculated Draft EIR, one exploratory boring was drilled at a depth of 31.5 feet below the existing ground surface. Groundwater was encountered at a depth of approximately 16.5 feet below the existing ground surface.

As previously noted, the Project Site is currently comprised of mostly impervious surfaces (96 percent). Accordingly, there is currently minimal groundwater recharge potential within the Project Site. There are no groundwater production wells or public water supply wells within the Project Site or in the vicinity of the Project Site.

[28] *Paseo Marina Water Resources Technical Report, Fuscoe Engineering, Inc., July 2020.*

[29] *Paseo Marina Water Resources Technical Report, Fuscoe Engineering, Inc., July 2020.*

(5) Flood Zone

Based on the Federal Emergency Management Agency Flood Insurance Rate Maps for the Project Site, the Project Site is not located within a 100-year flood zone. As provided in the Water Resources Technical Report, the Project Site is specifically designated as flood hazard area—Zone X, which is defined as "areas determined to be outside the 0.2 percent annual chance floodplain."

3. Project Impacts

a. Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, a project would have a significant impact related to hydrology and water quality if it would:

Threshold (a): ***Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;***

Threshold (b): ***Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;***

Threshold (c): ***Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:***

(i) result in substantial erosion or siltation on- or off-site;

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

(iii) 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; or

(iv) Impede or redirect flood flows;

Threshold (d): ***In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;***

Threshold (e): ***Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan; or***

Threshold (f): Require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects.

For this analysis, the Appendix G Thresholds listed above are relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide, as appropriate, to assist in answering the Appendix G Threshold questions.

The L.A. CEQA Thresholds Guide identifies the following criteria to evaluate hydrology and water quality impacts:

(1) Surface Water Quality

- Would the project result in discharges that would create pollution, contamination or nuisance as defined in Section 13050 of the California Water Code or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body.

(2) Surface Water Hydrology

- Would the project cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources?
- Would the project substantially reduce or increase the amount of surface water in a water body?
- Would the project result in a permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow?

(3) Groundwater

- Change potable water levels sufficiently to:
  - Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;
  - Reduce yields of adjacent wells or well fields (public or private); or
  - Adversely change the rate or direction of flow of groundwater;

- Result in demonstrable and sustained reduction of groundwater recharge capacity;
- Affect the rate or change direction of movement of existing contaminants;
- Expand the area affected by contaminants;
- Result in an increased level of groundwater contamination (including that from direct percolation, injection or salt water intrusion); or
- Cause regulatory water quality standards at an existing production well to be violated, as defined in the CCR, Title 22, Division 4, Chapter 15 and in the Safe Drinking Water Act.

b. Methodology

The analysis is based on the *Water Resources Technical Report* prepared by Fuscoe Engineering dated March 2017 and updated July 2020. This report is included as Appendix F of this Recirculated Draft EIR.

(1) Surface Water Quality

The analysis of surface water quality impacts identifies the types of pollutants associated with construction and operation of the Project and considers their potential effects on surface water quality.

(2) Surface Water Hydrology

The surface water hydrology analysis evaluates the change in surface water runoff patterns and quantity for the Project Site due to the construction and operation of the Project, and the impact of these changes on the existing downstream stormwater system. As discussed in the Regulatory Framework Section above, the City has adopted the Los Angeles County Department of Public Works Hydrology Manual as its basis of design for storm drainage facilities. The Hydrology Manual requires that a storm drain conveyance system be designed for a 25-year storm event and that the combined capacity of a storm drain and street flow system accommodate flow from a 50-year storm event. The City's L.A. City CEQA Thresholds Guide establishes the 50-year frequency design storm event as the threshold to evaluate potential impacts on surface water hydrology. Thus, to determine the ability of the existing storm drain infrastructure to accommodate any changes in runoff flows associated with the Project, potential flows from each drainage area during a 50-year frequency design storm event was evaluated.

As part of the surface water hydrologic analysis, stormwater runoff generated from the Project Site was quantified using the Modified Rational Method.[30] The Modified Rational Method assumes that a steady, uniform rainfall rate will produce maximum runoff when all parts of the basin area are contributing to outflow. This occurs when the storm event lasts longer than the time of concentration. The time of concentration (Tc) is the time it takes for rain in the most hydrologically remote part of the basin area to reach the outlet.

As part of its Hydrology Manual, the Los Angeles County Department of Public Works developed a time of concentration calculator, HydroCalc, to automate time of concentration, peak runoff rate, and total volume calculations. HydroCalc was used to calculate the stormwater peak runoff flow rate for the Project Site with implementation of the Project by evaluating the changes within the individual drainage areas.

(3) Groundwater Quality and Hydrology

The analysis of the Project's potential impacts associated with groundwater was based on a review of existing groundwater conditions and groundwater uses and an evaluation of the potential impacts for construction and operation of the Project to affect those uses and groundwater quality. Construction and operational activities evaluated include any potential dewatering activities during construction; changes in groundwater recharge based on proposed land use changes; infiltration capacity of the underlying soil; permanent dewatering; potential soil or shallow groundwater exposure to construction materials, wastes, or spilled materials, handling and storage of hazardous materials; and any potential groundwater remediation activities.

c. Project Design Features

No specific project design features are proposed with regard to hydrology and water quality.

