IV. Environmental Impact Analysis
F. Hydrology and Water Quality

1. Introduction

This section analyzes the Project's potential impacts on hydrology (drainage flows), surface water quality, groundwater levels and groundwater quality. The analysis is primarily based on the *1360 Vine St. Project Water Resources Technical Report*[1] (Water Resources Technical Report) prepared for the Project by KPFF Consulting Engineers in September 2020, which is included in its entirety in Appendix J of this Draft EIR.

2. Environmental Setting

a. Regulatory Framework

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

- Clean Water Act
- Federal Antidegradation Policy
- Safe Drinking Water Act
- National Flood Insurance Program
- Porter–Cologne Water Quality Act (California Water Code)
- California Antidegradation Policy
- California Toxics Rule
- Sustainable Groundwater Management Act of 2014
- Water Replenishment District of Southern California

[1] *KPFF Consulting Engineers, 1360 Vine St Project Water Resources Technical Report for APN 5546022011, 5546022012, 5546022013, 5546022015, 5546022016, 5546022019, 5546022020, 5546022021, 5546022022, and 5546022030, September 2020.*

- County of Los Angeles Hydrology Manual
- National Pollutant Discharge Elimination System Permit Program
- Los Angeles River Watershed Master Plan
- Los Angeles Municipal Code Section 62.105, Construction "Class B" Permit
- LAMC Sections 12.40 through 12.43, Landscape Ordinance
- LAMC Section 64.70, Stormwater and Urban Runoff Pollution Control Ordinance
- LAMC Section 64.72, Stormwater Pollution Control Measures for Development Planning and Construction Activities
- Low Impact Development Ordinance (No. 181,899)
- Water Quality Compliance Master Plan for Urban Runoff
- Stormwater Program—Los Angeles County MS4 Permit Citywide Implementation
- Flood Hazard Management Ordinance

(1) Federal

(a) Clean Water Act

The Clean Water Act (CWA), formerly known as the Federal Water Pollution Control Act, was first introduced in 1948, with major amendments in the 1960s, 1970s and 1980s.[2] The CWA authorizes Federal, state, and local entities to cooperatively create comprehensive programs for eliminating or reducing the pollution of state waters and tributaries. Amendments to the CWA in 1972 established the National Pollutant Discharge Elimination System (NPDES) permit program, which prohibits discharge of pollutants into the nation's waters without procurement of a NPDES permit from the United States Environmental Protection Agency (USEPA). The purpose of the permit is to translate general requirements of the Clean Water Act into specific provisions tailored to the operations of each organization that is discharging pollutants. Although federally mandated, the NPDES permit program is generally administered at the State and Regional levels.

The USEPA NPDES Program requires NPDES permits for: (1) Municipal Separate Storm Sewer Systems (MS4) Permit generally serving, or located in, incorporated cities

[2] *USEPA, Clean Water Act, November 2002.*

with 100,000 or more people (referred to as municipal permits); (2) 11 specific categories of industrial activity (including landfills); and (3) construction activity that disturbs five acres or more of land. As of March 2003, Phase II of the NPDES Program extended the requirements for NPDES permits to numerous small municipal separate storm sewer systems, construction sites of one to five acres, and industrial facilities owned or operated by small municipal separate storm sewer systems, which were previously exempted from permitting.

(b) Federal Antidegradation Policy

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

(c) Safe Drinking Water Act

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

(d) National Flood Insurance Program

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate the Federal Emergency Management Agency (FEMA) to evaluate flood

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

[4] *United States Code, Title 42—The Public Health and Welfare, Chapter 6A Public Health and Service, Safe Drinking Water Act. 2006 Edition, Supplement 4, https://uscode.house.gov/view.xhtml?path=/prelim@title42/chapter6A/subchapter12&edition=prelim, accessed February 16, 2021.*

hazards.[5] FEMA provides flood insurance rate maps (FIRMs) for local and regional planners to promote sound land use and development practices, by identifying potential flood areas based on the current conditions. To delineate a FIRM, FEMA conducts engineering studies referred to as flood insurance studies (FIS). Using information gathered in these studies, FEMA engineers and cartographers delineate special flood hazard areas (SFHA) on FIRMs.

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

(2) State

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

The Porter-Cologne Water Quality Control Act established the legal and regulatory framework for California's water quality control.[6] The California Water Code (CWC) authorizes the State Water Resources Control Board (SWRCB) to implement the provisions of the CWA, including the authority to regulate waste disposal and require cleanup of discharges of hazardous materials and other pollutants. In California, the NPDES stormwater permitting program is administered by the SWRCB.

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

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

[6] *SWRCB, Porter-Cologne Water Quality Control Act, January 2018.*

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

(b) California Antidegradation Policy

The California Antidegradation Policy, otherwise known as the *Statement of Policy with Respect to Maintaining High Quality Water in California* was adopted by the SWRCB in 1968.[8] Unlike the federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the state, not just surface waters. The policy states that whenever the existing quality of a water body is better than the quality established in individual basin plans, such high quality shall be maintained and discharges to that water body shall not unreasonably affect present or anticipated beneficial use of such water resource.

(c) California Toxics Rule

In 2000, the California Environmental Protection Agency (CalEPA) promulgated the California Toxics Rule, which establishes water quality criteria for certain toxic substances to be applied to waters in the State.[9] CalEPA promulgated this rule based on CalEPA's determination that the numeric criteria of specific concentrations of regulated substances are necessary for the State to protect human health and the environment. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water such as inland surface waters and enclosed bays and estuaries that are designated by the LARWQCB as having beneficial uses protective of aquatic life or human health.

(d) Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014 (SGMA) requires the designation of groundwater sustainability agencies (GSAs) by one or more local agencies and the adoption of groundwater sustainability plans (GSPs) for basins designated as medium- or high-priority by the California Department of Water Resources (DWR). SGMA grants new powers to GSAs, including the power to adopt rules, regulations, ordinances, and resolutions; regulate groundwater extractions; and to impose fees and assessments. SGMA also allows the State Water Resources Control Board (SWRCB) to intervene if local

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[7] *USEPA, Clean Water Act, December 2016, www.epa.gov/compliance/state-review-framework-compliance-and-enforcement-performance, accessed February 16, 2021.*

[8] *SWRCB, State Board Resolution No. 68-16. October 1968.*

[9] *USEPA, Water Quality Standards, Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California. February 2001, www.epa.gov/wqs-tech/water-quality-standards-establishment-numeric-criteria-priority-toxic-pollutants-state, accessed February 16, 2021.*

agencies will not or do not meet the SGMA requirements, in addition to mandating that critically overdrafted basins be sustainable by 2040, and medium- or high-priority by 2042.

