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. This analysis is based on the *2159 Bay Street Technical Report: Water Resources* (Water Resources Technical Report),[1] prepared for the Project, and is included as Appendix H of this 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

[1] *KPFF Consulting Engineers, 2159 Bay Street Technical Report: Water Resources, May 23, 2022.*

- 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
- 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.[2] 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) Permit generally serving, or located in, incorporated cities with 100,000 or more people (referred to as municipal permits); (2) 11 specific categories of

[2] *U.S. Environmental Protection Agency, Clean Water Act, November 2002.*

industrial activity (including landfills); and (3) construction activity that disturbs five acres or more of land. As of March 2003, Phase II of the NPDES Program extended the requirements for NPDES permits to numerous small municipal separate storm sewer systems, construction sites of one to five 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.[3] 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.[4] 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: 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 MCLs, and that the EPA has delegated the Cal Dept. of Public Health the responsible agency for administering California's drinking water program. MCLs are established under 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

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[3] *U.S. Environmental Protection Agency, Water Quality Standards Handbook, 2010, Chapter 4: Antidegradation.*

[4] *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 January 26, 2022.*

hazards.[5] FEMA provides flood insurance rate maps (FIRMs) for local and regional planners to promote sound land use and development practices, by identifying potential 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.[6] 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 Region (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

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[5] *The National Flood Insurance Act of 1968, as amended, and The Flood Disaster Protection Act of 1973, 42 U.S.C. 4001 et. seq., www.fema.gov/media-library/assets/documents/21010, accessed January 26, 2022.*

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

RWQCB is also given authority to issue waste discharge requirements, enforce actions against stormwater discharge violators, and monitor water quality.[7]

(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.[8] 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 such water resource.

(c) California Toxics Rule

In 2000, the California Environmental Protection Agency (Cal-EPA) promulgated the California Toxics Rule, which establishes water quality criteria for certain toxic substances to be applied to waters in the State.[9] Cal-EPA promulgated this rule based on Cal-EPA'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

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[7] *U.S. Environmental Protection Agency, Clean Water Act, December 2016, www.epa.gov/compliance/state-review-framework-compliance-and-enforcement-performance, accessed January 26, 2022.*

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

[9] *U.S. Environmental Protection Agency, 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 January 26, 2022.*

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.

(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 groundwater sustainability agency (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.[10] 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.[11] 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

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[10] *Board of Directors of the Water Replenishment District of Southern California, Resolution No. 16-1048, December 8, 2016, https://sgma.water.ca.gov/portal/alternative/print/12, accessed January 26, 2022.*

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

County's MS4 Permit, which is enforced on all new developments that discharge directly into the County's MS4 system.

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, referred to as General Permit for Stormwater Discharges from Construction Activities by the SWRCB, establishes a risk-based approach to stormwater control requirements for construction projects.

(i) Construction: Stormwater Pollution Prevention Plan

For all construction activities disturbing one 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 General Permit must prepare and implement a SWPPP that meets the requirements of the General Permit.[12] 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.

[12] *State Water Resources Control Board, Construction Stormwater Program, www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html, accessed January 26, 2022.*

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

- 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 (General Permit) on September 2, 2009, most recently amended the permit on July 17, 2012 (Order No. 2012-0006-DWQ, General NPDES Permit No. CAS000002), and will be re-issuing the General Permit. The Construction General Permit (and the upcoming re-issued General Permit) regulates construction activity, including clearing, grading, and excavation of areas one 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 ground water, 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. A 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.[13] 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.[14]

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[13] *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.*

[14] *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.*

(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). The Los Angeles County MS4 Permit has been determined by the State Water Resources Control Board 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 United States (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, the County and City are both required to implement development planning guidance and control measures that control and mitigate stormwater quality and runoff volume impacts to receiving waters as a result of new development and redevelopment. The County and the City also are required to implement other municipal source detection and elimination programs, as well as maintenance measures.

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.[15] 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

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

(Stormwater Ordinance), as authorized by Los Angeles Municipal Code (LAMC) Section 64.72.

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),[16] 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 Plan

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.[17] 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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[16] *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.*

[17] *City of Los Angeles, The Los Angeles River Revitalization Master Plan, April 2007.*

(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 Subsection B of LAMC Section 64.70.

(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 SUSMP 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. The LID Ordinance (see below) applies first to a project in lieu of SUSMP. If a large project cannot meet the requirements of the LID Ordinance, then SUSMP measures are applied.

(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 updated 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.[18]

The intent of LID standards is to:

[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.*

- 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;
- 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 are intended to be inclusive of, and potentially exceed, SUSMP standards, 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.[19] 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

[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.*

approach listed in the LID Manual is feasible, then a combination of approaches may be used.[20]

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)[21] 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. The Development Best Management Practices Handbook, Part A: Construction Activities, provides specific minimum BMPs for

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[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.*

all construction activities.[22] 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 regulations of the City's Stormwater Program.[23] 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.