[30] *The equation used in the Modified Rational Method is Q=C x I x A, where "Q" equals the volumetric flow, "C" equals the runoff coefficient, "I" equals the rainfall intensity, and "A" equals the tributary drainage area. The Modified Rational Method assumes that the runoff coefficient (C) remains constant during a storm. The runoff coefficient is a function of both the soil characteristics and the percentage of impervious surfaces in the drainage area. The rainfall intensity was determined using isohyets rainfall values according to the Los Angeles County Department of Public Works Hydrology Manual. The tributary drainage area was determined by delineating high points to create drainage boundaries and any subareas.*

d. Analysis of Project Impacts

As set forth in Section II, Project Description, of this Recirculated Draft EIR, the Project proposes two development options—Option A and Option B. Under Option A, the Project proposes the development of 658 multi-family residential units and up to 27,300 square feet of neighborhood-serving commercial uses, including up to approximately 13,650 square feet of retail space and up to approximately 13,650 square feet of restaurant space. Option B proposes the development of 425 multi-family residential units, 91,162 square feet of office space, and 40,165 square feet of neighborhood-serving commercial uses, including approximately 20,000 square feet of retail space and approximately 20,165 square feet of restaurant space. Construction activities, including the types of equipment to be used would be the same under both development options. The sources of potential pollutants generated during operation of the Project would also be similar under both development options. As the differences in the land use mix under the two development options do not affect the analyses related to hydrology and water quality, the analysis of potential impacts associated with hydrology and water quality provided below accounts for both development options and, the term "Project" used in the analysis below accounts for the potential impacts of both Option A and Option B.

Threshold (a): Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

(1) Impact Analysis

(a) Surface Water Quality

(i) Construction

During Project construction, particularly during the grading phase, stormwater runoff from precipitation events could cause exposed and stockpiled soils to be subject to erosion and convey sediments into municipal storm drain systems. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. Pollutant discharges relating to the storage, handling, use and disposal of chemicals, adhesives, coatings, lubricants, and fuel could also occur. However, as Project construction would disturb more than one acre of soil, the Project would be required to obtain coverage under the NPDES Construction General Permit. In accordance with the requirements of the NPDES Construction General Permit, the Project would prepare and implement a site-specific SWPPP adhering to the California Stormwater Quality Association BMP Handbook. The SWPPP would specify BMPs to be used during construction to manage stormwater and non-stormwater discharges. BMPs would include, but not be limited to, erosion control, sediment control, non-stormwater management, and materials management BMPs.

In addition, Project construction activities would occur in accordance with City grading permit regulations (Chapter IX, Division 70 of the LAMC), such as the preparation of an erosion control plan, to reduce the effects of sedimentation and erosion.

As discussed in Section II, Project Description, of this Recirculated Draft EIR, below grade parking would extend to a maximum depth of 28 feet below ground surface under Option A and 43 feet below ground surface under Option B. Data from the California Division of Mines and Geology indicate the historic high groundwater level on the Project Site is approximately 6 feet below ground surface. In addition, a boring drilled within the Project Site as part of the geotechnical analysis encountered groundwater at 16.5 feet below ground surface. Therefore, Project construction activities could encounter groundwater and dewatering may be required. Dewatering operations are practices that discharge non-stormwater from a work location into a drainage system to proceed with construction. Discharges from dewatering operations can contain high levels of fine sediments, which, if not properly treated, could lead to exceedance of the NPDES requirements. Additionally, as discussed in Section IV.F, Hazards and Hazardous Materials, of this Recirculated Draft EIR, the Phase I ESA identified a potential for groundwater contamination to exist on the Project Site. This contamination is a result of the elevated concentrations of PCBs, TCE, and PCE that were detected in the soils at the former property of Cornell-Dubilier Electronics Division located north-northwest of the Project Site. During construction, temporary dewatering systems such as dewatering tanks, sand media particulate, pressurized bag filters, and cartridge filters would be utilized in compliance with the NPDES permit. These temporary systems would comply with all relevant NPDES requirements related to construction and discharges from dewatering operations.

With the implementation of site-specific BMPs included as part of the SWPPP and implementation of an erosion control plan as required by the LAMC, the Project would reduce or eliminate the discharge of potential pollutants from stormwater runoff. In addition, the Applicant would be required to comply with City grading permit regulations and inspections to reduce sedimentation and erosion. **Therefore, with compliance with NPDES requirements and City of Los Angeles grading permit regulations, construction of the Project would not result in discharges that would violate any surface water quality standard or waste discharge requirements or otherwise substantially degrade surface water quality. Thus, temporary construction-related impacts on surface water quality would be less than significant.**

(ii) Operation

As is typical of most urban developments, stormwater runoff from the Project Site during operation of the Project has the potential to introduce pollutants into the stormwater system. Anticipated and potential pollutants generated by the Project would be typical of

mixed-use residential and commercial developments, including sediment, nutrients, pesticides, metals, pathogens, and oil and grease.