(3) Regional

(a) Water Replenishment District of Southern California

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

(b) County of Los Angeles Hydrology Manual

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

Per the City's Special Order No. 007-1299, December 3, 1999, the City has adopted the Los Angeles County Department of Public Works' Hydrology Manual as its basis of design for storm drainage facilities.[11] The Department of Public Works' Hydrology Manual requires that a storm drain conveyance system be designed for a 25-year storm event and that the combined capacity of a storm drain and street flow system accommodate flow from a 50-year storm event. Areas with sump conditions are required to have a storm drain conveyance system capable of conveying flow from a 50-year storm event. The County also limits the allowable discharge into existing storm drain (MS4) facilities based on the

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

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

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

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

(c) National Pollutant Discharge Elimination System Permit Program

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

(i) Construction: Stormwater Pollution Prevention Plan

For all construction activities disturbing one acre of land or more, California mandates the development and implementation of Stormwater Pollution Prevention Plans (SWPPP). The SWPPP documents the selection and implementation of best management practices (BMPs) to prevent discharges of water pollutants to surface or groundwater. The SWPPP also charges owners with stormwater quality management responsibilities. The developer or contractor for a construction site subject to the General Permit must prepare and implement a SWPPP that meets the requirements of the General Permit.[12] The purpose of an SWPPP is to identify potential sources and types of pollutants associated with construction activity and list BMPs that would prohibit pollutants from being discharged from the construction site into the public stormwater system. BMPs typically address stabilization of construction areas, minimization of erosion during construction, sediment control, control of pollutants from construction materials, and post-construction stormwater management (e.g., the minimization of impervious surfaces or treatment of stormwater runoff). The SWPPP is also required to include a discussion of the proposed program to inspect and maintain all BMPs.

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[12] *SWRCB, Construction Stormwater Program, www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html, accessed February 16, 2021.*

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

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

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

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

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

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

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

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

To obtain coverage under the Construction General Permit, a developer is required to file a Notice of Intent (NOI) with the appropriate RWQCB and provide proof of the NOI prior to applying for a grading or building permit from the local jurisdiction, and must

prepare a State SWPPP that incorporates the minimum BMPs required under the permit as well as appropriate project-specific BMPs. The SWPPP must be completed and certified by the developer and BMPs must be implemented prior to the commencement of construction, and may require modification during the course of construction as conditions warrant. When project construction is complete, the developer is required to file a Notice of Termination with the RWQCB certifying that all the conditions of the Construction General permit, including conditions necessary for termination, have been met.

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

Dewatering operations are practices that discharge non-stormwater, such as ground water, that must be removed from a work location to proceed with construction into the drainage system. Discharges from dewatering operations can contain high levels of fine sediments, which if not properly treated, could lead to exceedance of the NPDES requirements. A NPDES Permit for dewatering discharges was adopted by the LARWQCB on September 13, 2018 (Order No. R4-2018-0125, General NPDES Permit No. CAG994004. Similar to the Construction General Permit, to be authorized to discharge under this Permit; the developer must submit a NOI to discharge groundwater generated from dewatering operations during construction in accordance with the requirements of this Permit and shall continue in full force until it expires November 13, 2023.[13] In accordance with the NOI, among other requirements and actions, the discharger must demonstrate that the discharges shall not cause or contribute to a violation of any applicable water quality objective/criteria for the receiving waters, perform reasonable potential analysis using a representative sample of groundwater or wastewater to be discharged. The discharger must obtain and analyze (using appropriate methods) a representative sample of the groundwater to be treated and discharged under the Order. The analytical method used shall be capable of achieving a detection limit at or below the minimum level. The discharger must also provide a feasibility study on conservation, reuse, and/or alternative disposal methods of the wastewater and provide a flow diagram of the influent to the discharge point.[14]

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

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

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

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

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

Under the amended Los Angeles County MS4 Permit, the County and City are both required to implement development planning guidance and control measures that control and mitigate stormwater quality and runoff volume impacts to receiving waters as a result of new development and redevelopment. The County and the City also are required to implement other municipal source detection and elimination programs, as well as maintenance measures.

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

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

This Enhanced Watershed Management Program for the Upper Los Angeles River (ULAR EWMP) describes a customized compliance pathway that participating agencies will follow to address the pollutant reduction requirements of the Los Angeles County MS4

Permit.[15] By electing the optional compliance pathway in the MS4 Permit, the Upper Los Angeles River Watershed Management Group (EWMP Group) has leveraged this EWMP to facilitate a robust, comprehensive approach to stormwater planning for the Upper Los Angeles River watershed. The objective of the EWMP Plan is to determine the network of control measures (BMPs) that will achieve required pollutant reductions while also providing multiple benefits to the community and leveraging sustainable green infrastructure practices. The Permit requires the identification of Watershed Control Measures, which are strategies and BMPs that will be implemented through the EWMP, individually or collectively, at watershed-scale to address the Water Quality Priorities. The EWMP Implementation Strategy is used as a recipe for compliance for each jurisdiction to address Water Quality Priorities and comply with the provisions of the MS4 Permit. The EWMP Implementation Strategy includes individual recipes for each of the 18 jurisdictions and each watershed/assessment area—Los Angeles River above Sepulveda Basin, Los Angeles River below Sepulveda Basin, Compton Creek, Rio Hondo, Verdugo Wash, Arroyo Seco, Burbank Western Channel, Tujunga Wash, Bull Creek, Aliso Wash, Bell Creek, McCoy-Dry Canyon, and Browns Canyon Wash. Implementation of the EWMP Implementation Strategy will provide a BMP-based compliance pathway for each jurisdiction under the MS4 Permit. The Permit specifies that an adaptive management process will be revisited every two years to evaluate the EWMP and update the program. The EWMP strategy will evolve based on monitoring results by identifying updates to the EWMP Implementation Plan to increase its effectiveness.

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

The City supports the requirements of the Los Angeles County MS4 Permit through the City of Los Angeles' *Development Best Management Practices Handbook, Low Impact*

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

Development Manual, Part B: Planning Activities (5th edition, May 2016) (LID Handbook),[16] which provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities comply with the Developing Planning Program regulations of the City's Stormwater Program. The LID Handbook assists developers with the selection, design, and incorporation of stormwater source control and treatment control BMPs into project design plans, and provides an overview of the City's plan review and permitting process.

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

(d) Los Angeles River Watershed Master Plan

The Los Angeles River Master Plan recognizes the river as a resource of regional importance and that those resources must be protected and enhanced. The Los Angeles River Master Plan was adopted in 1996, and is intended to maintain the river as a resource that provides flood protection and opportunities for recreational and environmental enhancement, improves the aesthetics of the region, enriches the quality of life for residents, and helps sustain the economy of the region.[17] Environmental goals of the Watershed Master Plan are to preserve, enhance, and restore environmental resources in and along the river, including improving water quality and cleanliness of the river. Soil contamination on riverfront lands that have supported railroads and other industries is cited as an issue of concern.

(4) Local

(a) 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 B-permit (LAMC Section 62.105). Under the B-permit process, storm drain installation plans are subject to review and approval by the Bureau of Engineering. Additionally,

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

[17] *City of Los Angeles, The Los Angeles River Revitalization Master Plan, April 2007, https://boe.lacity.org/lariverrmp/CommunityOutreach/masterplan_download.htm, accessed February 16, 2021.*

connections to the MS4 system from a property line to a catch basin or a storm drain pipe require a storm drain permit from the Bureau of Engineering.

(b) 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 12.43 defines the practices addressed by the Ordinance, of which two are applicable to stormwater management. The Heat and Glare Reduction practice states among its purposes the design of vehicular use areas that reduce stormwater runoff and increase groundwater recharge. The Soil and Watershed Conservation practice is intended to encourage the restoration of native areas that are unavoidably disturbed by development; to conserve soil and accumulated organic litter and reduce erosion by utilization of a variety of methods; and to increase the "residence time of precipitation" (i.e., the time between the original evaporation and the returning of water masses to the land surface as precipitation) within a given watershed. Implementation guidelines developed for the Ordinance provide specific features and techniques for incorporation into projects, and include water management guidelines addressing runoff, infiltration, and groundwater recharge. This Ordinance is incorporated into the LID Ordinance discussed below.

