IV. Environmental Impact Analysis

F. Hydrology and Water Quality

1. Introduction

This section analyzes the Project's potential impacts on hydrology (drainage flows), surface water quality, groundwater levels and groundwater quality. The analysis is primarily based on the *1100 East Fifth Street Mixed-Use Project Technical Report: Water Resources*[1] (Water Resources Report) prepared for the Project, and included in its entirety in **Appendix G** 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
- 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 (No. 181,899)

[1] KPFF, 1100 East Fifth Street Mixed-Use Project Technical Report: Water Resources for APNs 5163-024-009 and 5163-024-014, 1100 E 5th Street, Los Angeles, California, 90013, April 30, 2019.

- 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 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 Anti-Degradation Policy

The Federal Antidegradation Policy has been incorporated within the Clean Water Act and requires states to develop state-wide 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.

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2 United States Environmental Protection Agency, Clean Water Act, November 2002, https://www.epa.gov/sites/production/files/2017-08/documents/federal-water-pollution-control-act-508full.pdf, accessed August 23, 2022.

3 United States Environmental Protection Agency, Water Quality Standards Handbook - Chapter 4: Antidegradation, 2010. https://www.epa.gov/sites/default/files/2014-10/documents/handbook-chapter4.pdf, accessed August 23, 2022.

(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 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 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

[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 August 23, 2022.

[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., https://www.fema.gov/sites/default/files/2020-07/national-flood-insurance-act-1968.pdf, accessed August 23, 2022.

[6] State Water Resources Control Board, Porter-Cologne Water Quality Control Act, January 2018, https://www.waterboards.ca.gov/laws_regulations/docs/portercologne.pdf, accessed August 23, 2022.

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 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 the 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

[7] United States Environmental Protection Agency, Clean Water Act, December 2016, https://www.epa.gov/sites/production/files/2017-08/documents/federal-water-pollution-control-act-508full.pdf, accessed August 23, 2022.

[8] California State Water Resources Control Board, State Board Resolution No. 68-16. October 1968, https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/1968/rs68_016.pdf, accessed August 23, 2022.

[9] United States Environmental Protection Agency, Water Quality Standards, Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California. February 2001, https://www.epa.gov/wqs-tech/water-quality-standards-establishment-numeric-criteria-priority-toxic-pollutants-state, accessed August 23, 2022.

waters and enclosed bays and estuaries that are designated by the LARWQCB as having beneficial uses protective of aquatic life or human health.

(d) Sustainable Groundwater Management Act of 2014

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

(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 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

[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 August 23, 2022.

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 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

[11] Los Angeles County Department of Public Works, Hydrology Manual, January 2006, http://dpw.lacounty.gov/wrd/Publication/engineering/2006_Hydrology_Manual/2006%20Hydrology%20Manual-Divided.pdf, accessed August 23, 2022.

[12] Construction Stormwater Program, State Water Resources Control Board, October 30, 2019. https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html, accessed August 23, 2022.

of stormwater runoff). The SWPPP is also required to include a discussion of the proposed program to inspect and maintain all BMPs.

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

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

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

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

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

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

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

The SWRCB adopted a General Permit for Stormwater Discharges from Construction Activities on September 2, 2009 and most recently amended the permit on July 17, 2012 (Order No. 2012-0006-DWQ, General NPDES Permit No. CAS000002). The Construction General Permit regulates construction activity, including clearing, grading, and excavation of areas 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 Activities

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]

(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

[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, https://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/general_orders/r4-2018-0125/OrderNoR4-2018-0125(Order).pdf, accessed August 23, 2022.

[14] 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, June 6, 2013, http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/permits/general/npdes/r4-2013-0095/Dewatering%20Order.pdf, accessed August 23, 2022.

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

[15] Upper Los Angeles River Watershed Management Group, Enhanced Watershed Management Program, January 2016, https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/los_angeles/upper_losangeles/20160127/UpperLARiver_mainbody_revEWMP_Jan2016.pdf, accessed August 23, 2022.

Watershed Control Measures, which are strategies and BMPs that will be implemented through the EWMP, individually or collectively, at watershed-scale to address the Water Quality Priorities. The EWMP Implementation Strategy is used as a recipe for compliance for each jurisdiction to address Water Quality Priorities and comply with the provisions of the MS4 Permit. The EWMP Implementation Strategy includes individual recipes for each of the 18 jurisdictions and each watershed/assessment area – Los Angeles River above Sepulveda Basin, Los Angeles River below Sepulveda Basin, Compton Creek, Rio Hondo, Verdugo Wash, Arroyo Seco, Burbank Western Channel, Tujunga Wash, Bull Creek, Aliso Wash, Bell Creek, McCoy-Dry Canyon, and Browns Canyon Wash. Implementation of the EWMP Implementation Strategy will provide a BMP-based compliance pathway for each jurisdiction under the MS4 Permit. The Permit specifies that an adaptive management process will be revisited every two years to evaluate the EWMP and update the program. The EWMP strategy will evolve based on monitoring results by identifying updates to the EWMP Implementation Plan to increase its effectiveness.

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

[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, https://www.lacitysan.org/cs/groups/sg_sw/documents/document/y250/mde3/~edisp/cnt017152.pdf, accessed August 23, 2022.

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.

(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.

[17] City of Los Angeles, The Los Angeles River Revitalization Master Plan, April 2007, website: https://tayloryardriverprojects.lacity.org/la-river/la-river-revitalization-master-plan, accessed August 23, 2022.

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]

[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

The intent of LID standards is to:

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

Activities, 5th Edition, May 2016, https://www.lacitysan.org/cs/groups/sg_sw/documents/document/y250/mde3/~edisp/cnt017152.pdf, accessed August 23, 2022.

[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, https://www.lacitysan.org/cs/groups/sg_sw/documents/document/y250/mde3/~edisp/cnt017152.pdf, accessed August 23, 2022.

the LID Manual, if no single 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) was developed by the Department of Public Works, Bureau of Sanitation, Watershed Protection Division, and was adopted in April 2009.[21]

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 all construction activities.[22] The Development

[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, https://www.lacitysan.org/cs/groups/sg_sw/documents/document/y250/mde3/~edisp/cnt017152.pdf, accessed August 23, 2022.

[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, https://www.lacitysan.org/cs/groups/sg_sw/documents/document/y250/mde3/~edisp/cnt017152.pdf, accessed August 23, 2022.

[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, https://www.lacitysan.org/cs/groups/sg_sw/documents/document/y250/mde3/~edisp/cnt017152.pdf, accessed August 23, 2022.

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.

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. Groundwater within Los Angeles County is stored in groundwater basins underlying five major geographic areas. The Los Angeles River traverses two of these geographic areas: San Fernando Valley and Coastal Plain. These areas contain three groundwater basins that underlay the river for its entire length: San Fernando Main Basin, Central Basin, and West Coast Basin.

[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, https://www.lacitysan.org/cs/groups/sg_sw/documents/document/y250/mde3/~edisp/cnt017152.pdf, accessed *August 23, 2022*.

The largest basin is the San Fernando Main Basin. The watershed encompasses a land area of approximately 834 square miles. The eastern portion spans from the Santa Monica Mountains to Simi Hills and in the west from the Santa Susana Mountains to the San Gabriel Mountains. The 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 plan and into San Pedro near Long Beach. 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.

