

5.8 Hydrology and Water Quality

5.8.1 INTRODUCTION

This section describes the environmental and regulatory settings and identifies potential impacts for hydrology and water quality resources. The analysis in this section is based on information from the Geotechnical EIR Due-Diligence Level Report (Geotechnical Report) that was prepared by LGC Geotechnical (GEO 2019), which is included as Appendix C, the Preliminary Water Quality Management Plan prepared by Fuscoe Engineering (WQMP 2019) (included as Appendix G) and the Water Supply Assessment, prepared by prepared by Fuscoe Engineering (included as Appendix H).

5.8.2 REGULATORY SETTING

Clean Water Act

The U.S. Environmental Protection Agency (USEPA) is the federal agency that implements the Clean Water Act (CWA), which is responsible for water quality management. The purpose of the CWA is to protect and maintain the quality and integrity of the nation's waters by requiring states to develop and implement state water plans and policies.

CWA Section 303, Total Maximum Daily Loads (TMDL): Section 303 of the CWA requires states to establish water quality standards consisting of designated beneficial uses of water bodies and water quality standards to protect those uses for all Waters of the United States. Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop lists of impaired waters. Impaired waters are waters that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish a priority ranking for listed waters and develop action plans to improve their water quality. This process includes development of Total Maximum Daily Loads (TMDL) that set discharge limits for non-point source pollutants.

A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards. The Ducheny Bill (AB 1740) requires the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) to post this list and to provide an estimated completion date for each TMDL.

CWA Section 402, National Pollutant Discharge Elimination System (NPDES) Permit: Direct discharges of pollutants into Waters of the United States are not allowed, except in accordance with the NPDES program established in Section 402 of the CWA. The main goal of the NPDES program is to protect human health and the environment. Pursuant to the NPDES program, permits that apply to storm water discharges from municipal storm drain systems, specific industrial activities, and construction activities (one acre [ac] or more) have been issued. NPDES permits establish enforceable effluent limitations on discharges, require monitoring of discharges, designate reporting requirements, and require the permittee to include use of Best Management Practices (BMPs). Industrial (point source) storm water permits are required to meet effluent limitations, while municipal and construction permits are governed by the maximum extent practicable (MEP) or the Best Available Technology (BAT)/Best Control Technology (BCT) application of BMPs. SWRCB are required to require the development of state-specific permits that comply with the NPDES Permit.

Porter-Cologne Act

The Porter-Cologne Water Quality Control Act of 1969, codified as Division 7 of the California Water Code, authorizes the State Water Resources Control Board (SWRCB) to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirements of Clean Water Act (CWA) and establishes water quality standards that have to be set for certain waters by adopting water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act establishes the responsibilities and authorities of the 9 Regional Water Quality Control Boards (RWQCB), including preparing water quality plans for areas in the region, and identifying water quality objectives and waste discharge requirements (WDRs). Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. Beneficial uses consist of all the various ways that water can be used for the benefit of people and/or wildlife.

The project site is within the Santa Ana River Watershed. The Santa Ana River Basin Water Quality Control Plan was adopted in February 2016. This Basin Plan gives direction on the beneficial uses of the waters, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the established standards.

California Anti-Degradation Policy

A key policy of California's water quality program is the State's Anti-Degradation Policy. This policy, formally known as the Statement of Policy with Respect to Maintaining High Quality Waters in California (SWRCB Resolution No. 68-16), restricts degradation of surface and ground waters. In particular, this policy protects water bodies where existing quality is higher than necessary for the protection of beneficial uses. Under the Anti-Degradation Policy, any actions that can adversely affect water quality in all surface and ground waters must (1) be consistent with maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial use of the water; and (3) not result in water quality less than that prescribed in water quality plans and policies (i.e., will not result in exceedances of water quality objectives).

California Construction General Permit

The State of California adopted a Statewide NPDES Permit for General Construction Activity (Construction General Permit) on September 2, 2009 (Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ). The last Construction General Permit amendment became effective on July 17, 2012. The Construction General Permit regulates construction site stormwater management. Dischargers whose projects disturb one or more acres of soil, or whose projects disturb less than one acre, but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the general permit for discharges of stormwater associated with construction activity. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

To obtain coverage under this permit, project operators must electronically file Permit Registration Documents, which include a Notice of Intent, a Stormwater Pollution Prevention Plan (SWPPP), and other compliance-related documents, including a risk-level assessment for construction sites, an active stormwater effluent monitoring and reporting program during construction, rain event action plans, and numeric action levels for pH and turbidity as well as requirements for qualified professionals to prepare and implement the plan. An appropriate permit fee must also be mailed to SWRCB.

The Construction General Permit requires project applicants to file a Notice of Intent with the SWRCB to discharge stormwater, and to prepare and implement a SWPPP for projects that will disturb greater than 1 acre of soil. The SWPPP would include a site map, description of stormwater discharge activities, and best management practices (BMPs) taken from the menu of BMPs set forth in the California Stormwater Quality Association BMP Handbook that will be employed to prevent water pollution. The SWPPP is required to include BMPs that will be used to control soil erosion and discharges of other construction-related pollutants (e.g., petroleum products, solvents, paints, cement) that could contaminate nearby water resources. It must demonstrate compliance with local and regional erosion and sediment control standards, identify responsible parties, provide a detailed construction timeline, and implement a BMP monitoring and maintenance schedule. The Construction General Permit also requires the SWPPP to identify BMPs that will be implemented to reduce controlling potential chemical contaminants from impacting water quality. Types of BMPs include erosion control (e.g., preservation of vegetation), sediment control (e.g., fiber rolls), non-stormwater management (e.g., water conservation), and waste management. The SWPPP is also required to include BMPs to reduce pollutants in stormwater discharges after all construction phases have been completed at the site (post-construction BMPs).

California Water Resources Control Board Low Impact Development Policy

The SWRCB adopted the Low Impact Development (LID) Policy which, at its core, promotes the idea of “sustainability” as a key parameter to be prioritized during the design and planning process for future development. The SWRCB has directed its staff to consider sustainability in all future policies, guidelines, and regulatory actions. LID is a proven approach to manage stormwater. The RWQCBs are advancing LID in California in various ways, including provisions for LID requirements in renewed Phase I municipal stormwater NPDES permits.