(c) 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) for the City is managed by the Bureau of Sanitation along with all City Flood Protection and Pollution Abatement (Water Quality) Programs, including but not limited to, regulatory compliance, implementation, operations, reporting and funding. Section 64.70 sets forth uniform requirements and prohibitions for discharges and places of discharge into the storm drain system and receiving waters necessary to adequately enforce and administer all federal and state laws, legal standards, orders and/or special orders that provide for the protection, enhancement and restoration of water quality. Through a program employing watershed-based approaches, the regulation implements the following objectives:

1. To comply with all Federal and State laws, lawful standards and orders applicable to stormwater and urban runoff pollution control;

2. To prohibit any discharge which may interfere with the operation of, or cause any damage to the storm drain system, or impair the beneficial use of the receiving waters;

3. To prohibit illicit discharges to the storm drain system;

4. To reduce stormwater runoff pollution;

5. To reduce non-stormwater discharge to the storm drain system to the maximum extent practicable; and

6. To develop and implement effective educational outreach programs designed to educate the public on issues of stormwater and urban runoff pollution.

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

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

(d) 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 maximize open, green and pervious space on all developments and redevelopments consistent with the City's Landscape Ordinance and other related requirements in the Development Best Management Practices Handbook. The LID Ordinance (see below) applies first to a project in lieu of SUSMP. If a large project cannot meet the requirements of the LID Ordinance, then SUSMP measures are applied.

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

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

The goal of LID practices is to remove nutrients, bacteria, and metals from stormwater while also reducing the quantity and intensity of stormwater flows. Through the use of various infiltration strategies, LID is aimed at minimizing impervious surface area. Where infiltration is not feasible, the use of bioretention, rain gardens, green roofs, and rain barrels that will store, evaporate, detain, and/or treat runoff can be used.[18]

The intent of LID standards is to:

- 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;

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

- Reduce erosion and hydrologic impacts downstream; and
- Enhance the recreational and aesthetic values in our communities.

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

Per the City's 2016 LID Manual's Figure 3.3 and Section 4.1, the City's preferred LID improvement is on-site infiltration of stormwater, site since it allows for groundwater recharge and reduces the volume of stormwater entering municipal drains.[19] If Project Site conditions are not suitable for infiltration, the City requires on-site retention via stormwater capture and reuse. Should capture and reuse be deemed technically infeasible, high efficiency bio-filtration/bioretention systems should be utilized. Lastly, under the LID Ordinance (LAMC Section 64.72 (C) 6), as interpreted in the LID Manual, if no single approach listed in the LID Manual is feasible, then a combination of approaches may be used.[20]

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

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

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

(f) Water Quality Compliance Master Plan for Urban Runoff

The Water Quality Compliance Master Plan for Urban Runoff (Water Quality Compliance Master Plan)[21] was developed by the Department of Public Works, Bureau of Sanitation, Watershed Protection Division, and was adopted in April 2009.

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

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

The Watershed Protection Division of the Department of Public Works, Bureau of Sanitation is responsible for stormwater pollution control throughout the City in compliance with the Los Angeles County MS4 Permit. The Watershed Protection Division administers the City's Stormwater Program, which has two major components: Pollution Abatement and Flood Control. The Watershed Protection Division publishes the two-part Development Best Management Practices Handbook that provides guidance to developers for compliance with the Los Angeles County MS4 permit through the incorporation of water quality management into development planning. The Development Best Management Practices Handbook, Part A: Construction Activities, provides specific minimum BMPs for all construction activities.[22] The *Development Best Management Practices Handbook, Low Impact Development Manual, Part B: Planning Activities* (5th edition, May 2016) (LID Handbook) provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities comply with the Developing Planning Program regulations of the City's Stormwater Program.[23] The LID Handbook assists developers with

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

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

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

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

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

(h) Flood Hazard Management Ordinance

Effective April 19, 2021, Ordinance 186,952 amends the Specific Plan for the Management of Flood Hazards, established by Ordinance No. 154,405 and amended by Ordinance Nos. 163,913 and 172,081, to update it to meet current federal standards and to rename it the Flood Hazard Management Ordinance (Flood Hazard Ordinance). The Flood Hazard 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 FIS for Los Angeles County dated December 2, 1980, the Flood Hazard 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 Hazard Ordinance deal with the unique problems of each hazard in addition to the Citywide policies and goals.

b. Existing Conditions

(1) Surface Water Hydrology

(a) Regional

The Project Site is located within the Ballona Creek Watershed (Watershed) in the Los Angeles Basin. The Watershed covers approximately 130 square miles with boundaries including the Santa Monica Mountains to the north, the Harbor Freeway (I-110) to the east, and the Baldwin Hills to the south. The watershed includes the cities of Beverly Hills, West Hollywood, portions of the cities of Los Angeles, Culver City, Inglewood and Santa Monica, unincorporated areas of Los Angeles County, and areas under the jurisdiction of Caltrans. The Watershed is highly developed: residential uses (64 percent), vacant/open space (17 percent), and commercial uses (8 percent) are the predominant

land uses. Overall, 49 percent of the Watershed is covered by roads, rooftops and other impervious surfaces.

Ballona Creek flows as an open channel for just under 10 miles from mid-Los Angeles (south of Hancock Park) through Culver City, reaching the Pacific Ocean at Playa del Rey (Marina del Rey Harbor). The Estuary portion (from Centinela Avenue to the outlet) is soft bottomed, while the remainder of the creek is lined in concrete. Ballona Creek is fed by a network of underground storm drains, which reaches north into Beverly Hills and West Hollywood. Major tributaries of the Creek and Estuary include Centinela Creek, Sepulveda Channel, and Benedict Canyon Channel.

The average dry weather flow at the Watershed's terminus in Playa del Rey is 25 cubic feet per second—a slow, steady flow. The average wet weather flow is ten times higher, or even more during large storms. Ballona Creek is designed to discharge to Santa Monica Bay up to approximately 71,400 cubic feet of stormwater per second from a 50-year frequency storm event.[24]

(b) Local

Underground storm drainage facilities are located offsite along Vine Street and are owned and maintained by the City of Los Angeles. Surface drainage along De Longpre Avenue flows east until it intersects North El Centro Avenue. Surface drainage along Afton Place flows until it intersects North El Centro Avenue. The flow along North El Centro Avenue is generally southwest until it discharges into a catch basin at the intersection of North El Centro Avenue and Fountain Avenue. From this catch basin, water flows in underground storm drainage facilities west where it connects to Vine Street flowing generally south. Stormwater runoff from the Project Site is discharged into the offsite storm drainage catch basins and underground storm drainage pipes which convey stormwater through various underground pipe networks into Ballona Creek.

(c) On-Site

The Project Site consists of six lots along De Longpre Avenue and seven lots along Afton Place and is currently occupied by a mix of uses that consist of low-rise commercial uses along Vine Street, including a post-production facility, restaurants, and neighborhood retail uses, and an eight-unit vacant multi-family building fronting on Afton Place on the eastern-most lot. There are also six bungalows onsite with three fronting on Afton Place and three fronting on De Longpre Avenue.

