IV. Environmental Impact Analysis

I. 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 *Harvard-Westlake River Park Hydrology and Water Quality Report*[1] prepared for the Project, and included in its entirety in Appendix I of this Draft EIR.

2. Environmental Setting

a) Regulatory Framework

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

- Clean Water Act
- Federal Antidegradation Policy
- Safe Drinking Water Act
- National Flood Insurance Program
- Porter-Cologne Water Quality Act (California Water Code)
- California Antidegradation Policy
- California Toxics Rule
- Sustainable Groundwater Management Act of 2014
- Water Replenishment District of Southern California
- County of Los Angeles Hydrology Manual
- NPDES Permit Program
- Los Angeles River Watershed Master Plan
- Los Angeles Municipal Code Section 62.105, Construction "Class B" Permit
- Los Angeles Municipal Code Sections 12.40 through 12.43, Landscape Ordinance

[1] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022. Provided in Appendix I of this Draft EIR.

- Los Angeles Municipal Code Section 64.70, Stormwater and Urban Runoff Pollution Control Ordinance
- Los Angeles Municipal Code Section 64.72, Stormwater Pollution Control Measures for Development Planning and Construction Activities
- Low Impact Development Ordinance
- Water Quality Compliance Master Plan for Urban Runoff

(1) Federal

(a) Clean Water Act

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

The USEPA NPDES Program requires NPDES permits for: (1) Municipal Separate Storm Sewer Systems (MS4) Permit generally serving, or located in, incorporated cities with 100,000 or more people (referred to as municipal permits); (2) 11 specific categories of industrial activity (including landfills); and (3) construction activity that disturbs five acres or more of land. As of March 2003, Phase II of the NPDES Program extended the requirements for NPDES permits to numerous small municipal separate storm sewer systems, construction sites of 1 to 5 acres, and industrial facilities owned or operated by small municipal separate storm sewer systems, which were previously exempted from permitting.

(b) Federal Antidegradation Policy

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

2 United States Environmental Protection Agency, Clean Water Act, 2002.

3 United States Environmental Protection Agency, Water Quality Standards Handbook - Chapter 4: Antidegradation, 2010.

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 the maximum contaminant levels (MCLs), and that the USEPA has delegated the California Department of Public Health the responsible agency for administering California's drinking water program. MCLs are established under California Code of Regulations (CCR) Title 22, Division 4, Chapter 15, Article 4 (Title 22 Standards).

(d) National Flood Insurance Program

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate the Federal Emergency Management Agency (FEMA) to evaluate flood hazards.[5] FEMA provides flood insurance rate maps (FIRMs) for local and regional planners to promote sound land use and development practices, by identifying potential flood areas based on the current conditions. To delineate a FIRM, FEMA conducts engineering studies referred to as flood insurance studies (FIS). Using information gathered in these studies, FEMA engineers and cartographers delineate special flood hazard areas (SFHA) on FIRMs.

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

(2) State

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

The Porter-Cologne Water Quality Control Act established the legal and regulatory framework for California's water quality control.[6] The California Water Code (CWC) authorizes the State Water Resources Control Board (SWRCB) to implement the

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, 2006.

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 State Water Resources Control Board, Porter-Cologne Water Quality Control Act, 2018.

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

(b) California Antidegradation Policy

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

(c) California Toxics Rule

In 2000, the California Environmental Protection Agency (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.

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7 United States Environmental Protection Agency, Clean Water Act, 2016.

8 California State Water Resources Control Board, State Board Resolution No. 68-16, 1968.

9 United States Environmental Protection Agency, Water Quality Standards, Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 2001.

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

(3) Regional

(a) Water Replenishment District of Southern California

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

(b) County of Los Angeles Hydrology Manual

Drainage and flood control structures and improvements 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) and the Department of Building and Safety. 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

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

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

requires that a storm drain conveyance system be designed for a 25-year storm event and that the combined capacity of a storm drain and street flow system accommodate flow from a 50-year storm event. Areas with sump conditions are required to have a storm drain conveyance system capable of conveying flow from a 50-year storm event. The County also limits the allowable discharge into existing storm drain (MS4) facilities based on the County's MS4 Permit, which is enforced on all new developments that discharge directly into the County's MS4 system.

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 (NPDES) Permit Program

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

The SWRCB adopted this General Permit for Stormwater Discharges from Construction Activities on September 2, 2009 (Order No. 2009-0009-DWQ, General NPDES Permit No. CAS000002) and amended the permit on July 17, 2012 (Order Nos. 2010-0014-DWQ and 2012-0006-DWQ). 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.

(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

[12] Construction Stormwater Program, State Water Resources Control Board, October 30, 2019. https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html, accessed February 6, 2022.

of an SWPPP is to identify potential sources and types of pollutants associated with construction activity and list BMPs that would prohibit pollutants from being discharged from the construction site into the public stormwater system. BMPs typically address stabilization of construction areas, minimization of erosion during construction, sediment control, control of pollutants from construction materials, and post-construction stormwater management (e.g., the minimization of impervious surfaces or treatment of stormwater runoff). The SWPPP is also required to include a discussion of the proposed program to inspect and maintain all BMPs.

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

- 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.

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). The Los Angeles County MS4 Permit has been determined by the SWRCB to be consistent with the requirements of the CWA and the Porter-Cologne Act for discharges through the public storm drains in Los Angeles County to statutorily-defined waters of the United States (33 United States Code [USC] Section1342(p); 33 CFR Part 328.11). On September 8, 2016, the LARWQCB amended the Los Angeles County MS4 Permit to

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

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

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. 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.

The 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 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 Water Quality Priorities. The EWMP Implementation Strategy

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

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 Implementation 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 (SQMP). The objective of the SQMP 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 SQMP. In addition, the Los Angeles County MS4 Permit requires that permittees implement a LID Plan, as discussed above, that designates BMPs that must be used in specified categories of development projects to infiltrate water, filter, or treat stormwater runoff; control peak flow discharge; and reduce the post-project discharge of pollutants into stormwater conveyance systems. In response to the Los Angeles County MS4 Permit requirements, the City adopted Ordinance No. 173,494 (Stormwater Ordinance) , as authorized by Los Angeles Municipal Code (LAMC) 64.72, which is further discussed below.

(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.[16] Environmental goals of the Watershed Master Plan are to preserve, enhance, and restore environmental resources in and along the river, including improving water quality and cleanliness of the river. Soil contamination on riverfront lands that have supported railroads and other industries is cited as an issue of concern.

[16] City of Los Angeles Department of Public Works, Bureau of Engineering, The Los Angeles River Revitalization Master Plan, April 2007.

(4) Local

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

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

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

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

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

LAMC Section 64.70, the Stormwater and Urban Runoff Pollution Control Ordinance, was added by Ordinance No. 172,176 in 1998 and prohibits the discharge of unauthorized pollutants in the City. The Watershed Protection Program (Stormwater Program) for the City is managed by the Department of Public Works, Bureau of Sanitation (LASAN), 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 City 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 City's Board of Public Works' 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 Los Angeles Department of Building and Safety. In the event a specified BMP proves to be ineffective or infeasible, the additional and/or alternative, site-specific BMPs or conditions deemed appropriate to achieve the objectives of this ordinance as defined in LAMC Section 64.70 B.

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

LAMC Section 64.72, Stormwater Pollution Control Measures for Development Planning and Construction Activities, was added by Ordinance No. 173,494 (LID Ordinance) in

2000 and sets forth requirements for construction activities and facility operations of development and redevelopment projects to comply with the requirements of the NPDES permit requirements. The provisions of this section contain requirements for construction activities and facility operations of development and redevelopment projects to comply with the land development requirements of the Los Angeles County MS4 permit through integrating LID practices and standards for stormwater pollution mitigation, and maximize open, green, and pervious space on all developments and redevelopments consistent with the City's Landscape Ordinance and other related requirements in the Watershed Protection Division of LASAN's Development Best Management Practices (BMP) Handbook.

(i) Low Impact Development Ordinance (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 Sections 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.[17]

The intent of the LID standards is to:

- Require the use of LID practices in future developments and redevelopments to encourage the beneficial use of rainwater and urban runoff;
- Reduce stormwater/urban runoff while improving water quality;
- Promote rainwater harvesting;
- Reduce off-site runoff and provide increased groundwater recharge;
- Reduce erosion and hydrologic impacts downstream; and
- Enhance the recreational and aesthetic values in our communities.

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

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 (1) be inclusive of, and potentially exceed, the former Standard Urban Stormwater Mitigation Plan (SUSMP) standards; (2) apply to existing, as well as new, development; and (3) 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 since it allows for groundwater recharge and reduces the volume of stormwater entering municipal drains.[18] If Project Site conditions are not suitable for infiltration, the City requires on-site retention via stormwater capture and reuse. Should capture and reuse be deemed technically infeasible, high efficiency bio-filtration/ bioretention systems should be utilized. Lastly, under the LID Ordinance (LAMC Section 64.72 C.6), as interpreted in the LID Manual, if no single approach listed in the LID Manual is feasible, then a combination of approaches may be used.[19]

(e) Water Quality Compliance Master Plan for Urban Runoff

The Water Quality Compliance Master Plan for Urban Runoff (Water Quality Compliance Master Plan)[20] was developed by LASAN's 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

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

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

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.