Santa Ana Regional Water Quality Control Board Water Quality Control Plan

The City of Santa Ana is within the jurisdiction of the Santa Ana RWQCB. The RWQCB sets water quality standards for all ground and surface waters within its region through implementation of a Water Quality Control Plan (Basin Plan). The Basin Plan describes existing water quality conditions and establishes water quality goals and policies. The Basin Plan is also the basis for the Regional Board’s regulatory programs. To this end, the Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term “water quality standards,” as used in the federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality which must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions that are necessary to achieve and maintain target water quality standards. The goal of the Basin Plan is to protect public health and welfare and maintain or enhance water quality and potential beneficial uses of the water.

Santa Ana Regional Municipal Separate Storm Sewer System Permit

The Municipal Separate Storm Sewer System (MS4) Permit for the Santa Ana Region regulates urban runoff from areas under jurisdiction of the Permit’s various permittees, which include Orange County, Orange County Flood Control District, and the incorporated cities within Orange County including the City of Santa Ana. When discharged, urban runoff (or stormwater) has the potential to mix with and carry various pollutants into receiving waters. The Permit lists allowable and unallowable discharges and requires implementation of LID infrastructure, which are engineered facilities that are designed to retain and/or biotreat runoff on the project site. Developments that qualify as a development or redevelopment project, which includes the proposed project as specified by criteria in the MS4 Permit, are required to develop a site-specific water quality management plan (WQMP), which includes site design, source control and treatment control elements to reduce the discharge of pollutants in runoff. The WQMP is required to be approved prior to the issuance of a building or grading permit, and post-construction BMPs are required to

be implemented. The MS4 Permit requires priority projects to infiltrate, harvest and use, evapotranspire, or biotreat/biofilter, the 85th percentile of a 24-hour storm event (Design Capture Volume). The MS4 Permit also requires the evaluation and use of LID features using the following hierarchy of treatment: infiltration, evapotranspiration, harvest/reuse, and biotreatment.

Biotreatment BMPs are a broad class of LID BMPs that reduce storm water volume to the maximum extent practicable, treat storm water using a suite of treatment mechanisms characteristic of biologically active systems, and discharge water to the downstream storm drain system or directly to receiving waters. Treatment mechanisms include media filtration (though biologically-active media), vegetative filtration (straining, sedimentation, interception, and stabilization of particles resulting from shallow flow through vegetation), general sorption processes (i.e., absorption, adsorption, ionexchange, precipitation, surface complexation), biologically-mediated transformations, and other processes to address both suspended and dissolved constituents. Examples of biotreatment BMPs include bioretention with underdrains, vegetated swales, constructed wetlands, and proprietary biotreatment systems.

County of Orange Drainage Area Management Plan

The Drainage Area Management Plan (DAMP) is the County's primary policy, planning and implementation document for NPDES Stormwater Permit compliance. The DAMP describes the agreements, structures and programs that:

- Provide the framework for the program management activities and plan development;
- Provide the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensure that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues;
- Ensure that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management;

The DAMP requires that new development and significant redevelopment projects (or priority projects), such as the proposed Project, develop and implement a Preliminary WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site.

City of Santa Ana General Plan

The City is currently undergoing a comprehensive update to the General Plan. The following objectives and policies from the existing General Plan Conservation Element are relevant to the proposed Project:

Objective 1.2: Provide sufficient water of adequate quality for all users.

Objective 2.1: Conserve water resources in commercial, industrial, residential and recreational uses.

Policies:

- Encourage water conservation through design and facilities features of new developments through the use of water quality wetlands, biofiltration swales, watershed-scale retrofits, etc. where such measures are likely to be effective and technically and economically feasible.
- Provide for appropriate permanent measures to reduce storm water pollutant loads in storm water from the development site.

- Minimize changes in hydrology and pollutant loading; require incorporation of control, including structural and non-structural and Best Management Practices to mitigate the projected increases in pollutant loads and flows.
- Ensure that post-development runoff rates and velocities from a site have no significant adverse impact on downstream erosion and stream habitat.

City of Santa Ana Municipal Code

Section 18-156; Control of Urban Runoff: This code section states that all new development and significant redevelopment within the City shall be undertaken in accordance with the County DAMP, including but not limited to the development project guidance; and any conditions and requirements established by City agencies related to the reduction or elimination of pollutants in storm water runoff from the project site. Prior to the issuance by the City of a grading permit, building permit or nonresidential plumbing permit for any new development or significant redevelopment, City agencies are required to review the project plans and impose terms, conditions and requirements on the project. The owner of a new development or significant redevelopment project shall implement and adhere to the terms, conditions and requirements on the new development or significant redevelopment project.

5.8.3 ENVIRONMENTAL SETTING

Watershed

The Project site is in the Santa Ana River Watershed and the Newport Bay sub-watershed. The Santa Ana River Watershed includes much of Orange County, much of western Riverside County, part of southwestern San Bernardino County, and a small portion of Los Angeles County. The watershed is bounded by the Santa Margarita watershed to the south, on the east by the Salton Sea and Southern Mojave watersheds, and on the north and west by the Mojave and San Gabriel watersheds, respectively. The watershed covers approximately 2,800 square miles in area with about 700 miles of rivers. The Santa Ana River extends 96 miles from the San Bernardino Mountains in San Bernardino County to the Pacific Ocean at the boundary between the Cities of Huntington Beach and Newport Beach.

The Santa Ana Watershed is subdivided into several smaller watersheds, and the Project site is in the Newport Bay Watershed. The Newport Bay Watershed spans 152 square miles from the foothills of the Santa Ana Mountains in the north to the Pacific Ocean in the south and from the Cities of Santa Ana and Costa Mesa on the west to the City of Lake Forest on the east. Runoff from the Project site flows through existing storm drains to the nearby Barranca Channel, which drains to San Diego Creek (Reach 1), then Upper Newport Bay, and discharges to the ocean at Balboa Beach (WQMP 2019).

