4.7 Hydrology and Water Quality

This section evaluates the environmental effects related to hydrology and water quality associated with implementation of the OSP Specific Plan. The analysis of hydrology and water quality impacts is based on information and data contained in the One San Pedro Revitalization Project Technical Report: Water Resources (OSP Specific Plan Site Water Resources Report) and 327 North Harbor Boulevard Project Technical Report: Water Resources (327 Harbor Site Water Resources Report) produced by KPFF Consulting Engineers (KPFF) (KPFF 2022a and 2022b; Appendix F). This section is also informed by the Preliminary Geotechnical Reports prepared for the OSP Specific Plan Site and 327 Harbor Site by Group Delta Consultants, Inc. (Group Delta) (Group Delta 2022a and 2022b; Appendix D).

4.7.1 Environmental Setting

a. Surface Water Hydrology

Regional

The proposed project is located within the Dominguez Watershed[1]. The Dominguez Watershed area covers approximately 120 square miles of the land and 13 square miles of water (floodways, harbors) extending from the Los Angeles International Airport to the Los Angeles Harbor, covering areas with residential, commercial, and industrial land uses. Most of the surface drainage within the watershed flows into the Dominguez Channel, a human-made concrete flood control channel that eventually discharges to the inner Port of Los Angeles (KPFF 2022a and 2022b).

Local

Stormwater runoff in the project vicinity is generally collected and conveyed through storm drain facilities located in public roadways. Underground storm drainage facilities in San Pedro are owned and maintained by the City of Los Angeles, with stormwater discharges ultimately flowing into the Dominguez Channel, which discharges to the inner Port of Los Angeles (KPFF 2022a and 2022b).

Project Site

327 Harbor Site

The 327 Harbor Site is currently undeveloped. The site primarily consists of ruderal vegetation and includes two small areas of existing concrete and a small area of asphalt pavement. Under existing conditions, approximately 94 percent of the 327 Harbor Site consists of pervious surface (KPFF 2022b). Generally, the 327 Harbor Site and surrounding streets slope from west to east, with a site slope of 4.2 percent. Rainfall generally leaves the 327 Harbor Site as sheet flow towards Harbor Boulevard, rather than infiltrating into the soil, due to the existing steep slopes and underlying soil conditions, yielding a large flowrate from the site and minimal groundwater infiltration. The 327 Harbor Site is bounded by O'Farrell Street to the north, Harbor Boulevard to the east, commercial development to the south, and Beason Street to the west. Stormwater flow leaving the site is routed via curbs and gutters along Harbor Boulevard to existing catch basins and underground storm drain

[1] A watershed is the area of land where all of the water that drains off of the land flows into the same place, such as a river, stream, lake or the ocean.

infrastructure. As detailed in the 327 Harbor Site Water Resources Report, the total existing flow rate from the site during a 50-year storm event is approximately 1.47 cubic feet per second (cfs) (KPFF 2022b).

OSP Specific Plan Site

Under existing conditions, 57 percent of the OSP Specific Plan Site consists of impervious surfaces (e.g., buildings, parking lots, and paved areas) and 43 percent of the site consists of pervious areas (e.g., courtyards, the sports field, and other landscaped areas) (KPFF 2022a). Generally, the OSP Specific Plan Site and surrounding streets slope from west to east. Based on aerial contour maps available through the City of Los Angeles' Navigate LA GIS database, it is estimated the site slopes range from approximately 2 to 7 percent, sloping down in a west-to-east direction (City of Los Angeles 2021).

The OSP Specific Plan Site is bounded by Harbor Boulevard to the east, North Mesa Street to the west, West 3rd Street to the south, and West Santa Cruz Street to the north. Storm drain inlets are located throughout the streets surrounding the OSP Specific Plan Site at most intersections and connect to City of Los Angeles storm drain mainlines. The storm drain lines in Mesa Street, Centre Street, and Palos Verdes Street drain into the main line along 3rd Street, while the storm drain lines within Santa Cruz Street, 1st Street, and 2nd Street connect to the main line that runs south along Harbor Boulevard. During precipitation events, drainage from the site flows in the easterly direction as sheet flow, ultimately reaching the inlets located along adjacent streets, particularly Palos Verdes Street and Beacon Street. As detailed in the OSP Specific Plan Site Water Resources Report, the total existing flow rate from the site during a 50-year storm event is approximately 58.51 cfs (KPFF 2022a).

b. Surface Water Quality

Regional

As described above, the project site lies within the Dominguez Watershed. The Dominguez Channel drains into a highly industrialized area with numerous nonpoint sources of pollution for polycyclic aromatic hydrocarbons (PAHs). The channel also contains remnants of persistent legacy pesticides and polychlorinated biphenyls (PCBs), resulting in poor sediment quality. In addition, dichlorodiphenyltrichloroethane (DDT) and metals such as copper and zinc are pervasive throughout the Dominguez Channel estuary and consolidated slip. The consolidated slip, the portion of the Port of Los Angeles immediately downstream of Dominguez Channel, continues to exhibit a very impacted benthic invertebrate[2] community. The Port of Los Angeles/Port of Long Beach Harbor is on the 2018 Clean Water Act Section 303(d) list due to bacteria, impaired benthic community, sediment toxicity, DDT, copper, zinc, PAHs, and PCBs (State Water Resources Control Board [SWRCB] 2020). Potential sources of these materials are considered to be historical deposition, discharges from nearby publicly owned treatment works, spills from ships and industrial facilities, and stormwater runoff. Many areas of the Port of Los Angeles/Port of Long Beach have experienced soil and/or groundwater contamination, which may result in possible transport of pollutants to the Port of Los Angeles/Port of Long Beach surface waters. Dredging and disposal, capping, and/or remediation of contaminated sediments and source control of pollutants in the Port of Los Angeles/Port of Long Beach are current areas of focus by regulatory agencies.

[2] Benthic invertebrates are organisms that live on the bottom of a water body (or in the sediment) and have no backbone.

Local

In general, urban stormwater runoff occurs following precipitation events, with the volume of runoff flowing into the drainage system dependent upon the intensity and duration of each rain event. Contaminants that may be found in stormwater from developed areas include sediments, trash, bacteria, metals, nutrients, organics, and pesticides. The sources of contaminants include surface areas where precipitation falls and the air through which it falls. Contaminants on surfaces such as roads, maintenance areas, parking lots, and buildings that are typically contained in dry weather conditions may be carried by rainfall runoff into drainage systems.

Project Site

327 Harbor Site

The approximately 0.6-acre 327 Harbor Site is currently vacant and undeveloped. The 327 Harbor Site does not currently contain surface water quality best management practices (BMPs) or treatment features. Pollutants of concern associated with the site include trash and debris (KPFF 2022b).

OSP Specific Plan Site

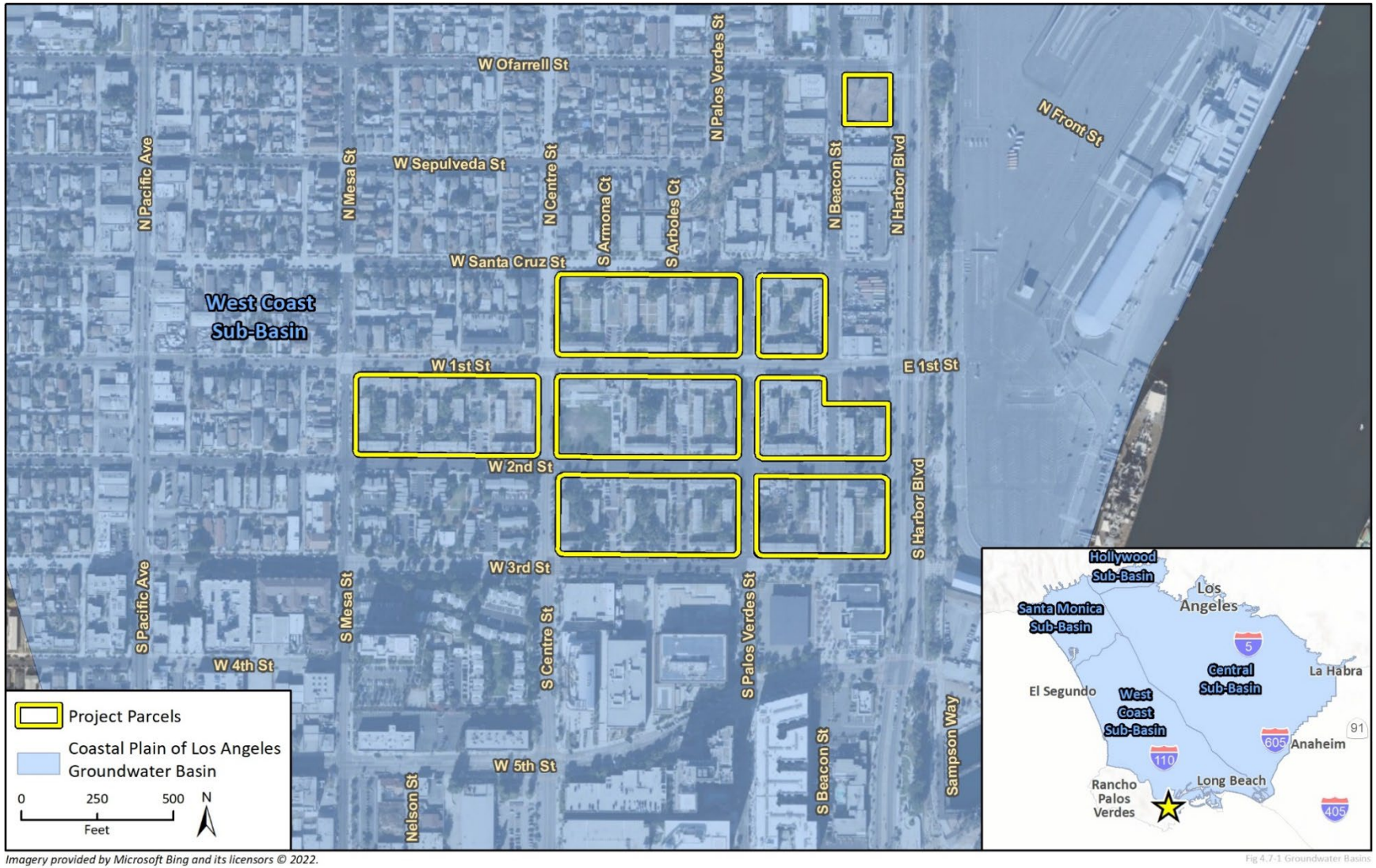
The approximately 20-acre OSP Specific Plan Site consists of a mix of multi-family residential buildings and scattered open space. A preliminary site investigation indicated that surface water quality BMPs are not present. In addition, the City of Los Angeles Bureau of Sanitation confirmed its database shows no record of BMPs being installed at the OSP Specific Plan Site. While there are no structural BMPs in place on the site, non-structural BMPs and environmental water quality measures are currently utilized to minimize pollutants. These water quality measures include general housekeeping practices such as weekly trash collection and spill prevention and response activities where applicable, as well as proper storage of hazardous materials and wastes. Pollutants of concern associated with the existing residential uses include sediments, nutrients, pesticides, metals, trash, pathogens, and oil and grease (KPFF 2022a).