(b) Local

Underground storm drainage facilities are located offsite along 5th Street and Seaton Street and are owned and maintained by the City. Stormwater runoff from the Project Site discharges into the curb and gutter which conveys stormwater to nearby street catch basins, which convey stormwater through various underground pipe networks into Los Angeles River.

(c) Project Site

The Project Site is currently occupied by three single-story warehouse buildings and a paved surface parking lot. Generally, the Project Site slopes downward from east to west approximately two feet. Drainage from the Project Site is captured by area drains and is directed offsite primarily to 5th Street, however, drainage in the northern and middle warehouse building areas is directed to Seaton Street. As detailed in the Water Resources Report (see **Appendix G** of this Draft EIR), the total existing flow rate from the Project Site during a 50-year storm event is approximately 3.94 cubic feet per second (cfs), with approximately 2.22 cfs flowing into E. 5th Street and 1.72 cfs flowing into Imperial Street.[24]

(2) Surface Water Quality

(a) Regional

The Project Site lies within the Los Angeles River Watershed Reach 2 in the Los Angeles Central Basin. Constituents of concern listed for Reach 2 under California's Clean Water Act Section 303(d) List include ammonia, copper, indicator bacteria, lead, nutrients (algae), oil, scum/foam-unnatural, taste and odor, and trash.[25] Probable sources of these impairments are identified as natural sources, non-point sources, unspecified urban stormwater, and urban runoff/storm sewers as well as unknown sources.[26] With the exception of oil, State TMDLs have been established for

[24] See page 15 of the Water Resources Report in **Appendix G** of this Draft EIR.

[25] California Environmental Protection Agency, State Water Resources Control Board, Impaired Water Bodies, Final 2014/2016 California Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report), Los Angeles River Reach 2 (Carson to Figueroa Street) Pollutant Assessments, https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml?wbid=CAR405150101999020208502 1, accessed August 23, 2022.

[26] United States Environmental Protection Agency, How's My Waterway?, Waterbody Report, Los Angeles River Reach 2 (Carson to Figueroa Street), Assessment Unit ID: CAR405150101999020208502 1, Assessment Information from 2016,

all impairments and scum/foam-unnatural and taste and odor have been recommended for delisting from 303(d) list as these pollutants are considered conditions resulting from pollutants that are being addressed by TMDLs.[27]

(b) Local[28]

In general, urban stormwater runoff occurs following precipitation events, with the volume of runoff flowing into the drainage system depending on the intensity and duration of the rain event. Contaminants that may be found in stormwater from developed areas include sediments, trash, bacteria, metals, nutrients, organics, and pesticides. The source of contaminants includes surface areas where precipitation falls, as well as the air through which it falls. 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.

Underground storm drainage facilities are located off-site along 5th Street and Seaton Street and are owned and maintained by LADWP. Stormwater runoff from the Project Site discharges into the curb and gutter which conveys stormwater to nearby street catch basins, which convey stormwater through various underground pipe networks into Los Angeles River. Los Angeles River flows generally southward, ultimately discharging into the Pacific Ocean at the San Pedro Bay, near Long Beach. The Los Angeles River is designed to discharge up to approximately 183,000 cubic feet of stormwater per second from a 50-year frequency storm event.[29]

(c) Project Site

The Project Site is completely developed and occupied by three single-story warehouse buildings and a paved surface parking lot. Drainage from the Project Site is captured by area drains and is directed offsite primarily to 5th Street, however, drainage in the northern and middle warehouse building areas is directed to Seaton Street. As detailed in the Water Resources Report (see **Appendix G** of this Draft EIR), the total existing flow rate from the Project Site during a 50-year storm event is approximately 3.94 cubic feet per second (cfs), with approximately 2.22 cfs flowing into 5th Street and 1.72 cfs flowing into Imperial Street.[30]

https://mywaterway.epa.gov/waterbody-report/CA_SWRCB/CAR4051501019990202085021/2016, accessed August 23, 2022.

27 California Environmental Protection Agency, State Water Resources Control Board, Final Los Angeles Region 2016 Integrated Report (303(d) List/305(b) Report), Supporting Information, https://www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16r4_ir_reports/01095.shtml, accessed August 23, 2022.

28 KPFF, 1100 East Fifth Street Mixed-Use Project Technical Report: Water Resources for APNs 5163-024-009 and 5163-024-014, 1100 E 5th Street, Los Angeles, California, 90013, April 30, 2019. See **Appendix G** of this Draft EIR.

29 Los Angeles County Public Works, Los Angeles River Watershed, website: http://www.ladpw.org/wmd/watershed/la/, accessed August 23, 2022.

30 See page 15 of the Water Resources Report in **Appendix G** of this Draft EIR.

Based on a site investigation, it appears the Project Site currently does not implement Best Management Practices (BMPs) and apparently has no means of treatment for stormwater runoff.

(3) Groundwater Hydrology

(a) Regional

The City overlies the Los Angeles Coastal Plain Groundwater Basin (Basin). The Basin is comprised of the Hollywood, Santa Monica, Central, and West Coast Groundwater Subbasins. Groundwater flow in the 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. Groundwater use for domestic water supply is a major beneficial use of groundwater basins in Los Angeles County.

(b) Local

The Project Site overlies the northeastern portion of the Central Subbasin. 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.[31]

Groundwater in the 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 Subbasin is estimated to be approximately 3,000 acre-feet per year (AFY).

(c) Project Site

Ground surface elevations range from 257.7 feet above mean sea level (msl) on the southeast corner to 254.5 feet on the south side for a total elevation difference of 2.2 feet. The ground surface slopes gently to the west at a 100 to 1 gradient (horizontal to vertical).[32] The Project Site is currently improved with existing buildings and an existing paved parking lot and, therefore, does not contribute to groundwater recharge.

As described in the Geotechnical Report (see **Appendix D.1** of this Draft EIR), groundwater was not encountered during exploration of the Project Site to a maximum depth of 50.5 feet below the

[31] See pages 16 and 17 of the Water Resources Report in **Appendix G** of this Draft EIR.
[32] See page 2 of the Geotechnical Report in **Appendix D.1** of this Draft EIR.

ground surface and the historically highest groundwater is at least 100 feet below the ground surface.[33]

(4) Groundwater Quality

(a) Regional

As stated above, the City overlies the Los Angeles Coastal Plain Groundwater Basin, which falls under the jurisdiction of the LARWQCB. According to LARWQCB's Basin Plan, water quality objectives applying to all ground waters of the region include bacteria, chemical constituents and radioactivity, mineral quality, nitrogen (nitrate, nitrite), and taste and odor.[34]

(b) Local

As stated above, the Project Site specifically overlies the Central Subbasin. Based upon LARWQCB's Basin Plan, constituents of concern listed for the Central Subbasin include boron, chloride, sulfate, and Total Dissolved Solids (TDS).[35]

(c) Project Site

The existing Project Site is fully improved with an existing building and existing paved parking lot and does not contribute to groundwater recharge. Therefore, the existing Project Site does not contribute to groundwater pollution or otherwise adversely impact groundwater quality.