(f) Stormwater Program – Los Angeles County MS4 Permit Citywide Implementation

The Watershed Protection Division of LASAN 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, Low Impact Development Manual, Part B: Planning Activities (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.[21] The LID Handbook assists developers with the selection, design, and incorporation of stormwater source control and treatment control BMPs into project design plans, and provides an overview of the City's plan review and permitting process. The LID Handbook addresses the need for frequent and/or regular inspections of infiltration facilities in order to ensure on-site compliance of BMP standards, soil quality, site vegetations, and permeable surfaces. These inspections are required to guarantee that facilities follow all proprietary operation and maintenance requirements.

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

[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.

b) Existing Conditions

(1) Surface Water Hydrology (Drainage)

(a) Regional

The Project Site is located within the Los Angeles River Watershed in the Los Angeles Basin. The eastern portion of the Los Angeles River Watershed spans from the Santa Monica mountains to the Simi Hills. The western portion of the Los Angeles River Watershed spans from the Santa Susana Mountains to the San Gabriel Mountains. The Los Angeles River Watershed encompasses and is shaped by the path of the Los Angeles River, which flows from its headwaters in the mountains eastward to the northern corner of Griffith Park. From the northern corner, the Los Angeles River turns southward through the Glendale Narrows before it flows across the coastal plain and into San Pedro Bay near Long Beach.

(b) Local

The Project vicinity has a network of existing underground storm drainage facilities, owned and maintained by the County of Los Angeles, that receive surface water runoff. There are two existing catch basins located adjacent to the Project Site: one at the intersection of Whitsett Avenue and Valleyheart Drive, and one at the intersection of Bellaire Avenue and Valleyheart Drive. Both of these catch basins drain south discharging via underground pipes into the Los Angeles River.[22]

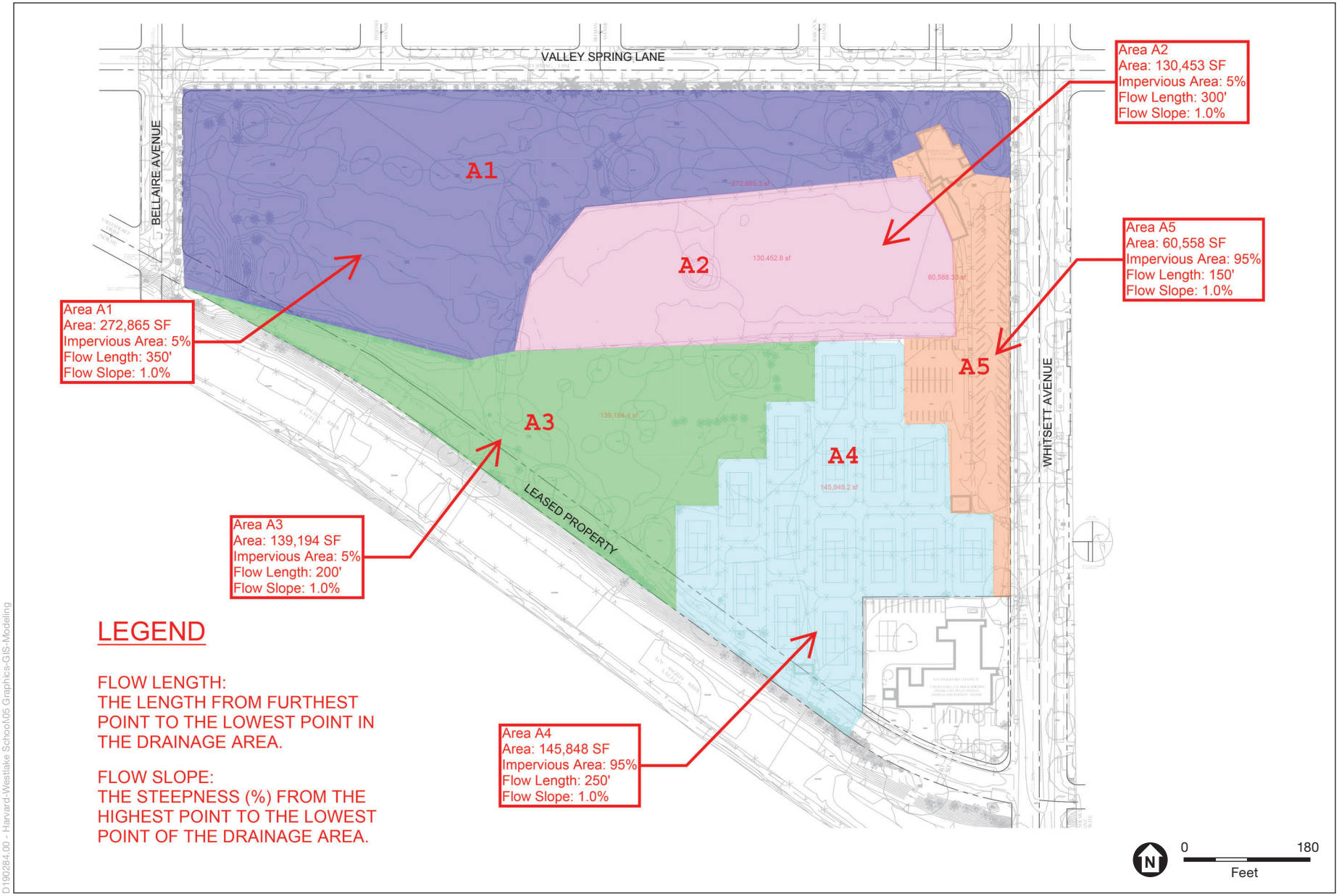
(c) Project Site

As shown in **Figure IV.I-1**, *Existing Site Drainage,* the Project Site is divided into five drainage areas.[23] The Project Site generally consists of pervious golf course and impervious tennis courts, surface parking, buildings, and pavement for pedestrian and vehicular circulation. The five drainage areas are as follows:

- Area A1 consists of the golf course along Valley Spring Lane and Bellaire Avenue.
- Area A2 consists of the driving range.
- Area A3 consists of the southern portion of the golf course, including portions of the Leased Property.
- Area A4 consists of 16 tennis courts and the surrounding area, including portions of the Leased Property.
- Area A5 consists of a surface parking lot and the existing clubhouse building along Whitsett Avenue.

[22] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 3. Provided in Appendix I of this Draft EIR.

[23] These drainage areas are determined by the drainage patterns and flow paths of stormwater that are tributary to a common point or area.



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SOURCE: KPFF Consulting Engineers, Inc., 2021

Harvard-Westlake River Park Project

Figure IV.I-1
Existing Site Drainage

Table IV.I-1, *Existing Drainage Conditions during 85th Percentile and 50-Year Storm Events*, shows the existing volumetric flow rate (measured in cubic feet per second [cfs]) generated by an 85th percentile[24] and 50-year storm events, as well as existing imperviousness conditions for the Project Site. The existing runoff rate during an 85th percentile storm event, referred to as the [Q_{85}] value, on the existing Project Site is 1.4 cfs. The existing runoff rate during a 50-year storm event storm event [Q_{50}] is 54.9 cfs. As shown in Table IV.I-1, the Project Site is currently approximately 30 percent impervious. Detailed Hydrocalc results for existing conditions at the Project Site can be found in Figure 5 for Areas A1 through A5 in the Hydrology and Water Quality Report included in Appendix I of this Draft EIR.

TABLE IV.I-1
EXISTING DRAINAGE CONDITIONS DURING 85TH PERCENTILE AND 50-YEAR STORM EVENTS

Drainage Area	Area (Acres)	Percent Imperviousness (%)	Q_{85} (cfs) (volumetric flow rate measured in cubic feet per second)	Q_{50} (cfs) (volumetric flow rate measured in cubic feet per second)
A1	6.26	5	0.19	24.20
A2	3.00	5	0.09	11.59
A3	3.20	5	0.11	12.37
A4	3.35	95	1.22	12.95
A5	1.39	95	0.60	5.37
Total	**17.2**	**30**	**1.4**	**54.9**

SOURCE**:** KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, February 2022, page 4. Provided in Appendix I of the Draft EIR.

The Project also would receive and treat stormwater runoff from an off-site area directly north of the Project (Area B. Since Area B is not part of the Project Site, it is not included in the existing drainage conditions presented in Table IV.I-1. This off-site drainage area is an approximately 38.64-acre area, consisting of single- and multi-family residential uses. This off-site drainage area is bounded by Moorpark Street to the north, Whitsett Avenue to the east, Bellaire Avenue to the west, and Valley Spring Lane to the south. The existing topography of the off-site drainage area slopes from north to south collecting in the southeastern corner of the off-site drainage area at Whitsett Avenue and Valley Spring Lane. The stormwater runoff then runs south along Whitsett Avenue to the catch basin located on the west side of the street at the intersection of Whitsett Avenue and Valleyheart Drive. Under existing conditions, during rainfall events and even with dry weather flows (such as residential landscape irrigation and car washing), runoff from the

[24] An 85-year rainfall event has a one in 85 (approximately 1.2 percent) chance of occurring in a given year.

off-site drainage area sheet flows untreated and polluted water to an inlet that directs water into the Los Angeles River.