Water Quality

Water Quality Impairments: Section 303(d) of the federal CWA requires states to identify water bodies that are “impaired,” or those that do not meet water quality standards and are not supporting their beneficial uses. Total Maximum Daily Loads (TMDLs) are then designed to serve as pollution control plans for these specific pollutants.

The San Diego Creek Reach 1 is included on the Section 303(d) List of Water Quality Limited Segments for: fecal coliform, nutrients, pesticides, sedimentation, selenium, and toxaphene. The Upper Newport Bay is included on the Section 303(d) List of Water Quality Limited Segments for: chlordane, copper, DDT, metals, nutrients, PCBs, sediment toxicity, and sedimentation. Additionally, the Lower Newport Bay (to which the

Upper Newport Bay drains) is included on the Section 303(d) List of Water Quality Limited Segments for chlordane, DDT, nutrients, PCBs, pesticides, and sediment toxicity (WQMP 2019).

Selenium Concentration Area: The Project site is located within the Selenium Concentration Area identified by the Orange County Water District (OCWD), as shown on Figure 5.8-1 (WQMP 2019). In the Newport Bay watershed, selenium derived from ancient marine sediments in local foothills accumulated over the last several thousand years in the Swamp of the Frogs, which stretched from Upper Newport Bay almost to Red Hill Avenue. This ancient swamp, though now drained and filled, has become an active source of selenium because of the high-water table in the area (Meixner, 2004). Thus, virtually any activity that mobilizes groundwater to the surface has the potential to increase selenium contamination of surface waters in the Newport Bay watershed.

South Basin Groundwater Protection Project: The Project site is located within the South Basin Groundwater Protection Project area, as shown on Figure 5.8-1, which implements groundwater remediation due to a comingled plume of groundwater pollutants that was generated by more than 20 industrial sites (OCWA 2018). The plume occurs predominately in the shallow aquifer at 100-foot depth which flows into a deeper Principal Aquifer, bringing VOC contaminants with it (OCWA 2018). Due to this condition, infiltration of groundwater is not allowed within the South Basin Groundwater Protection Project area.

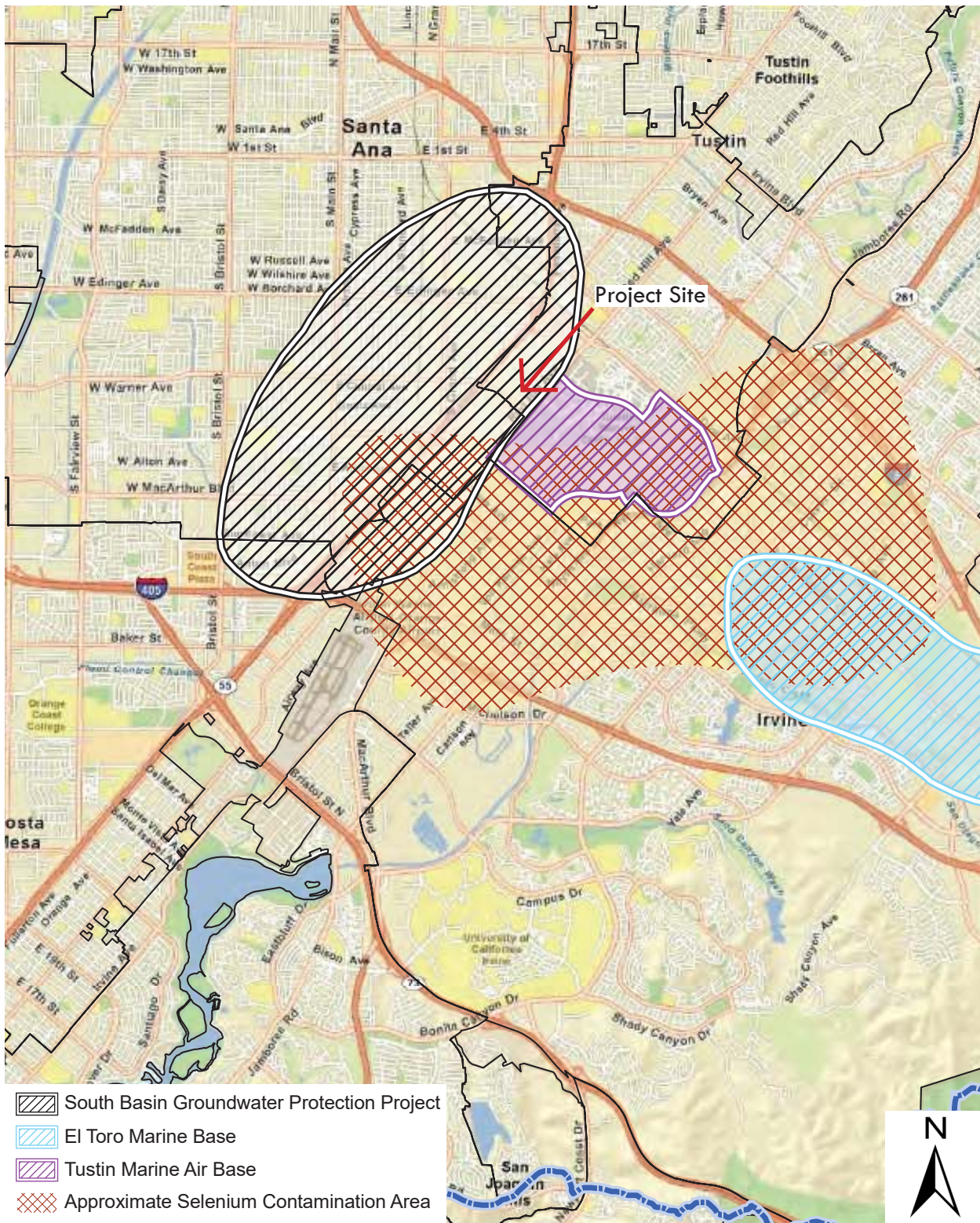
Tustin Marine Air Base: The Project site is located adjacent to the Tustin Legacy Specific Plan area, which was previously used as a Marine Air Base. Past Air Base operations have resulted in releases of hazardous substances within the upper 50 feet of the shallow aquifer beneath the air base (MCAS Tustin). Hazardous materials were reportedly used in construction of the base and helium purification for blimp use. Daily operation and support activities for helicopters that were used on the Base included the use, storage, transfer, and disposal of hazardous waste that included oil, solvents, fuel, hydraulic fluid, antifreeze, paint thinner, and sludge from cleaning tanks and fuel filters. The federal government is in the process of implementing remediation programs related to this contamination from past hazardous waste disposal and hazardous material spills within the Air Base (MCAS Tustin). Due to this condition, infiltration of groundwater may not be allowed within the Tustin Marine Air Base area.