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[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.*

[23] *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.*

b. Existing Conditions

(1) Surface Water Hydrology

(a) Regional

The Project Site is located within the Los Angeles River Watershed in the Los Angeles Central Basin (see Figures 1 and 5 of the Water Resources Technical Report). The Los Angeles River Watershed encompasses a land area of approximately 834 square miles. The eastern portion of the Los Angeles River Watershed spans from the Santa Monica Mountains to Simi Hills and in the west from the Santa Susana Mountains to the San Gabriel Mountains. The Los Angeles River Watershed is shaped by the path of the Los Angeles River, which flows from its headwaters in the mountains eastward toward the northern corner of Griffith Park. There the channel turns southward through Glendale Narrows before it flows across the coastal plain and into San Pedro Bay at Long Beach. The Los Angeles River Watershed covers 43 cities and unincorporated communities and is composed of the following land uses: 44 percent open space, 37 percent residential, 11 percent industrial, and 8 percent commercial.[24] The Los Angeles River has evolved from an uncontrolled, meandering river providing a valuable source of water for early inhabitants to a major flood protection waterway.[25]

(b) Local

Stormwater runoff from the Project Site discharges into the curbs and gutters along the south side of Bay Street and north side of Sacramento Street where these streets border the Project Site, which convey the stormwater to nearby street storm inlets. The storm inlets collect the stormwater into the underground storm drain system before discharge to the Los Angeles River. The Los Angeles River flows generally south and ultimately discharges into the Pacific Ocean at San Pedro Bay near Long Beach. The underground storm drainage facilities are owned and maintained by the City of Los Angeles.

(c) On-Site

The Project Site is currently built out with three existing buildings, a paved parking lot, and paved courtyards. The Project Site is approximately 100 percent impervious in its existing condition. As indicated in Figure 2, Existing Drainage Conditions, in the Water

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[24] *Los Angeles County Department of Public Works, Watershed Management Division, Los Angeles River Watershed, http://dpw.lacounty.gov/wmd/watershed/LA, accessed January 26, 2022.*

[25] *Los Angeles County Department of Public Works, Watershed Management Division, Los Angeles River Watershed, http://dpw.lacounty.gov/wmd/watershed/LA, accessed January 26, 2022.*

Resources Technical Report, approximately one-third of the Project Site sheet flows to the northwest into the gutter in Bay Street. The remaining two-thirds of the sheet flows to the south and discharges into the gutter in Sacramento Street through a combination of curb drain/weep holes. As shown below in Table IV.G-1 on page IV.G-21, the existing 50-year frequency storm event peak flow rate from the Project Site is 5.34 cubic feet per second.

(2) Surface Water Quality

(a) Regional

As previously noted, the Project Site is located within the Los Angeles River Watershed in the Los Angeles Central Basin. Constituents of concern listed for Los Angeles River Watershed Reach 3 under California's Clean Water Act Section 303(d) include ammonia, trash, indicator bacteria, copper, toxicity, and nutrients (algae).

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 establishes the maximum amount of a pollutant allowed in a waterbody and serves as a planning tool for restoring water quality. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. No Total Maximum Daily Load (TMDL) data have been recorded by USEPA for the Los Angeles River Watershed Reach 3.[26]

(b) Local

In general, urban stormwater runoff occurs following precipitation events. The volume of runoff flowing into the drainage system depends on the intensity and duration of the rain event. Contaminants that may be found in stormwater from developed areas typically 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. The City typically installs 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.

[26] *SWRCB, 2016 California 303(d) List of Water Quality Limited Segments, www.waterboards.ca.gov/losangeles/water_issues/programs/303d/2016/Revised%20Appendix_B.shtml; accessed January 26, 2022.*

Table IV.G-1
Existing Drainage Stormwater Runoff Calculations

Drainage Area[a]	Area (acres)	Volumetric Flow Rate measured in cubic feet per second Q_{50} (cfs)
Drainage to Bay Street		
Sub-Area A1	0.21	0.66
Sub-Area A2	0.42	1.32
Total to Bay Street	*0.63*	*1.98*
Drainage to Sacramento Street		
Sub-Area B1	0.56	1.76
Sub-Area B2	0.51	1.60
Total to Sacramento Street	*1.07*	*3.36*
Total of Project Site	**1.70**	**5.34**

Q_{50} (cfs) = Volumetric flow rate of a 50-year storm event measured in cubic feet per second.

[a] *The existing on-site drainage sub-areas are shown in Figure 2, Existing Drainage Conditions, in the Water Resources Technical Report which is included as Appendix H of this Draft EIR.*

Source: KPFF Consulting Engineers, 2022.

(c) On-Site

As discussed in Section II, Project Description, of this Draft EIR, existing operations within the Project Site include engineering and test development operations, office operations, and fabrication and machining operations. Exterior areas in the central and eastern portions of the Project Site are used for storage, equipment staging, and exterior operations. Other smaller structures at the Project Site include shipping containers that have been converted into offices and conference rooms, tents used for welding operations and meetings, and stacked parking systems. In addition, designated areas for storage of industrial byproducts and materials are currently present on-site. Based on a site investigation, no BMPs are currently implemented at the Project Site, and the Project Site has no current means of treating stormwater runoff.

(3) Groundwater Hydrology

(a) Regional

Groundwater use for domestic water supply is a major 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 is comprised of 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

The Project Site specifically overlies northeastern portion of the Central Subbasin. As described in the Water Resources Report, the Central Subbasin is bounded on the north by a surface divide called the La Brea high, and on the northeast and east by emergent less permeable Tertiary rocks of the Elysian, Repetto, Merced and Puente Hills. The southeast boundary between Central Basin and Orange County Groundwater Basin roughly follows Coyote Creek, which is a regional drainage province boundary. The southwest boundary is formed by the Newport Inglewood fault system and the associated folded rocks of the Newport Inglewood uplift.

Groundwater in the Central Subbasin is replenished by percolation of precipitation and stream flow from the Santa Monica Mountains to the north. Over time, urbanization has decreased the amount of pervious surfaces limiting natural recharge through direct percolation. The natural safe yield of the Central Subbasin is estimated to be approximately 3,000 acre-feet per year.