Other types of risk such as USTs have a greater potential to impact groundwater. As discussed in greater detail in **Section IV.E, Hazards and Hazardous Materials**, of this Draft EIR, the Site Assessment prepared for the Project Site (see **Appendix F.1** of this Draft EIR) noted that although previous land uses included two USTs, both have been removed and were granted closure by the City in 2013.[36] No records showing the existence of additional USTs were found and no additional USTs were observed to currently exist at the Project Site.[37]

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33 See pages 4-5 of the Geotechnical Report in **Appendix D.1** of this Draft EIR.

34 Los Angeles Regional Water Quality Control Board, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, Chapter 3 0 Water Quality Objectives May 6, 2019, pages 3-47 – 3-50, https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/2020/Chapter_3/Chapter_3.pdf, accessed August 23, 2022.

35 Los Angeles Regional Water Quality Control Board, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, Chapter 3 0 Water Quality Objectives May 6, 2019, page 3-53, https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/2020/Chapter_3/Chapter_3.pdf, accessed August 23, 2022.

36 See page 1 of the Site Assessment in **Appendix F.1** of this Draft EIR.

37 See page 22 of the Site Assessment in **Appendix F.1** of this Draft EIR.

3. Project Impacts

a) Thresholds of Significance

In accordance with Appendix G to the *State CEQA Guidelines*, the Project would have a significant impact with respect to hydrology and water quality if it would:

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

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

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 which would result in flooding on- or off-site;

iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv. impede or redirect flood flows

Threshold (d): ***In flood hazards, 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.***

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

(1) Surface Water Hydrology

- *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; or*

- *Substantially reduce or increase the amount of surface water in a water body; Interference with wildlife movement/migration corridors that may diminish the chances for long-term survival of a sensitive species; or*

- *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.*

(2) Surface Water Quality

- *Discharges associated with the project would create pollution, contamination or nuisance as defined in Section 13050 of the California Water Code (CWC) 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. "Pollution" means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: the waters for beneficial uses or facilities which serve these beneficial uses. "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 disease. "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:*

    - *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;*

    - *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; or*

    - *Occurs during, or as a result of, the treatment or disposal of wastes.*

(3) Groundwater Hydrology

- *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; or*

- *Result in demonstrable and sustained reduction of groundwater recharge capacity.*

(4) Groundwater Quality

- *Affect the rate or change the 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 California Code of Regulations (CCR), Title 22, Division 4, and Chapter 15 and in the Safe Drinking Water Act.*

The potential for the Project to result in impacts to hydrology and water quality is based on the *State CEQA Guidelines* Appendix G thresholds and criteria identified in the *L.A. CEQA Thresholds Guide* that provide supplemental analysis to the Appendix G thresholds, as applicable. The City's threshold criteria above are considerations that were made as part of the analysis of the Appendix G thresholds for hydrology and water quality.

b) Methodology

The analysis of potential impacts to surface water hydrology, surface water quality, and groundwater is based, in large part, on the Water Resources Report, prepared by KPFF, Consulting Engineers. The report is provided in **Appendix G** of this Draft EIR. A summary of the analytical methodology for impacts to surface water hydrology, surface water quality, and groundwater is provided below.

(1) Surface Water Hydrology

The analysis of potential impacts to the existing hydrologic drainage system includes a calculation of existing (pre-Project) and post-Project runoff rates during a 50-year storm event. Potential impacts to the storm drain system for this Project were analyzed by comparing the calculated existing runoff rates to the calculated post-Project runoff rates to determine the Project's effect on drainage flows. The Project's proposed on-site stormwater treatment system is evaluated for consistency with applicable regulatory measures for reducing drainage impacts.

The Project Site's drainage collection, treatment and conveyance are regulated by the City. Per the City's Special Order No. 007-1299, December 3, 1999, the City has adopted the County's 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 in 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. To provide a more conservative analysis, this report analyzes the larger storm event threshold, i.e., the 50-year frequency design storm event.

The Modified Rational Method (MODRAT) was used to calculate stormwater runoff as required by the County's Hydrology Manual. MODRAT uses the design storm and time of concentration to

calculate runoff at different times throughout the storm, and allows for consideration of attenuation through channel storage, retention basins, etc., to reduce peak flows.[38]

The County Department of Public Works has developed a time of concentration calculator, Hydrocalc, to automate time of concentration calculations as well as the peak runoff rates and volumes using the MODRAT design criteria as outlined in the Hydrology Manual. Hydrocalc was used to calculate the storm water peak runoff flow rate for the Project conditions by evaluating individual subareas (Subareas A-1 through A-8) independent of all adjacent subareas.

(2) Surface Water Quality

Water quality impacts were assessed by characterizing the types of pollutants and/or effects on water quality likely to be associated with temporary construction and long-term operation of the Project, design features of the Project that are intended to treat contaminants, and expected contaminant flows with Project implementation. Project consistency with relevant regulatory permits/requirements, including BMPs and applicable plans, is evaluated to demonstrate how compliance would reduce potential Project impacts.

Under Section 3.1.3 of the City's LID Manual, post-construction stormwater runoff from a new development must be, in order of desirability, infiltrated, captured, and used, and/or treated through high efficiency on-site biofiltration/bioretention systems for at least the volume of water produced by the greater of the 85th percentile storm or the 0.75-inch storm event. In accordance with these requirements, the feasibility of the different potential BMPs outlined in the LID is evaluated in the analysis, and the required capacity of the identified preferred feasible BMP is calculated.

(3) Groundwater Hydrology

Impacts to groundwater quality and groundwater level were assessed by identifying the types of pollutants and/or effects on water quality likely to be associated with construction and operation of the Project. The analysis includes a review of the existing levels, quality, direction of flow, and existing uses for the water within the Central Subbasin.

Analysis of the Project impact on groundwater levels includes assessing the pre- and post-Site permeability, construction dewatering, determining the projected reduction in groundwater resources and any existing wells within a one-mile radius of the Project Site, and projecting the change in local or regional groundwater flow patterns.

(4) Groundwater Quality

The evaluation of Project consistency with Water Quality and Sustainable Groundwater Management Plans is based on a summary of the preceding analyses of Project impacts on water quality and groundwater resources. The summary identifies the applicable plans, the regulatory

[38] Q [Volumetric flow rate (cf)] =C [Runoff coefficient (dimensionless)] x I [Rainfall Intensity at a given point in time (in/hr)] x A [Basin area (acres)] or Q=C x I x A.

mechanisms for meeting the standards in those plans and the Project characteristics that conform to those regulatory standards.

c) Project Design Features

Construction and operation of the Project would be implemented in accordance with applicable regulatory and code requirements related to hydrology and water quality. No specific Project Design Features are proposed with regard to hydrology and water quality.