c. Groundwater Hydrology

Regional

As shown in Figure 4.7-1, most of the City of Los Angeles, including San Pedro, overlies the Los Angeles Coastal Plain Groundwater Basin (Basin). Specifically, San Pedro is located in the West Coast Sub-basin of the Basin. Figure 4.7-1 illustrates the groundwater basins in relation to the project site. The West Coast Sub-basin underlies 160 square miles in the southwestern portion of the Basin and extends from the Ballona Escarpment to the north, Newport-Inglewood Uplift to the east, the San Pedro Bay and Palos Verdes Hills to the south, and the Santa Monica Bay to the west. The average annual groundwater production in the Basin is roughly 52,000 acre-feet (AF) (West Basin Municipal Water District 2022).

Figure 4.7-1 Groundwater Basin Area



Imagery provided by Microsoft Bing and its licensors © 2022.
Additional data provided by CDWR, 2018.

Fig 4.7-1 Groundwater Basins

The West Coast Sub-basin was adjudicated[3] in 1961, which limited the allowable annual extraction of groundwater per water rights holders within West Coast Sub-basin to prevent seawater intrusion and an unhealthy groundwater level. Replenishment of groundwater basins occurs mainly by percolation of precipitation throughout the region via permeable surfaces and spreading grounds, groundwater migration from adjacent basins, and injection wells designed to pump freshwater along specific seawater barriers to prevent the intrusion of salt water.

Local

San Pedro is within the West Coast Sub-basin, as described above. To prevent salt water from intruding into the West Coast Sub-basin, barriers have been constructed between the ocean and mainland. One of these barriers, the Dominguez Gap barrier[4], lies approximately 0.5 mile north of San Pedro. Regardless, groundwater is not pumped within San Pedro for domestic consumption due to its high salinity and potential contamination from industrial and commercial activities at the Port of Los Angeles.

Project Site

327 Harbor Site

The 327 Harbor Site is undeveloped and vacant, with approximately 94 percent of the site consisting of pervious surface. Borings were collected throughout the site in April 2017 and April 2021. In April 2017, groundwater was encountered at approximately 20 feet below ground surface (bgs), while in April 2021, groundwater was encountered between 22 and 24 feet bgs (KPFF 2022b; Group Delta 2022b). Historic highest groundwater at the site has been mapped at a depth of about 10 feet bgs, and groundwater levels are subject to change due to seasonal and tidal variations (Group Delta 2022b). As discussed in Section 4.6, *Hazards and Hazardous Materials*, soils on the 327 Harbor Site contain contaminants from historical industrial uses. Contamination on the site is limited to soils, and groundwater sampling completed on the site indicated that groundwater underlying the site is not impacted (Stantec 2022). Existing groundwater infiltration is assumed to be minimal due to the underlying soil type conditions (with low hydraulic conductivity) and the existing site slopes (steeper than 4 percent in some areas), which results in surface runoff traversing faster across the ground than it can be infiltrated (KPFF 2022b).

OSP Specific Plan Site

The OSP Specific Plan Site is currently occupied by multiple residential buildings. Existing pervious surfaces on the site include courtyards and a soccer field, which allow for some groundwater infiltration but do not contribute substantially to groundwater recharge. As described in the Preliminary Geotechnical Engineering Report for the OSP Specific Plan Site, groundwater was encountered at 20 to 30 feet bgs during field explorations at the project site (Group Delta 2022a; see Appendix D). Groundwater levels are subject to change due to tidal fluctuations, as the waterfront is approximately 700 feet from the OSP Specific Plan Site at its closest point. As discussed in Section 4.6,

[3] When water users within a basin are in dispute over legal rights to the water, a court can issue a ruling known as an adjudication. Adjudications can cover an entire basin, a portion of a basin, or a group of basins and all in-between non-basin locations. See https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Adjudicated-Areas#:~:text=Court%20Adjudications,all%20non%2Dbasin%20locations%20between for more information on this process.

[4] This barrier is composed of a line of 41 injection wells and 107 observation wells extending 12 miles from F Street to E Street along the Dominguez Channel. The observation wells, which are used to monitor water surface elevations and chloride levels, are located along the barrier alignment and placed between injection wells or situated off the immediate barrier alignment. Both reclaimed and imported water are injected into the barrier (LADWP 2022).

Hazards and Hazardous Materials, soils in portions of the OSP Specific Plan Site include contaminants from historical industrial uses. Contamination on the site is anticipated to be limited to soils, based on the results of the Phase II Environmental Site Assessment and Additional Soil Vapor Assessment Report prepared by Frey Environmental, Inc. (Frey) in January 2020 and March 2022 (see Appendix E).

d. Groundwater Quality

Regional

The Basin is under the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB). Due to historical activities, such as seepage of fertilizers and pesticides and hazardous substances leaks from industrial operations and underground storage tanks, groundwater quality in the region has been degraded. According to the Los Angeles RWQCB's Basin Plan, water quality objectives applying to all groundwaters of the region include those concerning bacteria, chemical constituents and radioactivity, mineral quality, nitrogen (nitrate and nitrite), and taste and odor.

Local

The project site specifically overlies the West Coast Sub-basin of the Los Angeles Coastal Plain Groundwater Basin. Based on the Los Angeles RWQCB's Basin Plan, constituents of concern listed for the West Coast Sub-basin include boron, chloride, sulfate, salt/sodium chloride, and total dissolved solids (KPFF 2022a and 2022b).

Project Site

327 Harbor Site

The 327 Harbor Site is vacant and undeveloped. Pollutants associated with the site are limited to debris and trash. Due to the relatively small size of the site and its undeveloped nature, the 327 Harbor Site does not substantially contribute to groundwater recharge or groundwater pollution (KPFF 2022b).

OSP Specific Plan Site

The OSP Specific Plan Site is developed with existing residential uses. Groundwater infiltration on the site is limited to areas such as courtyards and the sports field. Pollutants associated with these uses may include minor concentrations of nutrients and pesticides from landscaping maintenance activities. Therefore, under existing conditions, the OSP Specific Plan Site does not substantially contribute to groundwater recharge or groundwater pollution (KPFF 2022a).

e. Flooding

The major cause of flooding in Los Angeles is short-duration, high-intensity storms. Water courses can flood in response to a succession of intense winter rainstorms, typically between early November and late March. A series of such weather events can cause severe flooding in the city due to the large percentage of impervious areas and the age and capacity of the drainage system. Other flooding causes may include flash floods, dam and levee failure, tsunamis, and power failures. According to Federal Emergency Management Agency (FEMA) flood maps, the project site is located within Zone X, defined as areas determined to be outside the 0.2 percent annual chance floodplain (FEMA 2021). The proposed project is not located in a designated tsunami zone and is not located near any bodies

of water that are subject to seiche (Cal OES 2021). Therefore, the project site is not located in a flood zone and does not have a high risk of flooding or water inundation.

4.7.2 Regulatory Setting

a. Federal Laws and Regulations

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[5]. 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 (U.S. EPA). The purpose of the permit is to translate general requirements of the CWA into specific provisions tailored to the operations of each organization that discharges pollutants. Although federally mandated, the NPDES permit program is generally administered at the State and regional levels.

The U.S. EPA 's 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 5.0 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 1.0 to 5.0 acres, and industrial facilities owned or operated by small municipal separate storm sewer systems, which were previously exempted from permitting.

Federal Antidegradation Policy

The Federal Antidegradation Policy has been incorporated within the CWA and requires states to develop state-wide antidegradation policies and identify methods for implementing them (U.S. EPA 2012). 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.

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[6]. 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 the SDWA, the U.S. EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers that implement those standards. The SDWA

[5]United States Environmental Protection Agency, Clean Water Act, 2002.
[6] United States Code, Title 42 – The Public Health and Welfare – Chapter 6A, Public Health and Service, Safe Drinking Water Act. 2006 Edition, Supplement 4, 2006.

regulates contaminants of concern in domestic water supply, including maximum containment levels. The U.S. EPA has authorized the California Department of Public Health the responsible agency for administering California's drinking water program. Maximum containment levels are established under the California Code of Regulations (CCR) Title 22, Div. 4, Ch. 15, Article 4 (Title 22 Standards).