(c) On-Site

The Project Site is improved with three existing buildings and existing paved areas used for industrial activities and storage. As such, the Project Site is currently comprised entirely of impervious surfaces and does not contribute to groundwater recharge. As referenced in the Project's Preliminary Geotechnical Assessment included as Appendix IS-3 of the Initial Study, which is included in Appendix A of this Draft EIR, the Seismic Hazard Report for the Los Angeles 7.5-Minute Quadrangle indicated that the historic-high groundwater level for the Project Site is in the order of 170 feet below ground surface (bgs). However, as also mentioned in the Preliminary Geotechnical Assessment, previous investigations in the vicinity of the Project Site did not encounter groundwater to explored depths of approximately 80 feet bgs, and the Phase I Environmental Site Assessment Report (Phase I ESA) prepared for the Project and included in Appendix G of this Draft EIR observed groundwater at 81 feet bgs. Based on the geotechnical assessment, it was

stated that current groundwater levels at the Project Site are anticipated to be similar to these observed water levels (i.e., at least 80 feet bgs).[27]

(4) Groundwater Quality

(a) Regional

As mentioned above, the City of Los Angeles overlies the Los Angeles Coastal Plain Groundwater Basin, which falls under the jurisdiction of the LARWQCB. According to LARWQCB's 2013 Basin Plan (the latest 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, nitrite), and taste and odor.

(b) Local

The Project Site overlies the Central Subbasin within the Los Angeles Coastal Plain Groundwater Basin. Based upon LARWQCB's Basin Plan, constituents of concern listed for the Central Subbasin include boron, chloride, sulfate, and Total Dissolved Solids (TDS).

(c) On-Site

Although it is possible for surface water-borne contaminants to percolate into groundwater and affect groundwater quality, as the Project Site is currently entirely impervious surfaces, no appreciable infiltration of potential contaminants is expected to occur. Therefore, groundwater quality is not impacted by existing activities at the Project Site.

Other types of risk such as underground storage tanks have a greater potential to impact groundwater. As noted in the Phase I ESA, previous land uses included chemical manufacturing and storage, automotive repair operations and storage, insulation and waterproofing fabrication, battery manufacturing, floor cement manufacturing, and laundry related operations. All these uses indicate the potential presence of historical underground storage tanks. At least one UST for diesel storage was identified and removed in or about 1990.[28]

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[27] *Geotechnologies, Inc., Preliminary Geotechnical Assessment, Proposed Commercial Development 2159 Bay Street, Los Angeles, California, November 21, 2017. See Appendix IS-3 of Appendix A.1 of this Draft EIR.*

[28] *Ramboll Environ US Corporation, Phase I Environmental Site Assessment Report, 2145-2161 Sacramento Street, 2136 & 2159 Bay Street, Los Angeles, CA 90021, October 5, 2016. See Appendix A of this Draft EIR.*

A Limited Phase II Subsurface Investigation was subsequently conducted and included a limited geophysical survey and 19 borings for collection of soils samples. Five of these borings were performed in the vicinity of the former UST as well as groundwater sampling. The report concluded that the results of the sampling performed did not indicate that significant subsurface impacts exist beneath the existing building footprints. Given the low concentrations of VOCs and TPH reported in the groundwater, no active remediation is warranted although limited monitoring may be required by the appropriate regulatory agency.[29]

(5) Flood Zone

Based on the Federal Emergency Management Agency Flood Insurance Rate Map that covers the Project area (included as Figure 8 of the Water Resources Technical Report), the Project Site is not located within a 100-year flood zone. 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."[30] However, according to a U.S. Army Corps of Engineers (USACE) report from 1992, the Project Site may be subject to a 100-year flood due to a limitation in the capacity of the Los Angeles River channel.[31] The levee nearest to the Project Site is located along the Los Angeles River approximately 250 feet east of the Project Site. The USACE operates and maintains the 22.5-mile stretch of the Los Angeles River between Lankershim Boulevard in Hollywood and Stuart and Grey Road in Downey, which includes the portion adjacent to the Project Site. Their maintenance activities include inspection and cleaning of the channel walls and removing vegetation growing in cracks and joints.[32] In 2017, they awarded a contract for the repair of a damage embankment in Reach 4D of the Los Angeles River Flood Control Channel. Previously, HESCO flood barriers were installed in parts of the channel identified as at greatest risk of flood waters during the 2015/2016 El Nino storm season. As discussed in the Water Resources Report, the USACE is taking an active role in identifying areas in need of repair and flood mitigation, and the area nearest to the Project Site has not been identified in need of improvement.

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[29] *Ramboll Environ US Corporation, Limited Phase II Subsurface Investigation, 2145-2161 Sacramento Street, 2136 & 2159 Bay Street, Los Angeles, California 90021, October 5, 2016. See Appendix G of this Draft EIR.*

[30] *Federal Emergency Management Agency, Flood Insurance Rate Map, Panel Number 06037C1636G, effective on 12/21/2018.*

[31] *U.S. Army Corps of Engineers, Los Angeles District, Los Angeles County Drainage Area Review Final Feasibility Report, revised February 1992.*

[32] *U.S. Army Corps of Engineers, Los Angeles River, www.spl.usace.army.mil/Missions/Asset-Management/Los-Angeles-River/, accessed February 15, 2022.*

3. Project Impacts

a. Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines (Appendix G), a project would have a significant impact in regards to hydrology and water quality if it would result in any of the following:

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

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

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. City 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.

