

## 4.9 HYDROLOGY AND WATER QUALITY

This section discusses the existing setting regarding hydrology and water quality of the Project Site and assesses the Project's potential impacts related to hydrology and water quality. Information in this section is derived in part from the *Storm Drain Plan*, prepared by Joseph C. Truxaw and Associates, Inc. dated July 29, 2022, which includes by reference the Low Impact Development (LID) Plan; *Public Storm Drain Plan Profile, Ambeco Road*, prepared by Joseph C. Truxaw and Associates, Inc. dated June 21, 2022; the *Stormwater Pollution Prevention Plan (SWPPP)*, prepared by Joseph C. Truxaw and Associates, Inc. dated August 13, 2020, revised through May 12, 2022<sup>1</sup> (WDID No. 4 19C391158); and the *SWPPP*, prepared by Incompli, Inc. dated January 3, 2024 (WDID No. 4 19C402990); a complete copy of these plans are included as Appendices I-1 through I-4 to this document.

### 4.9.1 SUMMARY OF PREVIOUS ENVIRONMENTAL DOCUMENTATION

#### MND for the Pacific Place Project

The Hydrology and Water Quality analysis for the MND for the Prior Project approved by the City in 2021, determined that implementation of the Prior Project would have less than significant impacts related to hydrology and water quality, and no mitigation was required.

The MND determined that construction-related impacts to water quality would be minimized through compliance with the statewide National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2012-0006-DWQ, NPDES No. CAS000002<sup>2</sup>), adopted by the State Water Resources Control Board (SWRCB) on July 17, 2012 (SWRCB 2012). Operations-related impacts to water quality would be managed through compliance with the Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges from The City of Long Beach (Order No. R4-2014-0024, NPDES No. CAS004003<sup>3</sup>) and Order No. R4-2014-0024-A01, amending Order No. R4-2014-0024, NPDES No. CAS004003, including preparation and implementation of a LID plan. It was determined that the Prior Project would generate additional runoff compared to the existing conditions, which would be managed on-site by the required LID plan consistent with the City's MS4 permit.

The MND determined the Prior Project would not adversely impact groundwater resources or groundwater basin management. Although the entire Prior Project Site was determined to be pervious and available for infiltration of rainwater into soil, the Site was not used for intentional groundwater recharge. Additionally, groundwater pumping rights for the Central Basin are set by

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<sup>1</sup> The SWPPP is frequently revised and updated. The most recent approved version at the time of this Draft EIR is the May 12, 2022 version, included as Appendix J-3. As and when the SWPPP is updated, new versions can be accessed at the SWRCB's SMARTS website at: <https://smarts.waterboards.ca.gov/smarts/faces/SwPublicUserMenu.xhtml>. After clicking on the hyperlink, select "Search for Owners/Operators or Facilities/Sites" and search WDID No. 4 19C391158 (for the original SWPPP and amendments) or WDID No. 4 19C402990 (for the most current SWPPP and any amendments).

<sup>2</sup> This General Permit was in place at the time the City initiated preparation of the previously published MND. On September 8, 2022, the SWRCB issued Order No. 2022-0057-DWQ, NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities. The requirements of this permit would be applicable at the time of Project implementation if approved.

<sup>3</sup> This NPDES Permit was in place at the time the City initiated preparation of the previously published MND. On July 23, 2021, the Los Angeles RWQCB issued Order No. R4-2021-0105, Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit for Municipal Separate Storm Sewer System (MS4) Discharges Within the Coastal Watersheds of Los Angeles and Ventura Counties (Regional Phase I MS4 NPDES Permit) (NPDES No. CAS004004). The City of Long Beach became a co-permittee of the regional MS4, and the requirements of this permit would be applicable at the time of Project implementation if approved.

a court judgment. It was indicated that demand for municipal water by the Prior Project would not reduce groundwater supplies.

The MND determined that Prior Project development, with implementation of the proposed stormwater detention system, would not cause flooding on- or offsite and would not exceed the capacities of existing storm drains to which Project Site runoff would be discharged. Development of the Project would not risk release of pollutants due to project inundation due to a flood within a 100-year flood zone, tsunami, or seiche.

### ***MND Mitigation Measures***

No mitigation measures were adopted as part of the previously approved MND.

As set forth below, the DEIR analysis confirms that there are no new impacts and no increase in the severity of previously identified impacts beyond those identified in the MND.