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[24] *Los Angeles County Department of Public Works, Ballona Creek Watershed, http://ladpw.org/wmd/watershed/bc/, accessed October 19, 2021.*

Generally, the Project Site slopes downward from north to south approximately 5 feet, and west to east with a decrease in grade of approximately 1 foot from the western property line to the eastern property line. As shown in Figure IV.F-1 on page IV.F-21, the hydrology analysis divides the Project Site into Areas A and B. The roof drainage of commercial buildings in Area A collects internally and follows the overall grading trend and drains to the southeast toward Area B. Emergency overflow roof drains outlet along the Project Site's frontage on Vine Street and De Longpre Avenue.

Drainage from Area B sheet flows to a strip grate at the southern edge of the area. The strip grate drains to underground storm drain infrastructure that outlets onto Afton Place.

Roof drainage from the commercial building in Area A also follows the general grading trend of the Site, flowing south to Afton Place, with overflow roof drains outletting along the building frontage along Vine Street and Afton Place.

Based on the Los Angeles County Hydrology Manual, the Project Site is underlain by soil type 006 Hanford Fine Sandy Loam. As this type of soil has a limited capacity to absorb stormwater during an intense rain event (i.e., a 50-year storm event), runoff from existing site soils is anticipated to be similar in manner to runoff from paved surfaces. As shown below in Table IV.F-1 on page IV.F-22, the 50-year frequency storm event peak flow rate within the Project Site under existing conditions is 6.6 cubic feet per second.

(2) Surface Water Quality

(a) Regional

As stated above, the Project Site lies within the Ballona Creek Watershed. Constituents of concern listed for Ballona Creek under California's Clean Water Act Section 303(d) List include cadmium (sediment), trash, coliform bacteria, copper (dissolved), lead, Escherichia (E. coli), selenium, sediment toxicity, Shellfish Harvesting Advisory, silver, toxicity, viruses (Enteric), and zinc.[25]

Pursuant to Section 303(d) of the federal Clean Water Act, the state and RWQCBs identify impaired bodies of water that do not meet water quality standards and prioritizes and schedules them for development of Total Maximum Daily Loads (TMDLs). A TMDL establishes the maximum amount of a pollutant allowed in a waterbody and serves as a planning tool for restoring water quality. Those facilities and activities that are discharging

[25] *SWRCB, 2016 California 303(d) List of Water Quality Limited Segments, www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/category4a_report.shtml, accessed October 19, 2021.*

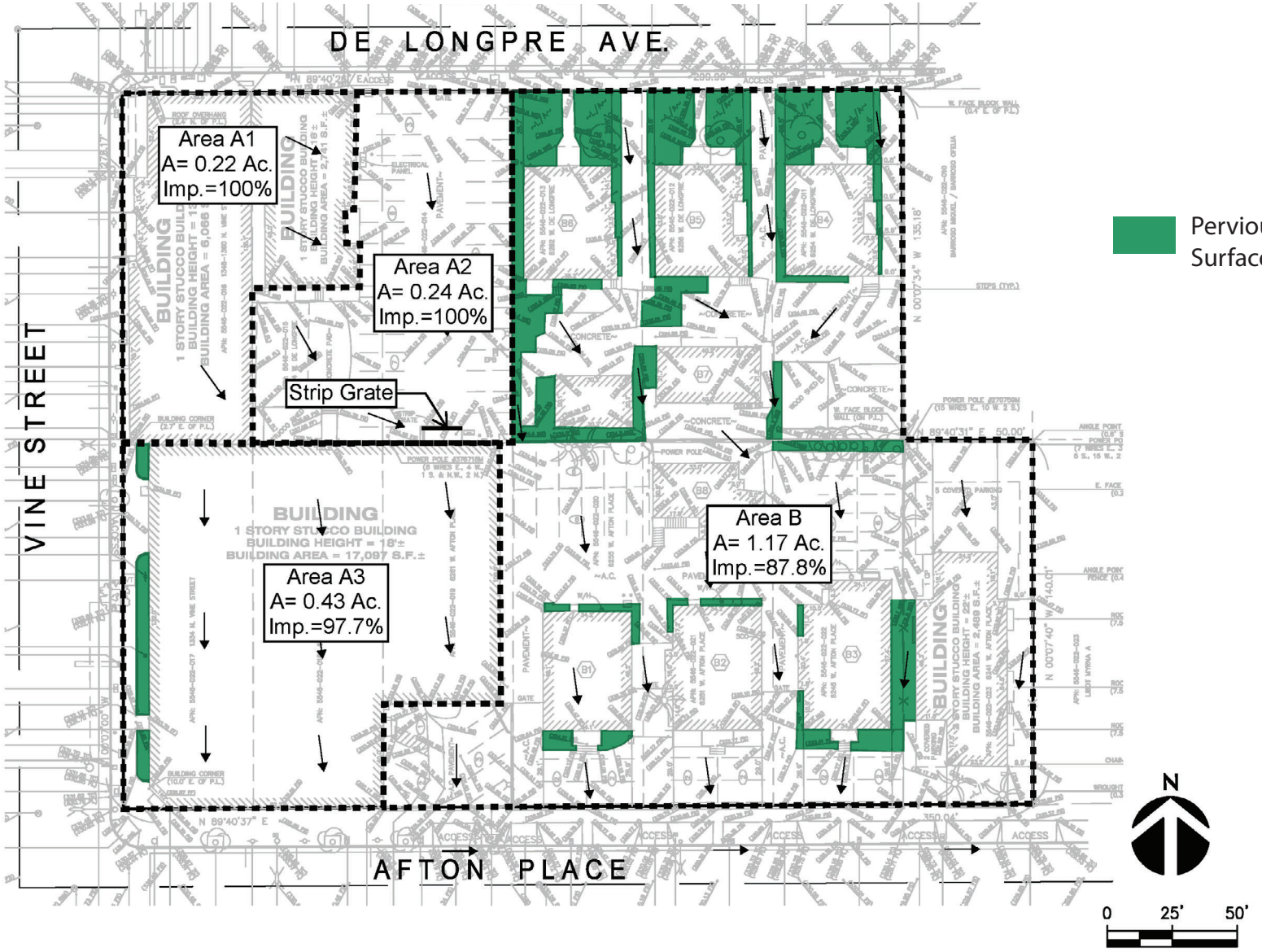

Figure IV.F-1
Existing On-Site Drainage Pattern

Source: KPFF Consulting Engineers, 2020.

Table IV.F-1
Existing Drainage Stormwater Runoff Calculations

Drainage Area	Area (acres)	Percent Imperviousness (%)	Volumetric Flow Rate measured in cubic feet per second Q_{50} (cfs)
A1	0.2223	100	0.7
A2	0.2416	100	0.8
A3	0.4264	97.7	1.4
B	1.1652	87.8	3.7
Total	**2.0556**	**96.4**	**6.6**

Q_{50} (cfs) = Volumetric flow rate of a 50-year storm event measured in cubic feet per second
Source: KPFF Consulting Engineers, 2020.

into the water body, collectively, must not exceed the TMDL. No Total Maximum Daily Load (TMDL) data have been recorded by USEPA for this waterbody.[26]

(b) Local

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

(c) On-Site

Based on a site investigation, the Project Site currently does not implement BMPs and has no means of treatment for stormwater runoff. As stated above, the commercial building's roof drainage collects internally and drains to curb outlets along the Project Site's

[26] *SWRCB, 2016 California 303(d) List of Water Quality Limited Segments, www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/category4a_report.shtml, accessed October 19, 2021.*

frontage on Vine Street, De Longpre Avenue, and Afton Place. This drainage flows south on Vine Street and enters a catch basin on the northeast corner of Vine Street and Afton Place. The hardscape surface drainage collects and drains to Afton Place. This drainage flows east along Afton Place until it intersects North El Centro Avenue. The flow along North El Centro Avenue is generally southwest until it discharges into a catch basin at the intersection of N El Centro Avenue and Fountain Avenue. Refer to Figure IV.F-1 on page IV.F-21 for the existing on-site drainage pattern.