National Flood Insurance Program

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate FEMA to evaluate flood hazards (42 United States Code [USC] 4001 et. seq.). FEMA provides flood insurance rate maps 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 flood insurance rate map, FEMA conducts engineering studies referred to as flood insurance studies. Using information gathered in these studies, FEMA engineers and cartographers delineate special flood hazard areas on flood insurance rate maps.

The Flood Disaster Protection Act requires owners of all structures within identified special flood hazard areas 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 afforded by FEMA.

California Toxics Rule

In 2000, the U.S. EPA promulgated the California Toxics Rule, which establishes water quality criteria for priority toxic pollutants to be applied to waters in the State[7]. The U.S. EPA promulgated this rule based on the U.S. EPA Administrator's determination that the numeric criteria of specific concentrations of regulated substances are necessary for the State to protect human health and the environment (U.S. EPA 2022). The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water, such as inland surface waters and enclosed bays and estuaries, that are designated by the Los Angeles RWQCB as having beneficial uses protective of aquatic life or human health.

b. State Regulations

Porter-Cologne Water Quality Control Act

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

Under the CWC, the State of California is divided into nine RWQCBs, which govern the implementation and enforcement of the CWC and the CWA. The project site is located within Region 4, also known as the Los Angeles RWQCB. 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 and discharge

[7] U.S. EPA, Water Quality Standards, Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 2001.

conditions and prohibitions, and must adhere to the policies set forth in the CWC and established by the SWRCB. In this regard, the Los Angeles RWQCB issued the Los Angeles Basin Plan on August 29, 2014, for the Coastal Watersheds of Los Angeles and Ventura Counties, with subsequent amendments. The Los Angeles RWQCB is also given authority to issue waste discharge requirements, enforce actions against stormwater discharge violators, and monitor water quality.

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. 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.

California Safe Drinking Water Act

The U.S. EPA authorized the California Department of Public Health to administer California's drinking water program. In 1976, two years after the federal Safe Drinking Water Act was passed, California adopted its own safe drinking water act (contained in the Health and Safety Code) and adopted implementing regulations (contained in Title 22 CCR). California's program sets drinking water standards that are at least as stringent as the federal standards. Each community water system also must monitor for a specified list of contaminants, and the monitoring results must be reported to the State. Responsibility for the State's Drinking Water Program was transferred from the Department of Public Health to the Division of Drinking Water, which is a division of the SWRCB that was created in July 2014.

Sustainable Groundwater Management Act

Effective in 2015, the Sustainable Groundwater Management Act creates a framework for sustainable, local groundwater management in California. The Sustainable Groundwater Management Act requires the designation of groundwater sustainability agencies by one or more local agencies and the adoption of groundwater sustainability plans for basins designated as medium- or high-priority by the California Department of Water Resources. The Sustainable Groundwater Management Act grants new powers to groundwater sustainability agencies, including the power to adopt rules, regulations, ordinances, and resolutions; regulate groundwater extractions; and impose fees and assessments. The Sustainable Groundwater Management Act also allows the SWRCB to intervene if local agencies will not or do not meet the Sustainable Groundwater Management Act requirements, in addition to mandating that critically overdrafted basins be sustainable by 2040, and medium- or high-priority basins by 2042.

c. Regional and Local Laws and Regulations

Regional

County of Los Angeles Hydrology Manual

Drainage and flood control in city are subject to review and approval by the City of Los Angeles Bureau of Engineering (LABOE). 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, dated December 3, 1999, the City has adopted the Los Angeles County Department of Public Works' Hydrology Manual as its basis of design for storm drainage facilities (County of Los Angeles 2006). 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 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 the County of Los Angeles. 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.

Los Angeles Regional Water Quality Control Board Basin Plan

As mentioned above, the proposed project is within the jurisdiction of the Los Angeles RWQCB, which also protects ground and surface water quality in the Los Angeles Region, including the coastal watersheds of Los Angeles and Ventura counties, along with very small portions of Kern and Santa Barbara counties. The Los Angeles RWQCB provides permits for projects that may affect surface water and groundwater locally. The Los Angeles RWQCB is responsible for preparing the Basin Plan, which is updated as necessary every three years. The latest Basin Plan was updated in 2014 (Los Angeles RWQCB 2014). The Basin Plan establishes water quality objectives for surface waters and groundwater within the Los Angeles region. The Basin Plan designates the beneficial uses of inland surface waters and specifies both qualitative and numerical water quality objectives for these surface waters in the county. Water quality objectives, as defined by CWA Section 13050(h), are the "limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses or the prevention of nuisance within a specific area."

NPDES Permit Program

As indicated above, in California, the NPDES stormwater permitting program is administered by the SWRCB through its nine RWQCBs.

CONSTRUCTION: STORMWATER POLLUTION PREVENTION PLAN

The 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. For all construction activities disturbing 1.0 acre of land or more, California mandates the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP discusses the selection and implementation of BMPs to prevent discharges of water pollutants to surface water and groundwater. The SWPPP also charges owners with stormwater

quality management responsibilities. The developer or contractor for a construction site subject to the Construction General Permit must prepare and implement a SWPPP that meets the requirements of the Construction General Permit (SWRCB 2021)[8]. The purpose of a SWPPP is to identify potential sources and types of pollutants associated with construction activity and list BMPs that would prohibit pollutants from being discharged from the construction site into the public stormwater system. BMPs typically address stabilization of construction areas, minimization of erosion during construction, sediment control, control of pollutants from construction materials, and post-construction stormwater management (e.g., the minimization of impervious surfaces or treatment of stormwater runoff). The SWPPP is also required to include a discussion of the proposed program to inspect and maintain all BMPs (U.S. EPA 2007).

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

- Erosion Control BMPs – to protect the soil surface and prevent soil particles from detaching from current surfaces. 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, 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 1.0 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 with the appropriate RWQCB and provide proof of the Notice of Intent prior to applying for a grading or building permit from the local jurisdiction and must prepare a SWPPP that incorporates the minimum BMPs required under the permit, as well as appropriate project-specific BMPs. The

[8] Order No. R4-2021-0105

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.

DISCHARGES OF GROUNDWATER FROM CONSTRUCTION AND PROJECT DEWATERING

Dewatering operations are practices that discharge non-stormwater, such as groundwater, that must be removed from a work location to proceed with construction into the drainage system. Discharges from dewatering operations can contain high levels of fine sediments, which, if not properly treated, could lead to exceedance of the NPDES requirements. A NPDES Permit for dewatering discharges was adopted by the Los Angeles RWQCB 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 Notice of Intent 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 (Los Angeles RWQCB 2018). In accordance with the Notice of Intent, 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 and 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 (Los Angeles RWQCB 2018).

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 SWRCB to be consistent with the requirements of the CWA and the Porter-Cologne Act for discharges through the public storm drains in Los Angeles County to statutorily defined waters of the United States (33 USC Section 1342(p); 33 CFR Part 328.11). On September 8, 2016, the Los Angeles RWQCB 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 minimize stormwater quality and runoff volume impacts to receiving waters as a result of new development and redevelopment. The County and the City are also 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 that 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 sf 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.

The Enhanced Watershed Management Program for the Upper Los Angeles River (EWMP) describes a customized compliance pathway that participating agencies will follow to address the pollutant reduction requirements of the Los Angeles County MS4 Permit. 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 (e.g., BMPs) that will achieve required pollutant reductions while also providing multiple benefits to the community and leveraging sustainable green infrastructure practices. The Los Angeles County MS4 Permit requires the identification of Watershed Control Measures, which are strategies and BMPs that will be implemented through the EWMP, individually or collectively, at watershed-scale to address the Water Quality Priorities identified in the EWMP. The EWMP Implementation Strategy is used 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 instructions 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 Management Program. The objective of the Stormwater Management Program is to reduce pollutants in urban stormwater runoff on site to the "maximum extent practicable" prior to site runoff into the public storm drains to attain water quality objectives and protect the beneficial uses of receiving waters in Los Angeles County. Special provisions in the Los Angeles County MS4 Permit facilitate implementation of the Stormwater Management Program. In addition, the Los Angeles County MS4 Permit requires that permittees implement an LID Plan, as discussed above, that designates BMPs that must be used in specified categories of development projects to infiltrate, 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 codified in 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 (LID Handbook; City of Los Angeles 2016), which provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities comply with the Developing Planning Program regulations of the City's Stormwater Program. The LID Handbook assists developers with the selection, design, and incorporation of stormwater source control and treatment control BMPs into project design plans and provides an overview of the City's plan review and permitting process.

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

Local

LAMC 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 Class B Permit (LAMC Section 62.105). Under the Class B permitting process, storm drain installation plans are subject to review and approval by LABOE. Additionally, connections to the MS4 system from a property line to a catch basin or a storm drainpipe require a storm drain permit from the Bureau of Engineering.

LAMC 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 12.42 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; conserve soil and accumulated organic litter and reduce erosion by utilization of a variety of methods; and increase the "residence time of precipitation" (i.e., the time between the original evaporation and the returning of water masses to the land surface as precipitation) within a given watershed. Implementation guidelines developed for the Ordinance provide specific features and techniques for incorporation into projects, and include water management guidelines addressing runoff, infiltration, and groundwater recharge. This Ordinance is incorporated into the LID Ordinance discussed below.