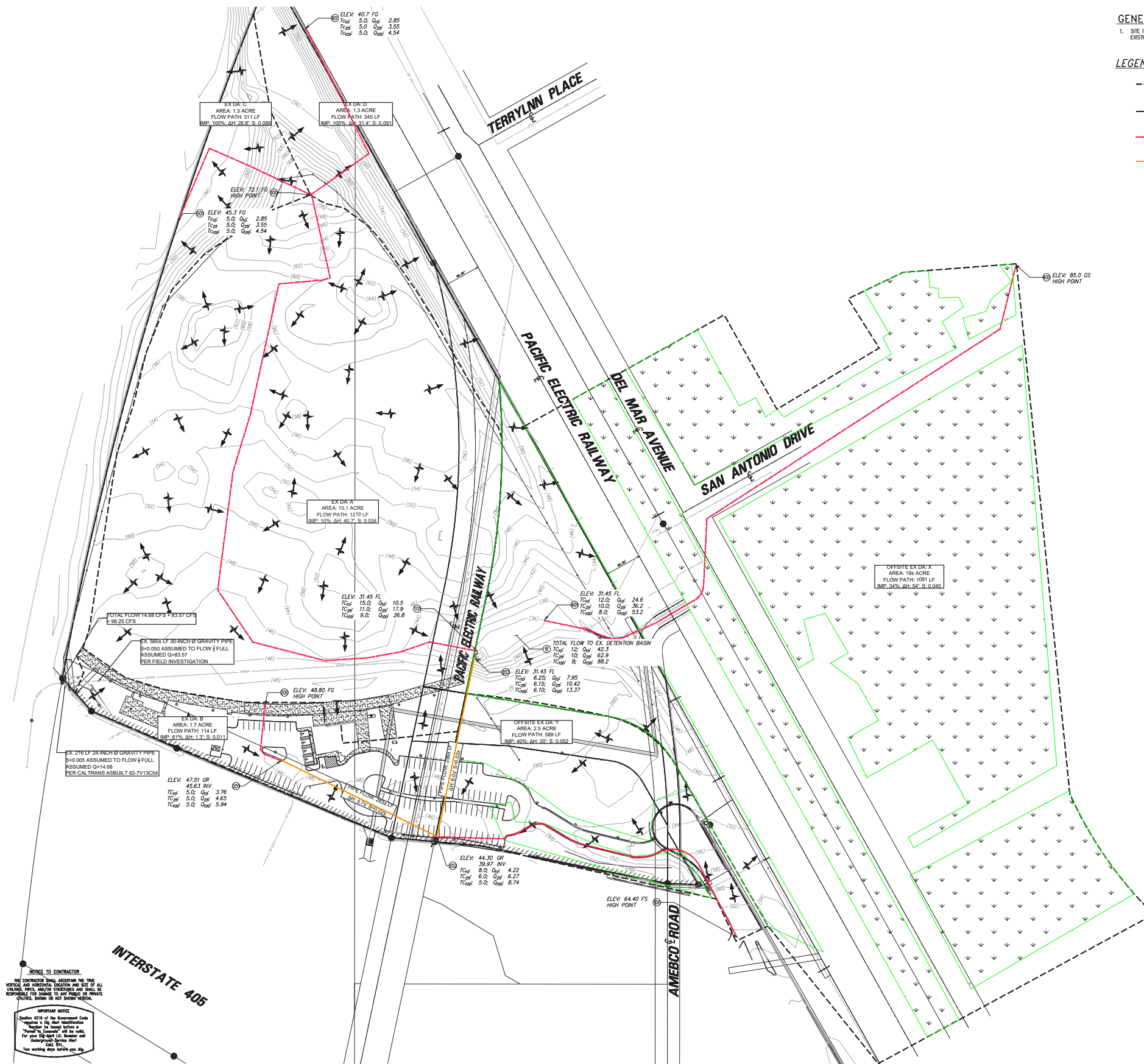
## **4.9.2 ENVIRONMENTAL SETTING**

### **A. Existing Conditions**

#### **Project Site Hydrology**

The Project Site is currently vacant, unpaved, and pervious. The Project Site currently does not have a permanent stormwater management system. There is an existing Caltrans manhole just outside of the southwest corner property line of the Project Site which connects to an existing 30" reinforced concrete pipe (RCP). This existing 30" RCP is a Caltrans owned and maintained storm drain line which carries stormwater southwest from the manhole through the adjacent LACFD property to the LA River. There is also a 30" RCP which runs northeast from the offsite Caltrans manhole partway across the Project Site. However, there are no stormwater inlets on the Project Site or offsite to capture the Project Site's stormwater and direct it to the onsite RCP or offsite Caltrans system. Prior to the soil stockpile surcharge (Surcharge) program in 2020 (see Chapter 3, Project Description), the stormwater that collected on the eastern portion of the Project Site generally flowed east towards the adjacent private property to the east, which is at a lower elevation. Stormwater that collected on the western portion of the Project Site generally flowed west toward the LA River. The existing site hydrology is illustrated further in Exhibit 4.9-1, Existing Hydrology.

Before commencing the Surcharge program, as required by the SWRCB's Construction General Permit and the Project's SMP, the Applicant prepared and submitted to the SWRCB a Notice of Intent and SWPPP, which was approved by the SWRCB and is available online in the SWRCB's Stormwater Multiple Application and Report Tracking System (SMARTS) system (Waste Discharge Identification [WDID] number 4 19C391158). In accordance with the SWPPP, sediment basins, silt fences, check dams, fiber rolls, berms, and other Best Management Practices (BMPs) were constructed onsite to prevent stormwater from carrying sediment offsite and eroding onsite materials. As required by the SWPPP, prior grading work done directs the stormwater to the sediment basins, where it is collected by the sediment basins to ensure that water quality standards set by the Construction General Permit are met. Because the Surcharge pile remains onsite as of the preparation of this EIR, the SWPPP measures are required to be maintained and remain in place.



**GENERAL NOTES**

1. SITE IS CONSIDERED IMPERVIOUS DUE TO THE ASSUMED CAP INSTALLED TO ADDRESS EXISTING SOIL CONTAMINATION.

**LEGEND**

- DRAINAGE AREA BOUNDARY
- - - - - DRAINAGE AREA BOUNDARY (OFFSITE)
- (red) — FLOW PATH—OVERLAND (INITIAL)
- (orange) — FLOW PATH PIPE
- + DRAINAGE FLOW DIRECTION

SOIL TYPE 013

**REFERENCE TO CONTRACTOR**  
 THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION AND SIZE OF ALL UTILITIES, PIPES, AND/OR STRUCTURES AND SHALL BE RESPONSIBLE FOR OBTAINING TO ANY PUBLIC OR PRIVATE UTILITIES, BEFORE OR NOT SHOWN HEREON.

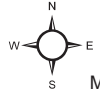
**IMPORTANT NOTICE**  
 Section 4219 of the Government Code requires a City Staff Identification Number to be used before a "Permit to Commence" will be issued. For more information, please contact the City of San Diego, Planning and Community Development Department, 1201 La Jolla Village Drive, San Diego, CA 92161.

Source: Joseph C. Truwx and Associates, Inc., 2022

**Existing Hydrology**

**Exhibit 4.9-1**

Pacific Place Project



Map not to scale



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## **Regional Hydrology**

### ***Watershed***

The Project Site is located within the Los Angeles-San Gabriel Hydrologic Unit, which covers the majority of Los Angeles County (County) and drains an area of approximately 1,600 square miles. The major drainage systems in this area include the Los Angeles River, San Gabriel River, and Ballona Creek. The receiving water for the Project Site is the Los Angeles River, which is located approximately 200 feet west of the Site and drains into the Pacific Ocean approximately 4.25 miles south of the Site.

The Project Site is in the southernmost portion of the 824-square mile Los Angeles River Watershed (Watershed). Approximately 324 square miles of the watershed are covered by forest or open space land including the area near the headwaters which originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. The rest of the watershed is highly developed with a diverse range of land use types. Beneficial uses of waters in the Watershed above the estuary (south of the Project Site) are defined by the Los Angeles Regional Water Quality Control Board (RWQCB) and include groundwater recharge, contact and noncontact recreation, warmwater habitat, wetlands habitat, protection of rare and endangered species, and wildlife habitat (LARWQCB 2024).