d) Analysis of Project Impacts

As compared to the Project, the Flexibility Option would change a portion of the use of the second floor from residential to commercial, and would not otherwise change the Project's land uses or size. The overall commercial square footage provided would be increased by 17,765 square feet to 64,313 square feet and, in turn, there would be a reduction in the number of live/work units from 220 to 200 units. The overall building parameters would remain unchanged and the design, configuration, and operation of the Flexibility Option would be comparable to the Project. Furthermore, the Flexibility Option would be located on the same Project Site with the same depth to groundwater and flooding/inundation susceptibilities, and would excavate to the same depth, result in the same amount of impervious surfaces, and require/generate the same type and amount of pollutants during construction and operation as the Project. In addition, the Flexibility Option would also be subject to the same regulatory requirements, including the General Construction Activity Stormwater Permit (including implementation of a SWPPP), the SUSMP, the MS4 Permit, and LID development standards. Therefore, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

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

Because the Flexibility Option would be located on the same Project Site with the same depth to groundwater as the Project, would excavate to the same depth as the Project, and would be subject to the same site conditions and regulatory requirements, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

(1) Impact Analysis

(a) Construction

(i) Surface Water

During construction, the Project Site would contain a variety of construction materials such as adhesives, cleaning agents, landscaping, plumbing, painting, heat/cooling, masonry materials, floor and wall coverings, and demolition debris. Spills of construction materials can be a source

of stormwater pollution and/or soil contamination. All hazardous materials are to be stored, labeled, and used in accordance with the U.S. Occupational Safety and Health Administration regulations. These regulations for routine handling and storing of hazardous materials effectively control the potential stormwater pollution caused by these materials.

Earth moving activities would involve preparation of the Project Site for Project construction. Soil erosion is the process by which soil particles are removed from the land surface, by wind, water and/or gravity. Soil particles removed by stormwater runoff can have negative impacts on downstream conditions through increased sedimentation as well as spread of contaminants found in the exposed soil of the Project Site. Grading activities can greatly increase erosion processes. The Project's proposed construction activities would not require compliance with the State's General Construction NPDES Permit and the development of a construction SWPPP because the Project Site is less than one acre in size.[39] However, all development and redevelopment projects that create, add, or replace 500 square feet or more of impervious area must comply with the City's LID Ordinance.[40] This includes compliance with the City's Development Best Management Practices Handbook (BMP Handbook), which contains minimum stormwater requirements for construction activities. Furthermore, as discussed in the regulatory setting above, construction activities must comply with the grading and water pollution regulations set forth in the LAMC, including LAMC Section 64.70 and Section 64.72. LAMC Section 64.70 prohibits any illicit discharges to the storm drain system and includes Section 64.70.02.D regarding pollution control at building sites, which, along with the City's grading permit regulations (set forth in LAMC, Chapter IX, Article 1), include standard erosion control measures and inspections to ensure the reduction of sedimentation and erosion during grading. LAMC Section 64.72 requires implementation of storm water requirements and construction practices listed in the City's BMP Handbook. In compliance with this requirement, BMPs must be implemented to protect the quality of storm water and non-storm water runoff during construction by controlling the discharge of potential contaminants incident to the construction process.

Also pursuant to LAMC Section 64.72, based on approved grading plans, the City of Los Angeles Bureau of Engineering requires the completion of an Erosion Control Plan Checklist, which incorporates County Department of Public Works' Erosion Control Notes and is intended to ensure proper control to avoid the deposition of silt and debris onto the public right-of-way, adjacent neighboring properties and the MS4 system. Requirements are based on the City's BMP Handbook, which implements the requirements of and is intended to ensure compliance with the Los Angeles County MS4 Permit.[41] If construction should occur during the rainy season

[39] California Environmental Protection Agency, State Water Resources Control Board, Order 2009-0009-DWG (as amended), Construction General Permit, effective July 1, 2010, https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2009/wqo/wqo2009_0009_dwq.pdf, accessed August 23, 2022.

[40] City of Los Angeles, LA Sanitation and Environment, Ordinance #181899 (as updated), Stormwater LID Ordinance, adopted: November 14, 2011, http://clkrep.lacity.org/onlinedocs/2009/09-1554_ord_181899.pdf, accessed August 23, 2022.

[41] City of Los Angeles, Bureau of Engineering, Erosion Control Plan Submittal Requirements Form, revised: February 20, 2015, https://engpermits.lacity.org/bpermits/bdocs/plan_check/erosion_control_plan_submittal_requirements_and_checklist_3_17_2015.pdf, accessed August 23, 2022.

(October 1st to April 14th), a wet weather erosion control plan must be prepared pursuant to the "Manual and Guideline for Temporary and Emergency Erosion Control," adopted by the Los Angeles Board of Public Works and incorporated into the City's BMP Handbook.

Pursuant to the above regulations and requirements, two general strategies are typically required to prevent construction silt from entering drainage courses. First, the amount of exposed soil is typically limited and erosion control procedures are implemented for those areas that must be exposed. Common methods for controlling fugitive dust emissions, such as covering truck loads and street sweeping, are also effective in controlling stormwater quality. Second, the construction area would be secured to control off-site migration of pollutants. Erosion control devices, including temporary diversion dikes/berms, drainage swales, and siltation basins, are typically required around construction areas to ensure that sediment is trapped and properly removed. Compliance with the regulations, guidelines, and requirements of these ordinances, codes, and policies would ensure that construction of the Project would not result in degradation of surface water quality through increased sedimentation or spread of soil contaminants. **Accordingly, required compliance with applicable City regulations and implementation of BMPs would ensure that Project and the Flexibility Option construction would not violate surface water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality, and impacts would be less than significant. No mitigation measures would be required.**

(ii) Groundwater

With regard to groundwater, construction of the Project is not anticipated to encounter groundwater based on the depth of excavation (approximately 50 feet) and the depth of groundwater (historically 100 feet) below the Project Site. In addition, polluted soils or other features have not been identified on the Project Site that, if exposed to rainfall during construction, could potentially cause pollutants to enter the groundwater table via percolation. Potential percolation would be reduced through implementation of required construction BMPs (such as covering exposed soils and stockpiles during rainfall). BMPs would also be implemented during construction to prevent drainage into the groundwater supply during rain storms. This would prevent any water-borne pollutants that may be present in the environment from entering the groundwater supply. 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. **Accordingly, required compliance with applicable City regulations and implementation of BMPs would ensure that Project and the Flexibility Option construction would not violate groundwater quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality, and impacts would be less than significant. No mitigation measures would be required.**

(b) Operation

(i) Surface Water

With the incorporation of the required LID BMPs, operation of the Project would not result in discharges that would cause: (1) pollution which would alter the quality of the waters of the state (i.e., Los Angeles River) to a degree which unreasonably affects beneficial uses of the waters; (2) contamination 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; or (3) nuisance that would be injurious to health; affect an entire community or neighborhood, or any considerable number of persons; and occurs during or as a result of the treatment or disposal of wastes.

As is typical of most urban developments, stormwater runoff from the Project Site has the potential to introduce pollutants into the stormwater system. Anticipated and potential pollutants generated by the Project are sediment, nutrients, pesticides, metals, pathogens, and oil and grease. The pollutants would be addressed through the implementation of approved LID BMPs. The Project proposes a mix of residential and commercial land uses, which does not represent the type of use that would otherwise degrade water quality (e.g., an industrial land use that could adversely affect water quality).