LAMC 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) 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 Ordinance implements the following objectives:

- To comply with all federal and State laws, lawful standards, and orders applicable to stormwater and urban runoff pollution control;
- 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;
- To prohibit illicit discharges to the storm drain system;
- To reduce stormwater runoff pollution;
- To reduce non-stormwater discharge to the storm drain system to the maximum extent practicable; and
- 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. 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 of Public Works of the City of Los Angeles' 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 the Ordinance as defined in Subsection B of LAMC Section 64.70.

LAMC 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 maximizing 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.

Low Impact Development Ordinance (No. 181,899)

In 2011, the City of Los Angeles adopted a Citywide Low Impact Development Ordinance (LID Ordinance) that amended the existing Stormwater Ordinance (LAMC Section Nos. 64.70 and 64.72, discussed above). The LID Ordinance, effective May 12, 2012, and updated in September 2015 (Ordinance No. 183,833), enforces the requirements of the Los Angeles County MS4 Permit. LID is a stormwater management strategy with goals to minimize the impacts of increased runoff and stormwater pollution as close to the source as possible, and that promotes the use of natural infiltration systems and 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 to store, evaporate, detain, and/or treat runoff is recommended (City of Los Angeles 2016).

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 Ordinance 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. The LID Ordinance and the BMPs contained therein comply with Los Angeles County MS4 Permit requirements for stormwater management, which apply to proposed new development and redevelopment of a certain size. The LID Ordinance provides a consistent set of BMPs that are intended to be inclusive of, and potentially exceed, SUSMP standards 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 events 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, and/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, since it allows for groundwater recharge and reduces the volume of stormwater entering municipal drains (City of Los Angeles 2016). If project site conditions are not suitable for infiltration, the City requires on-site retention via stormwater capture and reuse. Should capture and reuse be deemed technically infeasible, high-efficiency bio-filtration/bioretention systems should be utilized. Lastly, under the LID Ordinance (LAMC Section 64.72 [C] 6), as interpreted in the LID Manual, if no single approach listed in the LID Manual is feasible, then a combination of approaches may be used (City of Los Angeles 2016). The LID Ordinance applies first to a project in lieu

of SUSMP. If a large project cannot meet the requirements of the LID Ordinance, then SUSMP is required.

Water Quality Compliance Master Plan for Urban Runoff

The City's 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. 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.

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 (City of Los Angeles 2016). The Development Best Management Practices Handbook, Low Impact Development Manual, Part B: Planning Activities (5th edition, May 2016) (LID Handbook) provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities comply with the Developing Planning Program regulations of the City's Stormwater Program (City of Los Angeles 2016). 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.

Flood Hazard Management Ordinance

Effective on April 19, 2021, Ordinance 186,952 amended 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 (Flood Ordinance). The Flood 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 Flood Ordinance deal with the unique problems of each hazard, in addition to the Citywide policies and goals.

4.7.3 Impact Analysis

a. Significance Thresholds and Methodology

Significance Thresholds

In accordance with Appendix G of the CEQA Guidelines, an impact regarding hydrology and water quality would be significant if the proposed project would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
3. 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:
    a. Result in substantial erosion or siltation on- or off-site,
    b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site,
    c. 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, and/or
    d. Impede or redirect flood flows;
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; and/or
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

For this analysis, the Appendix G Thresholds listed above are analyzed. However, the analysis considers the City of Los Angeles' 2006 CEQA Thresholds Guide, as appropriate, to assist in answering the Appendix G Thresholds. The City of Los Angeles CEQA Thresholds Guide are identified below:

Surface Water Hydrology

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

Surface Water Quality

- Would the project result in discharges that would create pollution, contamination, or nuisance as defined in Section 13050 of the 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?

As defined in the CWC:

- "Pollution" means an alteration of the quality of the waters of the State to a degree which unreasonably affects either of the following: (1) the waters for beneficial uses; or (2) facilities which serve these beneficial uses. Pollution may include contamination.
- "Contamination" means an impairment of the quality of the waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases. Contamination includes any equivalent effect resulting from the disposal of waste whether or not waters of the State are affected.
- "Nuisance" means anything which meets all of the following requirements: (1) is injurious to health or is indecent or offensive to the sense or an obstruction to the free use of property so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community, neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and (3) occurs during or as a result of the treatment of disposal of wastes.

Groundwater

- Change potable water levels sufficiently to:
  - Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;
  - Reduce yields of adjacent wells or well fields (public or private); and/or
  - Adversely change the rate or direction of flow of groundwater;
- Result in demonstrable and sustained reduction of groundwater recharge capacity;
- Affect the rate or change direction of movement of existing contaminants;
- Expand the area affected by contaminants;
- Result in an increased level of groundwater contamination (including that from direct percolation, injection, or saltwater intrusion); and/or
- Cause regulatory water quality standards at an existing production well to be violated, as defined in the CCR, Title 22, Division 4, Chapter 15 and in the Safe Drinking Water Act.

Methodology

The analysis of hydrologic and water quality impacts is based on information and data contained in the Water Resources Reports prepared by KPFF, which include site runoff, soil properties, impervious surface areas, and water quality BMPs (KPFF 2022a and 2022b). This section is also informed by the Preliminary Geotechnical Reports prepared for the OSP Specific Plan Site and 327 Harbor Site by Group Delta (2022a and 2022b). In addition to the technical reports stated above, aerial imagery, grading plans, and drainage plans for the project site were reviewed to analyze pre- and post-construction hydrology. Documents published by the SWRCB and Los Angeles RWQCB, including plans

and permits, were reviewed to provide information on existing water quality, as well as required water quality improvement measures.

The environmental impacts of the proposed project with respect to surface water hydrology, water quality, and groundwater are based on the potential for changes to the amount of surface water flow, which could alter drainage patterns, contribute to flooding, degrade surface water quality, exceed stormwater collection infrastructure, and/or effect groundwater supplies and recharge. The existing conditions for surface water hydrology, water quality, and groundwater are compared to the future site conditions under project developments to determine impacts.

b. Project Design Features

Construction and operation of the project would be implemented in accordance with applicable regulatory requirements (refer to Section 4.7.2, *Regulatory Setting*). No specific Project Design Features are proposed with regard to hydrology and water quality.

c. Project Impacts and Mitigation Measures

Threshold 1:	Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Impact HYD-1 PROJECT CONSTRUCTION ACTIVITIES WOULD NOT VIOLATE WATER QUALITY STANDARDS OR WASTE DISCHARGE REQUIREMENTS, OR OTHERWISE SUBSTANTIALLY DEGRADE SURFACE OR GROUNDWATER QUALITY WITH COMPLIANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION GENERAL PERMIT, NPDES PERMIT NO. CAG994004, AND LOCAL, STATE, AND FEDERAL REGULATIONS FOR THE HANDLING, TRANSPORT, AND DISPOSAL OF HAZARDOUS MATERIALS AND CONTAMINATED SOIL. SIMILARLY, THE POTENTIAL FOR LONG-TERM OPERATIONAL WATER QUALITY IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH IMPLEMENTATION OF LID BMPS AS REQUIRED BY THE LAMC AND LID HANDBOOK. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The 327 Harbor Site is undeveloped and vacant. The 327 Harbor Site is bounded by O'Farrell Street to the north, Harbor Boulevard to the east, commercial development to the south, and Beacon Street to the west. The OSP Specific Plan Site is currently developed with the Rancho San Pedro public housing complex. Existing development includes 478 public housing units and 8,000 sf of amenities, services, and administration land uses, including a management/leasing office, computer center and resident leadership office, social hall, maintenance building, and community room. Outdoor open space amenities include a playground, sports field, grilling area, picnic tables, and a community garden totaling 164,000 sf. The OSP Specific Plan Site is bounded by Santa Cruz Street to the north, Harbor Boulevard to the east, 3rd Street to the south, and Mesa Street to the west. Generally, the project site slopes downward from west to east and surface runoff drains as sheet flow to the east, draining into existing storm drains along adjacent streets.

On the OSP Specific Plan Site, the proposed project would involve the phased demolition of existing structures and the construction of up to 1,553 multi-family residential units; 85,000 sf of Neighborhood Serving Uses; and 45,000 sf of commercial retail uses. Additionally, the proposed project would add approximately 5.3 acres of public park space and approximately 504,051 sf of landscaped areas to the OSP Specific Plan Site. On the 327 Harbor Site, 47 residential units would be developed, as well as 4,906 sf of outdoor open space and 6,040 sf of landscaped areas. Landscaped areas would include drought tolerant shrubs, groundcover, and trees, as well as native plant species and/or plants adaptive to the southern California coastal environment. In areas where turf is installed, a water-conserving species appropriate for the climate in Los Angeles would be selected. The OSP

Specific Plan Site would be comprised of approximately 63 percent impervious surfaces and 37 percent pervious surfaces upon project buildout. The 327 Harbor Site would be comprised of 100 percent impervious surfaces upon project buildout.

Two project development scenarios are proposed (see Section 2, *Project Description*) that would involve phasing the construction on the OSP Specific Plan Site in two different development patterns. Under Scenario A, the densest development would be located in Phases 2 and 3, whereas under Scenario B, development would be densest in Phases 1 and 2. Under both scenarios, the footprint of development would be identical, construction and grading activities would be the same, and the same amount of impervious and pervious land cover would be developed. Development at the 327 Harbor Site would be identical under both development scenarios. Therefore, this analysis applies to both Scenario A and Scenario B.