The Project Site is included in the Lower Los Angeles River Watershed Management Program. The Lower Los Angeles River Watershed includes the sub-drainage areas of Compton Creek, Rio Hondo, and the Lower Los Angeles River; and drains runoff directly from an approximate 43.7-square mile urbanized area. From its upstream beginning in South Gate to its downstream confluence with the Los Angeles River Estuary, the Lower Los Angeles River stretches approximately 13.3 miles.

### ***Floodplain***

According to the City of Long Beach Federal Emergency Management Agency (FEMA) Flood Zones map, the Project Site is within Flood Hazard Zone X Areas Protection by Levees. Zone X is defined as an area inundated by a 500-year flood; an area inundated by 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from 100-year flooding (City of Long Beach 2022).

### **Groundwater Resources**

The coastal portion of the City, including the Project Site, overlies the Coastal Plain of Los Angeles Groundwater Basin, West Coast Subbasin (Subbasin), which underlies approximately 160 square miles in southwestern Los Angeles County (DWR 2024a).<sup>4</sup> Replenishment of groundwater basins occurs mainly by percolation of precipitation throughout the region via permeable surfaces, spreading grounds, and groundwater migration from adjacent basins, as well as injection wells designed to pump freshwater along specific seawater barriers to prevent the intrusion of salt water.

The Water Replenishment District of Southern California (WRD), designated as the Watermaster for the Subbasin under a court judgment, manages groundwater pumping and certain

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<sup>4</sup> The boundary between the West Coast Subbasin and the Central Subbasin is along the Newport-Inglewood Fault Zone, which passes along the east Project Site boundary; and of which the Cherry Hill Fault is a component.

groundwater storage efforts in the Subbasin (WRD 2023). WRD issues a Watermaster Report for the Subbasin annually (WRD 2023).

The Long Beach Water Department (LBWD) supplies water to the City, including the Project Site. LBWD obtains water from two main sources: imported surface water (40 percent) and groundwater (60 percent) (LBWD 2024).

## **B. Regulatory Framework**

### **Federal**

#### ***National Flood Insurance Act***

The National Flood Insurance Act established the National Flood Insurance Program (NFIP), which provides flood insurance, floodplain management, and flood hazard mapping data. Communities subject to flood hazards voluntarily participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce the potential for flood damage. In turn, the NFIP offers federally funded flood insurance to homeowners, renters, and business owners in participating communities. Under this program, the FEMA produces Flood Insurance Rate Maps (FIRM) that identify properties and buildings in flood risk areas. Flood hazards related to storm events are generally described in terms of 100- or 500-year floods. These are floods that, respectively, have a 1 percent and 0.2 percent chance of occurring every year. The Project Site is not within a 100- or 500-year flood zone (City of Long Beach 2022).

#### ***Clean Water Act***

In 1972, the Federal Water Pollution Control Act (Clean Water Act [CWA]) was amended to require NPDES permits for the discharge of pollutants to “Waters of the U.S.” from any point source. In 1987, the CWA was again amended to require that the U.S. Environmental Protection Agency (USEPA) establish regulations for permitting under the NPDES permit program for municipal and industrial storm water discharges. The USEPA published final regulations regarding storm water discharges on November 16, 1990. The regulations require that municipal separate storm sewer systems (MS4) discharges to surface waters be regulated by a NPDES permit. MS4s are a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), and are owned or operated by a public body that has jurisdiction over the disposal of various wastes, including storm water. The MS4s are designated or used for collecting or conveying storm water only (i.e., not wastewater or combined sewage).

In addition, the CWA requires states to adopt water quality standards for water bodies, to be approved by the USEPA. Water quality standards consist of designated beneficial uses for a particular water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents, such as lead, suspended sediment, and fecal coliform bacteria, or narrative statements that represent the quality of water that supports a particular use. Because California has not established a complete list of acceptable water quality criteria, the USEPA has established numeric water quality criteria for certain toxic constituents in the form of the California Toxics Rule (see 40 Code of Federal Regulations §131.38).

When designated beneficial uses of a particular water body are compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as impaired. Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL) must be developed for each impairing water quality constituent. The segment of the Los Angeles River from the Los

Angeles/Long Beach Outer Harbor north to Carson Street in the City of Long Beach is listed on the Clean Water Act Section 303(d) List of Water Quality Limited Segments for contamination with ammonia, cadmium, dissolved copper, cyanide, indicator bacteria, lead, nutrients (algae), pH, trash, and dissolved zinc. TMDLs have been established for all of those contaminants except cyanide; the estimated completion date for the cyanide TMDL was 2019 (SWRCB 2024).

## **State**

### ***California Porter-Cologne Act***

The federal CWA places the primary responsibility for the control of water pollution and for planning the development and use of water resources with the states. California's primary statute governing water quality and water pollution issues is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and the nine RWQCBs broad powers to protect water quality and is the primary vehicle for implementing California's responsibilities under the Federal CWA. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to (1) adopt plans and policies; (2) regulate discharges to surface water and groundwater; (3) regulate waste disposal sites; and (4) require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, and oil or petroleum products.

Each RWQCB must formulate and adopt a water quality plan (or Basin Plan) for its region. The regional plans conform to the policies set forth in the Porter-Cologne Act and those established by the SWRCB in its State Water Policy. The Porter-Cologne Act also enables the RWQCBs to include water discharge prohibitions applicable to particular conditions, areas, or types of waste within its regional plan. The RWQCBs are also authorized to (1) enforce discharge limitations; (2) take actions to prevent violations of these limitations from occurring; and (3) conduct investigations to determine the status of the quality of any "Waters of the State." Civil and criminal penalties are imposed on persons who violate the requirements of the Porter-Cologne Act or any SWRCB/RWQCB orders.

### ***California Toxics Rule***

The California Toxics Rule (CTR) is a federal regulation that is issued by the USEPA and provides water quality criteria for potentially toxic constituents in receiving waters with human health or aquatic life designated uses in California. CTR criteria are applicable to the receiving water body and therefore must be calculated based upon the probable hardness values of the receiving waters for evaluation of acute (and chronic) toxicity criteria. At higher hardness values for the receiving water, copper, lead, and zinc are more likely to bind with components in the water which, in turn, reduces the bioavailability and resulting potential toxicity of these metals. The CTR criteria do not apply directly to discharges of urban runoff, but rather to specified receiving waters.