As defined in the California Water Code:

- "Pollution" means an alteration of the quality of the waters of the state to a degree which unreasonably affects either of the following: (1) the waters for beneficial uses; or (2) facilities which serve these beneficial uses. Pollution may include contamination.

- "Contamination" means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases. Contamination includes any equivalent effect resulting from the disposal of waste whether or not waters of the state are affected.

- "Nuisance" means anything which meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons although the extent of the annoyance or damage inflicted upon individuals may be unequal; and (3) occurs during or as a result of the treatment or disposal of wastes.

(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

Would the project:

- 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

This analysis is based on the Water Resources Report prepared for the Project by KPFF Consulting Engineers, dated May 23, 2022. This report is included as Appendix H of this 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. The analysis also address how the Project would comply with applicable surface water quality regulations (i.e., NPDES, SWPPP, and City LID and BMP requirements) that have been formulated to avoid significant surface water quality impacts.

With regards specifically to how the Project would meet City LID requirements, according to Section 3.1.3. of the City's LID Manual, post-construction stormwater runoff

from a new development must be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency BMPs onsite for at least the volume of water produced by the greater of the 85th percentile storm or the 0.75 inch storm event. The LID Manual prioritizes the selection of BMPs used to comply with the stormwater mitigation requirement as follows: (1) infiltration systems; (2) stormwater capture and use; (3) high efficient biofiltration/bioretention systems; and (4) any combination of these. Feasibility screening delineated in the LID Manual is applied to determine which BMP would best suit the Project, with the mitigated stormwater runoff volume generated from the greater of the 85th percentile storm and the 0.75-inch storm event calculated using the following formula from the City's LID Handbook:

> Vdesign (gallons) = (85th percentile or 0.75 inch * 7.48 gallons/cubic foot) * Catchment Area (sq. ft.)
>
> > Where: Catchment Area = (Impervious Area x 0.9) + [(Pervious Area + Undeveloped Area) x 0.1]

(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 projects to have drainage facilities that meet the Urban Flood level of protection. The Urban Flood is runoff from a 25-year frequency design storm falling on a saturated watershed. A 25-year frequency design storm has a probability of 1/25 of being equaled or exceeded in any year. The *L.A. CEQA Thresholds Guide*, however, establishes the 50-year frequency design storm event as the threshold to analyze potential impacts on surface water hydrology as a result of development. Therefore, to provide a more conservative analysis, the Water Resources Report and this section analyze the larger storm event threshold, which is the 50-year frequency design storm event.

As part of the surface water hydrologic analysis, stormwater runoff generated from the Project Site was quantified using the Modified Rational Method.[33] The Modified

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[33] *The equation used in the Modified Rational Method is Q = C × I × 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 2006 Los Angeles County Department of Public Works Hydrology Manual. The*
(Footnote continued on next page)

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. The HydroCalc Calculator was used to calculate the stormwater peak runoff flow rate for the Project conditions by evaluating the changes within the individual drainage area. See Figure 4 of the Water Resources Technical Report for the HydroCalc Calculator results for the Project.

(3) Groundwater Quality and Hydrology

The analysis of the Project's potential impacts associated with groundwater is 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 extraction, dewatering, spreading, injection, or similar activities during construction; changes in groundwater recharge based on proposed land use changes and any existing wells in the vicinity; 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/or any potential groundwater remediation activities.

c. Project Design Features

The following project design features are proposed as a part of the Project:

Project Design Feature HYD-PDF-1: An on-site storm runoff detention system will be installed to hold flow rates in excess of 3.36 cubic feet per second for a 50-year storm event.

Project Design Feature HYD-PDF-2: The building finish floor will be raised two (2) feet above the existing grade on Bay Street, and four (4) feet above existing grade on Sacramento Street.

tributary drainage area was determined by delineating high points to create drainage boundaries and any subareas.

d. Analysis of Project Impacts

Threshold (a): Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water 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 (i.e., would potentially disturb the entire 1.70-acre Project Site), 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 (and the upcoming re-issued 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 Draft EIR, excavation would extend to a maximum depth of up to 42 feet below the ground surface. As discussed above, the historic high groundwater level for the Project Site is approximately 170 feet bgs, and groundwater was not encountered above 80 feet during explorations performed in the vicinity. As such, the Project is not expected to require dewatering during construction. 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. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with the NPDES permit. Any such temporary system would comply

with all relevant NPDES requirements related to construction and discharges from dewatering operations.

Furthermore, with implementation of a SWPPP and Erosion Control Plan, site-specific BMPs 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 discharge that would violate any water quality standard or waste discharge requirements or otherwise substantially degrade surface water quality. Thus, temporary construction-related impacts to surface water quality would be less than significant.**

(ii) Operation

Project operation would not increase concentrations of the items listed as constituents of concern for the Los Angeles River Watershed but would introduce sources of potential water pollution that are typical of office, retail, and restaurant uses (e.g., sediment, nutrients, pesticides, metals, pathogens, oil, and grease).[34] Stormwater runoff from precipitation events could also potentially carry urban pollutants into municipal storm drains. Although the Project would maintain the same percentage of impervious surfaces as under existing conditions, a portion of the Project Site would be allocated for such stormwater BMPs intended to control and treat stormwater runoff in compliance with LID requirements. As such, in order to comply with LID requirements, the BMPs would mitigate at minimum the first flush or the equivalent of the greater between the 85th percentile storm and first 0.75-inch of rainfall for any storm event.