(3) Groundwater Hydrology

(a) Regional

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

(b) Local

The Project Site specifically overlies the eastern portion of the Hollywood Subbasin, which underlies the northeastern portion of the Los Angeles Coastal Plain Groundwater Basin. As described in the Water Resources Technical Report, the Hollywood Subbasin is bounded on the north by the Santa Monica Mountains and the Hollywood fault, on the east by the Elysian Hills, on the west by the Inglewood fault zone, and on the south by the La Brea high, formed by an anticline that brings impermeable rocks close to the surface.

Groundwater in the Hollywood Subbasin is replenished by percolation of precipitation and stream flow from the Santa Monica Mountains to the north. Over time, urbanization has decreased the amount of pervious surfaces area allowing direct percolation. Therefore, natural recharge is somewhat limited. The natural safe yield of the Hollywood Subbasin is estimated to be approximately 3,000 acre-feet per year. Groundwater flow within the Subbasin generally flows east to west.

The primary producer from the Hollywood Subbasin is the City of Beverly Hills, which currently owns and operates four groundwater production wells in the Subbasin.

These wells have a combined capacity of 2,083 gallons per minute and are treated by a reverse osmosis desalter.[27]

(c) On-Site

The Project Site is improved with existing buildings and mostly paved surfaces, and therefore does not substantially contribute to groundwater recharge. The below discussion is based upon a review on-site explorations conducted as part of the Geotechnical Investigations for the Project Site by Geocon West Inc., dated September 2016 and August 17, 2020, as well as a response letter from Geocon West, Inc., dated November 12, 2020.

The site is located within the Hollywood Groundwater Basin of the Los Angeles Coastal Plain Groundwater Basin. The basin can be 660 feet in depth and contains three water bearing units, the Fernando Formation, Lakewood Formation, and upper alluvial soils. The main potable groundwater aquifer is sourced from the deep Fernando Formation; however, some groundwater can seasonally perch within the shallow alluvium.

Groundwater was encountered in soil borings at depths of 48 and 39 feet below the ground surface during Geocon West's field investigation. These groundwater levels are not static groundwater levels but represent the first water encountered in the borings. The water levels encountered in the borings likely represent perched water since they are approximately the same elevation or at a higher elevation than the historic high groundwater levels reported by CDMG from 1998 for this area. The clayey sand bed strongly suggests this is a perched water condition. Considering the historic high groundwater levels and the depth to perched water encountered in the borings, groundwater may be encountered during construction. It is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity.

(4) Groundwater Quality

(a) Regional

In general, due to historical activities and practices, groundwater quality in the City of Los Angeles has been substantially degraded over time. The degradation of regional groundwater is a result of seepage into the subsurface of fertilizers and pesticides from agricultural uses, nitrogen and pathogenic bacteria from septic tanks, and various

[27] *City of Beverly Hills, 2015 Urban Water Management Plan.*

hazardous substances from leaking aboveground and underground storage tanks and industrial-type operations.

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

(b) Local

Based on LARWQCB's Basin Plan, constituents of concern listed for the Hollywood Subbasin include sulfate, boron, chloride, nitrate, and Total Dissolved Solids (TDS).[28]

(c) On-Site

The Project Site is fully improved with the existing buildings and mostly paved hardscape surfaces, and therefore does not substantially contribute to groundwater recharge. As such, the Project Site does not currently contribute to groundwater pollution or otherwise adversely impact groundwater quality.

Other types of risk such as underground storage tanks have a greater potential to impact groundwater. As described in the Phase I ESA prepared for the Project Site, no evidence or record of underground storage tanks was found.[29]

(5) Other Conditions

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the Project Site, the Project Site is not located within a 100-year flood plain . The Project Site is specifically designated as flood hazard area—Zone X, which is defined as "areas determined to be outside the 0.2 percent annual chance floodplain." [30,31]

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[28] *LARRWQCB, Basin Plan, Chapter 3: Water Quality Objectives, May 2019.*

[29] *Advantage Environmental Consultants, Phase I ESA, April 13, 2016. See Appendix IS-4 of the Project's Initial Study included as Appendix A of this Draft EIR.*

[30] *FEMA Flood Insurance Rate Map, Map Number 06037C1605F.*

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

The Project Site is within the potential inundation area of the Hollywood Reservoir according to the City of Los Angeles General Plan Safety Element.[32] According to the Safety Element, the Project Site is not located within an area that could be impacted by a seiche, tsunami or mudflow.

3. Project Impacts

a. Thresholds of Significance

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

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

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

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

- ***i. result in substantial erosion or siltation on- or off-site;***
- ***ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;***
- ***iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or***
- ***iv. impede or redirect flood flows;***

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

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

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

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

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

(1) Surface Water Quality

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

(2) Surface Water Hydrology

- Would the project cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources?

- Would the project substantially reduce or increase the amount of surface water in a water body?

- Would the project result in a permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow?

(3) Groundwater

Would the project:

- Change potable water levels sufficiently to:

  – Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;

  – Reduce yields of adjacent wells or well fields (public or private); or

  – Adversely change the rate or direction of flow of groundwater;

- Result in demonstrable and sustained reduction of groundwater recharge capacity;

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

b. Methodology

This analysis is based on the *1360 Vine St Project Water Resources Technical Report,* prepared by KPFF Consulting Engineers, dated September 2020. This report is included as Appendix J of this Draft EIR.

(1) Surface Water Quality

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

(2) Surface Water Hydrology

The surface water hydrology analysis evaluates the change in surface water runoff patterns and quantity for the Project Site due to the construction and operation of the Project, and the impact of these changes on the existing downstream stormwater system. As discussed in the Regulatory Framework Section above, the City has adopted the Los Angeles County Department of Public Works Hydrology Manual as its basis of design for storm drainage facilities. The Hydrology Manual requires projects to have drainage facilities that meet the Urban Flood level of protection. The Urban Flood is runoff from a 25-year frequency design storm falling on a saturated watershed. A 25-year frequency design storm has a probability of 1/25 of being equaled or exceeded in any year. The *L.A. CEQA Thresholds Guide*, however, establishes the 50-year frequency design storm event as the threshold to analyze potential impacts on surface water hydrology as a result of development. Therefore, to provide a more conservative analysis, the Water Resources Technical Report analyzes the larger storm event threshold, which is the 50-year frequency design storm event.

As part of the surface water hydrologic analysis, stormwater runoff generated from the Project Site was quantified using the Modified Rational Method.[33] The Modified Rational Method assumes that a steady, uniform rainfall rate will produce maximum runoff when all parts of the basin area are contributing to outflow. This occurs when the storm event lasts longer than the time of concentration. The time of concentration (Tc) is the time it takes for rain in the most hydrologically remote part of the basin area to reach the outlet.

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

(3) Groundwater Quality and Hydrology

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

c. Project Design Features

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

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

d. Analysis of Project Impacts

As set forth in Section II, Project Description, of this Draft EIR, the Project proposes two development options—the Residential Option and the Office Option.