Under the City's LID Ordinance, post-construction stormwater runoff from new projects must be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency BMPs on site for the volume of water produced by the 85th percentile storm event or first 0.75 inches of rainfall for any storm event, whichever is greater. According to the Water Resources Technical Report, the sandy clay and clay soils encountered between 10 feet and 16 feet below grade are not considered conducive to infiltration due to low infiltration rates. In addition, the silty soil layers encountered at depths of 5 feet and 7.5 feet are not considered to be conducive to infiltration due to the potential for mounding in relatively thin layers of potentially permeable soils overlying practically impermeable layers of groundwater. Therefore, infiltration is not feasible within the Project Site. However, consistent with LID requirements to reduce the quantity and improve the quality of rainfall runoff that leaves the Project Site, the Project would include the installation of capture and use or biofiltration planter BMPs as established by the LID Manual. Given that there is one pretreatment BMP on-site that only provides partial treatment of stormwater runoff, additional BMP implementation associated with the Project would result in improved surface water quality of the receiving waters. The proposed LID design for the Project Site would outline the stormwater treatment post-construction BMPs required to control pollutants associated with storm events up to the 85th percentile storm event, per the City's LID Ordinance. As the majority of potential contaminants are anticipated to be contained within the "first flush" 85th percentile storm event, major storms are not anticipated to cause an exceedance of regulatory standards. Additionally, the implementation of BMPs required by the City's LID Ordinance would target the specific pollutants that could potentially be carried in stormwater runoff from the Project Site. **Therefore, with the incorporation of LID BMPs, operation of the Project would not result in discharges that would violate any water quality standard or waste discharge requirements. Operational impacts to surface water quality would be less than significant.**

(b) Groundwater Quality

(i) Construction

As discussed above, Project construction activities could encounter groundwater and temporary dewatering is expected. As discussed in Section IV.F, Hazards and Hazardous Materials, of this Recirculated Draft EIR, the Phase I ESA identified a potential for groundwater contamination to exist on the Project Site. This contamination is a result of the elevated concentrations of PCBs, TCE, and PCE that were detected in the soils at the former property of Cornell-Dubilier Electronics Division located north-northwest of the Project Site. In the event dewatering is required during Project construction, a temporary dewatering system would be installed and operated in accordance with NPDES requirements. Any discharge of groundwater during construction of the Project would occur

pursuant to, and comply with, the applicable NPDES permit or industrial user sewer discharge permit requirements. Pursuant to such requirements, the groundwater extracted would be chemically analyzed to determine the appropriate treatment and/or disposal methods. As such, with compliance with applicable NPDES requirements, groundwater quality would not be impacted from these potential dewatering activities.

Other potential effects to groundwater quality could result from the presence of an underground storage tank or during the removal of an underground storage tank. As previously described, there is no existing UST within the Project Site. Therefore, USTs would not pose a significant hazard to groundwater quality.

There are also risks associated with oil wells impacting groundwater quality. As discussed in detail in Section IV.F, Hazards and Hazardous Materials, of this Recirculated Draft EIR, according to the Geologic Energy Management Division (CalGEM) online mapping application Well Finder, there are no former oil and gas production wells located on the Project Site. Therefore, oil wells would not pose a significant risk to groundwater quality.

As further discussed in Section IV.F, Hazards and Hazardous Materials, of this Recirculated Draft EIR, the Project Site is located within a City-designated Methane Buffer Zone.[31] According to the Water Resources Technical Report, an analysis of methane concentration in the underlying soils was performed to determine any potential methane pollution that may impact the Project Site, specifically groundwater quality. The results of the investigation revealed elevated concentrations of methane gas between 15 and 1,050 parts per million of methane by volume. Based on these concentrations, the Project Site is categorized as a Level III site relative to site design requirements under the City of Los Angeles' Methane Mitigation Ordinance No. 175,790. Level III site design levels do not require any specific methane mitigation design features other than following standard protocols during construction and operation. Adherence to the City of Los Angeles' Methane Mitigation Ordinance and applicable NPDES requirements regarding dewatering activities, as discussed above, would address potential impacts to groundwater quality.

As discussed in Section IV.F, Hazards and Hazardous Materials, of this Recirculated Draft EIR, during on-site grading and building construction, hazardous materials, such as fuels, oils, paints, solvents, and concrete additives, could be used and would therefore require proper management and, in some cases, disposal. The management of any resultant hazardous wastes could increase the potential for hazardous materials to be released into groundwater. Compliance with all applicable federal, state, and local requirements concerning the handling, storage and disposal of hazardous waste, would

[31] *City of Los Angeles Department of City Planning, ZIMAS, Parcel Profile Report for 13450 Maxella Avenue., http://zimas.lacity.org/, accessed July 6, 2023.*

reduce the potential for the construction of the Project to release contaminants into groundwater. In addition, as there are no existing groundwater production wells or public water supply wells within 1 mile of the Project Site, construction activities would not be anticipated to affect existing wells.

Based on the above, with implementation of regulatory requirements, construction of the Project would not result in discharges that would violate any groundwater quality standard or waste discharge requirements or otherwise substantially degrade groundwater quality. Therefore, construction-related impacts on groundwater quality would be less than significant.