### ***National Pollution Discharge Elimination System General Construction Activities Permit***

Pursuant to CWA Section 402(p), which requires regulations for permitting of certain storm water discharges, the SWRCB issued a Statewide NPDES General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2022-0057-DWQ, NPDES No. CAS000002), adopted by the SWRCB on September 8, 2022, and it is currently in effect as of September 1, 2023 (Construction General Permit). Construction activities subject to this permit include clearing, grading, and ground disturbances such as stockpiling or excavation, but do not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

Under the Construction General Permit, storm water discharges from construction sites with a disturbance area of one acre or more are required to either obtain individual NPDES permits for storm water discharges or be covered by the Construction General Permit. Coverage under the Construction General Permit is obtained by completing and filing a Notice of Intent (NOI) with the SWRCB and preparing a SWPPP prior to any land disturbance. The SWPPP identifies erosion control, sediment control, tracking control, wind erosion control, waste management, and non-storm water management BMPs that would be implemented during the construction phase to reduce or eliminate pollutants entering the storm drain system.

## **Regional**

### ***Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties***

The *Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) seeks to preserve and enhance water quality and protect the beneficial uses of water bodies in the region (LARWQCB 2014). The Basin Plan provides quantitative and narrative criteria for a range of water quality constituents applicable to certain receiving water bodies and groundwater basins within the Los Angeles Region. The Basin Plan (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and to conform to the State's anti-degradation policy; and (3) describes implementation programs to protect all waters in the region. All applicable SWRCB and RWQCB plans and policies and other pertinent water quality policies and regulations are incorporated by reference into the Basin Plan. The Basin Plan is reviewed and updated as necessary.

Water quality objectives for ammonia, coliform bacteria, bioaccumulation, biochemical oxygen demand, biostimulatory substances, chemical constituents, total residual chlorine, color, exotic vegetation, floating material, methylene blue activated substances, mineral quality, nitrogen, oil and grease, dissolved oxygen, pesticides, pH, polychlorinated biphenyls, radioactive substances, suspended solids, taste and odor, temperature, toxicity, and turbidity are also included in the Basin Plan (LARWQCB 2019a). Implementation of the Basin Plan occurs primarily through issuance of Waste Discharge Requirements (WDRs), including regulatory enforcement action, as necessary. In addition, the USEPA has delegated responsibility to the SWRCB and RWQCBs for implementation of the federal NPDES program that requires permitting of point source discharges of pollutants to waters of the United States. State WDRs for discharges to surface waters also serve as federal NPDES permits in these cases. Any person or entity discharging waste that could affect waters of the state would file a report of waste discharge (ROWD), which are then submitted to the applicable RWQCB for review and approval. Once approved, Standard Provisions would apply to all WDRs, which require dischargers to take steps to prevent permit violations and provide evidence that the facility is operated by a certified individual. Additionally, annual reports and facility inspections are used to evaluate permit compliance and determine enforcement actions (such as "fix" it tickets or cleanup abatement orders). NPDES permits are issued for a five-year period, but may be administratively extended if necessary. Non-NPDES WDRs usually do not have an expiration date, but are reviewed and renewed periodically on a schedule based on the level of threat to water quality (LARWQCB 2019b).

### ***Discharges of Groundwater to Surface Waters***

The Los Angeles RWQCB Order R4-2023-0429 contains the waste discharge requirements for discharges of groundwater from construction and project dewatering to surface waters in the coastal watersheds of Los Angeles and Ventura Counties (General NPDES Permit No. CAG994004). This order regulates the discharge of groundwater that may or may not be impacted by toxic compounds and/or conventional pollutants. It requires that dewatering activities

prevent water quality degradation and protect beneficial uses of receiving surface water bodies. The order also includes discharge limitations and discharge prohibitions, as well as TMDLs for receiving water bodies (LARWQCB 2023).

## **Local**

### ***Municipal Separate Storm Sewer System Permit***

The City's Stormwater and Environmental Compliance Division is responsible for monitoring the City's stormwater quality and maintaining the storm drain system.

On July 23, 2021, the Los Angeles RWQCB issued Order No. R4-2021-0105, Waste Discharge Requirements and NPDES Permit for MS4 Discharges Within the Coastal Watersheds of Los Angeles and Ventura Counties (Regional Phase I MS4 NPDES Permit) (NPDES No. CAS004004) (LARWQCB 2021). The City of Long Beach became a co-permittee—the 85<sup>th</sup> incorporated City in Los Angeles County—of the regional MS4, and the requirements of this permit would be applicable at the time of Project implementation if approved.

The MS4 regulates storm water discharges and details the requirements for new development and significant redevelopment projects, including the selection and scale of project-specific BMPs that must be constructed during project development and maintained during project operations. The City has developed a low impact development (LID) ordinance and a Stormwater Management Program, both discussed below, in accordance with Los Angeles RWQCB requirements under the MS4 permit to ensure storm water runoff meets the WDRs, which regulates all discharge of waste to protect surface waters by prescribing waste containment, treatment and control requirements.

### **Low Impact Development Ordinance**

Effective November 12, 2013, the City's LID Ordinance applies to any new development or redevelopment that results in the replacement of more than 50 percent of an existing building structure, or impervious surface area, and was developed to ensure compliance with the MS4 permit. Standard BMPs are described in the City's LID BMP Design Manual. A project's LID Plan must demonstrate compliance with the requirements for infiltration, capture and reuse, evapotranspiration, and/or treatment on-site through the use of BMPs. On-site stormwater management BMPs must be properly sized, at a minimum, to infiltrate, evapotranspire, and/or store for use any stormwater runoff leaving the Site to the maximum extent feasible, or at least the volume of water produced by a 0.75-inch storm event, the 85<sup>th</sup> percentile 24-hour storm event, or the volume of annual runoff based on unit basin storage water quality volume to achieve 80 percent or more volume treatment.