The Residential Option would develop a new high-rise building with four levels of subterranean parking consisting of up to 429 new residential units, including 36 units designated for Very Low Income households, an approximately 55,000-square-foot grocery store, approximately 5,000 square feet of neighborhood-serving commercial retail uses, and 8,988 square feet of restaurant uses in the bungalows. The new building would be 360 feet 4 inches in height when accounting for rooftop mechanical equipment. The estimated depth of excavation expected for the subterranean parking and building foundations would be up to approximately 45 feet below grade. It is estimated that approximately 142,000 cubic yards of export material (e.g., concrete and asphalt surfaces) and soil would be hauled from the Project Site during the demolition and excavation phase. Overall, the Residential Option would provide approximately 484,421 square feet of floor area within the Project Site.

The Office Option would develop a new high-rise building with eight levels of subterranean parking with approximately 463,521 square feet of office uses and 11,914 square feet of restaurant uses in the proposed building, as well as nine residential units in the bungalows. The new building would be 330 feet when accounting for rooftop mechanical equipment. The estimated depth of excavation expected for the 8 levels of subterranean parking and building foundations would be up to approximately 83 feet below grade. It is estimated that approximately 321,060 cubic yards of export material and soil would be hauled. Upon completion, the Office Option would provide approximately 484,423 square feet of floor area within the Project Site.

As the differences in the land use mix under the two development options do not affect the analytics related to hydrology and water quality, the analysis of potential impacts associated with hydrology and water quality provided below accounts for both development scenarios and the term “Project” is used to describe both development scenarios unless stated otherwise.

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

(1) Impact Analysis

(a) Surface Water Quality

(i) Construction

During Project construction, particularly during the grading phase, stormwater runoff from precipitation events could cause exposed and stockpiled soils to be subject to erosion and convey sediments into municipal storm drain systems. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. Pollutant discharges relating to the storage, handling, use and disposal of chemicals, adhesives, coatings, lubricants, and fuel could also occur. However, as Project construction would disturb more than one acre of soil, the Project would be required to obtain coverage under the NPDES Construction General Permit. In accordance with the requirements of the NPDES Construction General Permit, the Project would prepare and implement a site-specific SWPPP adhering to the California Stormwater Quality Association BMP Handbook. The SWPPP would specify BMPs to be used during construction to manage stormwater and non-stormwater discharges. BMPs would include, but not be limited to, erosion control, sediment control, non-stormwater management, and materials management BMPs, which would reduce or eliminate the discharge of potential pollutants from stormwater runoff. In addition, Project construction activities would occur in accordance with City grading permit regulations (Chapter IX, Division 70 of the LAMC), such as the preparation of an erosion control plan, to reduce the effects of sedimentation and erosion.

As detailed further below, the Project is expected to require temporary dewatering during construction. Dewatering operations are practices that discharge non-stormwater, such as groundwater, that must be removed from a work location to proceed with construction into the drainage system. Discharges from dewatering operations can contain high levels of fine sediments, which if not properly treated, could lead to exceedance of the NPDES requirements. During construction, temporary pumps and filtration would be utilized in compliance with the NPDES permit. The temporary system would comply with all relevant NPDES requirements related to construction and discharges from dewatering operations.

With the implementation of site-specific BMPs included as part of the SWPPP and implementation of an erosion control plan as required by the LAMC, the Project would reduce or eliminate the discharge of potential pollutants from stormwater runoff. In addition, the Project would be required to comply with City grading permit regulations and inspections to reduce sedimentation and erosion. Therefore, based on the above, with compliance with NPDES requirements and City of Los Angeles grading permit regulations, construction of the Project would not result in discharge that would violate any water quality standard or waste discharge requirements or

otherwise substantially degrade surface water quality. Thus, temporary construction-related impacts to surface water quality would be less than significant.

(ii) Operation

Project operation would not increase concentrations of the items listed as constituents of concern for the Ballona Creek Watershed but would introduce sources of potential water pollution that are typical of residential, office, retail, and restaurant uses (e.g., sediment, nutrients, pesticides, metals, pathogens, and oil and grease).[34] Stormwater runoff from precipitation events could also potentially carry urban pollutants into municipal storm drains. As discussed in the Water Resources Technical Report, based on site conditions, capture and reuse cisterns would be most feasible BMP for the Project Site to address these pollutants in accordance with the City's LID Ordinance. In addition, the captured stormwater would be used to offset the potable irrigation demand that would occur during the rainy season (October 1 to April 30). The installed BMP system will also be designed with an internal bypass overflow system to prevent upstream flooding during major storm events. Furthermore, since there are no onsite BMPs under existing conditions, stormwater run-off during Project operations would result in improved surface water quality.

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

(b) Groundwater Quality

(i) Construction

During on-site grading and building construction, hazardous materials, such as fuels, paints, solvents, and concrete additives, could be used and would therefore require proper management and, in some cases, disposal. The management of any resultant hazardous wastes could increase the potential for hazardous materials to be released into groundwater. Compliance with all applicable federal, state, and local requirements concerning the handling, storage and disposal of hazardous waste, would reduce the potential for the construction of the Project to release contaminants into groundwater that could affect existing contaminants, expand the area or increase the level of groundwater

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

contamination, or cause a violation of regulatory water quality standards at an existing production well.

Furthermore, construction of the Project would include excavations for subterranean parking and building foundations and would result in a net export of existing soil material. As discussed in Section II, Project Description, of this Draft EIR, excavation would extend to a maximum depth of approximately 45 feet below grade for the Residential Option and approximately 83 feet below grade for the Office Option. As discussed above, the historic high groundwater level for the Project Site was determined to be on the order of 45 feet below grade, while on-site borings encountered groundwater at depths of 39 and 48 feet below grade. As such, the Project is expected to require dewatering during construction. Dewatering operations are practices that discharge non-stormwater, such as groundwater, that must be removed from a work location to proceed with construction into the drainage system. Discharges from dewatering operations can contain high levels of fine sediments, which if not properly treated, could lead to exceedance of the NPDES requirements. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with the NPDES permit. Any such temporary system would comply with all relevant NPDES requirements related to construction and discharges from dewatering operations. Pursuant to such requirements, the groundwater extracted would be chemically analyzed to determine contamination and the appropriate treatment and/or disposal methods.

In addition, although there are existing groundwater production wells or public water supply wells within one mile of the Project Site, construction activities would not be anticipated to affect existing wells due to compliance with measures listed above and the implementation of BMPs. The Project also would not involve drilling to or drilling through a clean or contaminated aquifer.