Construction

Surface Water

Construction activities associated with development of the proposed project could result in soil erosion due to earth-moving activities such as excavation, grading, soil compaction and moving, and soil stockpiling. In addition, chemicals, adhesives, coatings, and fuels used during construction have the potential to result in pollutant discharges. However, the proposed project would be required to comply with State and local water quality regulations designed to control erosion and protect water quality during construction. This includes compliance with the requirements of the SWRCB Construction General Permit, which requires preparation and implementation of a SWPPP for projects that disturb 1.0 acre or more of land. Each stage of project construction would be required to develop and implement a SWPPP that would adhere to the California Stormwater Quality Association Construction BMP Handbook and would take effect when construction commences, before site clearing and grubbing or demolition activity. Each SWPPP must include erosion and sediment control BMPs that would meet or exceed reduction measures required by the Construction General Permit. BMPs to reduce potential construction impacts may include measures such as the installation of silt fences prior to commencement of ground-disturbing activities to trap sediments, slope stabilization, regular sweeping of construction sites to control dust, and proper handling and storage of chemicals used during construction to prevent spills and discharges.

During construction, each SWPPP would be reviewed regularly and amended, as needed, as changes occur throughout the construction process. The Notice of Intent, Amendments to the SWPPP, Annual Reports, Rain Event Action Plans, and non-compliance reporting would be posted to the State's Stormwater Multiple Applications and Reports website in compliance with the requirements of the Construction General Permit. Implementation of the required SWPPPs would reduce the potential for eroded soil and soil contaminants to impact a waterbody following a storm event. In addition, construction activities would comply with City grading permit regulations (Chapter IX, Article 1, Division 70 of the LAMC), including preparation of an erosion control plan, to further reduce the effects of sedimentation and erosion.

As discussed in Section 4.7.1, *Environmental Setting*, in the most recent field explorations, groundwater was encountered at 20 to 30 feet bgs on the OSP Specific Plan Site and at 22 to 24 feet bgs on the 327 Harbor Site (Group Delta 2022a and 2022b, respectively). The historic high groundwater at the project site is 10 feet bgs, and groundwater levels may fluctuate with tidal and seasonal variations (KPFF 2022a and 2022b). Groundwater could be encountered during project construction due to the existing on-site groundwater levels and the proposed excavations.

Dewatering operations are practices that discharge non-stormwater, such as groundwater, into the drainage system. Discharges from dewatering operations can contain high levels of fine sediments, which, if not properly treated, could lead to exceedance of the NPDES requirements. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with NPDES Permit No. CAG994004. In addition, BMPs, erosion and sediment controls, and good housekeeping procedures would be implemented to address any dewatering discharges as required by the Construction General Permit (Order 2009-0009-DWQ). Any such temporary dewatering systems would comply with all relevant NPDES requirements to prevent impacts to surface water quality in areas where the groundwater is discharged.

With compliance with the applicable regulations, construction activities would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality, and associated impacts would be less than significant.

Groundwater

During on-site grading and building construction, hazardous materials such as fuels, paints, solvents, and concrete additives would be used and could increase the opportunity for hazardous materials releases into groundwater. However, as described in Section 4.6, *Hazards and Hazardous Materials*, construction activities would comply with all applicable federal, State, and local requirements concerning the handling, storage, and disposal of hazardous materials and waste, and the project SWPPPs would also include BMPs to prevent the spill of hazardous materials used during project construction.

In addition, project construction on the project site would include excavation and replacement of uncertified fill material on the site. As described in Section 4.4, *Geology and Soils*, the upper 10 to 20 feet of the OSP Specific Plan Site contain clayey soils that are poor for drainage and subject to liquefaction in a seismic event, and it is anticipated that mass export of the existing fill soils would occur to remove and replace the site soils with approved fill. Likewise, the upper 5 feet of artificial fill on the 327 Harbor Site would be removed during grading. Additionally, as described in Section 4.6, *Hazards and Hazardous Materials*, contaminated soil is known to exist across the project site. Contaminated soils encountered during project construction would be captured within the volume of excavated material removed from the project site and would be remediated at an approved disposal facility in accordance with regulatory requirements (refer to Section 4.6, *Hazards and Hazardous Materials*, for detailed discussion of these requirements). The removal of contaminated soils would occur under oversight by the Los Angeles Fire Department and/or California Department of Toxic Substances Control, which would require all proposed construction activities to follow the procedures necessary to prevent soil removal and remediation activities from affecting groundwater quality. Import fill sources would be observed and tested prior to hauling onto the project site to evaluate the suitability for use on site pursuant to the City's requirements. Specifically, imported fill materials would be nonhazardous and consist of granular soil with less than 35 percent passing the No. 200 sieve based on ASTM D1140 and an Erodibility Index less than 20 based on ASTM D489.

Compliance with regulatory requirements, including the NPDES Construction General Permit and local, State, and federal requirements for the handling, storage, and disposal of hazardous materials, would reduce the potential for construction of the project to release contaminants into groundwater that could interact with existing contaminants, expand the area or increase the level of groundwater contamination, or cause a violation of regulatory water quality standards. Potential impacts to groundwater quality associated with uncertified fill removal and replacement during project construction would be less than significant. In addition, as there are no groundwater production wells

or public water supply wells in the vicinity of the project site, construction activities would not be anticipated to affect existing wells. Therefore, the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality, and associated impacts would be less than significant.

Operation

Surface Water

The proposed project would involve the occupation and operation of proposed residential, commercial, recreational, and administrative uses. As is typical of most urban developments, stormwater runoff from the project site has the potential to introduce pollutants into the stormwater system. Potential pollutants generated by operation of the proposed project include sediment, trash, nutrients, pesticides, metals, pathogens, and oil and grease.

The proposed development would mimic the existing on-site drainage pattern that directs flows from west to east into the adjacent roadways. At the 327 Harbor Site, rainwater would be collected from the proposed development's roof and courtyard through roof drains and gutters and discharged to the existing storm drains serving the site along Harbor Boulevard. Similarly, at the OSP Specific Plan Site, post-construction surface flows would continue to be directed to the existing storm drains serving the site. Proposed development could potentially include new catch basins in the existing streets during roadway improvements for new pedestrian and bike access.

The proposed project would be required to comply with the City's post-construction LID requirements outlined in LAMC Chapter 64.70, LAMC Chapter 64.72, and the LID Handbook, which include measures to ensure the proper retention and treatment of stormwater. The project would include the installation of LID BMPs, which would be designed to treat, at minimum, the first flush or the equivalent of the 85th percentile, 24-hour runoff event and first 0.75-inch of rainfall for any storm event. The implementation of BMPs required by the City's LID standards and LAMC Chapters 64.70 and 64.72, such as trash capture devices, would target the potential pollutants generated during project operation and reduce the potential for them to enter the stormwater system. These BMPs are required to be maintained by their owner in perpetuity to ensure proper functioning.

Therefore, with the incorporation of the required BMPs, operation of the project would not result in discharges that would cause pollution that would alter the quality of the waters of the State to a degree that unreasonably affects beneficial uses of the waters; contamination of the quality of the waters of the State by waste to a degree that creates a hazard to the public health through poisoning or through the spread of diseases; or nuisance that would be injurious to health or affect any considerable number of persons as a result of the treatment or disposal of wastes. Rather, the project would improve the quality of on-site flows due to the implementation of BMPs that would collect, treat, and discharge flows from the project site, which are not being treated by structural stormwater BMPs under existing conditions (KPFF 2022a and 2022b). Operation of the project would not result in discharges that would violate any surface water quality standards or waste discharge requirements and impacts to surface water quality during operation would be less than significant.

Groundwater

The proposed project would not include the installation or operation of water wells, an extraction or recharge system that is in the vicinity of the coast (an area of known groundwater contamination or seawater intrusion), a municipal supply well, or a spreading ground facility. Furthermore, no water

supply wells, spreading grounds, or injection wells are located within 1 mile of the project site. Operational activities that could affect groundwater quality include spills of hazardous materials.

No underground storage tanks exist on the project site or would be placed beneath the site as part of the project. Hazardous materials associated with project operation would include common household hazardous materials such as fluids from resident and visitor vehicles, cleaning products, and landscaping maintenance materials. Drains in the proposed parking garages would be designed and maintained according to the Los Angeles Department of Building and Safety requirements (Document No. P/PC 2014-11), which require that drains be designed to receive water from automobile drippage, ruptured piping, and other similar conditions. These drains would be directly connected to the public storm drain system and would minimize the potential for contaminated water from parking structures to enter the groundwater. In addition, while increased development may incrementally increase the use of common household hazardous materials (such as cleaning fluids and landscaping maintenance materials), compliance with applicable existing regulations for the handling, transport, use, and disposal of hazardous materials would prevent the proposed project from affecting or expanding any potential areas of groundwater contamination, increasing the level of contamination in groundwater, or causing regulatory water quality standards at an existing production well to be violated, as defined in the CCR Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act.

The project would primarily direct stormwater to the existing storm drain system, similar to current conditions on the project site. If infiltration-based BMPs are utilized, such as detention basins or biofiltration, in accordance with City LID requirements, this would allow treated water to infiltrate the soil and improve the groundwater quality beneath those BMPs, contributing to better quality of the local groundwater as a whole (KPFF 2022a and 2022b). These BMPs are designed to prevent groundwater contamination and are required to be maintained by their owner in perpetuity to ensure proper functioning. Furthermore, as noted above under *Construction*, existing polluted soils on the project site would be removed and remediated during construction, thereby reducing the potential for impacts to groundwater quality posed by existing conditions on the project site. Therefore, operation of the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality and impacts would be less than significant.

Mitigation Measures

Because impacts would be less than significant, mitigation is not required.

Significance After Mitigation

Project impacts would be less than significant without mitigation.

Threshold 2:	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?