(d) Flooding and Inundation

The Project Site is not located within a Special Flood Hazard Area (a 100-year floodplain) or Moderate Flood Hazard Area (500-year floodplain) identified by the Federal Emergency Management Agency (FEMA) and published in the Flood Insurance Rate Maps (FIRM).[25] The areas of minimal flood hazard, which are the areas outside the Special Flood Hazard Area and higher than the elevation of the 500-year floodplain, are labeled Zone C or Zone X. The Project Site is located within Zone C and is, therefore, located outside of the 100- and 500-year floodplain.[26] However, rain events have regularly produced localized flooding at the intersection of Valley Spring Lane and Whitsett Avenue.

In addition, as discussed below, according to the City of Los Angeles General Plan Safety Element, Exhibit G: Inundation & Tsunami Hazard Areas, the Project Site is located within a City-designated inundation hazard area related to several upstream dams.[27]

(2) Surface Water Quality

(a) Regional

As stated above, the Project Site lies within the Los Angeles River Watershed, specifically within Reach 3. Pollutants of concern listed for the Los Angeles River under California's Clean Water Act Section 303(d) List include cadmium (dissolved), lead (dissolved), chlordane, dichloroethylene, tetrachloroethylene, trichloroethylene, coliform bacteria, copper (dissolved), total aluminum, total lead, enterococcus, fecal coliform, total coliform, algae, ammonia, oil and grease, zinc (dissolved) and trash. No Total Maximum Daily Load (TMDL) data have been recorded by the USEPA for this waterbody.[28]

(b) Local

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

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[25] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 16. Provided in Appendix I of this Draft EIR. FIRMs depict the 100-year floodplain as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone

[26] FEMA, Flood Map Service Center Search for 4141 Whitsett Avenue, Los Angeles, CA. Based on FIRM Number 06037C1320F, effective on September 26, 2008.

[27] City of Los Angeles General Plan, Safety Element Exhibit G, Inundation & Tsunami Hazard Areas, March 1994.

[28] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 4. Provided in Appendix I of this Draft EIR.

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, are carried by rainfall runoff into drainage systems. The City typically installs catch basins with screens to capture debris before entering the storm drain system. In addition, the City conducts routine street cleaning operations, as well as periodic cleaning and maintenance of catch basins, to reduce stormwater pollution within the City.[29] Typically, other than screens to catch debris and street cleaning, runoff from the off-site drainage area is not treated.

(c) Project Site

As stated in the Hydrology and Water Quality Report, based on the Project Site field observations and the fact that the existing site was developed prior to the enforcement of storm water quality BMP design, implementation, and maintenance regulatory requirements, the Project Site currently does not implement BMPs, and there are no significant means of on-site treatment for stormwater runoff.[30]

(3) Groundwater Hydrology

(a) Regional and Local

Groundwater use for domestic water supply is a major beneficial use of groundwater basins in Los Angeles County. The Project Site lies within the San Fernando Valley (SFV) Groundwater Basin. Groundwater flow in the SFV 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.

The SFV Groundwater Basin is bounded on the north and northwest by the Santa Susana Mountains, on the north and northeast by the San Gabriel Mountains, on the east by the San Rafael Hills, on the south by the Santa Monica Mountains and Chalk Hills, and on the west by the Simi Hills. The valley is drained by the Los Angeles River and its tributaries. Precipitation in the San Fernando Valley ranges from 15 to 23 inches per year and averages about 17 inches.[31]

The groundwater in the SFV Groundwater Basin is mainly unconfined with some confinement within the Saugus Formation in the western part of the basin and in the

[29] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 5. Provided in Appendix I of this Draft EIR.

[30] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 5. Provided in Appendix I of this Draft EIR.

[31] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 6. Provided in Appendix I of this Draft EIR.

Sylmar and Eagle Rock areas. Recharge of the SFV Groundwater Basin is from a variety of sources. Spreading of imported water and runoff occurs in the Pacoima, Tujunga, and Hansen spreading grounds. Runoff contains natural streamflow from the surrounding mountains, precipitation falling on impervious areas, reclaimed wastewater, and industrial discharges. Water flowing in surface washes infiltrates, particularly in the eastern portion of the basin.

Groundwater flows generally from the edges of the SFV Groundwater Basin toward the middle of the Basin, then beneath the Los Angeles River Narrows into the Central Sub-basin of the Coastal Plain of the Los Angeles Basin. In the northeastern part of the SFV Groundwater Basin, groundwater moves from the La Crescenta area southward beneath the surface of Verdugo Canyon toward the Los Angeles River near Glendale, whereas the groundwater in the Tujunga area flows west following the Tujunga Wash around the Verdugo Mountains to join groundwater flowing from the west following the course of the Los Angeles River near Glendale. Flow velocity ranges from about 5 feet per year in the western part of the SFV Groundwater Basin to 1,300 feet per year beneath the Los Angeles River Narrows.

(b) Project Site

The Project Site is approximately 30 percent impervious, including the tennis courts, surface parking, buildings, and pavement for pedestrian and vehicular circulation. Approximately 70 percent of the Project Site is pervious, including the golf course, putting green, driving range, and other landscaped areas. Groundwater was encountered during soil borings conducted as part of the Preliminary Geotechnical Report at varying depths between 24.5 and 49.5 feet below ground surface (bgs).[32] The historical highest groundwater is at ground surface.[33]

(4) Groundwater Quality

(a) Regional

The SFV Groundwater Basin falls under the jurisdiction of the LARWQCB. According to LARWQCB's Basin Plan, objectives applying to all groundwaters of the region include bacteria, chemical constituents and radioactivity, mineral quality, nitrogen (nitrate, nitrite), and taste and odor.[34]

[32] Geotechnologies, Inc., Geotechnical Engineering Investigation, Proposed Academic and Athletic Development, 4141 Whitsett Avenue, Studio City, CA. July 2, 2019 and revised July 20, 2020.

[33] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, February 2022, page 6. Provided in Appendix H of the Draft EIR.

[34] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 7. Provided in Appendix I of this Draft EIR.

(b) Local

In the western part of the SFV Groundwater Basin, calcium sulfate-bicarbonate concentration is dominant, and in the eastern part of the basin, calcium bicarbonate concentration dominates. Total dissolved solids (TDS) range from 326 to 615 milligrams per liter (mg/L). Data from 125 public supply wells shows an average TDS content of 499 and a range from 176 to 1,160. The average TDS content meets the secondary maximum contaminant level (SMCL) of 1000 mg/L for the SFV Groundwater Basin.

A number of investigations by the U.S. Geological Survey group have determined contamination of volatile organic compounds (VOCs), such as trichloroethylene (TCE), perchloroethylene (PCE), petroleum compounds, chloroform, nitrate, sulfate, and heavy metals. TCE, PCE, and nitrate contamination occurs in the eastern part of the SVF Groundwater Basin and elevated sulfate concentration occurs in the western part of the Basin.[35]

(c) Project Site

Per the Phase I Environmental Site Assessment (Phase I ESA), no known groundwater contamination has been reported on the Project Site from prior uses, nor has groundwater contamination from offsite areas been reported to adversely affect groundwater beneath the Project Site.[36] However, as the majority of the Project Site is pervious, there is potential for surface water-borne contaminants associated with maintenance of the golf course, such as pesticides and fertilizers, to percolate into underlying soils and groundwater.

(5) Inundation, Tsunami, and Seiche Hazard Areas

According to the City of Los Angeles General Plan Safety Element, Exhibit G: Inundation & Tsunami Hazard Areas, the Project Site is located within a City-designated inundation hazard area related to several upstream dams. The same inundation area affects a broad area of the San Fernando Valley from Balboa Boulevard to the west, the City of San Fernando to the north, the City of Burbank to the east, and Ventura Boulevard to the south.[37] Dam safety regulations are the primary means of reducing damage or injury due to inundation occurring from dam failure. The California Department of Water Resources, Division of Safety of Dams, regulates the siting, design, construction, and periodic review of all dams in the State. If a breach were to occur at the upstream dams, flood water would disperse over a large area where water flows would be redirected by intervening

[35] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 7. Provided in Appendix I of this Draft EIR.

[36] Citadel EHS, Phase I Environmental Site Assessment Report, April 30, 2020, revised October 13, 2020. Provided in Appendix H-1 of this Draft EIR.

[37] City of Los Angeles General Plan, Safety Element Exhibit G, Inundation & Tsunami Hazard Areas, March 1994.

development and changes in topography. Water flows, were it to reach the Project Site, would generally flow along roadways adjacent to or within the vicinity of the Project Site.