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

(ii) Operation

The Project would not include the installation or operation of water wells, or any extraction or recharge system that is in the vicinity of the coast, an area of known groundwater contamination or seawater intrusion, a municipal supply well or spreading ground facility. In addition, operation of the Project would not involve the use of underground storage tanks. While the development of new building facilities would result in the use of on-site hazardous materials typical of urban residential, office, retail, and restaurant uses, the Project would comply with all applicable existing regulations at the

Project Site regarding the handling and potentially required cleanup of hazardous materials. As such, regulatory compliance would prevent the Project from affecting or expanding any potential areas of contamination or casing regulatory water quality standards at an existing production well to be violated, as defined in the California Code of Regulations, Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act. Thus, the Project is not anticipated to result in releases or spills of contaminants that could reach a groundwater recharge area or spreading ground or otherwise reach groundwater through percolation. **Therefore, operation of the Project would not result in discharges that would violate any groundwater quality standard or waste discharge requirements or otherwise substantially degrade groundwater quality. The Project's potential impact on groundwater quality during operation would be less than significant.**

(2) Mitigation Measures

Project-level impacts with regard to water quality would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

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

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

(1) Impact Analysis

(a) Construction

Construction activities for the Project would include excavation for subterranean parking. As discussed above, excavation would extend to a maximum depth of approximately 45 feet below grade for the Residential Option and approximately 83 feet below grade for the Office Option. The historic high groundwater level for the Project Site was determined to be on the order of 45 feet below grade, while on-site borings encountered groundwater at depths of 39 and 48 feet below grade. Thus, the Project would be expected to require dewatering and the use of temporary pumps and filtration. Any such system would comply with all relevant NPDES requirements related to construction and discharges from dewatering operations. Furthermore, since operation of dewatering systems would only be temporary, local groundwater hydrologic conditions, including groundwater production wells or public water supply wells within one mile of the

Project Site, would be minimally affected, and regional impacts to groundwater flow and levels would not be considered significant. **Therefore, Project construction activities would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Impacts on groundwater supplies or recharge during construction of the Project would be less than significant.**

(b) Operation

As the Project Site is currently comprised of approximately 96 percent impervious surfaces, minimal groundwater recharge occurs. Upon buildout, the Project's impervious hardscape and structures would cover approximately 79 percent of the Project Site. As such, the Project would reduce impervious surfaces onsite when compared to existing conditions, increasing the on-site pervious area. Given that the Project's subterranean parking structure would be located underneath the pervious surfaces, the groundwater recharge potential would remain minimal. As stated above, the Project would comply with the City's LID requirements through BMPs such as a capture and reuse system. In addition, stormwater which bypasses the BMP systems would discharge to an approved discharge point in the public right-of-way and not result in infiltration of a large amount of rainfall that would affect groundwater hydrology, including the direction of groundwater flow. In addition, the subterranean levels of the Project are to be designed such that they can withstand hydrostatic forces and incorporate comprehensive waterproofing systems in accordance with current industry standards and construction methods. As such, permanent dewatering operations are not expected, and the groundwater level is expected to return to the existing level at the Project Site after construction is complete. Furthermore, while there are supply wells within one mile of the Project Site, the Project's compliance with regulatory requirements would not result in adverse impacts to wells. Additionally, the Project would not include new injection or supply wells. **Therefore, operation of the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge in a manner that would impede sustainable groundwater management of the basin. The Project's potential impact on groundwater supplies and recharge during operation would be less than significant.**

(2) Mitigation Measures

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

(3) Level of Significance After Mitigation

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

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

i. Result in substantial erosion or siltation on- or off-site;

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

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

(1) Impact Analysis

(a) Construction

Construction activities for the Project proposes to demolish the commercial buildings and multi-family building and includes a Preservation Plan to relocate, preserve, and rehabilitate the historic bungalows on the eastern portion of the Project Site. As discussed in Section II, Project Description, of this Draft EIR, the Residential Option would require excavation to a depth of approximately 45 feet below grade and the hauling of approximately 142,000 cubic yards of export material and soil. The Office Option would require excavation to a depth of approximately 83 feet below grade, and approximately 321,060 cubic yards of export material and soil would need to be hauled from the Project Site. Activities would also include building construction and the installation of hardscape and landscape. As such, these construction activities would have the potential to temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and rendering the Project Site temporarily more permeable. Exposed and stockpiled soils could be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities used to reduce airborne dust could contribute to pollutant loading in runoff.

As discussed above, because the construction site would be larger than one acre, the Project would be required to obtain coverage under the NPDES Construction General Permit. In accordance with the permit requirements, the Project would implement a SWPPP that specifies BMPs and erosion control measures during construction to manage

runoff flows. These BMPs would be designed to contain stormwater or construction watering on the Project Site such that runoff will not impact off-site drainage facilities or receiving waters. An Erosion Control Plan, prepared and implemented in accordance with City grading permit regulations (LAMC Chapter IX, Division 70), would contain and treat stormwater or construction watering on-site so that runoff does not result in substantial pollution or impact off-site drainage facilities or receiving water. As such, flow directions and runoff volumes during temporary construction activities would be controlled.

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

(b) Operation

As discussed above, the Project Site is currently approximately 96 percent impervious, and stormwater sheet flows from the Project Site without infiltration. Project drainage is expected to flow to Afton Place in both the existing and proposed conditions. As shown in Table IV.F-2 on page IV.F-38, with the development of the Project, the Project Site would be approximately 79 percent impervious. In addition, the LID requirements for the Project Site would outline the stormwater treatment post-construction BMPs required to control pollutants associated with either the first 0.75 inch of stormwater runoff from a storm event or the 85th percentile, 24-hour storm event, whichever is greater, per the City's Stormwater Program. As determined in the Water Resources Technical Report, capture and reuse BMPs (cisterns) would be implemented to control stormwater runoff such that no increase in runoff would result from the Project. As shown in Table IV.F-3 on page IV.F-38, operation of the Project would result in a slightly reduced volumetric flow rate when compared to existing conditions. Therefore, the Project would not substantially increase the rate or amount of surface runoff discharged into the existing infrastructure or waterbody. As such, the Project would not substantially increase the total rate or volume of stormwater runoff into the existing storm drain system.

Table IV.F-2
Proposed Drainage Stormwater Runoff

Drainage Area	Area (acres)	Percent Imperviousness (%)	Volumetric Flow Rate in cubic feet per second Q_{50} (cfs)
A	1.00	96.0	3.17
B	1.00	62.6	3.17
Total	**2.00**	**79.3**	**6.34**

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

Source: KPFF Consulting Engineers, 2020.

Table IV.F-3
Comparison of Existing and Proposed Drainage Stormwater Runoff

Project Condition	Area (acres)	Percent Imperviousness (%)	Volumetric Flow Rate in cubic feet per second Q_{50} (cfs)
Existing	2.06	96.4	6.6
Proposed	2.00	79.3	6.34

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

Source: KPFF Consulting Engineers, 2020.

Based on the above, operation of the Project would not substantially alter the existing drainage pattern of the Project Site in a manner that would result in substantial erosion, siltation, or flooding on- or off-site. In addition, the Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. As such, operational impacts to surface water hydrology would be less than significant.

(2) Mitigation Measures

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

(3) Level of Significance After Mitigation

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

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

iv. impede or redirect flood flows?

(1) Impact Analysis

As discussed above, Project drainage is expected to flow to Afton Place in both the existing and proposed conditions. Development of the Project would reduce the impervious surface area and increase the pervious surface area onsite and would result in a slightly reduced volumetric flow rate when compared to existing conditions. As such, the Project would not substantially increase the rate or amount of surface runoff discharged into the existing infrastructure or waterbody. Furthermore, the Project Site is not located within a designated 100-year flood hazard area as mapped by FEMA[35] or the Safety Element.[36] **Therefore, the Project would not alter the existing drainage pattern of the Project Site in a manner that would impede or redirect flood flows, and impacts would be less than significant.**

(2) Mitigation Measures

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

(3) Level of Significance After Mitigation

Project-level impacts related to impeding or redirecting flood flows were determined to be less than significant without mitigation. Therefore, no mitigation measures were required, and the impact level remains less than significant.