(ii) Operation

Operational activities which could affect groundwater quality include spills of hazardous materials and leaking underground storage tanks. Surface spills from the handling of hazardous materials most often involve small quantities and are cleaned up in a timely manner, thereby resulting in little threat to groundwater. Other types of risks such as leaking underground storage tanks have a greater potential to affect groundwater. As discussed in Section IV.F, Hazards and Hazardous Materials, of this Recirculated Draft EIR, the Project would not introduce any new USTs that would have the potential to expose groundwater to contaminants. In addition, the Project would comply with all applicable existing regulations at the Project Site regarding the handling and potentially required cleanup of hazardous materials. As such, regulatory compliance would prevent the Project from affecting or expanding any potential areas of contamination, increasing the level of contamination, or causing regulatory water quality standards at an existing production well to be violated, as defined in the California Code of Regulations, Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act. Thus, the Project is not anticipated to result in releases or spills of contaminants that could reach a groundwater recharge area or spreading ground or otherwise reach groundwater through percolation. **Therefore, operation of the Project would not result in discharges that would violate any groundwater quality standard or waste discharge requirements or otherwise substantially degrade groundwater quality. The Project's potential impact on groundwater quality during operation would be less than significant.**

(2) Mitigation Measures

Project-level impacts related to surface water and groundwater quality would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to surface water and groundwater quality were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (b): Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

(1) Impact Analysis

(a) Construction

As previously noted, below grade parking would extend to a maximum depth of 28 feet below ground surface under Option A and 43 feet below ground surface under Option B. Data from the California Division of Mines and Geology indicate the historic high groundwater level on the Project Site is approximately 6 feet below ground surface. In addition, a boring drilled within the Project Site as part of the geotechnical investigation included in Appendix D of this Recirculated Draft EIR encountered groundwater at a depth of 16.5 feet below ground surface. Therefore, dewatering operations are expected during construction. Due to the limited and temporary nature of temporary dewatering operations, regional impacts to groundwater level are not considered to be significant. Any such temporary system would comply with all relevant NPDES requirements related to construction and discharges from dewatering operations. In addition, if groundwater is encountered and is not contaminated, a portion of the extracted non-contaminated groundwater is proposed to be reused on-site for dust control, which would keep a portion of the dewatered groundwater on-site. Furthermore, no water supply wells are located at the Project Site or within 1 mile of the Project Site that could be impacted by construction. **Thus, construction activities for the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project would impede sustainable groundwater management of the basin. Impacts on groundwater supplies and recharge during construction of the Project would be less than significant.**

(b) Operation

As discussed above, the Project Site is currently comprised of approximately 96 percent impervious surfaces, and as such, minimal groundwater recharge occurs on the Project Site. With implementation of the Project, the Project Site would be comprised of 88 percent impervious surfaces. In addition to decreasing impervious surfaces, consistent with LID requirements to reduce the quantity and improve the quality of rainfall runoff that

leaves the Project Site, the Project would include the installation of capture and use or biofiltration planter BMPs as established by the LID Manual. Any stormwater that bypasses the BMP systems would discharge to an approved discharge point in the public right-of-way and not result in a large amount of runoff that would affect groundwater hydrology, including the direction of groundwater flow. In addition, as also discussed above, there are no existing water supply wells within 1 mile of the Project Site. In addition, the subterranean levels of the Project are to be designed such that they are able to withstand hydrostatic forces and incorporate comprehensive waterproofing systems in accordance with current industry standards and construction methods such that permanent dewatering operations would not be required. **Therefore, operation of the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management. Impacts on groundwater supplies during operation of the Project would be less than significant.**

(2) Mitigation Measures

Project-level impacts related to groundwater supplies and groundwater recharge would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to groundwater supplies and groundwater recharge were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (c): 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 through the addition of impervious surfaces, in a manner which would:

i. result in substantial erosion or siltation on- or off-site?

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off site?

(1) Impact Analysis

(a) Construction

There are no streams or rivers within or immediately surrounding the Project Site. Construction activities for the Project would include demolition of the existing buildings, grading of the Project Site, and excavation and removal of soil. These activities have the potential to temporarily alter existing drainage patterns and flows on the Project Site by

exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. Exposed and stockpiled soils could also be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. As discussed above, as the construction site would be greater than one acre, the Project would be required to obtain coverage under the NPDES Construction General Permit. In accordance with the requirements of this permit, the Project would implement a SWPPP that specifies BMPs and erosion control measures to be used during construction to manage runoff flows. These BMPs would be designed to contain stormwater or construction watering on the Project Site such that runoff does not impact off-site drainage facilities or receiving waters. In addition, Project construction activities would occur in accordance with City grading permit regulations (Chapter IX, Division 70 of the LAMC), such as the preparation of an erosion control plan, to reduce the effects of sedimentation and erosion. **Thus, through compliance with all NPDES Construction General Permit requirements, including preparation of a SWPPP and implementation of BMPs, as well as compliance with applicable City grading regulations, construction activities for the Project would not substantially alter the Project Site drainage patterns in a manner that would result in substantial erosion, siltation, or flooding on- or off-site. As such, construction impacts related to erosion and flooding on- or off-site would be less than significant.**

(b) Operation

As described above, the Project Site is currently developed with existing buildings and hardscape and is comprised of approximately 96 percent impervious surfaces. The Project would include new buildings surrounded by hardscape and landscape and, upon buildout, the Project Site would be comprised of approximately 88 percent impervious. As such, similar to existing conditions, there would be a limited potential for erosion or siltation to occur from exposed soils or large expanses of pervious areas.

In addition, as determined in the Water Resources Technical Report, and as summarized in Table IV.G-2 on page IV.G-38, the overall flow rate would be reduced compared to existing conditions. Specifically, runoff flows during a 50-year storm event[32] would decrease from 14.5 cubic feet per second to 13.9 cubic feet per second.