Additional measures to ensure dam safety and to prevent dam failure include seismic retrofits and other related dam improvements completed under the requirements of the National Dam Safety Program.[38] The City's Local Hazard Mitigation Plan,[39] which was adopted in July 2011 and revised in August 2017, 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. The Hazard Mitigation Plan evaluation of dam failure vulnerability classifies dam failure as a moderate risk rating.

A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant disturbance undersea, such as a tectonic displacement of sea floor associated with large, shallow earthquakes. According to the City of Los Angeles General Plan Safety Element, Exhibit G: Inundation & Tsunami Hazard Areas, the Project Site is not located within proximity to a body of water or storage tank that could result in a seiche at the Project Site. The Project Site, which is located more than 10 miles of the Pacific Ocean, is not within a designated tsunami area.[40]

A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. According to the City of Los Angeles General Plan Safety Element, Exhibit G: Inundation & Tsunami Hazard Areas, the Project Site is not located within proximity to a body of water or storage tank that could result in a seiche at the Project Site.

3. Project Impacts

a) Thresholds of Significance

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

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

[38] FEMA, National Dam Safety Program, https://www.fema.gov/national-dam-safety-program.

[39] City of Los Angeles Emergency Management Department, Local Hazard Mitigation Plan, August 2017.

[40] City of Los Angeles General Plan, Safety Element Exhibit G, Inundation & Tsunami Hazard Areas, March 1994.

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 alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

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

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

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

iv. Impede or redirect flood flows;

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

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

For this analysis, the Appendix G Thresholds 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 factors to evaluate hydrology and water quality impacts include whether the Project would:

(1) Surface Water Hydrology

- Cause flooding during the projected 50-year developed storm event which would have the potential to harm people or damage property or sensitive biological resources;
- Substantially reduce or increase the amount of surface water in a water body; or
- Result in a permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow.

(2) Surface Water Quality

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

(3) Groundwater Quality

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

b) Methodology

The analysis in this section addresses potential Project impacts on hydrology (drainage) and surface and groundwater water quality. The analysis is based, in large part, on the Hydrology and Water Quality Report and provided in Appendix I of this Draft EIR. A summary of the analytical methodology for hydrology and surface and groundwater water quality is provided below.

(1) Surface Water Quality

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

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

(2) Groundwater

Impacts to groundwater quality were assessed by identifying the types of pollutants and/or effects on water quality likely to be associated with construction and operation of the Project. The analysis compares existing conditions to the Project during both construction and operational conditions.

Analysis of the Project impact on groundwater levels includes assessing the pre- and post-Site permeability, construction dewatering, determining the projected reduction in

groundwater resources and any existing wells within a one-mile radius of the Project Site, and projecting the change in local or regional groundwater flow patterns.

(3) Hydrology (Drainage)

The analysis of potential impacts to the existing hydrologic drainage system includes a calculation of existing (pre-Project) and post-Project runoff rates during a 50-year and an 85th-percentile storm event. Potential impacts to the storm drain system for this Project were analyzed by comparing the calculated existing runoff rates to the calculated post-Project runoff rates to determine the Project's effect on drainage flows. The Project's proposed on-site stormwater treatment system is evaluated for consistency with applicable regulatory measures for reducing drainage impacts.

The Project Site's drainage collection, treatment, and conveyance are regulated by the City. Per the City's Special Order No. 007-1299, December 3, 1999, the City has adopted the County's Hydrology Manual as its basis of design for storm drainage facilities. The Hydrology Manual requires projects to have drainage facilities that meet the "Urban Flood" level of protection. The Urban Flood is runoff from a 25-year frequency design storm falling on a saturated watershed. A 25-year frequency design storm has a probability of 1/25 of being equaled or exceeded in any year. The 2006 L.A. CEQA Thresholds Guide, however, establishes the 50-year frequency design storm event as the threshold to analyze potential impacts on surface water hydrology as a result of development. To provide a more conservative analysis, the analysis below assesses the larger storm event threshold (i.e., the 50-year storm event).

The Modified Rational Method (MODRAT) was used to calculate stormwater runoff as required by the County's Hydrology Manual. MODRAT uses the design storm and time of concentration to calculate runoff at different times throughout the storm and allows for consideration of attenuation through channel storage, retention basins, etc., to reduce peak flows.

The Los Angeles County Department of Public Works has developed a time of concentration calculator, Hydrocalc, to automate time of concentration calculations as well as the peak runoff rates and volumes using the MODRAT design criteria as outlined in the Hydrology Manual. Hydrocalc was used to calculate the storm water peak runoff flow rate for the Project conditions.

(4) Water Quality and Sustainable Groundwater Management Plans

The evaluation of Project consistency with Water Quality and Sustainable Groundwater Management Plans is based on a summary of the preceding analyses of Project impacts on water quality and groundwater resources. The summary identifies the applicable plans, the regulatory mechanisms for meeting the standards in those plans and the Project characteristics that conform to those regulatory standards.

c) Project Design Features

See Project Design Feature WS-PDF-2: Capture and Reuse System, in Section IV.O.1, *Utilities and Service Systems - Water Supply*, of this Draft EIR. Project Design Feature WS-PDF-2 indicates the Project would capture, treat, and store up to 1 million gallons of stormwater and other urban runoff at a time from the developed portions of the Project Site, as well as from an approximate 38.64-acre off-site drainage area to the north of the Project Site, through a stormwater LID capture and reuse cistern system, which will then use the treated stormwater for irrigation or water features on the Project Site.

No additional Project Design Features are proposed with regard to hydrology and water quality.

d) Analysis of Project Impacts

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

(1) Impact Analysis

(a) Construction Impacts

Construction of the Project would require grading and excavation activities to a maximum depth of approximately 21 feet bgs. Construction activities for the Project, such as earth moving; maintenance and operation of construction equipment; potential dewatering, as described below; and handling, storage, and disposal of materials, could contribute to pollutant loading in stormwater runoff. However, the Project would be required to obtain coverage under the NPDES Construction General Permit. In accordance with the requirements of the permit, the Project would require the preparation and implementation of a site-specific SWPPP that adheres to the Watershed Protection Division of LASAN's BMP Handbook. The SWPPP would specify BMPs to be used during construction. BMPs would include, but not be limited to, erosion control, sediment control, non-stormwater management, and materials management BMPs.

As discussed in Section IV.H, *Hazards and Hazardous Materials*, of this Draft EIR, given the long-term occupancy of a golf course and the current usage and storage of pesticides at the Project Site, on-site soil may contain pesticides, although this potential did not meet the criteria to be defined as a Recognized Environmental Condition (REC) in the Phase I ESA. Furthermore, according to reviewed documents provided by LAFD, a 500-gallon underground storage tank (UST) was removed from the Project Site in 1995, under the supervision of LAFD. Laboratory results indicated that the soil samples collected at the bottom of the tank pit, the spoils pile, and under the dispenser of the UST did not exceed action levels. Based on the lack of reported spills or leaks, the former UST is also not considered to represent a REC. However, a No Further Action (NFA) letter was not located and the former UST is conservatively considered to represent a

Historic REC (HREC), in which contaminated soils could occur in the underlying soils on the Project Site near the previously removed UST. Thus, if contaminated soils from past pesticide use or the previously removed UST are encountered during construction excavation activities and not properly handled or disposed of, there could potentially adverse impacts to surface or groundwater quality. As such, this is considered a potentially significant impact.

As previously stated, groundwater was encountered beginning at a depth of 24.5 feet bgs, but the historical highest level is at the ground surface. Therefore, as Project construction would require grading and excavation activities below the historical highest groundwater level, dewatering during construction could be required. Dewatering operations are practices that discharge groundwater that must be removed from a work location into the storm drain system to proceed with construction. Discharges from dewatering operations can contain high levels of fine sediments, which, if not properly treated, could lead to exceedance of the NPDES requirements. If groundwater is encountered 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. If dewatering is required, the treatment and disposal of the dewatered water would occur in accordance with the requirements of LARWQCB's Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.[41]

In addition, the Applicant would be required to comply with the City's grading permit regulations set forth in LAMC, Chapter IX, Article 1, which include standard erosion control measures and inspections to reduce sedimentation and erosion (such measures would also be included in the construction SWPPP). Also, if construction should occur during the rainy season (October 1 to April 14), a wet weather erosion control plan (WWECP) would be prepared pursuant to the "Manual and Guideline for Temporary and Emergency Erosion Control," adopted by the City of Los Angeles Board of Public Works and incorporated into the City's Development Best Management Practices Handbook, Part A, Construction Activities, cited above, and be adopted into the facility SWPPP. As discussed above, BMPs for non-stormwater discharge management and materials management would be incorporated into the SWPPP. It is noted, however, that surface non-stormwater runoff potential would be minimal, if it occurs at all.