### **City of Long Beach Stormwater Management Program**

The City of Long Beach Stormwater Management Program was created in accordance with the CWA and the Porter-Cologne Water Quality Control Act. The objectives of the Program are to effectively prohibit non-stormwater discharges and to reduce the discharge of pollutants to the maximum extent practicable such that these discharges will not adversely impact the beneficial uses of receiving waters. This program contains several elements, practices, and activities aimed at reducing or eliminating pollutants in stormwater, including a Development Planning/Construction Program and an Illicit Connection/Illicit Discharges Elimination Program. The Stormwater and Environmental Compliance Division is responsible for monitoring the City's stormwater quality and maintaining the storm drain system (City of Long Beach 2024b). The Program was developed to ensure compliance with the MS4 permit, described above.



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## **City of Long Beach General Plan**

The City of Long Beach General Plan is a policy document that establishes the goals, policies, and directions the City will take to achieve the vision of the community and guide the future development of the City (City of Long Beach 2024a). The City's General Plan is comprehensive, not only in terms of the geographic planning area that it considers, but also in the range of issues addressed. By law, the City's General Plan must address the following seven subject areas or elements: land use, circulation, housing, conservation, open space, noise, and safety. It may also address any other issues or include any other elements that relate to the physical development of the city or county. The City's General Plan Circulation element is referred to as the Mobility element, its Open Space element is coupled with recreational goals and policies in its Open Space and Recreation element, and its Safety element is divided into two elements: the Public Safety and Seismic Safety elements. The City has also elected to include Air Quality, Historic Preservation, Local Coastal Program, and Urban Design elements.

The Public Safety Element of the City's General Plan identifies flood and inundation hazards, describes disaster response operations, and provides recommendations to attain established public safety goals (Long Beach 2004). Applicable goals and recommendations from the Public Safety Element that are related to hydrology and water quality and applicable to the Project are provided in Table 4.10-1 in Section 4.10, Land Use and Planning, with a Project consistency analysis.

## **Long Beach Municipal Code**

### Stormwater and Runoff Pollution Control Ordinance

Chapter 8.96 of the Long Beach Municipal Code (LBMC), the Stormwater and Runoff Pollution Control Ordinance of the City of Long Beach, was enacted to ensure the City meets federal and State Clean Water Act requirements and complies with MS4 permit requirements, as outlined further in the City of Long Beach Stormwater Management Program, discussed above.

The purpose of this chapter is to protect and improve water quality of receiving waters by:

- 1) Prohibiting illicit discharges to the municipal storm water system;
- 2) Eliminating illicit connections to the municipal storm water system;
- 3) Eliminating spillage, dumping, and disposal of pollutant materials into the municipal stormwater system; and
- 4) Reducing pollutant loads in stormwater and urban runoff from land uses and activities identified in the municipal NPDES permit.

The intent of this chapter is to enhance and protect the water quality of the receiving waters of the United States in a manner that is consistent with the Clean Water Act and acts amendatory thereof or supplementary thereto; applicable implementing regulations, the MS4 permit and any amendment, revision, or reissuance thereof.

### LID Standards

Chapter 18.74 of the LBMC requires the use of LID standards in the planning and construction of development projects, as contained in the City's LID BMP Design Manual and to ensure compliance with the MS4 permit.

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## Landscape Water Efficiency Ordinance

Section 21.42.035 of the LBMC, pursuant to the State Water Conservation in Landscaping Act (Assembly Bill 1881), defines landscaping standards in response to ongoing drought for certain types of projects.

Section 21.42.060 of the LBMC implements the State's Model Water Efficient Landscape Ordinance (MWELo). Property owners or their building or landscape designers, including anyone requiring a building or planning permit, plan check, or landscape design review from the City, are constructing a new (single-family, multi-family, public, institutional, or commercial) project with a landscape area greater than 500 square feet, or rehabilitating an existing landscape with a total landscape area greater than 2,500 square feet, shall comply with Sections 492.6(a)(3)(B) (C), (D), and (G) of the MWELo, including sections related to use of compost and mulch as delineated in this Section.

### **4.9.3 PROJECT IMPACTS**

#### **A. Thresholds of Significance**

In accordance with Appendix G of the State CEQA Guidelines, a project would result in a significant biological resources impact if it would:

- Threshold 4.9a**      *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.*
- Threshold 4.9b**      *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.*
- Threshold 4.9c**      *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*
- (i) result in substantial erosion or siltation on- or off-site;*
  - (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;*
  - (iii) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or*
  - (iv) impede or redirect flood flows.*
- Threshold 4.9d**      *In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation.*
- Threshold 4.9e**      *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.*

## B. Methodology

The analysis in this section is primarily based on the following Project-specific plans:

- On-Site Hydrology Plans and LID Plan: *Storm Drain Plan*, prepared by Joseph C. Truxaw and Associates, Inc. dated July 29, 2022 (Appendix J-1);
- Off-Site Hydrology Plans: *Public Storm Drain Plan Profile, Ambeco Road*, prepared by Joseph C. Truxaw and Associates, Inc. dated June 21, 2022 (Appendix J-2); and
- *SWPPP*, prepared by Joseph C. Truxaw and Associates, Inc. dated August 13, 2020, revised through May 12, 2022<sup>5</sup> (WDID No. 4 19C391158); and the *SWPPP*, prepared by Incompli, Inc. dated January 3, 2024 (WDID No. 4 19C402990) (both included as Appendix J-3).

Additionally, the analysis in this section is also based on review of information available in the City of Long Beach General Plan, Long Beach Municipal Code, and Basin Plan, as well as the websites of the City, SWRCB, Los Angeles RWQCB, and the WRD.

## C. Standard Requirements

No Standard Requirements related to Hydrology and Water Quality are identified.

## D. Impact Analysis

**Threshold 4.9a**      ***Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?***

As discussed further below, the Project could result in short-term construction impacts to surface water quality from grading and other construction-related activities (e.g., erosion, sediment, spills, and leaks from construction equipment). Also, Project operations would generate typical urban pollutants (e.g., sediment, petroleum hydrocarbons, pesticides, and cleaning agents) that could be discharged into the local and regional drainage systems.

### ***Short-Term Construction-Related Water Quality Impacts***

Potential impacts of construction activities on water quality focus on sediments, turbidity, and pollutants associated with sediments. Construction-related activities that are primarily responsible for sediment releases are related to exposing soils to potential mobilization by rainfall, runoff, and wind. These activities include grading and other earth-disturbance activities. Non-sediment-related pollutants that are also of concern during construction include waste construction materials and chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment.