[32] *Per the City's Special Order No. 007-1299, the City has adopted the Los Angeles County Department of Public Works (LACDPW) Hydrology Manual as its basis of design for storm drainage facilities. The Hydrology Manual requires projects to have drainage facilities to meet the Urban Flood level of protection, which is defined as runoff from a 25-year frequency storm falling on a saturated watershed. The L.A. CEQA Thresholds Guide, however, establishes the 50-year frequency design storm event as the threshold to evaluate potential impacts on surface water hydrology. Therefore, to provide a more conservative analysis of the ability of storm drain infrastructure to accommodate the demand generated by the Project, the higher 50-year storm event threshold was used.*

Table IV.G-2
Proposed Drainage Stormwater Runoff Calculations Summary

Area	Acreage	Pre-Project Percent Impervious	Post-Project Percent Impervious	Pre-Project Q_{10} (cfs)	Post-Project Q_{10} (cfs)	Pre-Project Q_{50} (cfs)	Post-Project Q_{50} (cfs)
Total Project Site	6.05	96%	88%	9.55	8.41	14.5	13.9

Q_x (cfs) = volumetric flow rate measured in cubic feet per second
Source: Fuscoe Engineering, 2020.

Accordingly, there would be no increase in runoff volumes into the existing storm drain system. Therefore, operation of the Project would not substantially alter the existing drainage pattern of the Project Site or surrounding area such that substantial erosion, siltation, or on-site or off-site flooding would occur. Operational impacts related to erosion and flooding on- or off-site would be less than significant.

(2) Mitigation Measures

Project-level impacts related to erosion and flooding on- or off-site would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to erosion and flooding on- and off-site were determined to be less than significant. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (c): 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 through the addition of impervious surfaces, in a manner which would:

iii. 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?

(1) Impact Analysis

As described above, the Project Site is developed with existing buildings and hardscape and is comprised of approximately 96 percent impervious surfaces. The Project

would include new buildings surrounded by hardscape and landscape and, upon buildout, the Project Site would be comprised of approximately 88 percent impervious surfaces.

Figure IV.G-2 on page IV.G-40 illustrates the proposed on-site drainage conditions. In addition, Table IV.G-2 on page IV.G-38 shows the existing and proposed 10-year and 50-year storm event peak flow rates. As shown, a comparison of the pre- and post-peak flow rates indicates a decrease in stormwater runoff from the Project Site. Specifically, runoff flows during a 50-year storm event[33] would decrease from 14.5 cubic feet per second to 13.9 cubic feet per second. Accordingly, there would be no increase in runoff volumes into the existing storm drain system.

As discussed in the Water Resources Technical Report, all Project Site flows are anticipated to be discharged to either Glencoe Avenue, Maxella Avenue or split between the two streets. To determine potential impacts to either of these streets, street capacity calculations for both Glencoe Avenue and Maxella Avenue were performed to determine if either street could handle the Project's flows. The street capacity calculations for both Glencoe Avenue and Maxella Avenue determined that both roadways can handle the proposed 10-year flows associated with the Project, along with street flows already in the roadways. In Maxella Avenue, the street capacity of 11 cubic feet per second is sufficient to handle the total proposed flows from the Project Site (8.4 cubic feet per second), along with existing street flows of 1.2 cubic feet per second. In Glencoe Avenue, the street capacity of 24 cubic feet per second is sufficient to handle the proposed flows from the Project Site (8.4 cubic feet per second), along with the existing street flows of 1.2 cubic feet per second.

In terms of polluted runoff, the Project's proposed uses would be typical of residential, office, and commercial operations and would not introduce substantial sources of polluted water. As discussed above under Threshold (a), anticipated and potential pollutants generated by the Project include sediment, nutrients, pesticides, metals, pathogens, and oil and grease. The implementation of BMPs required by the City's LID Ordinance would target these pollutants that could potentially be carried in stormwater runoff.