Groundwater Basin

The Orange County Basin underlies an area of approximately 350 square miles, bordered by the Coyote and Chino Hills to the north, the Santa Ana Mountains to the northeast, the Pacific Ocean to the southwest, and terminates at the Orange County line to the northwest, where the aquifer system continues to the Central Basin in Los Angeles County (WSA 2019). The OC Basin is recharged primarily by four sources including local rainfall, storm and base flows from the Santa Ana River (SAR), purchased MWD imported water; and highly treated recycled wastewater. Basin recharge occurs largely in 4 recharge basins that are in or adjacent to the City of Anaheim.

OCWD manages the Orange County Basin through a Basin Production Percentage (BPP) that is determined each water year based on groundwater conditions, availability of imported water supplies, water year precipitation, SAR runoff, and basin management objectives. While there is no legal limit as to how much an agency pumps from the Orange County Basin, there is a financial disincentive to pump above the BPP. For example, if the BPP is set at 75 percent, all pumpers within the Basin, including the City, can supply 75 percent of their water needs from groundwater supplies at a cost significantly less than the cost of

Orange County Groundwater Protection Areas



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imported water. If groundwater production is equal to or less than the BPP (i.e. less than 75 percent in the example above), all producers within the Basin pay a replenishment assessment (RA) fee which is used to fund groundwater replenishment and recharge programs aimed at ensuring the long-term viability and stability of the Basin. In 2019, the BPP was 75 percent and OCWD's goal is to provide a stable 75 percent BPP through management of the basin (WSA 2019).

As required by Senate Bill 1262, the WSA prepared for the proposed Project describes that the Orange County Basin is designated as a medium-priority basin and has operated within its sustainable yield over a period of at least 10 years without experiencing significant and unreasonable (1) lowering of groundwater levels, (2) reduction in storage, (3) water quality degradation, (4) seawater intrusion, (5) inelastic land subsidence, or (6) depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water. In addition, the Orange County Basin has not been in conditions of critical overdraft.

Groundwater Supply

Groundwater from the Orange County Basin provides approximately 71 percent of the City's water supply. The remaining supply comes from the Metropolitan Water District (28 percent) and recycled water (1 percent). As described by the WSA prepared for the Project, the water production capability of the basin has increased as a result of operation of the Groundwater Replenishment System in Fountain Valley, which turns wastewater into potable drinking water that is used for basin replenishment. The system increases local low-cost water supply reliability (WSA 2019).

Storm Drainage Facilities

The Project site is currently 75 percent impervious and 25 percent pervious (WQMP 2019). The existing topography of the project site is relatively flat and generally drains from the north to the south. Currently, the Project site drains northwest where flows enter an existing catch basin. The catch basin connects to a six foot high by ten foot wide culvert that directs flows to an 84-inch storm drain that flows southeast to a flood control basin. Drainage from the flood control basin is conveyed to the Barranca Channel that connects to San Diego Creek Reach 1 that drains to Newport Bay and the Pacific Ocean.

Soil Infiltration

Onsite soils infiltration testing was performed during preparation of the Geotechnical Report, which determined that soils have an infiltration rate of 0.15 inches per hour which, is identified as a low infiltration rate and considered infeasible to support drainage on the Project site (GEO 2019).

Flood Zone, Tsunami, Seiche

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the Project area (06059C0279J) shows that the Project site is located within "Zone X," which is an area of minimal flood hazard potential outside of the 0.2 percent annual chance flood.

A tsunami is a series of ocean waves caused by a sudden displacement of the ocean floor, most often due to earthquakes. The Project site is over 8.5 miles from the Pacific Ocean, and outside of the Tsunami Hazard Zone identified by the California Department of Conservation (DOC 2019).

A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam, or other artificial

body of water. There are no water bodies in the vicinity of the Project site, and no existing risks related to seiche flood hazards exist on or near the site.

5.8.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

- WQ-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- WQ-2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- WQ-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in a substantial erosion or siltation on- or off-site;
- WQ-4 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- WQ-5 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- WQ-6 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows;
- WQ-7 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- WQ-8 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

5.8.5 METHODOLOGY

This evaluation of the significance of potential impacts related to hydrology and water quality is based on a review of published information and reports regarding regional hydrology, groundwater conditions, and surface water quality. The potential impacts on hydrology and water quality were evaluated by considering the general type of pollutants that operation of the Project would generate during construction and operation. In determining the level of significance, the analysis recognizes that development under the proposed Project would be required to comply with relevant federal, state, and regional laws and regulations that are designed to ensure compliance with applicable water quality standards and waste discharge requirements. Because the regional and local regulations related to water quality standards have been developed to reduce the potential of pollutants in the water resources (as described in the Regulatory Setting Section above), and are implemented to specific waterbodies, such as 303(d) TMDL requirements, or development projects such as grading and construction permit regulations, implementation of all relevant

water quality and hydrology requirements would limit the potential of the proposed Project to a less than significant impact.

5.8.6 ENVIRONMENTAL IMPACTS

IMPACTS WQ-1: THE PROJECT WOULD NOT VIOLATE ANY WATER QUALITY STANDARDS OR WASTE DISCHARGE REQUIREMENTS OR OTHERWISE SUBSTANTIALLY DEGRADE SURFACE OR GROUND WATER QUALITY.