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 opportunity for hazardous materials releases into groundwater. Compliance with all applicable federal, State, and local requirements

41 KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 15. Provided in Appendix I of this Draft EIR.

concerning the handling, storage and disposal of hazardous waste, such as those applicable provisions of 22 CCR, would reduce the potential for construction of the Project to release contaminants into groundwater that could affect existing contaminants, expand the area or increase the level of groundwater contamination, or cause a violation of regulatory water quality standards at an existing production well. Implementation of the BMPs in the SWPPP in accordance with LARWQCB's discharge requirements would further ensure that any discharge of groundwater during construction would not impact groundwater quality.

Based on the above, excavation activities during construction could encounter contaminated soils, which if not properly handled or disposed of, could potentially result in adverse impacts to surface or groundwater quality. As such, impacts related to violations of water quality standards or waste discharge requirements would be potentially significant.

(b) Operational Impacts

Stormwater discharge is generated by rainfall that runs off the land and impervious surfaces, such as paved streets, parking lots, and rooftops. Stormwater discharge may include pollutants of concern, which are expected to be generated by the Project that could affect stormwater quality. During Project operation, pollutants of concern within stormwater runoff may include, but are not limited to, pollutants such as sediment, nutrients, pesticides, metals, pathogens, oil and grease, and trash. This stormwater runoff can flow directly into storm drains and continue untreated. Untreated stormwater runoff degrades water quality in surface waters and groundwater and can affect drinking water, human health, and plant and animal habitats.

According to the Project's Preliminary Geotechnical Report, groundwater was encountered below the Project Site at depths between 24.5 and 49.5 feet below grade. This water is perched on top of the underlying clay soils and bedrock, which are relatively impervious layers. On-site infiltration of stormwater would increase the existing perched water condition rather than contribute to usable groundwater supplies. In addition, the native alluvial site soils are prone to liquefaction when saturated, a condition that would worsen as the volume of perched water increases. Based on these considerations, on-site stormwater infiltration is not feasible at the Project Site.[42] Therefore, the Project would use stormwater capture and reuse systems to collect and store the first flush of stormwater runoff to satisfy LID requirements and use it for irrigation. The Project's BMPs and capture and reuse system (described below) would be designed to comply with the LID standards, including capture and treatment of the 85th percentile storm event volume.[43]

[42] Geotechnologies, Inc., Geotechnical Engineering Investigation – Proposed Academic and Athletic Development at 4141 Whitsett Avenue, Studio City, California, 91604, Revised June 19, 2020, page 47.

[43] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 17. Provided in Appendix I of this Draft EIR.

As discussed under Existing Conditions above, the Project Site currently consists of five drainage areas. However, under the proposed Project conditions and as shown in **Figure IV.I-2**, *Proposed Site Drainage,* the 17.2-acre Project Site (Area A would be graded such that runoff would drain via building roof drains, surface flows, and area drains to the proposed LID BMP system, which includes a below grade hydrodynamic separator to clean the water of particles and contaminants, such as sediment, oil and grease, pesticides and other toxics. Ultimately, the treated stormwater would be stored in the 1-million-gallon underground cistern system, where the treated water would be used for on-site irrigation and water features (refer to Project Design Feature WS-PDF-2).

In addition to capturing and reusing water from the Project Site (Area A), the Project's LID BMP system would also capture and reuse stormwater from a 38.64-acre off-site drainage area (Area B) consisting of single- and multi-family residential uses to the north of the Project Site. The Project proposes to install a new curb inlet at the southwestern corner of Whitsett Avenue and Valley Spring Lane to intercept the off-site runoff before it drains into the County storm drain system. From this new inlet, stormwater would be conveyed on-site to the below grade hydrodynamic separator for water treatment and stored in the 1-million-gallon underground cistern system for reuse as Project Site irrigation.

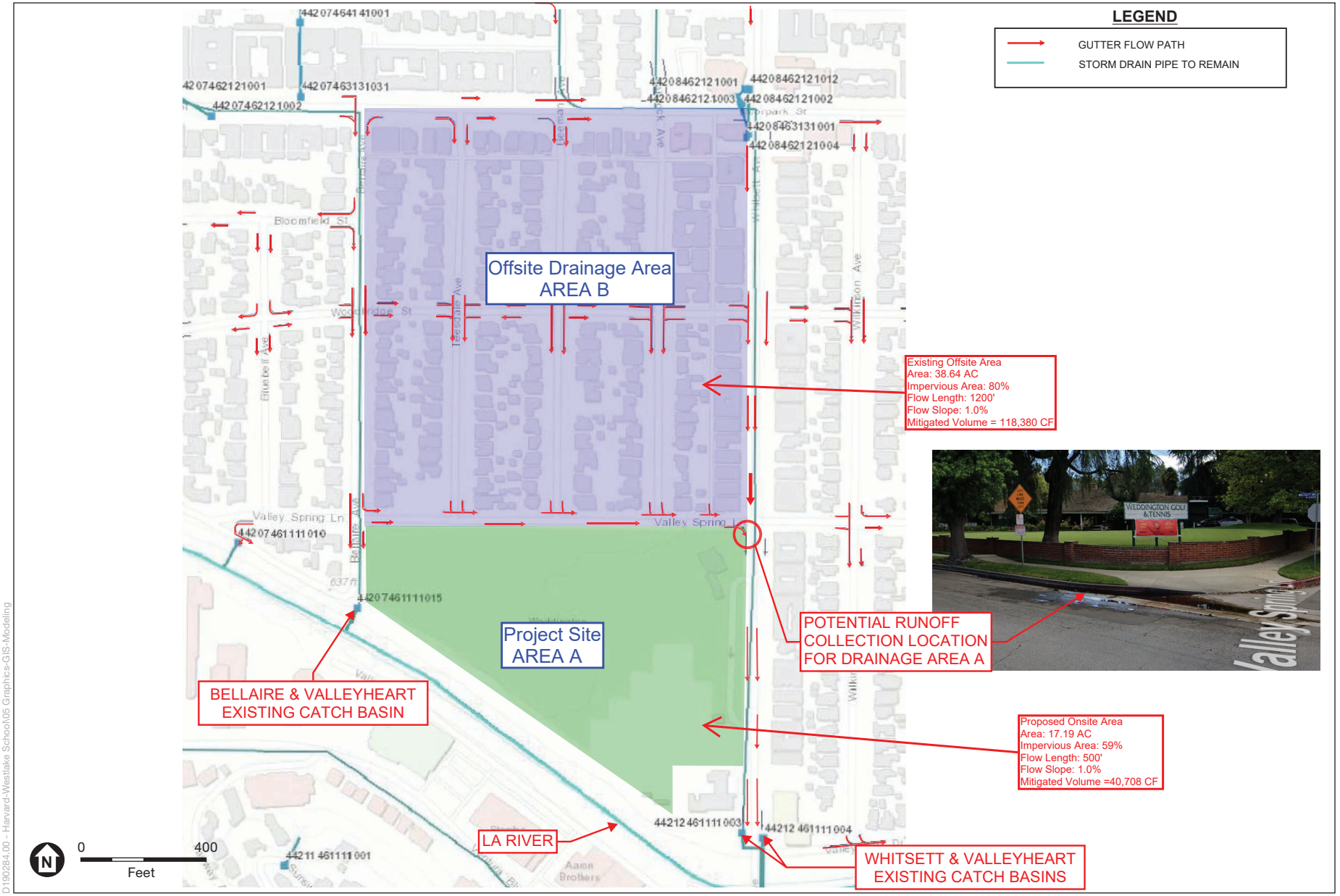
Table IV.I-2, *Proposed Drainage Conditions During 85th Percentile Storm Event,* shows the volumetric flow rates generated by an 85th percentile storm event and a summary of post-Project imperviousness conditions for the Project Site (Area A) and the off-site drainage area (Area B). The Project is not required to capture and reuse stormwater from Area B, but only from the on-site area (Area A). Accordingly, as shown in Table IV.I-2, the volume required to be captured and reused by the Project is 40,708 cubic feet, which equates to 304,517 gallons. Thus, the Project's 1-million-gallon underground cistern system significantly exceeds the City LID requirements.

TABLE IV.I-2
PROPOSED DRAINAGE CONDITIONS DURING 85TH PERCENTILE STORM EVENT

Drainage Area	Area (Acres)	Percent Imperviousness (%)	MV85th [a] (volume cubic feet/gallons)
On-Site - Stormwater Treatment Required by Project			
A	17.2	59.0	40,708 cf/ 304,517 gallons
Off-Site – Stormwater Treatment Not Required for Project			
B	38.6	80.0	118,380 cf/ 885,544 gallons

[a] MV85th = Mitigated volume of 85th percentile storm event

SOURCE**:** KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, February 2022, page 18. Provided in Appendix I of the Draft EIR.