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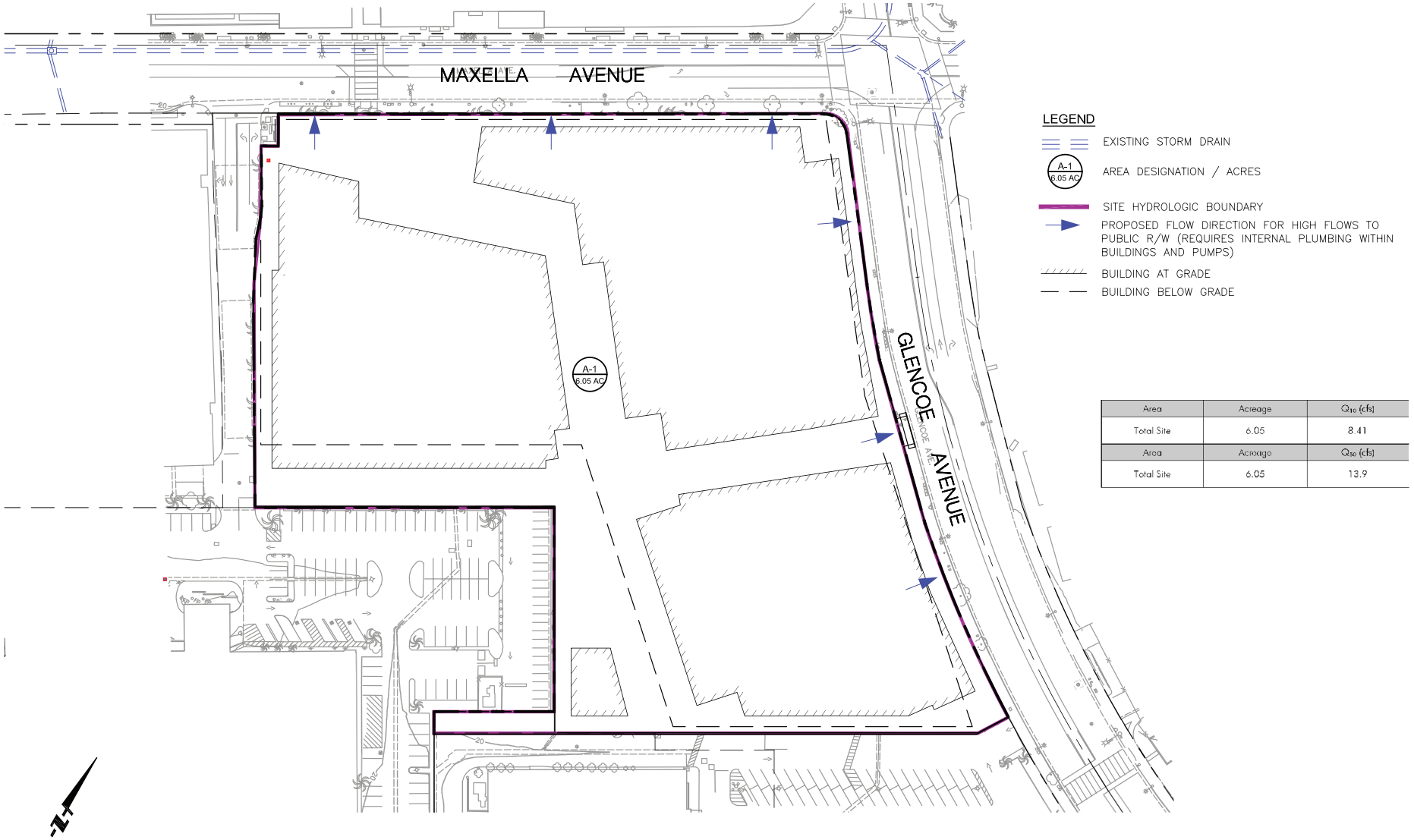
[33] *Per the City's Special Order No. 007-1299, the City has adopted the Los Angeles County Department of Public Works (LACDPW) Hydrology Manual as its basis of design for storm drainage facilities. The Hydrology Manual requires projects to have drainage facilities to meet the Urban Flood level of protection, which is defined as runoff from a 25-year frequency storm falling on a saturated watershed. The L.A. CEQA Thresholds Guide, however, establishes the 50-year frequency design storm event as the threshold to evaluate potential impacts on surface water hydrology. Therefore, to provide a more conservative analysis of the ability of storm drain infrastructure to accommodate the demand generated by the Project, the higher 50-year storm event threshold was used.*



Area	Acreage	Q_{10} (cfs)
Total Site	6.05	8.41
Area	Acreage	Q_{50} (cfs)
Total Site	6.05	13.9

Figure IV.G-2
Proposed Hydrology

Source: Fuscoe Engineering, 2020.

Based on the above, the Project would not create or contribute additional runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial sources of polluted runoff. Therefore, impacts from runoff water would be less than significant.

(2) Mitigation Measures

Project-level impacts related to stormwater drainage systems would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to stormwater drainage systems were determined to be less than significant. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (c): 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 through the addition of impervious surfaces, in a manner which would:

iv. impede or redirect flood flows?

(1) Impact Analysis

As discussed above, the Project Site is not located within a 100-year flood plain as mapped by the Federal Emergency Management Agency (FEMA) or the City of Los Angeles. In addition, as previously discussed, the Project would not substantially alter the existing drainage pattern of the Project Site nor would the Project include the addition of impervious surfaces. **As such, the Project would not alter the existing drainage pattern of the Project Site in a manner that would impede or redirect flood flows, and no impacts would occur.**

(2) Mitigation Measures

No Project-level impacts related to flood flows would occur. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

No Project-level impacts related to flood flows would occur. Therefore, no mitigation measures are required or included.

Threshold (d): In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to Project inundation?

(1) Impact Analysis

As previously noted above, the Project Site is not located within a flood hazard area. As discussed in Section VI, Other CEQA Considerations, of this Recirculated Draft EIR, and evaluated in the Initial Study prepared for the Project, included as Appendix A of this Recirculated Draft EIR, the Project Site is located approximately 0.35 mile east of the Marina del Rey and the Safety Element of the City of Los Angeles General Plan does not map the Project Site as being located within an area potentially affected by a tsunami. In addition, the Project Site is not positioned downslope from a body of water. Therefore, inundation as a result of seiche is unlikely. **Accordingly, as the Project would not be located in a flood hazard, tsunami, or seiche zone, the Project would not risk release of pollutants due to Project inundation, and no impacts would occur.**

(2) Mitigation Measures

No Project-level impacts related to the release of pollutants in flood hazard, tsunami, or seiche zones would occur. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

No Project-level impacts related to the release of pollutants in flood hazard, tsunami, or seiche zones would occur. Therefore, no mitigation measures were required or included.