Furthermore, operation of the Project would not result in discharges that would cause regulatory standards to be violated. The Project Site currently has approximately 100 percent impervious surfaces. Project development would maintain the same percentage of impervious surface. However, a portion of the Project Site would be allocated for stormwater BMPs specifically intended to control and treat stormwater runoff in compliance with LID requirements. As stated above, the Project Site currently discharges stormwater without any means of treatment. However, the Project would include the installation of LID BMPs for, at a 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. The installed BMP systems would be designed with an internal bypass or overflow system to prevent upstream flooding due to large storm events. The stormwater that bypasses the BMP systems would discharge to an approved discharge point in the public right-of-way. **Therefore, the impact of the Project and the Flexibility Option with respect to the violation of water quality standards or waste discharge requirements and degradation of surface water quality during operation would be less than significant. No mitigation measures would be required.**

(ii) Groundwater

Operational activities that could affect groundwater quality include spills of hazardous materials and leaking underground storage tanks. No underground storage tanks are currently operated or would be operated by the Project. While the development of new building facilities would slightly increase the use of on-site hazardous materials, as described above, compliance with all applicable existing regulations at the Project Site regarding the handling, storage, and potentially required cleanup of hazardous materials would prevent the Project from affecting or expanding any potential areas of contamination, increasing the level of contamination, or causing regulatory water quality standards at an existing production well to be violated, as defined in the California

Code of Regulations, Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act. Furthermore, operation of the Project would not require extraction from the groundwater supply based on the depth of excavation (approximately 50 feet) and the depth of groundwater (historically 100 feet) below the Project Site. **Therefore, the impact of the Project and the Flexibility Option with respect to the violation of water quality standards or waste discharge requirements and degradation of groundwater quality during operation would be less than significant. No mitigation measures would be required.**

(2) Mitigation Measures

Under both the Project and the Flexibility Option, impacts related to violation of water quality standards or waste discharge requirements would be less than significant; no mitigation would be required.

(3) Level of Significance After Mitigation

Under both the Project and the Flexibility Option, impacts related to violation of water quality standards or waste discharge requirements would be less than significant without mitigation.

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?

Because the Flexibility Option would be located on the same Project Site with the same depth to groundwater as the Project, would excavate to the same depth and develop the same amount of impervious surfaces as the Project, and would be subject to the same regulatory requirements, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

(1) Impact Analysis

(a) Construction

Construction activities for the Project would include excavating down for subterranean parking, building up the structure, and hardscape and landscape around the structure. The historic high groundwater level in the vicinity of the Project Site is at least 100 feet below grade.[42] The proposed excavation (approximately 50 feet) would not reach this depth, and it is not expected that groundwater would be encountered during construction that would require either temporary or permanent dewatering.[43] If groundwater were encountered during construction, temporary pumps and filtration would be used in compliance all applicable regulations and requirements, including with all relevant NPDES requirements related to construction and discharges from dewatering operations during construction. **Therefore, the Project and the Flexibility Option would not substantially decrease groundwater supplies in a manner that would impede**

[42] See pages 25 and 26 of the Water Resources Report in **Appendix G** of this Draft EIR.
[43] See pages 25 and 26 of the Water Resources Report in **Appendix G** of this Draft EIR.

sustainable groundwater management of the basin. No mitigation measures would be required.

(b) Operation

Regarding groundwater recharge, the Project Site is currently impervious with minimal groundwater recharge potential. The Project would develop hardscape and structures that cover the entire Project Site with impervious surfaces and, therefore, the groundwater recharge potential would remain minimal. The stormwater that bypasses the proposed BMP systems would discharge to an approved discharge point in the public right-of-way and not result in infiltration of a large amount of rainfall that would affect groundwater hydrology, including the direction of groundwater flow.

As discussed above, Project development would require excavation to approximately 50 feet for the subterranean parking. The historic high groundwater level in the vicinity of the Project Site is at least 100 feet below grade.[44] As the Project's excavation would not reach this depth, it is not expected that groundwater would be encountered during construction that would require permanent dewatering operations. Furthermore, 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, the Project and the Flexibility Option would not substantially decrease groundwater supplies in a manner that would impede sustainable groundwater management of the basin. No mitigation measures would be required.**

(2) Mitigation Measures

Under both the Project and the Flexibility Option, impacts to sustainable groundwater management would be less than significant; no mitigation would be required.

(3) Level of Significance After Mitigation

Under both the Project and the Flexibility Option, impacts to sustainable groundwater management would be less than significant without mitigation.

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 which would result in flooding on- or off-site;

[44] See pages 25 and 26 of the Water Resources Report in **Appendix G** of this Draft EIR.

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

Because the Flexibility Option would be located on the same Project Site with the same flooding susceptibility, would result in the same amount of hardscape as the Project, and would be subject to the same regulatory requirements, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

(1) Impact Analysis

(a) On- or Off-Site Erosion or Siltation

(i) Construction

Construction activities for the Project would include demolition of the existing buildings and parking lot, excavating down approximately 50 feet for subterranean parking, building the high-rise building, and constructing hardscape and landscape around the building. These activities have the potential to temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. Temporarily exposed and stockpiled soils could be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities to reduce airborne dust could also lead to increased runoff, potentially resulting in erosion of soils exposed to such runoff.

As detailed in response to Threshold a) above, construction activities would be conducted in accordance with LAMC Sections 64.70 and 64.72, including incorporation of BMPs set forth in the City's BMP Handbook to manage runoff flows and prevent pollution. BMPs would be designed to reduce runoff and pollutant levels in runoff during construction. The Project Site's relatively flat drainage patterns and the prevention or reduction of surface runoff during construction would prevent substantial alterations to drainage patterns and/or erosion on-site or off-site. In addition, the Project would be required to comply with all applicable City grading permit regulations, including completion of an Erosion Control Plan Checklist, that require necessary measures, plans, and inspections to reduce sedimentation and erosion during construction. Standard construction phase BMPs, required as part of this permitting process, would decrease the potential for significant erosion or siltation from soil disturbance associated with construction of the Project. Furthermore, if the Project requires grading activities during the rainy season (October 1 through April 14), then a wet weather erosion control plan would be prepared that would include BMPs to address potential erosion effects. Thus, through compliance with the erosion control measures of the Erosion Control Plan, implementation of BMPs, and compliance with applicable City grading regulations, the Project would not substantially alter the Project Site drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site during construction.

Based on the above, construction activities are temporary and flow directions and runoff volumes during construction would be controlled. **Therefore, the construction of the Project and the Flexibility Option would not substantially alter the existing drainage patterns with respect to the potential for erosion or siltation on- or off-site, and the impact would be less than significant. No mitigation measures would be required.**

(ii) Operation

The Project is an infill development within a fully urbanized environment and, as such, the Project Site is not an area of exposed natural land and water courses. Once the Project is operational, the Project Site would be impervious and erosion and siltation would not occur. In addition, the pattern of drainage would not be substantially altered because similar to the existing condition, runoff from the Project would drain via sheetflow toward the City streets and the Project would not modify the surrounding streets with respect to the manner in which they convey storm runoff to the City storm drain system.