Specifically, based on the analysis included in the Water Resources Report, infiltration would be feasible only if infiltration disposal would be located at least 10 feet below the bottom of the proposed foundation system. The Project's planned depth is up to 42 feet below the ground surface. As such, infiltration could potentially occur within a 28-foot zone in a portion of the Project Site under the proposed development. Based on the size of the Project Site, the LID system would be required to mitigate 41,549 gallons of stormwater runoff generated by a storm event. If infiltration were to be infeasible, stormwater capture and use could be utilized only if approximately 6,200 square feet of landscaping were installed. However, if capture and use is infeasible, the Project would then be required to implement High Efficiency Biofiltration/Bioretention Systems; in this

[34] *Constituents of concern listed for the Los Angeles River under California's Clean Water Act Section 303(d) List include cadmium (sediment), trash, coliform bacteria, copper (dissolved), lead, e. coli, selenium, sediment toxicity, Shellfish Harvesting Advisory, silver, toxicity, viruses (Enteric), and zinc.*

case, 5,127 square feet for a Biofiltration Planter would be required on-site. These measures would be required to meet the existing performance standards of the City LID Ordinance. Stormwater that bypasses the BMP systems would discharge to Sacramento Street at an approved discharge point in the public right-of-way.

Thus, based on the above, Project operation would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface water quality. Operational impacts related to surface water quality would be less than significant.

(b) Groundwater Quality

(i) Construction

During on-site grading and building construction, hazardous materials, such as fuels, 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 reduce the potential for the construction of the Project to release contaminants into groundwater that could affect existing contaminants, expand the area or increase the level of groundwater contamination, or cause a violation of regulatory water quality standards at an existing production well.

In addition, as discussed above, construction of the Project would include excavations of up to 42 feet bgs. The historic high groundwater level for the Project Site is approximately 170 feet bgs, and groundwater was not encountered above 80 feet during explorations performed in the vicinity. As such, dewatering operations are not expected during construction. It should be noted that, as discussed in Section IV.F, Hazards and Hazardous Materials, of this Draft EIR, based on the 2016 Phase I Environmental Site Assessment (ESA), Phase II subsurface soil sampling was conducted in 2015 which detected residual soil contamination at the Project Site, including VOCs (primarily tetrachloroethene [PCE], trichloroethene [TCE], 1,1,1-trichloroethane [1,1,1-TCA] and TPH, as well as lead and arsenic at the Project Site.[35] However, as indicated in the 2017 Source Area Removal Report included in Appendix G of this Draft EIR, remediation of soil contamination at the Project Site was completed under a 2017 Source Area Removal Work Plan approved by LACoFD. Nevertheless, because the maximum depth of Project

[35] *Ramboll Environ US Corporation, Phase I Environmental Site Assessment, Sacramento-Bay (2145-2161 Sacramento Street, 2136 & 2159 Bay Street), pgs. 2 and 25, October 2016. Included in Appendix G of this Draft EIR.*

excavations would be 42 feet bgs, versus the depth to groundwater and remediated soils of approximately 80 feet bgs and 86.5 feet bgs, respectively, it is not anticipated that Project excavations would intersect either the groundwater or the remediated soil. In addition, in the event dewatering is required during construction of the Project, any discharge of groundwater would occur pursuant to, and comply with, the NPDES permit or industrial user sewer discharge permit requirements. Pursuant to such requirements, the groundwater extracted would be chemically analyzed to determine contamination and the appropriate treatment and/or disposal methods.

According to the Phase I ESA, included in Appendix G of this Draft EIR, one diesel UST was formerly located at the Project Site and was removed in approximately 1990. Following the completion of the Phase II Investigation, soil was excavated in accordance with a soil management plan, and a subsurface metallic object was removed. In December 2018, the Site Mitigation Unit of the County of Los Angeles Fire Department's Health Hazardous Materials Division completed its review of the source area and soil removal reports and the existing site conditions and confirmed that the known site contamination had been satisfactorily assessed for commercial/industrial site use. This source area removal did not encounter USTs. In the unlikely event that USTs are found, suspect materials would be removed in accordance with all applicable federal, state, and local regulations, and applicable permits would be obtained from the LAFD prior to removal. Hence, the prior UST would not pose a groundwater quality issue under the Project.

Lastly, as there are no existing groundwater production wells or public water supply wells within one mile of the Project Site, construction activities would not be anticipated to affect existing wells. The Project also would not involve drilling to or drilling through a clean or contaminated aquifer.

Based on the above, with implementation of regulatory requirements, construction of the Project would not result in discharge 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

The Project would not include the installation or operation of water wells, or any extraction or recharge system that is in the vicinity of the coast, an area of known groundwater contamination or seawater intrusion, a municipal supply well or spreading ground facility.