Impact HYD-2 PROJECT CONSTRUCTION ACTIVITIES MAY REQUIRE TEMPORARY DEWATERING ON THE OSP SPECIFIC PLAN SITE FOR CONSTRUCTION OF UNDERGROUND PARKING. HOWEVER, TEMPORARY DEWATERING WOULD NOT SUBSTANTIALLY DECREASE GROUNDWATER SUPPLIES OR INTERFERE WITH GROUNDWATER RECHARGE DUE TO THE DISTANCE AND GRADIENT BETWEEN THE NEAREST GROUNDWATER WELL AND THE LIMITED NATURE OF DEWATERING ACTIVITIES. THE PROPOSED PROJECT WOULD RESULT IN A MINOR INCREASE IN IMPERVIOUS SURFACES ON THE PROJECT SITE BUT WOULD IMPLEMENT LID BMPS THAT PROMOTE GROUNDWATER RECHARGE DURING LONG-TERM PROJECT OPERATION. THEREFORE, THE PROPOSED PROJECT WOULD NOT SUBSTANTIALLY DECREASE GROUNDWATER SUPPLIES OR INTERFERE SUBSTANTIALLY WITH GROUNDWATER RECHARGE SUCH THAT THE PROJECT MAY IMPEDE SUSTAINABLE GROUNDWATER MANAGEMENT OF THE BASIN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Two project development scenarios are proposed (see Section 2, *Project Description*) that would involve phasing the construction in two different development patterns. Under Scenario A, the densest development would be located in Phases 2 and 3, whereas under Scenario B, development would be densest in Phases 1 and 2. Under both scenarios, the footprint of development would be identical, construction and grading activities would be the same, and sitewide development of residential and non-residential uses would be the same. Development of the OSP Specific Plan Site under both scenarios would include up to 1,553 residential units, 45,000 sf of commercial/retail uses, 85,000 sf of Neighborhood Serving Uses, 5.3 acres of public park space, and 504,051 sf of landscaping. Under both scenarios, development on the 327 Harbor Site would consist of 47 residential units with 4,906 sf of outdoor open space and 6,040 sf of landscaping. Under both Scenarios, the OSP Specific Plan Site would be comprised of 63 percent impervious surfaces and 37 percent pervious surfaces and the 327 Harbor site would be comprised of 100 percent impervious surfaces. Therefore, this analysis applies to both Scenario A and Scenario B.

Construction

Groundwater at the OSP Specific Plan Site was encountered at depths of 20 to 30 feet bgs and at depths of 20 to 24 feet bgs at the 327 Harbor Site during geotechnical investigations (Group Delta 2022a and 2022b). The historic high groundwater level at the OSP Specific Plan Site is 10 feet bgs, and groundwater levels may fluctuate with tidal and seasonal variations. Although groundwater is a water source used for distribution for public water utilities in Los Angeles County, groundwater near San Pedro is not ideal for collection due to its high salinity content from proximity to the ocean (KPFF 2022a and 2022b).

Groundwater could be encountered during project construction due to the current groundwater level and proposed depths of excavation. As described under Impact HYD-1, there are certain techniques, including temporary dewatering wells, storage tanks, and filters, that may be used to dewater the site if groundwater is encountered during excavations for underground parking structures on the OSP Specific Plan Site. However, due to the limited and temporary nature of potential dewatering activities during project construction, impacts to groundwater levels would be minimal. Dewatering activities would not deplete groundwater supplies because the distance between the project site and the nearest City groundwater well is down-gradient and because potential site dewatering would be conducted only when shallow groundwater conditions are encountered. Although temporary dewatering activities associated with construction may temporarily and nominally decrease the groundwater level in the immediate area of dewatering on the project site, the proposed project

would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Therefore, impacts would be less than significant.

Operation

The proposed project would increase the amount of impervious surface on the OSP Specific Plan Site from 57 percent under existing conditions to 63 percent upon buildout of the One San Pedro Specific Plan. On the 327 Harbor Site, the amount of impervious surface on the site would be increased from 5 percent under existing conditions to 100 percent upon buildout of the proposed residential development. Although the proposed project would result in an increase in impervious surfaces on the project site, the proposed project would include 5.3 acres of public park space and 504,051 sf of landscaping on the OSP Specific Plan Site and 4,906 sf of outdoor open space and 6,040 sf of landscaping on the 327 Harbor Site, as well as additional stormwater infiltration based BMPs that would offset the increase in impervious surfaces. Furthermore, on the 327 Harbor Site under existing conditions, rainfall is more likely to sheet flow towards Harbor Boulevard than infiltrate into the soil due to the existing steep slopes and underlying soil conditions, yielding a large flowrate from the site and minimal groundwater infiltration.

Stormwater management features such as infiltration basins and trenches, bioretention basins, permeable pavements, and dry wells would be developed as part of the project and would assist in the collection of stormwater and the process of groundwater recharge. The implementation of LID BMPs such as detention basins or biofiltration systems would be used to treat stormwater runoff, as discussed under Impact HYD-1. The treated water would help recharge the groundwater level locally but would not affect the overall groundwater level as only a small portion of water would infiltrate into the ground, when compared to the volume of water in the groundwater table (KPFF 2022a and 2022b). In addition, as discussed in the Preliminary Geotechnical Report, underground parking on the OSP Specific Plan Site would be designed to withstand hydrostatic forces and appropriately address groundwater management. Underground parking levels would be required to incorporate comprehensive waterproofing systems in accordance with current industry standards and construction methods, and long-term operational dewatering would not be required (Group Delta 2022a). Accordingly, operation of the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Therefore, impacts would be less than significant.

Mitigation Measures

Because impacts would be less than significant, mitigation is not required.

Significance After Mitigation

Project impacts would be less than significant without mitigation.

Threshold 3a: 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 result in substantial erosion or siltation on- or off-site?

Threshold 3b: 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 result in flooding on- or off-site?

Threshold 3c: 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 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?

Threshold 3d: 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 redirect flood flows?

Impact HYD-3 WITH IMPLEMENTATION OF CONSTRUCTION BMPS AND OPERATIONAL LID BMPS IN COMPLIANCE WITH THE REQUIREMENTS OF THE LAMC, LID HANDBOOK, AND NPDES, THE PROPOSED PROJECT WOULD NOT SUBSTANTIALLY ALTER DRAINAGE PATTERNS AND RUNOFF ON THE PROJECT 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 RESULT IN SUBSTANTIAL EROSION OR SILTATION ON- OR OFF-SITE, SUBSTANTIALLY INCREASE THE RATE OR AMOUNT OF SURFACE RUNOFF IN A MANNER WHICH WOULD RESULT IN FLOODING ON- OR OFF-SITE OR IMPEDE OR REDIRECT FLOOD FLOWS, OR 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. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The OSP Specific Plan Site currently consists of 478 public housing units and 8,000 sf of amenities, services, and administration land uses, including a management/leasing office, computer center and resident leadership office, social hall, maintenance building, and community room. In addition, outdoor amenities include a playground, sports field, grilling area, picnic tables, and a community garden. The 327 Harbor Site is an undeveloped, vacant lot. There are no existing water features, such as streams or rivers, on or within the immediate vicinity of the project site. The project site is located approximately 1,300 feet west of the Port of Los Angeles Harbor and 2.5 miles northeast of the Pacific Ocean. The project site is within FEMA Flood Zone X, which is not subject to flood risk. Drainage from the OSP Specific Plan Site is currently collected in existing paved areas and at downspouts on existing structures and drains to the existing storm water drainage system in the surrounding roadways. On the 327 Harbor Site, stormwater flows as sheet flow to the east and drains into the existing stormwater drainage system in Harbor Boulevard.

Two project development scenarios are proposed (see Section 2, *Project Description*) that would involve phasing the construction on the OSP Specific Plan Site in two different development patterns. Under Scenario A, the densest development would be located in Phases 2 and 3, whereas under Scenario B, development would be densest in Phases 1 and 2. Under both scenarios, the footprint of development would be identical, construction and grading activities would be the same, and sitewide development of residential and non-residential uses would be the same. Development of the OSP Specific Plan Site under both scenarios would include 1,553 residential units, 45,000 sf of

commercial/retail uses, 85,000 sf of Neighborhood Serving Uses, 5.3 acres of public park space, and 504,051 sf of landscaping. Under both scenarios, development on the 327 Harbor Site would consist of 47 residential units with 4,906 sf of outdoor open space and 6,040 sf of landscaping. Under both Scenarios, the OSP Specific Plan Site would be comprised of 63 percent impervious surfaces and 37 percent pervious surfaces and the 327 Harbor Site would be comprised of approximately 100 percent impervious surfaces upon project completion.

Therefore, this analysis applies to both Scenario A and Scenario B.

Construction

The proposed project is expected to be built over three stages, with each stage relating to the construction of specific buildings and associated infrastructure. As described above, there are no rivers or streams within or near the project site, and project construction would not alter the course of any rivers or streams. However, construction activities such as building demolition, grading and excavation, and earth moving have the potential to temporarily alter local site drainage patterns by exposing underlying soils, temporarily increasing site permeability, and modifying site terrain. In addition, construction activities could contribute to erosion and pollutant loading in stormwater runoff.

As discussed under Impact HYD-1, each stage of the proposed project would comply with the NPDES Construction General Permit, which requires preparation and implementation of a SWPPP. Each project construction stages' SWPPP would include implementation of erosion and sediment control BMPs that would meet or exceed measures required by the Construction General Permit. As discussed above, BMPs to reduce potential construction impacts may include measures such as installation of silt fences to trap sediments, slope stabilization, regular sweeping of construction sites to control dust, and proper handling and storage of any chemicals used during construction to prevent spills and discharges.