Less than Significant Impact.

Construction

Implementation of the proposed Project includes development involving demolition of the existing structures and pavement, site preparation, construction of new buildings, and infrastructure improvements. Demolition of existing structures, removal of existing contaminated soils, grading, stockpiling of materials, excavation and the import/export of soil and building materials, construction of new structures, and landscaping activities would expose and loosen sediment and building materials, which have the potential to mix with stormwater and urban runoff and degrade surface and receiving water quality.

Additionally, construction generally requires the use of heavy equipment and construction-related materials and chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents, and paints. In the absence of proper controls, these potentially harmful materials could be accidentally spilled or improperly disposed of during construction activities and could wash into and pollute surface waters or groundwater, resulting in a significant impact to water quality.

Pollutants of concern during construction activities generally include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. In addition, chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), and concrete-related waste may be spilled or leaked during construction, which would have the potential to be transported via storm runoff into nearby receiving waters and eventually may affect surface or groundwater quality. During construction activities, excavated soil would be exposed, thereby increasing the potential for soil erosion and sedimentation to occur compared to existing conditions. In addition, during construction, vehicles and equipment are prone to tracking soil and/or spoil from work areas to paved roadways, which is another form of erosion that could affect water quality.

However, the use of BMPs during construction implemented as part of a SWPPP as required by the NPDES General Construction Permit and included as PPP WQ-1 would serve to ensure that Project impacts related to construction activities resulting in a degradation of water quality would be less than significant. Furthermore, an Erosion and Sediment Transport Control Plan prepared by a qualified SWPPP developer (QSD) is required to be included in the SWPPP for the Project, and typically includes the following types of erosion control methods that are designed to minimize potential pollutants entering stormwater during construction:

- Prompt revegetation of proposed landscaped areas;
- Perimeter gravel bags or silt fences to prevent off-site transport of sediment;
- Storm drain inlet protection (filter fabric gravel bags and straw wattles), with gravel bag check dams within paved roadways;
- Regular sprinkling of exposed soils to control dust during construction and soil binders for forecasted wind storms;

- Specifications for construction waste handling and disposal;
- Contained equipment wash-out and vehicle maintenance areas;
- Erosion control measures including soil binders, hydro mulch, geotextiles, and hydro seeding of disturbed areas ahead of forecasted storms;
- Construction of stabilized construction entry/exits to prevent trucks from tracking sediment on City roadways;
- Construction timing to minimize soil exposure to storm events; and
- Training of subcontractors on general site housekeeping.

Therefore, compliance with the Statewide General Construction Activity Stormwater Permit requirements, included as PPP WQ-1, which would be verified during the City's construction permitting process, would ensure that Project impacts related to construction activities resulting in a degradation of water quality would be less than significant.

Operation

The proposed Project includes operation of retail and restaurant commercial and multi-family residential uses. Potential pollutants associated with the proposed uses include various chemicals from cleaners, pathogens from pet wastes, nutrients from fertilizer, pesticides and sediment from landscaping, trash and debris, and oil and grease from vehicles. If these pollutants discharge into surface waters, it could result in degradation of water quality. As described previously, San Diego Creek Reach1 and the Upper Newport Bay, to which the Project site ultimately drains, are currently listed as impaired on the EPA's 303(d) list for various pollutants. Therefore, additional pollutant discharge could create new or exacerbate existing impairments within these waterbodies, which could result in a significant impact related to water quality.

However, operation of the proposed Project would be required to comply with the requirements of the Santa Ana Regional MS4 Permit to develop of a project-specific WQMP (included as PPP WQ-2) that would describe implementation of LID infrastructure and non-structural, structural, and source control and treatment control BMPs to protect surface water quality. A Preliminary WQMP has been developed (included as Appendix G) per these requirements and recommends various BMPs to be incorporated into the Project. The WQMP is required to be approved prior to the issuance of a building or grading permit.

The MS4 Permit identifies the use of infiltration BMPs, which could assist in recharge groundwater. However, as described previously, the Project site is located within the Selenium Concentration Area and the South Basin Groundwater Protection Project area, and is adjacent to the Tustin Marine area, as shown on Figure 5.8-1. Infiltration into the groundwater is prohibited by OCWD within these areas. As such, infiltration of water quality pollutants from the Project would not occur, which would reduce potential impacts to groundwater quality.

In addition, as described previously the onsite soils have a low infiltration rate and are considered infeasible to support drainage on the Project site (GEO 2019). Therefore, the proposed Project would install four Modular Wetland System units for water quality treatment in the parking lot along Redhill Avenue, which have been sized to treat runoff from the Design Capture Storm (85th percentile, 24-hour) from the proposed Project. The Modular Wetland System units are devices that are manufactured to mimic natural systems such as bioretention areas by incorporating plants, soil, and microbes engineered to provide treatment at higher flow rates or volumes and with smaller footprints than their natural counterparts.

The Modular Wetland System units proposed for the Project consist of biotreatment systems that utilize multi-stage treatment processes including screening media filtration, settling, and biofiltration. The pre-treatment chamber contains a catch basin inlet filter to capture trash, debris, gross solids and sediments, a settling

chamber for separating out larger solids, and a media filter cartridge for capturing fine silts, metals, nutrients, and bacteria. Runoff then flows through the wetland chamber where treatment of the water is done through a variety of physical, chemical, and biological processes. As storm water passes down through the planting soil, pollutants are filtered, adsorbed, biodegraded and sequestered by the soil and plants, functioning similar to bioretention systems. The discharge chamber at the end of the unit collects treated flows and discharges it into the existing storm drain in Red Hill Avenue (WSA 2019). The preliminary WQMP (Appendix H) includes detailed calculations of each drainage area on the site and the capacity of the Modular Wetland System units.