Operation of the Project would not involve the use of underground storage tanks. While the development of new building facilities would slightly increase the use of on-site

hazardous materials, as discussed in Section IV.F, Hazards and Hazardous Materials, of this Draft EIR, 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 or casing 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, with implementation of regulatory requirements, 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 with regard to water quality would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to water 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

Construction activities for the Project would include excavation for subterranean parking. As discussed above, the historic high regional groundwater level for the Project Site is approximately 170 feet bgs, and groundwater was not encountered above 80 feet during explorations performed in the vicinity. As the Project's proposed excavation of up to 42 feet below grade would not reach this depth, groundwater is not expected to be encountered during construction that would require either temporary or permanent dewatering operations. However, as discussed above, if groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with the

NPDES permit. Any such temporary system would comply with all relevant NPDES requirements related to construction and discharges from dewatering operations. If groundwater is found during Project construction, it would consist of finite zones of perched groundwater, and any removal of groundwater, should it be required, would only occur up to the point where waterproofing would be installed. Therefore, if dewatering is required, it would have a minimal effect on local groundwater recharge in the vicinity of the Project Site. Furthermore, no water supply wells are located at the Project Site or within one mile of the Project Site that could be impacted by construction, nor would the Project include the construction of water supply wells. **Thus, Project construction would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Impacts on groundwater supplies or recharge during construction of the Project would be less than significant.**

(b) Operation

As the Project Site is currently comprised of approximately 100 percent impervious surfaces, minimal groundwater recharge occurs. As described in the Water Resources Report, based on a site visit, stormwater discharges from the Project Site without filtration under existing conditions. Although the Project would be developed with landscaping and planters, to provide a conservative analysis, the Project would be considered to result in the same percentage of impervious area.

A portion of the Project Site would be allocated for stormwater BMPs intended to control and treat stormwater runoff in compliance with LID requirements. The Project would implement infiltration, capture and use, and/or high-efficiency biofiltration/ bioretention systems. The 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 rainfall that would affect groundwater hydrology, including the direction of groundwater flow. In addition, as also discussed above, there are no existing wells or spreading grounds within one mile of the Project Site, and the Project would not include new injection or supply wells. **Therefore, operation of the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge in a manner that would impede sustainable groundwater management of the basin. The Project's potential impact on groundwater supplies and recharge during operation would be less than significant.**

(2) Mitigation Measures

Project-level impacts related to groundwater supplies or 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 or 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; or

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

(a) Construction

Construction activities for the Project would include demolition of the existing improvements and excavation for subterranean parking, followed by building construction and the installation of hardscape and landscape. These construction activities would have the potential to temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and rendering the Project Site temporarily more permeable. Exposed and stockpiled soils could be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities used to reduce airborne dust could contribute to pollutant loading in runoff.

As discussed above, because the construction site would be larger than one acre, the Project would be required to obtain coverage under the NPDES Construction General Permit. In accordance with the permit requirements, the Project would implement a SWPPP that specifies BMPs and erosion control measures during construction to manage runoff flows. These BMPs would be designed to contain stormwater or construction watering on the Project Site such that runoff will not impact off-site drainage facilities or receiving waters. An Erosion Control Plan, prepared and implemented in accordance with City grading permit regulations (LAMC Chapter IX, Division 70), would contain and treat stormwater or construction watering on-site so that runoff does not result in substantial pollution or impact off-site drainage facilities or receiving water. As such, flow directions and runoff volumes during temporary construction activities would be controlled.

Thus, with compliance with NPDES Construction General Permit requirements, including implementation of a SWPPP and BMPs, as well as compliance with applicable City grading permit regulations, Project construction would not substantially alter the existing drainage pattern of the Project Site in a manner that would result in substantial erosion, siltation, or flooding on- or off-site. In addition, the Project would not 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. As such, construction-related impacts to surface water hydrology would be less than significant.

(b) Operation

Under existing conditions, the Project Site is observed to be approximately 100 percent impervious, and stormwater sheet flows from the Project Site without infiltration or capturing. Stormwater from hardscape flows into off-site catch basins and is discharged through gutters in Bay Street and Sacramento Street, which both drain to a 28-inch storm drain pipe located in the public alley east of Santa Fe Avenue.

Although the Project would install landscaping and planters, in order to provide a conservative analysis, the Project is assumed to also retain the same percentage of imperviousness as under existing conditions. As such, the Project would not substantially increase the total rate or volume of stormwater runoff into the existing storm drain system. As discussed above, the Project would also comply with LID requirements and implement post-construction stormwater treatment BMPs that are required to control pollutants associated with the greater of the 85th percentile storm and first 0.75-inch of rainfall for any storm event. Specifically, based on the analysis included in the Water Resources Report, feasible BMPs could include infiltration, stormwater capture and use, and/or high-efficiency biofiltration/bioretention systems. The BMPs would control stormwater runoff such that there is no increase in runoff resulting from the Project.

As discussed previously, the Project Site is currently approximately 100 percent impervious, and no existing stormwater detention, infiltration or filtration systems or facilities appear to be located on the Project Site. Considering that the Project would develop buildings and paved areas covering virtually the entire Project Site, as indicated in Figure 3, Proposed Drainage Conditions, of the Water Resources Technical Report, the post-Project condition would also be approximately 100 percent impervious. Though the landscaping and landscaped planter proposed under the Project would reduce the imperviousness of the Project Site, this analysis conservatively assumes that the Project Site would remain approximately 100 percent impervious under the Project. Accordingly, as shown in Table IV.G-2 on page IV.G-38, the Project would not increase the total existing stormwater runoff from the Project Site during the 50-year storm event (i.e., both the pre-and post-Project Q_{50} stormwater flows from the Project Site would be an estimated

Table IV.G-2
Pre- and Post-Project Drainage Stormwater Runoff Comparison
(Without On-Site Stormwater Detention)

Drainage Area[a]	Pre-Project Flow Rate (Q_{50} cfs)	Post-Project Flow Rate (Q_{50} cfs)	Change Under the Project
Bay Street	1.98	0	–100%
Sacramento Street	3.36	5.34	+ 59%
Total	**5.34**	**5.34**	0%

Q_{50} cfs = Volumetric flow rate of a 50-year storm event measured in cubic feet per second.