Furthermore, as described above under Threshold a), the Project would include the installation of LID BMPs for, at a 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. The installed BMP systems would be designed with an internal bypass or overflow system to prevent upstream flooding due to large storm events. The stormwater that bypasses the BMP systems would discharge to an approved discharge point in the public right-of-way. This system would have no contact with exposed soils or erodible surfaces that would generate siltation if exposed to surface water runoff. Accordingly, operation of the Project would not substantially alter drainage patterns across the Project Site, or result in erosion or siltation on-site or off-site. **Therefore, the operational impact related to erosion or siltation resulting from alterations to drainage patterns under the Project and the Flexibility Option would be less than significant. No mitigation measures would be required.**

(b) On- or Off-Site Flooding

(i) Construction

As discussed under Threshold c(i), during Project construction, a temporary alteration of the existing on-site drainage pattern may occur from the demolition of existing structures and land cover, and site preparation and grading for Project construction. However, these changes would not result in a substantial increase in the rate or amount of surface runoff that could result in flooding due to stringent controls imposed under the erosion control BMPs required pursuant to the LAMC and as implemented under the City's BMP Handbook thus preventing uncontrolled runoff during construction. The Project Site's relatively flat drainage patterns and the prevention or reduction of surface runoff during construction would prevent substantial alterations to drainage patterns and/or flooding on-site or off-site. In addition, the Project would be required to comply with all applicable City grading permit regulations, including completion of an Erosion Control Plan Checklist and a wet weather erosion control plan during the rainy season, that require necessary measures, plans, and inspections to reduce flows from the Project Site during construction. Water would be used during the temporary construction phases of the Project (e.g., for dust

suppression). However, this water would be mechanically and precisely applied in accordance with the regulatory requirements, and would furthermore be controlled with required construction BMPs under the City's BMP Handbook to prevent discharges. **Therefore, the Project and the Flexibility Option would not substantially alter the existing drainage pattern of the site or area in a manner that would result in flooding on- or off-site, and the impact during construction would be less than significant. No mitigation measures would be required.**

(ii) Operation

In the existing condition, the Project Site is entirely covered with impervious surfaces (hardscape), and it appears stormwater discharges from the Project Site without filtration. The Project would develop hardscape that would also cover the entire surface area of the Project Site. Accordingly, there would be virtually no incremental increase or decrease in the coverage of impervious surfaces of the Project Site that would substantially increase runoff volumes into the existing storm drain system. Therefore, peak flow rates would not change.

In the existing condition, stormwater sheet flows into area drains and is discharged into the public storm drain system. The post-Project condition would manage stormwater flow to discharge points at the curb face that would direct the stormwater to the public storm drain system. **Table IV.F-1, (Existing and Proposed Drainage Stormwater Runoff Comparison),** shows the proposed 50-year frequency design storm event peak flow rate within the Project Site and shows a comparison of the pre- and post-peak flow rates. The numbers in **Table IV.F-1** indicate that there would be no increase in stormwater runoff.

Table IV.F-1
Existing and Proposed Drainage Stormwater Runoff Comparison

Drainage Area	Project Site Area (acres)	Pre-Project Q50 (cfs)	Post-Project Q50 (cfs)	Change from Existing to Proposed Condition (cfs)
5th Street Total	0.72	2.22	2.28	0.06
Seaton Street Total	0.52	1.72	1.65	(-0.07)
Total	**1.24**	**3.94**	**3.93**	**(-0.01)**

Notes: cfs= cubic feet per second.
Source: KPFF, 1100 East Fifth Street Mixed-Use Project Technical Report: Water Resources, April 30, 2019, Table 3, page 28. ***Appendix G*** *of this Draft EIR.*

As shown in **Table IV.F-1**, the Project would slightly change the distribution of stormwater discharge between 5th Street and Seaton Street: 5th Street would receive an additional 0.06 cubic feet per second of runoff during peak storm events while Seaton Street would receive a reduction of 0.07 cubic feet per second of runoff. Although the Project would increase the peak storm event flow rate into 5th Street by 0.06 cubic feet per second, this increase is a negligible amount and the stormwater infrastructure in 5th Street has sufficient capacity to accept stormwater runoff.[45] Furthermore, the Project would not increase the total rate or volume of stormwater runoff from the Project Site overall; there would be an incremental decrease of 0.01 cubic feet per second in the

[45] See page 29 of the Water Resources Report in **Appendix G** of this Draft EIR.

total volumetric flow rate discharging from the Site as a whole. As such, the Project would not substantially reduce or increase the amount of surface water discharged into the existing infrastructure or any waterbody.

It is not known if any additional or expanded storm drain infrastructure is planned by the City for the vicinity of the Project Site; however, no new off-site storm drainage infrastructure is proposed by the Project. Required on-site drainage infrastructure would be designed in accordance with City requirements, and would be subject to approval by LADPW, and would safely convey stormwater from the Project Site to the off-site storm drainage system without exceeding existing capacity. It is assumed that should the City plan off-site infrastructure improvements in the vicinity of the Project that the capacity of the new or expanded storm drainage facility would be of a comparable size to the existing storm drain and would be planned in order to accommodate the current and anticipated future development that would be served by the drain.

Furthermore, the LID requirements for the Project Site would outline the stormwater treatment post-construction BMPs required to control pollutants associated with storm events up to the 85th percentile storm event, per the City's Stormwater Program. The Project BMPs would be required to control stormwater runoff with no increase in runoff resulting from the Project, and runoff would continue to discharge to the same locations (5th Street and Seaton Street) and drain to the same stormwater systems. Therefore, no changes in the perviousness of the Project Site or no increase in stormwater flows, which could cause flooding outside the Project Site, would occur. **Accordingly, the Project and the Flexibility Option would not substantially alter the existing drainage pattern of the Site or area in a manner that would result in flooding on- or off-site, and the impact during operation would be less than significant. No mitigation measures would be required.**

(c) Stormwater Drainage Capacity/Polluted Runoff

(i) Construction

As discussed above under Threshold c(i), construction activities have the potential to result in temporary alterations to the drainage patterns of the Project Site. Alterations in drainage patterns have the potential to result in an increase in the amount of runoff from the Project Site, which could exceed the capacity of the stormwater drainage system or contain pollutants from soil contamination resulting from existing conditions or from the improper handling and storage of hazardous materials required for construction. However, as detailed under Threshold c(i), the Project Site's relatively flat drainage patterns would prevent substantial alterations to drainage patterns and polluted soils or other features have not been identified on the Project Site that, if exposed to rainfall during construction, could potentially cause the spread of pollutants in runoff. Furthermore, construction activities would be conducted in accordance with LAMC Sections 64.70 and 64.72, including incorporation of BMPs set forth in the City's BMP Handbook to manage runoff flows and prevent pollution. BMPs would be designed to reduce runoff and pollutant levels in runoff during construction. LAMC Section 64.70 prohibits any illicit discharges to the storm drain system and includes Section 64.70.02.D regarding pollution control at building sites, which, along with the City's grading permit regulations (set forth in LAMC, Chapter IX, Article 1), include

standard erosion control measures and inspections to ensure the reduction of sedimentation and erosion during grading. LAMC Section 64.72 requires implementation of storm water requirements and construction practices listed in the City's BMP Handbook. In compliance with this requirement, BMPs must be implemented to protect the quality of storm water and non-storm water runoff during construction by controlling the discharge of potential contaminants incident to the construction process.