Threshold (e): Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

(1) Impact Analysis

Under Section 303(d) of the Clean Water Act, states are required to identify water bodies that do not meet their water quality standards. Biennially, the Los Angeles Regional Water Quality Control Board prepares a list of impaired waterbodies in the region, referred to as the 303(d) list. The 303(d) list outlines the impaired waterbody and the specific pollutant(s) for which it is impaired. All waterbodies on the 303(d) list are subject to the development of a Total Maximum Daily Load (TMDL). As discussed above, the Project Site is located within the Ballona Creek Watershed and adjacent to the Marina del Rey Watershed. According to the State Water Resources Control Board, water quality in the Ballona Creek Estuary and Marina del Ray Harbor has been impaired by pollutants from dense clusters of residential, industrial, and other urban activities. Both the Ballona Creek Estuary and Marina del Rey Harbor are classified as impaired and listed as category 5 of

the Section 303(d) List of Water Quality Limited Segments, which signifies that standards are not met and that TMDLs are needed for at least one of the pollutants identified. Pollutants contributing to this classification for Ballona Creek are as follows: (1) cadmium; (2) chlordane; (3) coliform bacteria; (4) copper; (5) DDT; (6) lead; (7) PAHs; (8) PCBs; (9) shellfish harvesting advisory; (10) silver; and (11) zinc. Meanwhile pollutants contributing to the category 5 classification for the Marina del Rey Harbor are as follows: (1) chlordane; (2) copper; (3) fish consumption advisory; (4) indicator bacteria; (5) lead; (6) PCBs; and (7) zinc.

The County of Los Angeles, the City of Los Angeles, and all other cities in the Los Angeles Watershed are responsible for the implementation of watershed improvement plans or Enhanced Watershed Management Programs (EWMP) to improve water quality and assist in meeting the TMDL milestones. As discussed above in the Regulatory Framework, the Enhanced Watershed Management Program for the Ballona Creek Watershed utilizes a multi-pollutant approach that maximizes the retention and use of urban runoff as a resource for water reuse, irrigation, and indoor use, while also creating additional benefits for the communities in the Ballona Creek Watershed.

As discussed above under Threshold (a), Project construction could result in erosion of exposed and stockpiled soils, increased pollutant loading due to on-site watering activities, and pollutant discharges relating to the storage, handling, use and disposal of chemicals, adhesives, coatings, lubricants, and fuel. However, the Project would be required to obtain coverage under the NPDES Construction General Permit which requires implementation of a SWPPP. The BMPs included in the SWPPP could include sandbags, storm drain inlets protection, stabilized construction entrance/exit, wind erosion control, and stockpile management, to minimize the discharge of pollutants in stormwater runoff during construction. The SWPPP would be carried out in compliance with SWRCB requirements and would also be subject to review by the City. During construction, the SWPPP would be referred to regularly and amended as changes occur throughout the construction process. In addition, Project construction activities would occur in accordance with City grading permit regulations, such as the preparation of an erosion control plan, to reduce the effects of sedimentation and erosion. With compliance with these existing regulatory requirements that include specific BMPs to address surface water quality, impacts during construction would be less than significant.

As previously discussed, potential pollutants generated by the Project would be typical of residential, commercial, and office uses and may include sediment, nutrients, pesticides, pathogens, trash and debris, oil and grease, and metals. The implementation of BMPs required by the City's LID Ordinance would target these pollutants that could potentially be carried in stormwater runoff. Implementation of the LID features proposed as part of the Project would result in an improvement in surface water quality runoff as compared to existing conditions. As such, the Project would not introduce new pollutants

or an increase in pollutants that could conflict with or obstruct any water quality control plans for the Ballona Creek Estuary and Marina del Rey Watershed.

With regard to conflicting or obstructing any sustainable groundwater management plans, as discussed above, the Project Site is currently comprised of approximately 96 percent impervious surfaces, and as such, limited groundwater recharge occurs. With implementation of the Project, the Project Site would be comprised of 88 percent impervious surfaces. In addition to decreasing impervious surfaces, consistent with LID requirements to reduce the quantity and improve the quality of rainfall runoff that leaves the Project Site, the Project would include the installation of capture and use or biofiltration planter BMPs as established by the LID Manual. The Project's decrease in pervious surfaces as well as the installation of the capture and use or biofiltration system would improve the groundwater recharge capacity of the Project Site compared to existing conditions.

With compliance with existing regulatory requirements and implementation of LID BMPs, the Project would not conflict with or obstruct implementation of a water quality control plan or a sustainable groundwater management plan. Impacts would be less than significant.