The project would also implement an Erosion Control Plan that specifies BMPs and erosion control measures to be used during construction to manage runoff flows and minimize the potential to increase pollution entering the existing stormwater drainage system. The Erosion Control Plan measures would be designed to contain and treat stormwater and construction watering on the project site so runoff would not impact off-site drainage facilities or receiving waters. In addition, the proposed project would be required to comply with all applicable City grading permit regulations that require implementation of applicable measures, plans, and inspections to reduce sedimentation and erosion in stormwater runoff.

Thus, through compliance with the Construction General Permit and City grading requirements, including implementation of each SWPPP, Erosion Control Plans, and BMPs, flow directions and runoff volumes during construction would be controlled and site-specific BMPs would reduce or minimize the discharge of pollutants and sediment in stormwater runoff. BMPs utilized during construction of the proposed project would ensure construction activities would not result in substantial erosion or siltation on- or off-site or substantial sources of polluted runoff. Similarly, adherence to standard compliance measurements during construction would ensure temporary changes to site drainage and runoff flow during construction of the project would not substantially increase the rate or amount of surface runoff leaving the site. Stormwater flows would be appropriately contained on the site during construction, and temporary construction activities would not result in flooding on- or off-site or an exceedance of the capacity of the stormwater drainage system serving the site. Therefore, construction-related impacts would be less than significant.

Operation

Although the proposed project would result in increased impervious surfaces on the project site compared to current conditions, operation of the proposed project is not anticipated to increase stormwater runoff or change flow directions compared to existing conditions. No major alteration of the project site topography is expected that would alter existing drainage patterns or result in an impact on surface water hydrology. Currently, stormwater runoff exits the site as sheet flow to the surrounding streets and is collected in storm drains and catch basins dispersed throughout the surrounding streets. Upon project buildout, stormwater runoff would continue to flow in an easterly direction to the surrounding streets. Street improvements are expected along the streets within the OSP Specific Plan Site but these improvements would be designed such that the existing drainage conditions are maintained or improved by the proposed development.

The proposed project would employ LID techniques and stormwater control measures outlined under Chapter 64.72 of the LAMC and in the LID Handbook. Under section 3.2.(2) of the LID Handbook, post-construction stormwater runoff from a new development must be infiltrated, evapotranspirated, captured, and used and/or treated through high-efficiency BMPs on site for at least the volume of water produced by either: (1) the 85th percentile 24-hour runoff event determined from the Los Angeles County 85th percentile precipitation isohyetal map or (2) the 0.75 inch, 24-hour rain event, whichever is greater. Under existing conditions, runoff generated on the OSP Specific Plan Site and 327 Harbor Site during a 50-year storm event is 58.51 cfs and 1.47 cfs, respectively. With buildout of the proposed project and implementation of the required LID BMPs, runoff generated by a 50-year storm at the OSP Specific Plan Site would be 58.46 cfs, approximately 0.09 percent less than existing conditions, and runoff at the 327 Harbor Site would remain at 1.47 cfs (KPFF 2022a and 2022b). Therefore, operation of the proposed project would not substantially alter the existing drainage patterns on the site or existing stormwater infrastructure or result in increased runoff that would exceed the capacity of existing or planned stormwater drainage systems.

Upon completion of construction, the project site would be developed with buildings, paved areas, and landscaped open space. Site soils would be stabilized with landscaping and hardscaping and there would be limited potential for erosion or siltation during operation of the project. As is typical of most urban developments, stormwater runoff from the project site during operation of the project has the potential to introduce pollutants into the stormwater system, including sediment, trash, nutrients, pesticides, metals, pathogens, and oil and grease. These pollutants would be controlled through the implementation of approved City LID BMPs, such as infiltration basins and trenches, bioretention basins, and dry wells.

The proposed project would be required to implement post-construction stormwater treatment BMPs to retain and treat the volume of water produced by the 85th percentile 24-hour runoff event determined from the Los Angeles County 85th percentile precipitation isohyetal map or the 0.75 inch, 24-hour rain event, whichever is greater. The proposed BMP systems would be designed with an internal bypass or overflow system to prevent upstream flooding due to large storm events. Additionally, the proposed project would comply with the County's MS4 Permit and LAMC Chapter 64.70, Stormwater and Urban Runoff Control, for stormwater runoff and erosion control measures during project operation. Under these regulations, the proposed project would be required to implement an approved Stormwater Management Program and Water Quality Management Program during project operation to ensure stormwater is appropriately retained on site, stormwater runoff flows are not increased above existing conditions, and stormwater discharged into the City's stormwater drainage system meets or exceeds the required water quality standards. With implementation of post-construction BMPs and compliance with regulatory stormwater

requirements, on-site stormwater runoff would be properly retained and treated on site prior to conveyance to the existing drainage system. Therefore, project operation would not result in substantial erosion or siltation on- or off-site or additional sources of polluted runoff. Additionally, as described above, the project site is not within a flood hazard zone and the proposed project would not result in increased runoff with incorporation of LID BMPs, a Stormwater Management Program, and a Water Quality Management Program in compliance with the applicable local, regional, State, and federal policies and regulations; therefore, operation of the proposed project would not impede or redirect flood flows or result in on- or off-site flooding.

As described above, project operation would not substantially change the project site's drainage patterns, including through the alteration of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation, result in flooding or the redirection of flood flows, create runoff that would exceed the capacity of the storm drain system, or create a substantial additional source of polluted runoff. Impacts would be less than significant.

Mitigation Measures

Because impacts would be less than significant, mitigation is not required.

Significance After Mitigation

Project impacts would be less than significant without mitigation.

Threshold 4:	Would the project be located in flood hazard, tsunami, or seiche zones and risk release of pollutants due to project inundation?

Impact HYD-4 THE PROJECT SITE IS NOT LOCATED WITHIN A FLOOD HAZARD ZONE, TSUNAMI ZONE, OR SEICHE ZONE AND IS AT LOW RISK OF INUNDATION. THE PROPOSED PROJECT WOULD NOT INVOLVE THE STORAGE OR USE OF LARGE QUANTITIES OF HAZARDOUS MATERIALS OR POTENTIAL POLLUTANTS AND THE PROJECT WOULD BE REQUIRED TO COMPLY WITH THE CITY'S LID REGULATORY MEASURES FOR THE PROPER TREATMENT OF STORMWATER LEAVING THE PROJECT SITE. THEREFORE, THE PROPOSED PROJECT WOULD HAVE A LOW RISK OF RELEASING POLLUTANTS DUE TO PROJECT INUNDATION AND IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Two project development scenarios are proposed (see Section 2, *Project Description*) that would involve phasing the construction on the OSP Specific Plan Site in two different development patterns. Under Scenario A, the densest development would be located in Phases 2 and 3, whereas under Scenario B, development would be densest in Phases 1 and 2. Under both scenarios, the footprint of development would be identical, construction and grading activities would be the same, and sitewide development of residential and non-residential uses would be the same. Under both scenarios, development on the OSP Specific Plan Site would include 1,553 residential units, 45,000 sf of commercial/retail uses, 85,000 sf of Neighborhood Serving Uses and development on the 327 Harbor Site would consist of a 47-unit, affordable multi-family residential building. Therefore, this analysis applies to both Scenario A and Scenario B.

As stated above under Section 4.7.1*, Environmental Setting*, FEMA flood maps indicate the project site is located within Zone X, which is defined as "areas determined to be outside of the 0.2 annual change floodplain" (FEMA 2021). The proposed project is not located in a designated tsunami zone and is not located near any bodies of water that are subject to seiche (Cal OES 2021). Because the project site is located outside a flood hazard zone, the project site has a low risk of flooding and release of pollutants due to site inundation.

Operation of the proposed project would involve residential, commercial/retail, and Neighborhood Serving Uses, the operation of which would not include the storage or use of large quantities of hazardous materials or pollutants that would be at risk of release in the event of project inundation. Potential pollutants generated by operation of the proposed project include typical urban pollutants, such as sediment, trash, nutrients, pesticides, metals, pathogens, and oil and grease. As described under Impacts HYD-1 and HYD-3, the proposed project would be required to implement BMPs to adequately treat stormwater on the project site and prevent the release of pollutants to downstream water bodies. As required by the LID Handbook, the proposed project would include the installation of LID BMPs designed to retain and treat the volume of water produced by the 85th percentile 24-hour runoff event determined from the Los Angeles County 85th percentile precipitation isohyetal map or the 0.75 inch, 24-hour rain event, whichever is greater. 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. Given that the project site is not within a flood hazard zone, operation of the project would not involve the storage or use of large quantities of potential pollutants, and the regulatory measures that would be implemented as part of the project, impacts to the release of pollutants due to project inundation would be less than significant.

Mitigation Measures

Because impacts would be less than significant, mitigation is not required.

Significance After Mitigation

Project impacts would be less than significant without mitigation.

Threshold 5:	Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact HYD-5 THE PROPOSED PROJECT WOULD NOT SUBSTANTIALLY IMPEDE RECHARGE IN THE WEST COAST GROUNDWATER SUB-BASIN OR RESULT IN SIGNIFICANT WATER QUALITY-RELATED IMPACTS. THEREFORE, THE PROPOSED PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF AN APPLICABLE WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Two project development scenarios are proposed (see Section 2, *Project Description*) that would involve phasing the construction on the OSP Specific Plan Site in two different development patterns. Under Scenario A, the densest development would be located in Phases 2 and 3, whereas under Scenario B, development would be densest in Phases 1 and 2. Under both scenarios, the footprint of development would be identical, construction and grading activities would be the same, and sitewide development of residential and non-residential uses would be the same. Development of the OSP Specific Plan Site under both scenarios would include 1,553 residential units, 45,000 sf of commercial/retail uses, 85,000 sf of Neighborhood Serving Uses, 5.3 acres of public park space, and 504,051 sf of landscaping. Under both scenarios, development on the 327 Harbor Site would consist of 47 residential units with 4,301 sf of outdoor open space and 6,040 sf of landscaping. Under both Scenarios, the OSP Specific Plan Site would be comprised of 63 percent impervious surfaces and 37 percent pervious surfaces and the 327 Harbor Site would be comprised approximately 100 percent impervious surfaces upon project completion.