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[35] *FEMA Flood Insurance Rate Map, Map Number 06037C1605F.*

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

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

(1) Impact Analysis

As discussed in Section VI, Other CEQA Considerations, of this Draft EIR, and in the Initial Study included as Appendix A of this Draft EIR, the Project Site is located approximately 11.5 miles northeast of the Pacific Ocean, and the Safety Element of the City's General Plan does not map the Project Site as being located within an area potentially affected by a tsunami.[37] As discussed above, the Project Site is also not located within a designated 100-year flood plain as mapped by the FEMA[38] or the Safety Element,[39] although the Project Site is within the potential inundation area of the Hollywood Reservoir according to the City of Los Angeles General Plan Safety Element, Exhibit G: Inundation & Tsunami Hazard Areas. Dam safety regulations are the primary means of reducing damage or injury due to inundation occurring from dam failure. The California Division of Safety of Dams regulates the siting, design, construction, and periodic review of all dams in the State. In addition, LADWP operates the dam and mitigates the potential for over flow and seiche hazard through control of water levels and dam wall height. These measures include seismic retrofits and other related dam improvements completed under the requirements of the 1972 State Dam Safety Act. Furthermore, the City's Local Hazard Mitigation Plan provides a list of existing programs, proposed activities, and specific projects that may assist the City of Los Angeles in reducing risk and preventing loss of life and property damage from natural and human-caused hazards, including dam failure.[40] The Hazard Mitigation Plan evaluation of dam failure vulnerability classifies dam failure as a moderate risk rating. In the event of a dam failure at the Hollywood Reservoir, existing urban development north of the Project Site, including the US-101 Freeway, would serve as a physical barrier between the upstream portion of the reservoirs/dams and the Project Site. Therefore, the risk of flooding from inundation by a seiche or dam failure is considered low for the Project Site.

Based on the above, the risk of release of pollutants due to Project inundation from impacts associated with flood hazard, tsunami, or seiche zones would be less significant.

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

[38] *FEMA Flood Insurance Rate Map, Map Number 06037C1605F.*

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

[40] *City of Los Angeles, Emergency Management Department, Local Hazard Mitigation Plan, January 2018.*

(2) Mitigation Measures

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

(3) Level of Significance After Mitigation

Project-level impacts related to the release of pollutants due to Project inundation in flood hazard, tsunami, or seiche zones were determined to be less than significant without mitigation. Therefore, no mitigation measures were required, and the impact level remains less than significant.

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

(1) Impact Analysis

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

Potential pollutants generated by the Project during operation would include sediment, nutrients, pesticides, trash and debris, oil and grease, and metals typical of urban developments. However, the implementation of BMPs required by the City's LID Ordinance would reduce the amount of these pollutants entering the stormwater. Additionally, since the existing Project Site does not have any structural or LID BMPs to treat or infiltrate stormwater, implementation of the LID features proposed as part of the Project would result in an improvement in surface water quality runoff as compared to

existing conditions. As such, the Project would not introduce new pollutants or an increase in pollutants that could conflict with or obstruct any water quality control plans.

With respect to groundwater, as discussed above under Threshold (b), the Project would not result in impacts related to groundwater recharge or interfere with sustainable groundwater management of the basin.

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

(2) Mitigation Measures

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

(3) Level of Significance After Mitigation

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

e. Cumulative Impacts

As identified in Section III, Environmental Setting, of this Draft EIR, a total of 102 related projects are located in the vicinity of the Project Site. The related projects comprise a variety of uses, including apartments, condominiums, restaurants, hotels, theaters, hospitals, parks, offices, and retail uses, as well as mixed-use developments incorporating some or all of these elements. Much of this growth is anticipated by the City and will be incorporated into the Hollywood Community Plan Update, which the City Planning Commission recommended approval of in March 2021. The Hollywood Community Plan Update is included as Related Project No. 103.

(1) Impact Analysis

(a) Surface Water Quality

As discussed above, stormwater runoff from development has the potential to introduce pollutants into the stormwater system. Given the similar types of land uses

proposed by the related projects, anticipated and potential pollutants generated by the related projects could also include sediment, nutrients, pesticides, metals, pathogens, and oil and grease. The Project would introduce BMPs to the Project Site and provide for the capture and reuse of stormwater and would have a less-than-significant impact on surface water quality. As with the Project, related projects (all of which are in the Ballona Creek Watershed) would also implement SWPPP and LID requirements, including the implementation of BMPs and measures to comply with TMDLs and target pollutants that could be carried in stormwater runoff. Furthermore, increases in regional controls associated with other elements of the MS4 Permit would improve regional water quality over time. Additionally, with implementation of the Project, new BMPs for the treatment of stormwater runoff would be installed, thus improving the surface water quality runoff from the site compared to existing conditions. **Therefore, with compliance with all applicable laws, rules and regulations, construction and operation of the Project and related projects would not result in significant cumulative impacts related to surface water quality. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts to surface water quality would be less than significant.**

(b) Surface Water Hydrology

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

(c) Groundwater Quality

Future growth in the Hollywood Subbasin would be subject to LARWQCB requirements and implementation of measures to comply with total maximum daily loads in addition to requirements of California Code of Regulations, Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act. In addition, related projects and other future development would be required to coordinate with governing agencies to comply with all applicable federal, state, and local requirements concerning the handling, storage and disposal of hazardous waste, which would reduce the potential for the release of

contaminants into groundwater. Other potential effects to groundwater quality, including from USTs and oil wells, are site specific and would be addressed by each individual related project. This would include coordination with the applicable governing agencies and compliance with applicable regulations, as discussed above for the Project. As discussed above, the Project would have a less-than-significant impact on groundwater quality and would comply with all applicable laws, rules, and regulations. **Therefore, construction and operation of the Project and related projects would not result in significant cumulative impacts related to groundwater quality. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts to groundwater quality would be less than significant.**

(d) Groundwater Hydrology

The geographic context for the cumulative impact analysis on groundwater level is the Hollywood Subbasin. The Project in conjunction with forecasted growth in the region above the Hollywood Subbasin could cumulatively increase groundwater demand. As noted above, water supply wells, spreading grounds, or injection wells are located within a one-mile radius of the Project Site. However, as also previously discussed, while the Project would require temporary dewatering during construction, impacts to groundwater supplies or recharge during construction of the Project would be less than significant. Upon buildout, the Project would reduce the impervious surface area onsite and would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge in a manner that would impede sustainable groundwater management of the basin**.** Development of the related projects could require dewatering operations and/or result in changes in impervious surface area within their respective project sites. While any calculation of the extent to which the related projects might affect groundwater hydrology would be speculative, the development of such related projects would be subject to review and approval pursuant to all applicable regulatory requirements, including any required mitigation of potential groundwater hydrology impacts. In addition, as the related projects are located in a highly urbanized area, any potential reduction in groundwater recharge due to the overall net change in impervious area within the area encompassed by the related project sites would be minimal in the context of the regional groundwater basin. In accordance with the Beverly Hills Master Plan and Los Angeles County Public Works well records, the City of Beverly Hills (owner and operator of four groundwater production wells) works with other agencies to monitor groundwater levels and prevent overdraft of the Hollywood Subbasin.[41] **Therefore, construction and operation of the Project and related projects would not result in significant cumulative impacts related to groundwater hydrology. As such, the Project's contribution would not be**

[41] *City of Beverly Hills, Urban Water Management Plan, 2015.*

cumulatively considerable, and cumulative impacts to groundwater hydrology would be less than significant.

(2) Mitigation Measures

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

(3) Level of Significance After Mitigation

Cumulative impacts with regard to hydrology and water quality were determined to be less than significant without mitigation. Therefore, no mitigation measures were required, and the impact level remains less than significant.