Construction impacts from implementation of the Project would be minimized through compliance with the statewide Construction General Permit. This permit requires the development and implementation of a SWPPP for the proposed Project Site, which must include erosion- and

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<sup>5</sup> The SWPPP is frequently revised and updated. The most recent approved version at the time of this Draft EIR is the May 12, 2022 version, included as Appendix J-3. As and when the SWPPP is updated, new versions can be accessed at the SWRCB's SMARTS website at: <https://smarts.waterboards.ca.gov/smarts/faces/SwPublicUserMenu.xhtml>. After clicking on the hyperlink, select "Search for Owners/Operators or Facilities/Sites" and search WDID No. 4 19C391158 (for the original SWPPP and amendments) or WDID No. 4 19C402990 (for the most current SWPPP and any amendments).

sediment-control BMPs that meet or exceed measures required by the Construction General Permit, as well as BMPs that control the other potential construction-related pollutants. As described in further detail below, the Project specific SWPPP has been prepared, approved, and implemented for construction activities related to the Surcharge, and will continue to be implemented during future Project construction activities. Erosion-control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap sediment once it has been mobilized. The Construction General Permit requires the SWPPP to include BMPs to be selected and implemented based on the phase of construction and weather conditions. BMPs can be divided into two categories — structural and non-structural BMPs. Structural BMPs include silt fences, sedimentation ponds, erosion control blankets, and temporary or permanent seeding, while non-structural BMPs include picking up trash and debris, sweeping up nearby sidewalks and streets, maintaining equipment, and training site staff on erosion and sediment control practices. The term BMPs is used broadly and includes both structural and non-structural controls and practices.

As previously described in the Section 3, Project Description, Existing Physical Conditions, the Project Site was formerly used as an oil brine water treatment facility beginning in 1926 for nearby and onsite oil production activities. Oil brine was pumped to evaporation and treatment ponds (i.e., oil sumps) located on the Project Site and most of the Project Site was used as a treatment sump. Water was allowed to evaporate from the brine or seep into the subsurface below the sumps leaving behind a sludge. Following evaporation, the remaining sludge was left in the sumps or transported to an offsite location. Evaporation operations reportedly ceased at the Project Site in the mid-1950s. Fill soil was imported to the Site in the 1970's; the fill was not suitable for unrestricted use (DTSC 2020). Because Project construction could implicate the Project Site's environmental condition, prior to Surcharge activities, the Applicant submitted a Soil Management Plan (SMP) to DTSC, which was approved by DTSC, and which required preparation and implementation of a Project-specific SWPPP during construction to address stormwater.

Before commencing the Surcharge program, as required by the Construction General Permit and the Project's SMP, the Applicant prepared and submitted to the SWRCB a Notice of Intent and SWPPP, which was approved by the SWRCB and is available online in the SWRCB's SMARTS system (Waste Discharge Identification [WDID] number 4 19C391158). The SWPPP was designed to address site-specific conditions related to Project construction. The SWPPP identified and described the sources of sediment and other pollutants that may affect the quality of storm water discharges; it also analyzes and requires implementation and maintenance of BMPs to reduce or eliminate sediment, pollutants adhering to sediment, and other non-sediment pollutants in storm water and non-storm water discharges. In accordance with the SWPPP, sediment basins, silt fences, check dams, fiber rolls, berms, and other structural BMPs were constructed onsite prior to commencing the Surcharge program to prevent stormwater from carrying sediment offsite and eroding onsite materials. As required by the SWPPP, prior grading work done directs the stormwater to the sediment basins, where it is collected by the sediment basins to ensure that water quality standards set by the Construction General Permit are met. The SWPPP also set forth when and where water quality sampling must occur to confirm the discharge limits set by the NPDES permit are met and that Project construction activities do not impair or contribute to impairment of the beneficial uses of surface waters. Because the Surcharge pile remains onsite, the BMPs were required to be maintained and currently remain in place, and the non-structural BMPs, water quality monitoring, and other measures required by the SWPPP have continued to be implemented.

Compliance with the Construction General Permit and the preparation of a SWPPP has ensured and would continue to ensure that any impacts to downstream waters resulting from construction activities on the Project Site would be less than significant. Erosion-control and treatment-control BMPs have been and would continue to be implemented per NPDES requirements. In addition to

the requirements of the Construction General Permit, all areas of exposed soils would be re-vegetated and/or watered to reduce erosion. Coverage under the Construction General Permit is obtained by completing and filing a NOI with the SWRCB and preparing a SWPPP prior to any land disturbance.

Furthermore, the Project would comply with the Los Angeles RWQCB Order R4-2023-0429 to regulate the discharge of groundwater that may or may not be impacted by toxic compounds and/or conventional pollutants during construction activities. The Project must ensure any construction activities prevent water quality degradation through implementation of Project specific BMPs. The Project would demonstrate compliance with effluent limitations for priority pollutants using sample reporting protocols as defined by the SWRCB, and submitted to the SWRCB for review and approval. Through compliance with State, regional, and local requirements, there would be a less than significant impact to water quality during construction activities.

### ***Long-Term Operational Water Quality Impacts***

Water quality standards for discharges to municipal storm drainage systems in the City of Long Beach are set forth in Los Angeles RWQCB issued Order No. R4-2021-0105 (MS4 permit). Project operation is expected to generate the same categories of pollutants that project construction would. An LID plan, prepared for the Project in accordance with the City's MS4 Permit, specifies BMPs that would be implemented during Project design and operation to minimize stormwater pollution. The City of Long Beach issued a LID BMP Design Manual (LID Manual) in 2010, with amendments in 2013, presenting guidance on design of LID BMPs. The LID Manual prescribes BMPs for managing and capturing stormwater runoff in the following descending priority order:

1. Infiltration Systems,
2. Stormwater Capture and Use, or
3. Combination of Above.

The LID Manual permits projects that have demonstrated they cannot manage 100 percent of the water quality design volume onsite through infiltration and/or capture and use BMPs to use a high removal efficiency biofiltration/biotreatment BMP (City of Los Angeles 2016). The LID Plan for the Project determined that infiltration was infeasible due to soil contamination and the proposed geotechnical hazards such as liquefaction, collapsible soils, and/or expansive soils (Appendix J-1). Therefore, the LID Plan chose biofiltration as the BMP for managing and capturing stormwater runoff generated on the Project Site.