Because the Project would be required to implement construction control to prevent runoff from leaving the Project Site, stormwater runoff from the Project Site would not exceed the capacity of the existing or planned stormwater drainage systems during construction. However, should the City determine improvements to the stormwater drainage system are necessary during the normal permit review process, the Applicant would be responsible for the improvements, and such improvements would be conducted as part of the Project either on-site or off-site within the right-of-way, and as such, any related construction activities would be temporary and of short duration, and would not result in any significant environmental impacts given the disturbed nature of the right-of-way.

Therefore, the Project and the Flexibility Option would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, and the impact during construction would be less than significant. No mitigation measures would be required.

(ii) Operation

The existing Project Site is approximately 100 percent impervious and stormwater sheet flows into area drains and is discharged to the public storm drain system without filtration. As detailed under Threshold c(ii), the Project would not result in an increase in the amount of impervious surface at the Project Site and would decrease the amount of stormwater runoff Seaton Street would receive by 0.07 cubic feet per second. However, the Project would increase the amount of stormwater runoff that 5th Street would receive by 0.06 cubic feet per second. Although the Project would increase the peak storm event flow rate into 5th Street by 0.06 cubic feet per second, this increase is a negligible amount and the stormwater infrastructure in 5th Street has sufficient capacity to accept the increased stormwater runoff.[46] Furthermore, the Project would not increase the total rate or volume of stormwater runoff from the Project Site overall; there would be an incremental decrease of 0.01 cubic feet per second in the total volumetric flow rate discharging from the Site as a whole. As such, the Project would not substantially reduce or increase the amount of surface water discharged into the existing infrastructure or any waterbody.

Furthermore, the Project proposes a mix of residential and commercial land uses, which does not represent the type of use that would otherwise degrade water quality (e.g., an industrial land use that could adversely affect water quality). In addition, the LID requirements for the Project would outline the stormwater treatment post-construction BMPs required to control pollutants associated with storm events up to the 85th percentile storm event, per the City's Stormwater Program. As

[46] See page 29 of the Water Resources Report in **Appendix G** of this Draft EIR.

detailed under Threshold a), with the incorporation of the required LID BMPs, operation of the Project would not result in discharges of pollution from the Project Site.

Therefore, the Project and the Flexibility Option would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, and the impact during operation would be less than significant. No mitigation measures would be required.

(d) Flood Flows

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, and as shown on the City's ZIMAS,[47] the Project Site is within Zone X – Other Areas, which is a designation for areas determined to be outside the 100-year flood hazard area.[48] Additionally, no streams or rivers are located on the Project Site and the Site is not located within any high-risk coastal areas or floodway. The Project does not propose any structures which would impede floodwater such as a dam or berm. **Accordingly, both construction and operation of the Project and the Flexibility Option would have a less than significant impact with respect to impeding or redirecting flood flows and no mitigation measures would be required.**

(2) Mitigation Measures

Under both the Project and the Flexibility Option, impacts resulting from alteration of the existing drainage pattern, including through alteration of the course of a stream or river or through the addition of impervious surfaces, would be less than significant; no mitigation would be required.

(3) Level of Significance After Mitigation

Under both the Project and the Flexibility Option, impacts resulting from alteration of the existing drainage pattern, including through alteration of the course of a stream or river or through the addition of impervious surfaces, would be less than significant without mitigation.

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

Because the Flexibility Option would be located on the same Project Site with the same inundation susceptibility as the Project and would require and generate the same type and amount of pollutants during construction and operation as the Project, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

[47] City of Los Angeles, Department of City Planning, Zone Information Map Access System (ZIMAS) http://zimas.lacity.org, accessed August 23, 2022.

[48] Federal Emergency Management Agency, Flood Insurance Rate Map, Los Angeles County, California, FEMA Map Number 06037C1636G, effective December 21, 2018, https://msc.fema.gov/portal/search?AddressQuery=1100%20east%205th%20street%2C%20Los%20Angeles%2C%20ca#searchresultsanchor, accessed August 23, 2022.

(1) Impact Analysis

As previously discussed, the Project Site is within Zone X – Other Areas, which is a designation for areas determined to be outside the 100-year flood hazard area.[49,50] Additionally, the Project Site is approximately 13 miles from the Pacific Ocean and not within an area potentially impacted by a tsunami. There are also no major water bodies in the vicinity of the Project Site that would put the Project Site at risk of inundation by seiche. The nearest levee is along the Los Angeles River, located approximately 0.45-mile east of the Project Site. The stretch of the Los Angeles River east of the Project Site is identified at LAR-A-21.[51] The LAR-A-21 stretch is not identified by the U.S. Army Corps of Engineers for levee and wall repair activities.[52] Accordingly, failure of a levee along the LAR-A-21 is unlikely to put the Project Site at risk of flooding. However, the Project Site is located within the vicinity of the Hansen Dam and the Sepulveda Dam and could potentially experience inundation in the event of failure of these dams. Inundation of the Project Site resulting from dam failure could release pollutants into surface water should flood waters encounter contaminants at the Project Site. However, the Project proposes a mix of residential and commercial land uses, which does not represent the type of use that would otherwise degrade water quality (e.g., an industrial land use that could adversely affect water quality). Anticipated and potential pollutants generated by the Project would be normal and expected for the proposed land uses and include sediment, nutrients, pesticides, metals, pathogens, and oil and grease. These materials would be properly stored and handled as to avoid spilling contents in an area that may encounter flood water. **Accordingly, impacts related to the Project's and the Flexibility Option's risk of pollutant release due to Project inundation would be less than significant and no mitigation measures would be required.**

(2) Mitigation Measures

Under both the Project and the Flexibility Option, impacts related to the release of pollutants during inundation would be less than significant; no mitigation would be required.

(3) Level of Significance After Mitigation

Under both the Project and the Flexibility Option, impacts related to the release of pollutants during inundation would be less than significant without mitigation.

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49 Federal Emergency Management Agency, Flood Insurance Rate Map, Los Angeles County, California, FEMA Map Number 06037C1636G, effective December 21, 2018, https://msc.fema.gov/portal/search?AddressQuery=1100%20east%205th%20street%2C%20Los%20Angeles%2C%20ca#searchresultsanchor, accessed August 23, 2022.

50 City of Los Angeles, Department of City Planning, Zone Information Map Access System (ZIMAS) http://zimas.lacity.org, accessed August 23, 2022.

51 United States Army Corps of Engineers, Los Angeles District, Asset Management Interactive Map, https://www.spl.usace.army.mil/Missions/Asset-Management/Interactive-Map/, accessed August 23, 2022.

52 United States Army Corps of Engineers, Los Angeles District, Los Angeles River Active and Upcoming Projects Website, https://www.spl.usace.army.mil/Media/Fact-Sheets/Article/909410/los-angeles-river-active-and-upcoming-projects/, accessed August 23, 2022.

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

Because the design, configuration, and operation of the Flexibility Option would be comparable to the Project and the Flexibility Option would be subject to the same regulatory requirements as the Project, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

(1) Impact Analysis

(a) Water Quality Control Plans

As discussed in the regulatory setting above, the Project falls within the jurisdiction of water quality plans with related regulations and permitting requirements that assure that development projects comply with clean water policies. Most notably, the Project is subject to the policies of the LARWQCB's Basin Plan and the Bureau of Sanitation's Water Quality Compliance Master Plan.