[a] *The one on-site drainage sub-area under the Project is shown in Figure 3, Proposed Drainage Conditions, in the Water Resources Technical Report included as Appendix H of this Draft EIR.*

Source: KPFF Consulting Engineers, 2022.

5.34 cfs). The total amount of stormwater entering the public storm drain system from the Project Site would therefore remain unchanged. However, as indicated in Table IV.G-2, whereas approximately 37 percent of the stormwater runoff from the Project Site currently flows to Bay Street and approximately 63 percent to Sacramento Street, all the stormwater runoff from the Project Site would flow to Sacramento Street under the Project, effectively increasing runoff to Sacramento Street by approximately 1.98 cfs during the 50-year storm event. Because the existing storm drain in Sacramento Street, which is shown in Figure 3 of the Water Resources Technical Report, is 15 inches in diameter, its discharge capacity is insufficient to drain the existing runoff flow to it (estimated at 11.6 cubic feet per second).

In order to avoid increasing the runoff flow from the Project Site to the Sacramento Street storm drain, as part of the Project (see Project Design Feature HYD-PDF-1), an on-site stormwater runoff detention system capable of holding flow rates in excess of 3.36 cfs during a 50-year storm event would be implemented. Thus, as shown in Table IV.G-3 on page IV.G-39, with the development of the Project with the proposed on-site stormwater runoff detention system, the Project would: (1) reduce the total existing Q_{50} stormwater flow from the Project Site from 5.34 cfs to 3.36 cfs; (2) reduce the existing Q_{50} stormwater flow from the Project Site to the Bay Street storm drain from 1.98 cfs to 0 cfs; and (3) maintain the existing Q50 stormwater flow from the Project Site to the Sacramento Street storm drain at 3.36 cfs (i.e., no increase or decrease). Therefore, with implementation of the proposed stormwater runoff detention system, the Project would not substantially increase the rate or amount of surface runoff discharged into the existing storm drain system or any waterbody (in fact, the Project would have an overall beneficial effect on storm drain capacity). As such, the Project would not result in flooding on- or off-site.

Lastly, because the Project Site is currently approximately 100 percent impervious and would remain so under the Project, and because the Project would not increase the

Table IV.G-3
Pre- and Post-Project Drainage Stormwater Runoff Comparison
(With On-Site Stormwater Detention per Project Design Feature HYD-PDF-1)

Drainage Area[a]	Pre-Project Flow Rate (Q_{50} cfs)	Post-Project Flow Rate (Q_{50} cfs w/detention)	Change Under the Project
Bay Street	1.98	0	–100%
Sacramento Street	3.36	3.36	+ 0%
Total	**5.34**	**3.36**	– 37%

Q_{50} cfs = Volumetric flow rate of a 50-year storm event measured in cubic feet per second.

[a] *The one on-site drainage sub-area under the Project is shown in Figure 3, Proposed Drainage Conditions, in the Water Resources Technical Report included as Appendix H of this Draft EIR.*

Source: KPFF Consulting Engineers, 2022.

rate or amount of stormwater runoff from the Project Site, would not include uncontrolled stormwater runoff, and would not include large areas of unprotected soils that could potentially be eroded, Project operation would not result in substantial erosion or siltation on- or off-site.

Based on the above, operation of the Project would not substantially alter the existing drainage pattern of the Project Site in a manner that would result in substantial erosion, siltation, or flooding on- or off-site. In addition, the Project would not 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. As such, operational impacts to surface water hydrology would be less than significant.

(2) Mitigation Measures

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

(3) Level of Significance After Mitigation

Project-level impacts related to surface water 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.

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 designated 100-year flood hazard area as mapped by the Federal Emergency Management Agency or by the City of Los Angeles.[36,37] However, according to a USACE report from 1992, the Project Site may be subject to a 100-year flood due to a limitation in the capacity of the Los Angeles River channel.[38] The USACE operates the nearest levee (approximately 250 feet east of the Project Site) and maintains the 22.5-mile stretch of the Los Angeles River that includes the portion adjacent to the Project Site. The USACE continues to identify areas in need of repair and flood mitigation and is overseeing improvements upstream of the Project Site. Given such activity and based on the assessment that the area nearest to the Project Site is not in need of improvement, risk to the proposed development related to inundation or levee failure would be less than significant. Nonetheless, pursuant to Project Design Feature HYD-PDF-2, to provide additional protection against flooding, the building finish floor will be raised two feet above the existing grade on Bay Street, and approximately four feet above existing grade on Sacramento Street. **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 impacts would be less than significant.**

(2) Mitigation Measures

Project-level impacts related to impeding or redirecting flood flows would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to impeding or redirecting flood flows 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.