(2) Mitigation Measures

Project-level impacts related to conflict with a water quality control plan or sustainable groundwater management plan would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to conflict with a water quality control plan or sustainable groundwater management plan were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

(a) Surface Water Quality

As detailed in Section III, Environmental Setting, of this Recirculated Draft EIR, a total of 14 potential related development projects have been identified in the vicinity of the Project Site. These related projects reflect the diverse range of land uses in the vicinity of

the Project Site. Specifically, the related projects comprise a variety of uses, including apartments, condominiums, restaurants, hotels, office, and retail uses, as well as mixed-use developments incorporating some or all of these uses. As discussed above, stormwater runoff from most urban development sites has the potential to introduce pollutants into the stormwater system. Given the similar types of land uses proposed by the related projects, anticipated and potential pollutants generated by the related projects could also include sediment, nutrients, pesticides, metals, pathogens, and oil and grease. As with the Project, future growth in the Ballona Creek Watershed and the Marina del Rey Watershed would be subject to NPDES requirements relating to water quality for both construction and operation. In particular, related projects would be required, pursuant to the City's LID Ordinance, to implement BMPs that would target potential pollutants that could be carried in stormwater runoff. In addition, since the Project Site is located in a highly urbanized area, future land use changes or development are not likely to cause substantial changes in regional surface water quality. As noted above, the Project would not have an adverse impact on water quality, and would improve the quality of on-site flows due to the introduction of new BMPs that would collect, treat, and discharge runoff from the Project Site (which is currently not fully treated under existing water quality regulations before being discharged). Also, it is anticipated that the Project and other future development projects would be subject to LID requirements and implementation of measures to comply with Total Maximum Daily Loads. Increases in regional controls associated with other elements of the municipal separate stormwater sewer systems permit would improve regional water quality over time. **Therefore, construction and operation of the Project and related projects would not result in significant cumulative impacts associated with surface water quality. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts to surface water quality would be less than significant.**

(b) Groundwater Quality

As noted above, the related projects comprise a variety of uses, including apartments, condominiums, restaurants, hotels, office, and retail uses, as well as mixed-use developments incorporating some or all of these elements. These proposed uses are similar to the types of land uses proposed by the Project. As such, these related projects would be anticipated to involve the use, handling, storage, and disposal of similar potentially hazardous materials and wastes that could be released into the groundwater. However, as with the Project, the related projects would be required to comply with all applicable federal, state, and local requirements concerning the handling, storage and disposal of hazardous waste, which would reduce the potential for the release of contaminants into groundwater, and would be subject to LARWQCB requirements relating to groundwater quality. Other potential effects to groundwater quality, including from USTs and oil wells, are site specific and would be addressed by each individual related project. As discussed above, with implementation of regulatory requirements, potential groundwater quality impacts during construction and operation of the Project would be reduced to a less

than significant level. Like the Project, related projects would also comply with applicable regulations during construction and operation as discussed above for the Project and would implement site-specific measures where needed. **Therefore, construction and operation of the Project and related projects would not result in significant cumulative impacts associated with groundwater quality. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts to groundwater quality would be less than significant.**

(c) Surface Water Hydrology

The geographic context for the cumulative impact analysis on surface water hydrology is the Ballona Creek Watershed and the Marina del Rey Watershed. The Project, in conjunction with forecasted growth in the Ballona Creek Watershed, could cumulatively increase stormwater runoff flows. However, as noted above, the Project would not have an adverse impact on stormwater flows. Also, in accordance with City requirements, related projects and other future development projects would be required to implement BMPs to manage stormwater in accordance with LID guidelines. Furthermore, the City of Los Angeles Department of Public Works would review each future development project on a case-by-case basis to ensure sufficient local and regional stormwater drainage infrastructure is available to accommodate stormwater runoff. **Therefore, construction and operation of the Project and related projects would not result in significant cumulative impacts associated with surface water hydrology. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts to surface water hydrology would be less than significant.**

(d) Groundwater Hydrology

Cumulative groundwater hydrology impacts could result from the overall utilization of groundwater basins located in proximity to the Project Site and other related projects in the vicinity of the Project Site. In addition, interruptions to existing hydrology flow by dewatering operations of groundwater would have the potential to affect groundwater levels. The purpose of dewatering operations is for the protection of both existing and proposed building structures and temporary groundwater pumping would be limited to the level necessary for implementation of the Project. The dewatering system used during Project construction would be temporary, would not operate at all times, and would only be activated when the level of the water reaches the permitted level that initiates the dewatering operations. While short-term, periodic dewatering has the potential to have a minimal effect on groundwater hydrology locally at the Project Site, dewatering operations at such a temporary, localized level would not have the potential to affect regional groundwater hydrology.

Any calculation of the extent to which the related projects would increase or decrease impervious or pervious surfaces that might affect groundwater quality would be

speculative. However, no water supply wells are located within a 1-mile radius of the Project Site, and the Project would have a less-than-significant impact on groundwater levels. Moreover, as with the Project, any related project would be required to evaluate its individual impacts to groundwater hydrology due to temporary or permanent dewatering operations.

Similar to the Project, other proposed projects within the groundwater basin would likely incorporate structural designs for subterranean levels that are able to withstand hydrostatic forces and incorporate comprehensive waterproofing systems in accordance with current industry standards and construction methods such that permanent dewatering operations are not required. If any related project requires permanent dewatering systems, such systems would be regulated by the SWRCB. Should excavation for other related projects extend beneath the groundwater level, temporary groundwater dewatering systems would be designed and implemented in accordance with SWRCB permit requirements. Additionally, as with the Project, related projects would be required to implement BMPs to capture stormwater runoff onsite, thereby minimizing effects on groundwater recharge. **Therefore, construction and operation of the Project and related projects would not result in significant cumulative impacts associated with groundwater hydrology. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts to groundwater hydrology would be less than significant.**

(2) Mitigation Measures

Cumulative impacts related to surface water and groundwater quality and surface water and groundwater hydrology would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to surface water and groundwater quality and surface water and groundwater hydrology were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.