Construction and operation of the Project would involve activities that have the potential to conflict with the water quality goals in the Basin Plan and Master Plan through the spread of contaminants into surface or groundwater supplies. However, as previously detailed, construction of the Project would prevent the spread of contaminants into surface water through adherence to the U.S. Occupational Safety and Health Administration regulations for the handling and storing of hazardous materials, and the requirements of the General Construction Activity Stormwater Permit, including implementation of a SWPPP, and the MS4 Permit for the prevention of erosion. These regulations and practices effectively control the potential stormwater pollution to surface water during construction. Furthermore, the proposed mix of residential and commercial land uses do not represent the type of use that would have the ability to adversely affect water quality. Anticipated and potential pollutants generated by the Project would be addressed through the implementation of approved LID BMPs. While the development of new building facilities would slightly increase the use of on-site hazardous materials, as described above, compliance with all applicable existing regulations at the Project Site regarding the handling, storage, and potentially required cleanup of hazardous materials would prevent the Project from affecting or expanding any potential areas of contamination, increasing the level of contamination, or causing regulatory water quality standards at an existing production well to be violated. In addition, neither construction nor operation of the Project is expected to encounter groundwater and no groundwater extraction would be required.

(b) Sustainable Groundwater Management Plans

As discussed in the regulatory setting above, the Project Site overlies a basin which is not designated as critically overdrafted and as such, no GSA has been formed to develop a local GSP for its management as of yet. Therefore, there are no applicable sustainable groundwater management plans applicable to the Project. Furthermore, as discussed in greater detail in **Section IV.M.1, Utilities and Service Systems – Water,** of this Draft EIR, the Project would receive its water from LADWP. Both LADWP and the California Department of Water Resources

have programs in place to monitor wells to prevent overdrafting. The LADWP's groundwater pumping strategy is based on a "safe yield" strategy, in which the amount of water removed over a period of time equals the amount of water entering the groundwater basin through native and imported groundwater recharge. Further, protection from potential overdraft conditions is provided by the court-appointed Los Angeles River Area Watermaster for the San Fernando and Sylmar Basins, and a court-appointed Watermaster Panel for the Central Basin. LADWP addresses water supply needs through the preparation of an Urban Water Management Plan (UWMP), which projects future water use demands and identifies water supplies to meet these demands and is updated every five years. As detailed in **Section IV.M.1**, the Project's water demand would be within the projections of the UWMP and would be required to implement water saving features to reduce the amount of water used by the Project in accordance with water conservation measures, including Title 20 and 24 of the California Administrative Code. Furthermore, as previously discussed, neither construction nor operation of the Project is anticipated to encounter groundwater, therefore, the extraction of groundwater would not be required. Additionally, the Project would not have the potential to impact the amount of groundwater recharge as the Project Site is entirely covered with impervious surfaces and does not currently provide recharge for the groundwater basin.

(c) Conclusion

As described above, the Project would adhere to the applicable regulations and requirements with regard to water quality and groundwater sustainability. **Therefore, the Project and the Flexibility Option would not conflict or obstruct implementation of a water quality control plan or a sustainable groundwater management plan and the impact would be less than significant. No mitigation measures would be required.**

(2) Mitigation Measures

Under both the Project and the Flexibility Option, impacts to water quality control plans and sustainable groundwater management plans would be less than significant; no mitigation would be required.

(3) Level of Significance After Mitigation

Under both the Project and the Flexibility Option, impacts to water quality control plans and sustainable groundwater management plans would be less than significant without mitigation.

4. Cumulative Impacts

Because the Flexibility Option would be located on the same Project Site and include the same BMPs as the Project and would be subject to the same site conditions and regulatory requirements, the conclusions regarding the cumulative impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

a) Impact Analysis

(1) Surface Water

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. However, as noted above, the Project would have no net impact on stormwater flows. In accordance with City requirements, the Project and Related Projects would be required to implement BMPs to manage stormwater runoff in accordance with LID guidelines. Furthermore, the City of Los Angeles Department of Public Works reviews projects on a case-by-case basis to ensure sufficient local and regional infrastructure is available to accommodate stormwater runoff. Similar to the Project, the Related Projects are located on sites that are fully developed and impervious. Any new development on the Related Project sites would need to implement LID BMPs to meet the City's requirements. Implementation of LID BMPs would, at a minimum, maintain existing runoff conditions.

With respect to water quality, future growth in the Los Angeles River Watershed would be subject to NPDES requirements relating to water quality for both construction and operation. In addition, since the Project Site and the Related Projects are located in a highly urbanized area, future land use changes or development are not likely to cause substantial changes in regional surface water quality. As noted above, the Project and the Related Projects would not have an adverse impact on water quality, and would improve the quality of on-site flows due to the introduction of new BMPs that would collect, treat, and discharge flows from the Project Site (which are not being treated under existing conditions). Also, it is anticipated that the Project and the Related Projects would be subject to LID requirements and implementation of measures to comply with total maximum daily loads. Increases in regional controls associated with other elements of the MS4 Permit would improve regional water quality over time. **Therefore, the Project's and the Flexibility Option's contribution to cumulative impacts to surface water during construction and operation would not be cumulatively considerable and cumulative impacts would be less than significant.**

(2) Groundwater

The geographic context for the cumulative impact analysis on groundwater level is the Central Subbasin. No water supply wells, spreading grounds, or injection wells are located within a one-mile radius of the Project Site.

Furthermore, as previously discussed, implementation of the Project would not result in a substantial increase in impervious surface area. Development of the Related Projects could result in changes in impervious surface area within their respective project sites. However, it is not expected that such changes would have the potential to affect groundwater hydrology. This is due to the fact that the Related Projects are located on fully developed and impervious sites that, accordingly, do not currently contribute to groundwater recharge. As the Related Projects are located in a highly urbanized area, any potential reduction in groundwater recharge due to the overall net change in impervious surfaces within the area encompassed by the Related Project

sites would be minimal in the context of the regional groundwater basin. Additionally, the development of the Related Projects would be subject to review and approval pursuant to all applicable regulatory requirements, including any required mitigation of potential groundwater hydrology impacts.

With respect to groundwater quality, future growth in the Central Subbasin would be subject to LARWQCB requirements relating to groundwater quality. The Project would not expand any potential areas of contamination, increasing the level of contamination, or cause regulatory water quality standard violations, as defined in the California Code of Regulations, Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act. Similarly, the Related Projects, all of which are in the Central Subbasin would be required to comply with all applicable laws, rules and regulations related to groundwater quality.

Based on the above, the Project's and the Flexibility Option's contribution to cumulative impacts to groundwater during construction and operation would not be cumulatively considerable and cumulative impacts would be less than significant.

b) Mitigation Measures

Under both the Project and the Flexibility Option, cumulative impacts to hydrology and water quality would be less than significant; no mitigation measures would be required.

c) Level of Significance After Mitigation

Under both the Project and the Flexibility Option, cumulative impacts related to hydrology and water quality would be less than significant without mitigation.