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[36] *Federal Emergency Management Agency, Flood Insurance Rate Map, Panel Number 06037C1636G, effective on 12/21/2018.*

[37] *City of Los Angeles, Safety Element of the Los Angeles City General Plan, Exhibit F, November 26, 1996, p. 57.*

[38] *U.S. Army Corps of Engineers, Los Angeles District, Los Angeles County Drainage Area Review Final Feasibility Report, revised February 1992.*

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

(1) Impact Analysis

As discussed in Section VI, Other CEQA Considerations, of this Draft EIR, and in the Initial Study included in Appendix A of this Draft EIR, the Project Site is located approximately 14 miles east of the Pacific Ocean, and the Safety Element of the City's General Plan does not map the Project Site as being located within an area potentially affected by a tsunami.[39] As discussed above, the Project Site is also not located within a designated 100-year flood plain as mapped by the Federal Emergency Management Agency, although as noted above, according to the USACE, the Project Site may be subject to a 100-year flood due to a limitation in the capacity of the Los Angeles River channel. The closest body of water to the Project Site is the Los Angeles River located approximately 250 feet to the east. However, the Los Angeles River includes a sunken concrete-lined channel, and there are no major water-retaining structures located up-gradient from the Project Site. Nonetheless, pursuant to Project Design Feature HYD-PDF-2, to provide additional protection against flooding, the building finish floor will be raised two feet above the existing grade on Bay Street, and approximately four feet above existing grade on Sacramento Street. Thus, inundation as a result of seiche is considered unlikely. Furthermore, the Project Site and surrounding area are fully developed and generally characterized by flat topography, and the Project Site is not mapped by either the City or State as being prone to landslides and, thus, mudflows. **Therefore, as the Project is not located in flood hazard, tsunami, or seiche zones, the Project would not risk release of pollutants due to inundation, and impacts would be less significant.**

(2) Mitigation Measures

Project-level impacts related to the release of pollutants due to Project inundation in flood hazard tsunami, or seiche zones would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to the release of pollutants due to Project inundation in flood hazard tsunami, or seiche zones 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.

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[39] *City of Los Angeles, Safety Element of the Los Angeles City General Plan, Exhibit G, November 26, 1996, p. 59.*

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

(1) Impact Analysis

The Project would comply with all applicable water quality control plans and sustainable groundwater management plans. As discussed above in response to Threshold (a) and Threshold (b), the Project would implement BMPs to filter, treat, and reduce stormwater pollutants prior to discharge from the Project Site, in accordance with the City's LID requirements and SWPPP. Non-stormwater runoff associated with typical operations of the Project Site would also be partially filtered by the BMPs (e.g., through the use of biofiltration) provided on-site prior to discharging from the Project Site. Furthermore, the Project would not adversely affect compliance with Section 303 of the Clean Water Act or TMDLs relative to the nearby water bodies since no TMDL data has been recorded by USEPA for the Los Angeles River Watershed Reach 3 where the Project Site is located. **Therefore, the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, and impacts would be less than significant.**

(2) Mitigation Measures

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

(3) Level of Significance After Mitigation

Project-level impacts related to water quality control plans or sustainable groundwater management plans 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

As detailed in Section III, Environmental Setting, of this Draft EIR, a total of 72 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 elements. The projected growth reflected by Related Project Nos. 1 through 72 is a conservative assumption, as some of the related projects may not be built out by 2025, may never be built, or may be approved

and built at reduced densities. To provide a conservative analysis, the future baseline forecast assumes that Related Project Nos. 1 through 72 are fully built out by 2025, unless otherwise noted.

(1) Impact Analysis

(a) Surface Water Quality

As discussed above, stormwater runoff from most development 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, oil, and grease. As discussed above, the Project would introduce BMPs to the Project Site and provide for the collection, treatment, and discharge of site flows. The Project would have a less-than-significant impact on surface water quality. As with the Project, related projects (all of which are in the Los Angeles River Watershed) would also be subject to NPDES requirements relating to water quality, and related projects would also be subject to LID requirements and implementation of BMPs and measures to target potential pollutants that could be carried in stormwater runoff. **Therefore, construction and operation of the Project and related projects would not result in significant cumulative impacts related to 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) Surface Water Hydrology

The geographic context for the cumulative impact analysis on surface water hydrology is the Los Angeles River Watershed. The Project, in conjunction with forecasted growth in the Los Angeles River Watershed, could cumulatively increase stormwater runoff flows. Without detailed drainage plans, it is not possible to determine whether any of the related projects would discharge stormwater into the same storm drainage facilities as the Project. Furthermore, 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 infrastructure is available to accommodate stormwater runoff. Moreover, with the implementation of the stormwater runoff detention system proposed under Project Design Feature HYD-PDF-1, the Project would result in reduced stormwater runoff overall as compared to existing conditions. **Therefore, construction and operation of the Project and related projects would not result in significant cumulative impacts related to 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.**

(c) Groundwater Quality

As noted above, the related projects comprise a variety of uses, including apartments, condominiums, restaurants, schools, 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. This would include coordination with the applicable governing agencies and compliance with applicable regulations, as discussed above for the Project. **Therefore, construction and operation of the Project and related projects would not result in significant cumulative impacts related to groundwater quality. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts to groundwater quality would be less than significant.**

(d) Groundwater Hydrology

The geographic context for the cumulative impact analysis on groundwater level is the Central Subbasin. 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 would have the potential to affect groundwater levels. 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, spreading grounds, or injection wells are located within a one-mile radius of the Project Site, and the Project would have a less-than-significant impact on groundwater levels. Furthermore, based on the Project's proposed maximum depth of excavation (i.e., 42 feet bgs) and historic high groundwater (i.e., approximately 80 feet bgs), the Project would not be likely to affect groundwater or require dewatering. Given these factors, and given that the Project would comply with all applicable hydrology regulations (such as with City's LID requirements), the Project could not combine with related projects to result in cumulative impacts. 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. 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 NPDES permit requirements. **Therefore, construction and operation of the Project and related projects would not result in significant cumulative impacts related to 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 with regard to hydrology and water quality would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts with regard to hydrology and water 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.