### **Proposed Best Management Practices**

Three categories of BMPs are proposed for the Project to meet the requirements set forth in the City's MS4 Permit:

- 1) Nonstructural Source Control BMPs reduce the potential for pollutants resulting from activities onsite to enter runoff. Nonstructural source control BMPs specified for the Project are the following:
  - Education for property owners, tenants, and occupants,
  - Activity restrictions,
  - BMP maintenance,
  - Employee training, and

- Common area catch basin inspection.
- 2) Structural Source Control BMPs are components of the Project design intended to reduce the potential for pollutants to enter runoff. Structural source control BMPs specified for the Project are the following:
- Storm drain message and signage (e.g., “Drains to Ocean” on storm drain inlets), and
  - Outdoor trash storage and waste handling area design (e.g., berms surrounding trash storage areas to prevent stormwater from running on to those areas).
- 3) Biofiltration BMPs are components of the Project design that would remove pollutants from contaminated stormwater before the water is discharged offsite. Any biofiltration BMPs would be designed and/or located to restrict infiltration of water into the capped waste material. Biofiltration BMPs specified for the Project are the following, as depicted in Appendix J-1:
- Modular Wetlands Biofiltration System: a constructed open-topped chamber containing, from top to bottom, vegetation, mulch, and bioretention media. Treated effluent from the chamber would be discharged to a proposed storm drain discharging to an existing municipal storm drain.
  - Stormwater Detention System: two sets of three 60-inch-diameter storage pipes, one set in the west part of the Project Site and the second set in the east side. Stormwater discharged from the storage pipes would be directed to the modular wetlands for treatment; then released into municipal storm drains.

As described above, the Project Site was formerly used as an oil brine water treatment facility where water was allowed to evaporate from the brine or seep into the subsurface below the sumps leaving behind a sludge. In order to develop the Project Site in a manner that improves existing site conditions, the DTSC required implementation of a Project-specific Response Plan (Appendix I-10) to address historical site contamination, which involves installing an engineered asphalt cap with an approved waterproofing mat across the majority of the site, as well as an alternative cap (like a geosynthetic clay liner) under landscaped areas along the perimeter of the site outside of the asphalt cap area, to prevent water infiltration from contacting the impacted sump material under portions of the Project Site. At Project completion, the entire Project Site would be impervious. As such, the completed Project would generate more runoff than the existing conditions and the storm water runoff from the Project Site could implicate the Project Site’s environmental condition. In order to ensure the Project would not result in stormwater runoff impacts from additional impervious surfaces on-site, the Project would implement LID features as described above, such as the biofiltration system and stormwater detention system. Additionally, as described in further detail below, the runoff would be captured on-site, treated and deposited and directed towards the municipal stormwater system. All existing and proposed storm drains would be subject to inspection, and lining if necessary, to ensure no leakage would occur, and that no water would be introduced into the capped waste material.

As stated in Section 3.0, Project Description, the Project Site would be separated into eight drainage areas (Areas A through H), and two separate LID drainage management areas (DMA A and B). Drainage Area A (comprised of 2.2 acres), Area B (comprised of 2.4 acres), Area C (comprised of 2.0 acres), Area D (comprised of 2.1 acres), and Area G (comprised of 0.3 acre) would drain southwest towards LID feature area DMA A, which consists of a stormwater detention and wetland biofiltration system. The overall system is designed to accommodate the volume of water produced by a 0.75-inch storm event, as required by the City’s LID Ordinance. DMA A has a storage capacity of 33,499 cubic feet (cf), which exceeds the required storage capacity of 32,550

cf, and would comply with MS4 permit and LID requirements. Drainage Area E (comprised of 1.9 acres), Area F (comprised of 1.0 acre and Area H (comprised of 1.3 acres) would drain southeast towards LID feature area DMA B, which is comprised of another stormwater detention and wetland biofiltration system. DMA B has a storage capacity of 15,988 cf, which exceeds the required storage capacity of 15,528 cf, and also would comply with MS4 permit and LID requirements. The detention system will use high density polyethylene (HDPE) storm drain pipes to ensure durability, water-tightness, and prevent leakage and cross-contamination with the adjacent soils.

Onsite drainage would generally be directed towards a series of new catch basins and underground storage pipes along the site perimeters, which would convey stormwater to the two proposed detention systems located along the western and eastern site and consisting of multiple underground cisterns. The system will store stormwater during storms and then release it into municipal storm drains at a controlled rate so that the post-project runoff rate does not exceed the pre-project rate; and to avoid exceeding the storm drains' capacities. One detention system is located along the eastern site boundary (DMA B) and the other along the western boundary (DMA A), and stormwater discharged from the detention systems would be directed to the two proposed biofiltration systems located on their respective ends, comprised of modular wetlands for treatment, and then the treated stormwater is ultimately conveyed into the municipal storm drains located along the southern portion of the site towards the proposed extension of North Pacific Place northwest and Ambeco Road. Both detention systems would have a greater stormwater capacity than required by the City of Long Beach and MS4 permit. Exhibit 3-4, LID Plan, in Section 3.0, Project Description, illustrates the layout and components of the proposed stormwater management system for the Project.

Operational impacts related to requirements for discharges to stormwater would be less than significant with implementation of the Project LID Plan.

### **Mitigation Measures**

No mitigation measures are required.

### **Level of Significance After Mitigation**

Temporary Water Quality Impacts: A less than significant impact would occur and therefore no mitigation is required.

Operational Water Quality Impacts: A less than significant impact would occur and therefore no mitigation is required.

***Impact Comparison Summary:*** The Project would result in a less than significant impact. The Project would result in similar impacts when compared with the impact analysis in the previously prepared MND, which identified less than significant impacts related to water quality.

**Threshold 4.9b**      ***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? And***

**Threshold 4.9e**      ***Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***

As discussed previously, the Project Site is located over the Coastal Plain of Los Angeles Groundwater Basin, West Coast Subbasin; and the WRD is designated as the Watermaster under a court judgment to manage groundwater pumping and certain groundwater storage efforts in the Subbasin (WRD 2023).