As described previously, the WQMP is required to be approved prior to the issuance of a building or grading permit. The Project's WQMP would be reviewed and approved by the City to ensure it complies with the Santa Ana RWQCB MS4 Permit regulations. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the Project. Overall, implementation of the WQMP pursuant to the existing regulations would ensure that operation of the proposed Project would not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality; and impacts would be less than significant.

IMPACT WQ-2: THE PROJECT WOULD NOT SUBSTANTIALLY DECREASE GROUNDWATER SUPPLIES OR INTERFERE SUBSTANTIALLY WITH GROUNDWATER RECHARGE SUCH THAT THE PROJECT MAY IMPEDE SUSTAINABLE GROUNDWATER MANAGEMENT OF THE BASIN.

Less than Significant Impact.

As described previously, the Orange County Basin provides approximately 71 percent of the City's water supply. The remaining supply comes from the Metropolitan Water District (28 percent) and recycled water (1 percent) (WSA 2019). The OCWD manages basin water supply through the Basin Production Percentage (BPP), which is set based on groundwater conditions, availability of imported supplies, and precipitation. As shown on Table 5.8-1, the City's Urban Water Management Plan (UWMP) shows that the anticipated production of groundwater would remain steady from 2020 through 2040 and that in 2040 approximately 70 percent of supply would be from the Orange County Basin and 29.3 percent from imported/purchased sources.

Table 5.8-1: City of Santa Ana Projected Water Supply Projections (acre-feet)

Source	2020	2025	2030	2035	2040	2040 Percentage
OC Groundwater Basin	25,899	27,802	27,992	27,985	28,025	70.0%
Imported/Purchased	10,799	11,615	11,697	11,693	11,711	29.2%
Recycled	320	320	320	320	320	0.8%
Total	36,998	39,717	39,989	39,978	40,036	100%

Source: 2015 UWMP.

As detailed in Section 5.16, *Utilities and Service Systems*, the supply of water listed in Table 5.8-2 would be sufficient during both normal years and multiple dry year conditions between 2020 and 2040 to meet all of the City's estimated needs, including the proposed Project. Therefore, the Project would not result in changes to the projected groundwater pumping that would decrease groundwater supplies. Thus, impacts related to groundwater supplies would be less than significant.

In addition, as described previously the onsite soils have a low infiltration rate and do not currently provide onsite infiltration (GEO 2019). Also, as described previously, the Project site is located within an infiltration constraints area (see Figure 5.8-1) and infiltration is prohibited due to existing pollutant plumes under or adjacent to the site. As such, infiltration of water to the existing groundwater basin is neither currently

occurring, nor would occur by the proposed Project. Therefore, impacts related to interference with groundwater recharge would be less than significant.

IMPACT WQ-3: THE PROJECT WOULD NOT SUBSTANTIALLY ALTER THE EXISTING DRAINAGE PATTERN OF THE 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.

Less than Significant Impact. The Project site does not include, and is not adjacent to, a stream or river. Implementation of the Project would not alter the course of a stream or river.

Construction

Construction of the proposed Project would require demolition of the existing building structures, including foundations and floor slabs, that would expose and loosen building materials and sediment, which has the potential to mix with storm water runoff and result in erosion or siltation off-site. However, the Project site does not include any slopes, which reduces the erosion potential and the large majority of soil disturbance would be related to excavation and backfill for installation of building foundations and underground utilities.

The existing NPDES Construction General Permit and Orange County DAMP require preparation and implementation of a SWPPP by a Qualified SWPPP Developer for the proposed construction activities (included as PPP WQ-1). The SWPPP is required to address site-specific conditions related to potential sources of sedimentation and erosion and would list the required BMPs that are necessary to reduce or eliminate the potential of erosion or alteration of a drainage pattern during construction activities. Common types of construction BMPs include:

- Silt fencing, fiber rolls, or gravel bags
- Street sweeping and vacuuming
- Storm drain inlet protection
- Stabilized construction entrance/exit
- Vehicle and equipment maintenance, cleaning, and fueling
- Hydroseeding
- Material delivery and storage
- Stockpile management
- Spill prevention and control
- Solid waste management
- Concrete waste management

In addition, a Qualified SWPPP Practitioner (QSP) is required to ensure compliance with the SWPPP through regular monitoring and visual inspections during construction activities. The SWPPP would be amended and BMPs revised, as determined necessary through field inspections, in order to protect against substantial soil erosion, the loss of topsoil, or alteration of the drainage pattern. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP WQ-1) would prevent construction-related impacts related to potential alteration of a drainage pattern or erosion from development activities. Overall, with implementation of the existing construction regulations that would be verified by the City during the permitting approval process, impacts related to alteration of an existing drainage pattern during construction that could result in substantial erosion, siltation, and increases in stormwater runoff would be less than significant.

Operation

The Project site currently includes 10.96 acres of impermeable surfaces, which equates to 75 percent of the site. After completion of Project construction, the site would have a greater amount of (12.64 acres or 86 percent of the site) impermeable surfaces. As shown on Table 5.8-2, the increase in impervious surfaces would result in an increase the 2-year, 24-hour storm volume by 37 percent and the time of concentration (Tc) would increase by 26 percent.

Table 5.8-2: 2-Year, 24-Hour Storm Summary

Condition	Time of concentration (min)	Peak Runoff (cfs)	Volume (ac-ft)
Pre-Development	10.33	14.9	1.241
Post-Development	13.06	16.3	1.699
Difference	+2.73	+1.4	+0.458
Percent Change	+26%	+9.4%	+37%

Source: WQMP, 2019

As described previously, due to poor infiltration of soils and the site being located within Selenium Concentration Area and the South Basin Groundwater Protection Project area, and adjacent to the Tustin Marine area (Figure 5.8-1), infiltration of the additional runoff that would be generated by the proposed Project is not feasible.

The proposed Project would maintain the existing drainage pattern. The runoff from the Project area would be collected by roof drains, surface flow designed pavement, curbs, and area drains and conveyed to one of four Modular Wetland System units (described previously) for treatment. Treated runoff would be conveyed to the existing 84-inch drain located within Red Hill Avenue. From there, flows would travel southeast and be temporarily detained in an existing flood control basin before entering the Barranca Channel, which discharges into San Diego Creek Reach 1, then the Upper Newport Bay, Lower Newport Bay, and finally to the Pacific Ocean at Balboa Beach.