Therefore, this analysis applies to both Scenario A and Scenario B.

Groundwater Sustainability Plan

The proposed project is located in the West Coast Groundwater Sub-basin. As discussed in Section 4.7.1, *Environmental Setting*, the West Coast Sub-basin was adjudicated in 1961. Prior to the adjudication, the California State Legislature created the WRD to manage, regulate, and replenish the Basin. Each year, WRD determines the amount of supplemental recharge that is needed for the sub-basin based upon annual groundwater extractions and groundwater levels. As an adjudicated sub-basin, the West Coast Sub-basin is not required to prepare a groundwater sustainability plan pursuant to the Sustainable Groundwater Management Act. Furthermore, the community of San Pedro does not utilize groundwater for domestic water consumption due to high salinity levels in the portion of the groundwater basin that underlies the project site. Additionally, as discussed under Impact HYD-1 and Impact HYD-2, the proposed project would not include installation or operation of groundwater wells or long-term operational dewatering and would implement LID BMPs such as bioretention basins and dry wells that would treat and infiltrate stormwater on the project site (KPFF 2022a and 2022b). Given these considerations, the proposed project would not conflict with or obstruct implementation of any applicable sustainable groundwater management plans and impacts would be less than significant.

Los Angeles Regional Water Quality Control Board Basin Plan

The project site is in the region covered by the Los Angeles RWQCB Basin Plan. The Basin Plan enumerates the beneficial uses of surface and groundwater in the region, establishes water quality objectives for surface waters and groundwater within the Los Angeles region and describes implementation programs to achieve the water quality objectives established in the Basin Plan. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations that help to achieve the Basin Plan's water quality objectives.

Construction activities have the potential to result in the spread of contaminants, thereby conflicting with the water quality goals in the Basin Plan. However, as discussed under Impacts HYD-1 and HYD-2, with adherence to the requirements of the Construction General Permit and local, State, and federal requirements for the handling, storage, and disposal of hazardous materials, construction activities would result in less than significant impacts to surface and groundwater quality and would not conflict with the goals of the Basin Plan. Long-term operation of the proposed project has the potential to affect water quality through alterations to the development patterns and development intensity on the project site, which could result in typical pollutants such as sediments, nutrients, trash, pesticides, metals, pathogens, and oil and grease. However, these impacts would be marginal as the majority of the project site is developed, and the project would implement operational LID BMPs in compliance with the existing State, regional and local regulations, including those incorporated in the Basin Plan. As discussed in detail under Impacts HYD-1 through HYD-4, compliance with applicable water quality regulations and policies and implementation of LID BMPs that would retain and treat stormwater would reduce the risk of surface water and groundwater degradation from typical urban pollutants during operational activities. Therefore, the proposed project would not impair existing or potential beneficial uses of nearby or downstream water bodies or groundwater and would not conflict with or obstruct implementation of the Basin Plan. Impacts would be less than significant.

Mitigation Measures

Because impacts would be less than significant, mitigation is not required.

Significance After Mitigation

Project impacts would be less than significant without mitigation.

4.7.4 Cumulative Impacts

Cumulative development near the proposed project site includes specific known development projects and general ambient growth. A total of 12 cumulative projects have been identified in a 0.5-mile radius of the proposed project site, as listed in Section 3.4, *Cumulative Development*. The 12 cumulative projects considered within vicinity of the proposed project site anticipate adding approximately 1,508 residential units, as well as an 80-room hotel and a variety of new commercial opportunities, to the area. Cumulative development has the potential to impact the quality and hydrology of surface water and groundwater during construction and operational activities, and may be subject to flooding risk and the release of pollutants due to inundation.

a. Surface Water

The geographic context for the cumulative impact analysis on surface water hydrology is the Dominguez Channel Watershed. Multiple factors contribute to stormwater runoff quantity, including increased storm intensities and duration due to climate change, increased or decreased site imperviousness throughout the watershed, and/or changes in drainage pattern of the existing storm drain systems throughout the watershed. As discussed above, proposed project impacts to surface water would be less than significant. The proposed project would not result in increased stormwater flows on the project site compared to existing conditions. Additionally, with implementation of LID BMPs contained in the LID Handbook, the proposed project would not increase the discharge to receiving waters. Similar to the proposed project, the cumulative projects are located on infill sites that contain impervious surfaces. In accordance with City requirements, cumulative development would be required to implement appropriate BMPs designed to retain and treat, at minimum, the first flush or the equivalent of the 85th percentile, 24-hour runoff event and first 0.75-inch of rainfall for any storm event. The City of Los Angeles Department of Public Works would review each future development project on a case-by-case basis to ensure cumulative development would not significantly alter surface water hydrology and stormwater flows and sufficient local and regional infrastructure is available to accommodate stormwater runoff. Therefore, potential cumulative impacts related to surface water hydrology would be less than significant.

Cumulative development has the potential to significantly impact surface water quality through construction activities and increased development intensity. Cumulative development also has the potential to increase impervious surfaces, pollutant loading, erosion, and sedimentation. However, as discussed above, the proposed project would result in less than significant impacts to water quality with implementation of the required SWPPPs and compliance with NPDES during project construction, as well as development and long-term maintenance of LID BMPs to collect and treat stormwater on the site throughout project operation. In fact, the proposed project would improve the quality of on-site flows due to proposed BMPs that would collect, treat, and discharge flows from the proposed project site, which are not being treated under existing conditions (KPFF 2022a and 2022b). Similarly, cumulative development would be subject to NPDES and local and regional water quality requirements both during project construction and operation. All projects that disturb 1.0 acre or more of soil must comply with the requirements of the Construction General Permit, and all projects would be required to comply with the City grading permit. Compliance with these regulations would minimize the potential for significant cumulative impacts due to construction activities. Cumulative development would also be required to comply with the City LID Ordinance and

implement LID BMPs to ensure the proper retention and treatment of stormwater on the project site to protect water quality. Additionally, each project that creates and/or replaces 5,000 sf or more of impervious surface would be required to comply with the Los Angeles County MS4 Permit, including preparation of a Stormwater Management Program to determine appropriate BMPs to minimize water quality impacts. With compliance with the applicable regulations during construction and operation, potential cumulative impacts related to surface water quality would be less than significant.

b. Groundwater

The geographic context for the cumulative impact analysis on groundwater hydrology and supply is the West Coast Groundwater Sub-basin. The proposed project in conjunction with forecasted growth in the region above the West Coast Sub-basin could cumulatively increase groundwater demand for potable use. However, as noted above, no groundwater wells, spreading grounds, or injection wells are located within 1 mile of the proposed project site and the proposed project would not include operation of any such facilities. Temporary dewatering may be needed for construction on the project site; thus, the proposed project could result in a temporary impact on groundwater level. However, due to the limited and temporary nature of potential dewatering activities during proposed project construction, impacts to groundwater levels would be minimal. Dewatering would not deplete groundwater supplies because the distance between the proposed project site and the nearest City groundwater well is down-gradient and because potential site dewatering would be conducted only when shallow groundwater conditions are encountered. The proposed project would include LID BMPs in accordance with the City LID Ordinance and Los Angeles County MS4 Permit to treat and infiltrate stormwater and would not substantially decrease groundwater supplies or interfere with groundwater recharge in a manner that would impede sustainable groundwater management of the West Coast Sub-basin.

Development of the 12 cumulative projects could require dewatering operations or result in changes to site imperviousness within their respective project locations, which could potentially impact groundwater hydrology and water supply. However, similar to the proposed project, cumulative development would not involve long-term groundwater extraction and would be required to comply with City and regional regulations requiring the implementation of LID BMPs and any required mitigation of potential groundwater hydrology impacts. In addition, as the proposed project and cumulative projects are within an urbanized area on infill sites, the potential reduction in groundwater recharge due to the overall net change in impervious area would be minimal in the context of the regional groundwater basin. Therefore, potential cumulative impacts related to groundwater hydrology would be less than significant.

Construction of cumulative development projects would involve the use of hazardous materials such as construction equipment fluids, which could result in a potentially significant impact to groundwater quality if released to the environment. Similar to the proposed project, cumulative development would be required to comply with the Construction General Permit and/or City grading permit, which include requirements for the proper handling, storage, use, and disposal of hazardous materials and maintenance of construction equipment to prevent surface water and groundwater contamination. Additionally, the proposed project and cumulative development would be required to comply with all applicable local, State, and federal requirements for the handling, storage, disposal, and transport of hazardous materials and waste during construction, which would further reduce the potential for groundwater contamination during construction activities. Cumulative projects in a 0.5-mile radius of the project site include a mix of residential, retail, hotel, and restaurant uses. Similar to the proposed

project, these projects would be anticipated to involve the use of typical hazardous materials such as cleaning products, landscaping maintenance materials, and vehicle fluids, which could be released into the groundwater and result in a potentially significant cumulative impact to groundwater quality during long-term operation. However, while increased development on the project site and at the cumulative project locations could incrementally increase the use of common household hazardous materials, compliance with applicable existing regulations for the handling, transport, use, and disposal of hazardous materials would minimize the potential for significant cumulative impacts to groundwater quality. In addition, like the proposed project, cumulative development projects would be required to implement LID BMPs designed to treat and minimize typical urban pollutants in stormwater prior to groundwater infiltration. Therefore, potential cumulative impacts related to groundwater quality would be less than significant.

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