SOURCE: KPFF Consulting Engineers, Inc., 2021

Harvard-Westlake River Park Project

Figure IV.I-2
Proposed Site Drainage

D190284.00 - Harvard-Westlake School\05 Graphics-GIS-Modeling

When the Project's cistern system is at capacity, water would be prevented from entering the cistern but would continue to pass through the filtration system. Following filtration, it would be redirected back to the curb face on Whitsett Avenue where it would be captured in the existing inlet located on the corner of Whitsett Avenue and Valleyheart Drive and ultimately discharged, having been cleaned and filtered, into the Los Angeles River.[44]

Under existing conditions, stormwater discharges from the Project Site and the off-site drainage area (Area B) sheet flows untreated water to an inlet(s) that directs water into the Los Angeles River. Because there is no existing system in place at the Project Site or the off-site drainage area, upon Project buildout, fewer pollutants would be transported through the off-site stormwater conveyance systems into the Los Angeles River, which flows to the Pacific Ocean. Since there are currently no existing on-site BMPs, stormwater runoff during post-Project conditions would result in improved surface water quality.

Source control measures per the City's LID requirements, including good housekeeping, removal of trash and maintenance of driveways and parking areas, and proper use and storage of pesticides, would also reduce surface water quality impacts and would prevent pollutants from entering the groundwater by percolation within landscaped areas or other permeable surfaces. Any on-site use of hazardous materials to be used in association with operation of the Project, such as small quantities of potentially hazardous materials in the form of cleaning solvents, painting supplies, pesticides for landscaping, and pool maintenance, as well as fuel storage associated with maintenance and/or emergency equipment, would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations, such that no hazardous materials be exposed to or otherwise would adversely impact groundwater quality. Furthermore, the elimination of large grass areas associated with the golf course and use of artificial turf and native plantings under the Project would reduce levels of pesticide use and fertilizers compared to existing conditions and thereby reduce the potential for contaminants to affect surface runoff or groundwater.

Due to the incorporation of the required LID BMPs, operation of the Project would not result in discharges that would cause (1) pollution which would alter the quality of the waters of the State (i.e., Los Angeles River) to a degree which unreasonably affects beneficial uses of the waters; (2) contamination of the quality of the waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases; or (3) nuisance that would be injurious to health, affect an entire community or neighborhood, or any considerable number of persons, and occurs during or as a result of the treatment or disposal of wastes. Accordingly, operation of the Project would not result in discharges that violate any water quality standards or waste discharge requirements; rather, it would improve water quality compared to existing

[44] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 18. Provided in Appendix I of this Draft EIR.

conditions. **Therefore, impacts resulting from Project operation would be less than significant with respect to surface water quality and groundwater quality.**

(2) Mitigation Measures

Refer to Mitigation Measure HAZ-MM-1 in Section IV.H, *Hazards and Hazardous Materials*, of this Draft EIR. No additional mitigation measures are necessary.

(3) Level of Significance After Mitigation

As discussed in Section IV.H, *Hazards and Hazardous Materials*, of this Draft EIR, Mitigation Measure HAZ-MM-1 has been included to address impacts related to potentially contaminated soils. Mitigation Measure HAZ-MM-1 requires preparation of a Soils Management Plan (SMP). Per the SMP, any soils qualifying as hazardous waste and/or soils that include concentrations of chemicals that exceed applicable screening levels will be subject to site-specific soil removal, treatment, and disposal measures included in the SMP to comply with applicable federal, State, and local overseeing agencies requirements to prevent unacceptable exposure of construction workers, the environment, or the public to hazardous materials from contaminated soils. With implementation of Mitigation Measure HAZ-MM-1, potentially significant surface and groundwater quality impacts during construction would be reduced to a less-than-significant level.

Therefore, with implementation of Mitigation Measure HAZ-MM-1 and compliance with NPDES requirements and City grading regulations, Project construction would not result in discharge that would cause (1) pollution which would alter the quality of the water of the State (i.e., Los Angeles River) to a degree which unreasonably affects beneficial uses of the waters; (2) contamination of the quality of the water of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases; or (3) nuisance that would be injurious to health; affect an entire community or neighborhood, or any considerable number of persons; and occurs during or as a result of the treatment or disposal of wastes. Accordingly, construction of the Project would not result in discharges that would cause regulatory standards to be violated in the Los Angeles River.

Water quality impacts during operation were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level during operation 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 Impacts

Construction activities for the Project would include excavations to a maximum depth of approximately 21 feet bgs. As described above, groundwater was encountered during soil borings conducted as part of the Preliminary Geotechnical Report at varying depths between 24.5 and 49.5 feet bgs.[45] However, the historical highest groundwater level is at the surface. Thus, while the recent soil borings suggest groundwater is below 24.5 bgs, there is nonetheless the possibility that groundwater levels could fluctuate closer to the surface prior to construction. Thus, temporary dewatering during construction might be required if groundwater is encountered. In this instance, temporary pumps and filtration would be used in compliance with all applicable regulations and requirements. Temporary dewatering would occur during the construction of the foundations and below-grade parking structure until it is able to withstand hydrostatic forces. The system would then be turned off, and the groundwater table would stabilize again after turning the system off. The dewatered water would be disposed to the public storm drainage system under the LARWQCB permit and in accordance with NPDES requirements related to construction and discharges from dewatering operations. Dewatering during construction would not result in the substantial removal of groundwater that would reduce the local groundwater table. Further, dewatering would only occur temporarily during construction, if even necessary at all, and would not continue post-construction. For these reasons, the Project would not impede sustainable groundwater management of the SFV Groundwater Basin. **Therefore, Project construction would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the SFV Groundwater Basin, and impacts would be less than significant.**

(b) Operational Impacts

Regarding groundwater recharge, the majority of the Project Site is pervious in the existing condition, and there is limited groundwater recharge potential. As previously discussed, infiltration is not feasible at the Project Site.[46] Groundwater encountered during soil borings at varying depths between 24.5 and 49.5 feet bgs is water perched on top of the underlying clay soils and bedrock, which are relatively impervious layers. The amount of impervious area on the Project Site would increase from the existing 30 percent to 59 percent upon Project buildout. However, the Project would capture, treat, and store up to 1 million gallons of stormwater at a time from the developed portions of the Project Site through the stormwater LID capture and reuse cistern system, which would then use the treated stormwater for irrigation or water features on the Project Site (refer to Project Design Feature WS-PDF-2). Stormwater that is captured from the off-site drainage area

[45] Geotechnologies, Inc., Geotechnical Engineering Investigation, Proposed Academic and Athletic Development, 4141 Whitsett Avenue, Studio City, CA. July 2, 2019 and revised July 20, 2020.

[46] Geotechnologies, Inc., Geotechnical Engineering Investigation, Proposed Academic and Athletic Development, 4141 Whitsett Avenue, Studio City, CA. July 2, 2019 and revised July 20, 2020, page 47.

would also be conveyed to the Project's cistern system and ultimately used for irrigation or water features. During heavy or sustained rain events when the cistern storage tanks are at capacity, treated water would bypass the storage cisterns and discharge to the Los Angeles River. However, even with the Project's increase in impervious area, the amount of water percolating into the underlying soils would largely be similar to existing conditions because of the Project's capture and reuse system, which would return captured and treated stormwater into the on-site soils during irrigation. Because the Project Site's underlying soils and geologic characteristics do not allow for significant groundwater recharge and because there would not be a substantial change to the amount of water that would percolate into the underlying soils compared to existing conditions, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge.

Also, 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 round facility.[47] Furthermore, the Project would not introduce activities that would impede sustainable groundwater management of the SFV Groundwater Basin. **Therefore, Project operation would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the SFV Groundwater Basin, and impacts would be less than significant.**

(2) Mitigation Measures

Impacts regarding groundwater recharge were determined to be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Impacts regarding groundwater recharge were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (c): Would the Project substantially alter the existing drainage pattern of the site or area, including through 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?

[47] KPFF Consulting Engineers, Harvard-Westlake River Park Hydrology and Water Quality Report, 4141 Whitsett Avenue, Studio City, CA 91604, February 2022, page 20. Provided in Appendix I of this Draft EIR.

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

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

iv. Impede or redirect flood flows?

(1) Impact Analysis

(a) Construction Impacts

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

The Project would include excavation activities to a maximum depth of approximately 21 feet bgs. These activities could temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. Exposed and stockpiled soils could be temporarily subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in stormwater runoff.

Since the construction site would be greater than one acre, the Project would be required to comply with the NPDES Construction General Permit stormwater requirements. In accordance with the requirements of this permit, the Project would implement a SWPPP that specifies BMPs and erosion control measures to be used during construction to manage runoff flows and prevent pollution. BMPs would be designed to reduce runoff and pollutant levels in runoff during construction. The NPDES and SWPPP measures are designed to contain and treat, as necessary, stormwater or construction watering on the Project Site so runoff does not impact off-site drainage facilities or receiving waters. Further, if the Project requires grading activities during the rainy season (October 1 through April 14), a WWECP would be prepared that would include BMPs to address potential erosion effects. Construction activities would be temporary, and flow directions and runoff volumes during construction would be controlled.