Although the Project related runoff conditions (flow rates and durations) would increase from predevelopment conditions (shown in Table 5.8-1), the Project would manage the increased flow by the four Modular Wetland System units that have been designed to accommodate the increased volume. As described previously the Modular Wetland System units contain catch basin inlet filters to capture trash, debris, gross solids and sediments, a settling chamber for separating out larger solids, and a media filter cartridge for capturing fine silts, metals, nutrients, and bacteria. The treated flows are discharged into the existing storm drain in Red Hill Avenue (WSA 2019).

The MS4 permit and DAMP require new development projects to prepare a WQMP (included as PPP WQ-2) that is required to include BMPs to reduce the potential of erosion and/or sedimentation through site design and structural treatment control BMPs. The Preliminary WQMP has been completed and is included as Appendix G. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for erosion and siltation. Overall, the proposed drainage system and adherence to the existing regulations would ensure that Project impacts related to alteration of a drainage pattern and erosion/siltation from operational activities would be less than significant.

IMPACT WQ-4: THE PROJECT 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, 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.

Less than Significant Impact. As described previously, the Project site does not include, and is not adjacent to, a stream or river. Implementation of the Project would not alter the course of a stream or river.

Construction

Construction of the proposed Project would require demolition of the existing building structures, including foundations, floor slabs, and utilities systems. These activities could temporarily alter the existing drainage pattern of the site and could result in flooding on- or off-site if drainage is not properly controlled. However, as described previously, implementation of the Project requires a SWPPP (included as PPP WQ-1) that would address site specific drainage issues related to construction of the Project and include BMPs to eliminate the potential of flooding or alteration of a drainage pattern during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP WQ-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to potential alteration of a drainage pattern or flooding on or off-site from development activities. Therefore, impacts would be less than significant.

Operation

As described previously, and detailed in Table 5.8-1, the proposed Project would result in an increase of in impervious surfaces that would result in an increase the 2-year, 24-hour storm volume by 37 percent and the time of concentration (Tc) would increase by 26 percent. However, the Project would maintain the existing drainage pattern by collecting runoff in roof drains, curbs, and area drains and conveying it to one of four Modular Wetland System units (described previously) for treatment. Treated runoff would be conveyed to the existing 84-inch drain located within Red Hill Avenue.

Although the Project related runoff conditions (flow rates and durations) would increase from predevelopment conditions (shown in Table 5.8-1), the Project would manage the increased flow with the four Modular Wetland System units that have been designed to accommodate the increased volume pursuant to the MS4 permit and DAMP requirements. The units would retain, filter, and slowly discharge runoff into the existing off-site drain. As part of the permitting approval process, the proposed drainage design and engineering plans would be reviewed by the City's Engineering Division to ensure that the proposed drainage would accommodate the appropriate design flows. Overall, the proposed drainage system and adherence to the existing MS4 permit and DAMP regulations would ensure that Project impacts related to alteration of a drainage pattern or flooding from operational activities would be less than significant.

IMPACT WQ-5: THE PROJECT 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 OR THROUGH THE ADDITION OF IMPERVIOUS SURFACES, IN A MANNER WHICH WOULD CREATE OR CONTRIBUTE RUNOFF WATER WHICH WOULD EXCEED THE CAPACITY OF EXISTING OR PLANNED STORMWATER DRAINAGE SYSTEMS OR PROVIDE SUBSTANTIAL ADDITIONAL SOURCES OF POLLUTED RUNOFF.

Less than Significant Impact. As described previously, the Project site does not include, and is not adjacent to, a stream or river. Implementation of the Project would not alter the course of a stream or river.

Construction

As described in the previous response, construction of the proposed Project would require demolition and excavation activities that could temporarily alter the existing drainage pattern of the site and could result in increased runoff and polluted runoff if drainage is not properly controlled. However, as described previously, implementation of the Project requires a SWPPP (included as PPP WQ-1) that would address site specific pollutant and drainage issues related to construction of the Project and include BMPs to eliminate the potential of polluted runoff and increased runoff during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP WQ-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to increases in run-off and pollution from development activities. Therefore, impacts would be less than significant.

Operation

As described previously and detailed in Table 5.8-1, the proposed Project would result in an increase of the 2-year, 24-hour storm volume by 37 percent and the time of concentration by 26 percent. However, the Project would manage the increased flow with the four Modular Wetland System units that have been designed to accommodate the increased volume pursuant to the MS4 permit and DAMP requirements. The units would retain, filter, treat, and slowly discharge runoff into the existing off-site drain.

As part of the permitting approval process, the proposed drainage design and engineering plans would be reviewed by the City's Engineering Division to ensure that the proposed drainage would accommodate the appropriate design flows. Additionally, the City permitting process would ensure that the drainage system specifications adhere to the existing MS4 permit and DAMP regulations, which would ensure that pollutants are removed prior to discharge. Overall, with compliance to the existing regulations as verified by the City's permitting process, Project impacts related to the capacity of the drainage system and polluted runoff would be less than significant.

IMPACT WQ-6: THE PROJECT 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 OR THROUGH THE ADDITION OF IMPERVIOUS SURFACES, IN A MANNER WHICH WOULD IMPEDE OR REDIRECT FLOOD FLOWS.

Less than Significant Impact. As described previously, the Project site does not include, and is not adjacent to, a stream or river. Implementation of the Project would not alter the course of a stream or river. In addition, according to the FEMA FIRM for the Project area (06059C0279J), the Project site is located within "Zone X," which is an area determined to be outside of the 0.2 percent annual chance flood. Therefore, there is a low potential for onsite flooding to occur.