In addition, the Project would be required to comply with all applicable City grading permit regulations that require necessary measures, plans, and inspections to reduce sedimentation and erosion. Thus, through compliance with all NPDES Construction General Permit requirements, including preparation of a SWPPP, implementation of BMPs, and compliance with applicable City grading regulations, the Project would not substantially alter the Project Site drainage patterns in a manner that would result in substantial erosion, or siltation on- or off-site.

Therefore, Project construction would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site, and impacts would be less than significant.

(ii) Increase Rate or Amount of Surface Runoff

Erosion control measures specified under the Project's required SWPPP and BMPs would control surface runoff and prevent uncontrolled storm water runoff from the Project Site during Project construction. In addition, water used for dust control would not be applied in quantities that would create surface runoff. No other construction activities would require an increase in the use of water that would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. **As such, the Project's construction-related impacts with respect to the rate and amount of surface runoff would be less than significant.**

(iii) Exceed Capacity of Existing or Planned Stormwater Drainage Systems

During construction-related ground-disturbing activities, the Project Site would be temporarily more permeable compared to existing conditions. As the construction site would be greater than one acre, the Project would be required to comply with the NPDES Construction General Permit stormwater requirements. In accordance with the requirements of this permit, the Project would implement a SWPPP that specifies BMPs to be implemented during construction to manage runoff flows to ensure they are within the capacity of existing or planned stormwater drainage systems. In addition, the Project would be required to comply with all applicable City grading permit regulations that require necessary measures, plans, and inspections to control runoff from the construction site and avoid on- and off-site flooding during the construction period, which would further ensure no capacity exceedances occur within the stormwater drainage systems. Finally, as discussed under Threshold (a) above, Project construction would comply with applicable regulatory requirements to ensure surface and ground water quality impacts would be less than significant. Compliance with the applicable regulatory requirements would ensure the Project does not provide substantial additional sources of polluted runoff during construction.

Based on the above, Project construction 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, and impacts would be less than significant.

(iv) Impede or Redirect Flood Flows

The Project Site is located in an area outside of the 100- and 500-year floodplain.[48] Regardless, construction BMPs as part of the SWPPP would include measures that prevent any water from off-site sources from freely flowing into or across the Project Site. The existing drainage patterns in and around the Project Site would not be materially altered in a manner that would impede or redirect flood flows. **As such, construction of the Project's would not change the direction of flow of, or impede, any floodwater from off-site sources. Impacts with respect to impediment or redirection of flood flow would be less than significant.**

(b) Operational Impacts

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

As discussed under Threshold (a), the Project would comply with LID requirements to ensure that stormwater treatment with operational BMPs would control pollutants associated with storm events up to the 85th percentile storm event.

During the 50-year frequency design storm event peak flow rate, the peak flow rate of stormwater runoff from the Project Site would incrementally change from 60.93 cfs to 60.94 cfs (a 0.01 cfs or a 0.01 percent increase). **This incremental change would not substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site. Thus, impacts would be less than significant.**

(ii) Increase Rate or Amount of Surface Runoff/Flooding

The Project Site is not located in a 100- or 500-year floodplain.[49] As stated above, during the 50-year frequency design storm event peak flow rate, the peak flow rate of stormwater runoff from the Project Site would incrementally change from 60.93 cfs to 60.94 cfs (a 0.01 cfs or a 0.01 percent increase). **This incremental change would not substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Thus, impacts would be less than significant.**

48 FEMA, Flood Map Service Center Search for 4141 Whitsett Avenue, Los Angeles, CA. Based on FIRM Number 06037C1320F, effective on September 26, 2008.

49 FEMA, Flood Map Service Center Search for 4141 Whitsett Avenue, Los Angeles, CA. Based on FIRM Number 06037C1320F, effective on September 26, 2008.

(iii) Exceed capacity of existing or planned stormwater drainage systems

As discussed above under Threshold (a) and shown in Figure IV.I-2, as well as Threshold (c) subsection (1)(b)(i), Project Site runoff patterns would be altered as the result of Project implementation (including BMPs), as the required first flush runoff would be captured and reused on-site. However, during the 50-year frequency design storm event peak flow rate, the peak flow rate of stormwater runoff from the Project Site would incrementally change from 60.93 cfs to 60.94 cfs (a 0.01 cfs or a 0.01 percent increase). Runoff in excess of the volume captured, stored, and reused by the LID cistern system would be discharged off-site (post treatment) and would continue to be directed into the municipal storm drain system and discharged into the Los Angeles River. Required on-site drainage infrastructure would be designed in accordance with City requirements, would be subject to approval by the City's Department of Public Works, and would safely convey stormwater from the Project Site to the municipal storm drain system.

The stormwater capture and reuse system would serve to prevent on-site flooding and, at the same time, would ensure runoff discharged from the Project Site would not exceed the capacity of the municipal stormwater infrastructure during a larger storm event by capturing, storing and reusing stormwater on-site. Furthermore, through the stormwater capture and reuse system. the Project would address the localized flooding issue at the intersection of Valley Spring Lane and Whitsett Avenue, which regularly occurs during a rainfall event, as well as the stagnant water condition in the same area that frequently occurs even on dry days with the addition of a new curb inlet at the southwestern corner of Whitsett Avenue and Valley Spring Lane that would collect the stagnant water and convey it to the Project's capture and reuse system. By capturing, filtering, and reusing such stormwater, not only would at least one-third of the Project's annual landscape irrigation be satisfied, but vehicular and pedestrian safety would be improved by eliminating the localized flooding**.** Therefore, no new off-site storm drainage infrastructure is required or proposed.

With respect to impacts on water quality, as discussed under Threshold (a), the Project's LID cistern system that would capture, treat and reuse stormwater, as well as implementation of LID BMPs following Project implementation, would substantially improve the quality of stormwater runoff discharged from the Project Site compared to existing conditions, especially since there are no LID BMPs currently in use at the Project Site.

Based on the above, Project operation 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, and impacts would be less than significant.

(iv) Impede or Redirect Flood Flows

The Project Site is not located within a 100- and 500-year floodplain.[50] The Project would not substantially change the direction of surface flow from off-site sources or cause a new impediment to flood flow from off-site sources compared to existing conditions. As such, the Project is not anticipated to change the direction of flow or impede any floodwater from off-site sources. **Therefore, Project operation would not substantially alter the existing drainage pattern of the Project Site or area, including through alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows, and impacts would be less than significant.**

(2) Mitigation Measures

Impacts on existing drainage patterns that would cause increased siltation and flooding on- or off-site, create or contribute to the exceedance of the existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows were determined to be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Impacts on existing drainage patterns that would cause increased siltation and flooding on- or off-site, create or contribute to the exceedance of the existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (d): Would the Project risk release of pollutants due to project inundation by flooding, tsunami, or seiche?

(1) Impact Analysis

The Project Site is not located in a 100- or 500-year floodplain. The Project Site, however, is located within a City-designated inundation hazard area related to several upstream dams that could outlet into the Los Angeles River Basin. As discussed above under Existing Conditions, dam safety regulations are the primary means of reducing damage or injury due to inundation occurring from dam failure. The Project would not affect the implementation of any dam safety regulations. Similar to existing conditions, if water flows from a breached dam were to reach the Project Site, they would generally flow along roadways adjacent to or within the vicinity of the Project Site. Regardless, the Project would actively maintain the Project Site with its stormwater management system and regular implementation of BMPs to minimize pollutants within the Project Site in compliance with

[50] FEMA, Flood Map Service Center Search for 4141 Whitsett Avenue, Los Angeles, CA. Based on FIRM Number 06037C1320F, effective on September 26, 2008.

applicable regulatory requirements. The nature of pollutants would be typical of other developments within the dam inundation area. Thus, in the unlikely event of on-site inundation, the Project would not result in the release of significant types or quantities of pollutants.

The Project Site, which is located more than 10 miles of the Pacific Ocean, is not within a designated tsunami area.[51] Thus, there would be no potential for risk of release of pollutants due to inundation by tsunami.

As stated above under Subsection IV.I.2.b, Existing Conditions, according to the City of Los Angeles General Plan Safety Element, Exhibit G: Inundation & Tsunami Hazard Areas, the Project Site is not located within proximity to a body of water or storage tank that could result in a seiche at the Project Site. Thus, there would be no potential for risk of release of pollutants due to inundation by seiche.

Based on the above, the Project would not result in significant risk of release of pollutants to inundation by flooding, tsunami, or seiche, and impacts would be less than significant.

(2) Mitigation Measures

Impacts regarding the release of pollutants due to Project inundation by flooding, tsunami, or seiche were determined to be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Impacts regarding the release of pollutants due to project inundation by flooding, tsunami, or seiche were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (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 in Subsection IV.I.2.a, Regulatory Framework, and elaborated upon in the subsequent impact analyses, the Project falls within the jurisdiction of water quality plans with related regulations and permitting requirements that assure that development projects are in compliance with clean water policies. Most notably, the Project falls under the jurisdiction of the LARWQCB (Region 4) Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties and the ULAR EWMP, and the RWQCB is also given

[51] City of Los Angeles General Plan, Safety Element Exhibit G, Inundation & Tsunami Hazard Areas, March 1994.

authority to issue waste discharge requirements, enforce actions against stormwater discharge violators, and monitor water quality. In California, the NPDES stormwater permitting program is administered by the SWRCB, and the County of Los Angeles and the City are two of the Co-Permittees under the Los Angeles County NPDES MS4 Permit and, as such, are required to implement development planning guidance and control measures regarding water quality impacts from new development.

The Los Angeles County MS4 Permit contains provisions for implementation and enforcement of the SQMP and includes a LID Plan that designates BMPs that must be used by projects to address water infiltration, filtering, treatment and peak-flow discharge. The City supports the requirements of the Los Angeles County MS4 Permit through the City's LID Handbook, which provides guidance to developers of newly developed projects for compliance with regulatory standards. The Project is also within the jurisdiction of the Water Quality Compliance Master Plan for Urban Runoff, which was developed by the City's Department of Public Works and includes within its provisions the description of BMPs required by the City for stormwater quality management.

The Project would incorporate into its design an on-site drainage system that would meet regulatory requirements of the applicable plans for the protection of water resources. The Project would install a stormwater capture and reuse system, in compliance with the City's LID requirements. The detention would temporarily store the captured stormwater until the stored volume is entirely used for Project irrigation or water features.

The Project's potential impacts regarding water quality are evaluated under Threshold (a) above. As indicated in that analysis, with implementation of the Project's BMPs and Mitigation Measure HAZ-MM-1 (applicable to temporary short-term, construction impacts only), the Project would have less-than-significant impacts on both surface and groundwater quality during construction and operation phases. Note that operational water quality impacts would be less than significant without mitigation. The Project's potential impacts regarding groundwater supplies and groundwater recharge are evaluated under Threshold (b) above. As indicated, the Project would have a less-than-significant impact. As further indicated in those analyses, with Project implementation, the stormwater runoff quality during Project operation would be improved as compared to existing conditions.

Therefore, in conjunction with Mitigation Measure HAZ-MM-1 (applicable to temporary construction only) and the implementation of necessary BMPs to support the applicable plans, 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 after mitigation.

(2) Mitigation Measures

Refer to Mitigation Measure HAZ-MM-1 in Section IV.H, *Hazards and Hazardous Materials*, of this Draft EIR. No additional mitigation measures are necessary.

(3) Level of Significance After Mitigation

With implementation of Mitigation Measures HAZ-MM-1 (applicable to temporary construction only), potentially significant impacts during construction with regard to the Project conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan would be reduced to a less-than-significant level. Impacts with regard to the Project conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan during operation were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level during operation remains less than significant.

e) Cumulative Impacts

(1) Impact Analysis

As identified in Chapter III, *Environmental Setting*, of this Draft EIR, there are five related projects within a one-half mile radius of the Project Site plus one-quarter mile from the farthest outlying intersection.

As with the Project, the related projects are located in urbanized areas, which include mostly impermeable hard-surface project sites. Accordingly, the potential for the related projects to generate a substantial amount of new impermeable surfaces is limited. The related projects would also be subject to the same regulatory requirements as the Project, including, where applicable, the NPDES/Waste Discharge Requirements permits discussed above and the City's LID Ordinance, which would require the related projects to capture and manage their stormwater in accordance with City's LID Guidelines. LASAN would also review each future development project on a case-by-case basis to ensure that sufficient local and regional drainage capacity is available to accommodate each related project's stormwater runoff. Accordingly, the related projects are not anticipated to result in cumulatively considerable impacts with respect to hydrology and drainage quantities/patterns. Moreover, as shown above, the Project would not significantly alter or increase stormwater flows from the Project Site or alter drainage patterns in the area. **As such, the Project's contribution to cumulative impacts would not be cumulatively considerable, and cumulative impacts on hydrology and drainage patterns would be less than significant.**

All related projects that anticipate new construction have the potential to contribute to pollutant loading during construction and operation, which could potentially result in cumulative impacts to water quality. However, as with the Project, all new construction would be subject to NPDES Waste Discharge Requirements permits during construction and, where applicable, dewatering activities. Each related project greater than one acre in size would be required to develop a SWPPP for construction and grading activities. In addition, all new construction plans would be evaluated individually to determine the appropriate BMPs and treatment measures to minimize the related projects impacts to

water quality. Operation of the related projects would also be subject to applicable LID requirements, including implementation of operational BMPs to address the quality of water runoff from surfaces, such as driveways, parking lots, and parking structures. Pursuant to the City's LID Ordinance, related projects would be required to implement LID BMPs through one or more of the City's preferred improvements, including on-site infiltration, capture and reuse, or biofiltration/biotreatment BMPs, to the maximum extent feasible. As described above, the Project would implement Mitigation Measure HAZ-MM-1 (during construction only) requiring preparation of a Soils Management Plan and LID BMPs consistent with applicable regulatory requirements that would ensure less than significant Project impacts on surface water and groundwater quality during construction. With compliance to existing applicable regulations, such as the City's LID Ordinance requirements, the related projects would also be unlikely to cause or increase surface or groundwater contamination. In cases where the related projects would require dewatering during excavation, groundwater dewatering, treatment, and disposal would be conducted in accordance with the LARWQCB's Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties. Compliance with these regulations would ensure less-than-significant effects on surface water, as well as groundwater quality. **Therefore, with adherence to applicable regulations and implementation of Mitigation Measure HAZ-MM-1 (temporary construction only), the Project's contribution to cumulative impacts would not be cumulatively considerable during construction, and cumulative impacts during construction on water quality would be less than significant. Also, during operation, with adherence to applicable regulations the Project's contribution to cumulative impacts would not be cumulatively considerable, and cumulative impacts during operation on water quality would be less than significant.**

Furthermore, as demonstrated above, through compliance with applicable regulatory requirements via site-specific stormwater management and BMPs, as well as implementation of Mitigation Measure HAZ-MM-1 (temporary construction only), the Project and related projects would not substantially conflict with or obstruct implementation of a water quality control plan during construction or operation. Also, as discussed above, given the urbanized nature of the City and surrounding area, the potential for the related projects to generate a substantial amount of new impermeable surfaces and thereby affecting the groundwater table is limited. None of the related projects are known to include significant quantities of permanent, ongoing groundwater withdrawal, but some would include infiltration as a means of LID compliance, where feasible and possible**. Based on the above, with adherence to applicable regulations and implementation of Mitigation Measure HAZ-MM-1 (temporary construction only), the Project's contribution to cumulative impacts would not be cumulatively considerable during construction, and cumulative impacts during construction regarding the Project conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan would be less than significant. Also, during operation, with adherence to applicable regulations the Project's contribution to cumulative impacts would not be cumulatively**

considerable, and cumulative impacts during operation regarding the Project conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan would be less than significant.

With regards to pollutant releases during flooding, the Project Site and the areas immediately surrounding the Project Site are not located within a 100- and 500-year floodplain and would not increase runoff or change drainage patterns that would result in off-site flooding. **As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts with respect flooding would be less than significant.**

The Project Site, and other related project sites, are located within a City-designated inundation hazard area related to upstream dams. However, as discussed above, numerous dam safety regulations are in place to safeguard against dam failure. If a breach were to occur at the dams, flood water would disperse over a large area where water flows would be redirected by intervening development and changes in topography. Water flows, were it to reach the Project Site and related project sites, would generally flow along roadways adjacent to or within the vicinity of the project sites. Regardless, the Project and related projects would actively maintain their respective project sites with their own stormwater management systems and regular implementation of BMPs to minimize pollutants within those sites in compliance with applicable regulatory requirements. The nature of pollutants at the related project sites would be typical of other developments within the dam inundation area. Thus, in the unlikely event of on-site inundation, the Project and related projects would not result in the release of significant types or quantities of pollutants.

The Project Site and related project sites are not located within a City-designated tsunami hazard area. The Project Site and related project sites are also not located within proximity to a body of water or storage tank that could result in a seiche at the respective sites.

Based on the above, the Project's contribution to cumulative impacts would not be cumulatively considerable, and cumulative impacts with respect to release of pollutants due to inundation by flooding, tsunami, or seiche would be less than significant.

Overall, based on the above, the Project's contribution to cumulative impacts would not be cumulatively considerable and cumulative impacts on hydrology and water quality would be less than significant.

(2) Mitigation Measures

Cumulative impacts regarding hydrology and water quality were determined to be less than significant with implementation of Mitigation Measure HAZ-MM-1 (temporary construction only). Therefore, no additional mitigation measures are required.

(3) Level of Significance after Mitigation

With implementation of Mitigation Measures HAZ-MM-1 (applicable to temporary construction only regarding water quality), cumulative impacts regarding hydrology and water quality were determined to be less than significant. Therefore, no additional mitigation measures were required or included, and the impact level remains less than significant.