As detailed in the previous responses, implementation of the Project would result in an increase of impermeable surfaces from 75 percent of the site to 86 percent of the site. However, the Project would maintain the existing drainage pattern; and drainage would be accommodated by onsite by Modular Wetland System units that have been sized to accommodate the DAMP required design storm. Therefore, the Project would not result in impeding or redirecting flood flows by the addition of the impervious surfaces. As detailed previously, the City's permitting process would ensure that the drainage system specifications adhere to the existing MS4 permit and DAMP regulations, and compliance with existing regulations would ensure that impacts would be less than significant.

IMPACT WQ-7: THE PROJECT IS NOT IN A FLOOD HAZARD, TSUNAMI, OR SEICHE ZONE THAT COULD RISK RELEASE OF POLLUTANTS DUE TO PROJECT INUNDATION.

No Impact. As described previously, the FEMA FIRM for the Project area (06059C0279J) shows that the Project site is located within “Zone X,” which is an area of minimal flood hazard potential outside of the 0.2 percent annual chance flood. Thus, the Project site is not located within a flood hazard area that could be inundated with flood flows and result in release of pollutants. Impacts related to flood hazards and pollutants would not occur from the Project.

Also as detailed previously, the Project site is over 8.5 miles from the Pacific Ocean, and outside of the Tsunami Hazard Zone identified by the California Department of Conservation (DOC 2019). Thus, the Project site would not be inundated by a tsunami that could result in the release of pollutants, and impacts would not occur. Additionally, because the Project site is not within the vicinity of a water body, it is not at risk for seiche flood hazards. Therefore, the release of pollutants on the Project site resulting from a seiche inundation would not occur.

IMPACT WQ-8: THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF A WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN.

Less than Significant Impact. As described previously, use of BMPs during construction implemented as part of a SWPPP as required by the NPDES Construction General Permit and PPP WQ-1 would serve to ensure that Project impacts related to construction activities resulting in a degradation of water quality would be less than significant. Thus, construction of the Project would not conflict or obstruct implementation of a water quality control plan.

Also, as described previously, new development projects are required to implement a WQMP (per the Regional MS4 Permit) that would comply with the Orange County DAMP. The WQMP and applicable BMPs are verified as part of the City’s permitting approval process, and construction plans would be required to demonstrate compliance with these regulations. Therefore, operation of the proposed Project would not conflict or obstruct with a water quality control plan.

In addition, as detailed previously, the OCWD manages basin water supply through the Basin Production Percentage (BPP), such that, the anticipated production of groundwater would remain steady from 2025 through 2040 (as shown in Table 5.8-1). As described previously and further detailed in Section 5.16, *Utilities and Service Systems*, the City’s supply of water listed in Table 5.8-1 would be sufficient during both normal years and multiple dry year conditions between 2020 and 2040 to meet all of the City’s estimated needs, including the proposed Project. Therefore, the Project would be consistent with the groundwater management plan and would not conflict with or obstruct its implementation. Thus, impacts related to water quality control plan or sustainable groundwater management plan would be less than significant.

5.8.7 CUMULATIVE IMPACTS

Water Quality: The geographic scope for cumulative impacts related to hydrology and water quality includes the Santa Ana Watershed because cumulative projects and developments pursuant to the proposed Project could incrementally exacerbate the existing impaired condition and could result in new pollutant related impairments.

Related developments within the watershed would be required to implement water quality control measures pursuant to the same NPDES General Construction Permit that requires implementation of a SWPPP (for construction), a WQMP (for operation) and BMPs to eliminate or reduce the discharge of pollutants in

stormwater discharges, reduce runoff, reduce erosion and sedimentation, and increase filtration and infiltration, in areas permitted. The NPDES permit requirements have been set by the State Water Board and implemented by the RWQCB and the Orange County DAMP to reduce incremental effects of individual projects so that they would not become cumulatively considerable. Therefore, overall potential impacts to water quality associated with present and future development in the watershed would not be cumulatively considerable with compliance with all applicable laws, permits, ordinances and plans. As detailed previously, the proposed Project would be implemented in compliance with all regulations, as would be verified during the permitting process. Therefore, cumulative impacts related to water quality would be less than significant.

Drainage: The geographic scope for cumulative impacts related to stormwater drainage includes the geographic area served by the existing stormwater infrastructure for the Project area, from capture of runoff through final discharge points. As described above the proposed Project includes installation of Modular Wetland System units that would retain, slow, filter, and discharge runoff through storm drain connections to the off-site infrastructure in Red Hill Avenue. The Modular Wetland System units would retain runoff and control drainage, pursuant to the required design storm. As a result, the proposed Project would not generate runoff that could combine with additional runoff from cumulative projects that could cumulatively combine to impact drainage. Thus, cumulative impacts related to drainage would be less than significant.

Groundwater Basin: The geographic scope for cumulative impacts related to the groundwater basin is the Orange County Basin. As described previously, the volume of water that would be needed by the Project is within the anticipated groundwater pumping volumes. Therefore, the Project would not result in changes to the projected groundwater pumping that would decrease groundwater supplies. As a result, the proposed Project would not generate impacts related to the groundwater basin that have the potential to combine with effects from other projects to become cumulatively considerable. Therefore, cumulative impacts related to the groundwater basin would be less than significant.

5.8.8 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

- Construction General Permit, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ
- California Water Resources Control Board Low Impact Development (LID) Policy
- Santa Ana Region MS4 Permit
- Orange County Drainage Area Management Plan (DAMP)
- Municipal Code Section 18-156, Control of Urban Runoff

Plans, Program and Policies

The following Plans, Programs, and Policies (PPP) related to hydrology and water quality are incorporated into the Project and would reduce impacts related to hazards and hazardous materials. These actions will be included in the Project's mitigation monitoring and reporting program (MMRP):

PPP WQ-1: NPDES/SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building and Safety Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or

larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP WQ-2: WQMP. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be submitted to and approved by the City Building and Safety Division. The WQMP shall identify all Post-Construction, Site Design, Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development project in order to minimize the adverse effects on receiving waters.

5.8.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements Impacts WQ-1 through WQ-8 would be less than significant.

5.8.10 MITIGATION MEASURES

No mitigation measures are required.

5.8.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to hydrology and water quality have been identified and impacts would be less than significant.

REFERENCES

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