In the existing condition, the entire Project Site is pervious and available for infiltration of rainwater into soil. However, the Site is not used for intentional groundwater recharge and groundwater pumping rights are set by a court judgment. Therefore, Project development would not interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. In addition, the Project does not propose groundwater supply wells. As mentioned above, the LBWD supplies water to the City and forecasts that it will have sufficient water over the 2020–2040 period to meet municipal water demands (City of Long Beach 2016). Thus, demand for municipal water by the Project would not reduce groundwater supplies. As the Project would not impede sustainable groundwater management of the basin and does not propose any groundwater supply wells, the Project would not conflict with or obstruct the applicable water quality and groundwater basin plans. Further, the engineered cap would be constructed to prevent water infiltration from contacting the impacted sump material under portions of the Project Site and infiltrate into the groundwater.

Therefore, the Project would result in a less than significant impact related to groundwater supplies or recharge, and it would not conflict with applicable water quality/groundwater management plans.

### **Mitigation Measures**

No mitigation measures are required.

### **Level of Significance After Mitigation**

Groundwater Supplies or Recharge: A less than significant impact would occur and therefore no mitigation is required.

Water Quality Control Plan or Sustainable Groundwater Management Plan: A less than significant impact would occur and therefore no mitigation is required.

***Impact Comparison Summary:*** The Project would result in a less than significant impact. The Project would result in similar impacts when compared with the impact analysis in the previously prepared MND, which identified less than significant impacts related to water quality.

**Threshold 4.9c** ***Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:***

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



As discussed further below, development of the Project would change the drainage pattern of the Project Site and require implementation of BMPs to appropriately manage stormwater runoff.

The Project Site currently does not have a permanent<sup>6</sup> stormwater management system. There is an existing Caltrans manhole just outside of the southwest corner property line of the Project Site which connects to an offsite existing 30" reinforced concrete pipe (RCP). This existing 30" RCP is a Caltrans owned and maintained storm drain line which carries stormwater southwest from the manhole through the adjacent LACFD property to the LA River. There is also a 30" RCP which runs northeast from the offsite Caltrans manhole partway across the Project Site. However, there are no permanent stormwater inlets on the Project Site to capture stormwater and direct it to the existing RCPs or offsite Caltrans system.

During Project construction and as discussed in further detail above, compliance with the Construction General Permit and the preparation of a SWPPP has ensured and would continue to ensure that any impacts to downstream waters resulting from construction activities on the Project Site would be less than significant. Erosion-control and treatment-control BMPs have been and would continue to be implemented per NPDES requirements. The Project-specific SWPPP has been prepared, approved, and implemented for construction activities related to the Surcharge, and will continue to be implemented during future Project construction activities. As detailed in Section 1.7 of the current SWPPP, the Project would ensure compliance with the SWPPP beyond construction with annual report requirements to be reported to the LA RWQCB.

As discussed above, for Project operations, the Project would include construction of a permanent stormwater management system comprised of storm drains, detention systems, and biofiltration units. The two detention systems combined would have capacity for 33,499 cfs and 15,988 cfs. greater than the required volume of 32,500 cfs and 15,528 cfs by the City of Long Beach and MS4 permit. After a storm, stormwater would be released from the detention systems into the biofiltration units and then into existing municipal storm drains, over approximately 72 hours. Biofiltration systems are highly effective at removing sediment (CASQA 2023). Additionally, the LID system must meet water quality-related waste discharge requirements in addition to volume requirements. Therefore, Project development would not cause substantial erosion or siltation on- or off-site or contribute substantial additional sources of polluted runoff because the onsite system is designed to control erosion or siltation to the standards set by the City's MS4 permit to ensure that Project operations do not impair or contribute to impairment of the beneficial uses of surface waters. The Project also would not provide substantial additional sources of polluted runoff because the biofiltration BMPs that will be part of the Project Site's stormwater management system remove pollutants from contaminated stormwater and treat it onsite to meet the water quality standards set by the City's MS4 permit before the water is discharged offsite into the municipal system.

In addition, Project development would not increase the rate or amount of stormwater runoff draining off the Project Site. As discussed above, the proposed stormwater management system includes detention systems that comply with the City's MS4 and LID requirements. Detention systems store stormwater during storms and then release it into municipal storm drains at a controlled rate so that the post-project runoff rate does not exceed the pre-project rate; and to avoid exceeding the storm drains' capacities. Thus, Project development would not cause flooding on- or off-site and would not exceed the capacities of existing storm drains to which Project Site runoff would be discharged.

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<sup>6</sup> As previously discussed, there are temporary BMPs in place pursuant to the SWPPP to manage stormwater during Project construction, but these are not permanent stormwater management systems. Prior to the installation of the SWPPP BMPs, no stormwater management system existed onsite.

In addition to on-site improvements as stated above, the Project would include off-site stormwater improvements. To collect stormwater that originates offsite and flows to North Pacific Place, two catch basins would be installed in North Pacific Place and a new offsite 36" RCP storm drain line would be installed from North Pacific Place extending around the southern perimeter of the Project Site, to be dedicated to the City, which would eventually connect to an existing Caltrans pipe at the southwest corner of the Project Site. This is depicted on the offsite drainage plans included as Appendix J-2 of this DEIR. These would be improvements to the regional infrastructure, which would improve stormwater management off-site for nearby properties.

Prior to implementing the SWPPP BMPs as part of the Surchage program, stormwater infiltrated into the pervious Project Site or sheet flowed across the Project Site towards the Los Angeles River, and there were no storm drain inlets onsite or offsite to direct the Project Site's stormwater towards storm drain facilities. As discussed above, stormwater is currently being directed toward the existing Caltrans storm drains offsite through the temporary BMPs in place pursuant to the SWPPP. Following construction of the Project, the Project site would be impervious and re-direct flows of stormwater compared to the pre-Project condition. The proposed permanent stormwater management system on the Project Site would capture and direct runoff into the onsite drainage features. However, the change in the onsite drainage pattern would not impede or redirect flows of a stream or river or other surface waters that would cause adverse effects onsite or offsite. Redirecting the flow of surface waters through implementation of the SWPPP and permanent stormwater management system would be an improvement over the pre-Project condition because stormwater will now be treated and directly funneled, and released at a controlled rate, into the City's MS4 system.

Impacts related to the Site's drainage pattern would be less than significant.

### **Mitigation Measures**

No mitigation measures are required.

### **Level of Significance After Mitigation**

Erosion or Siltation: A less than significant impact would occur and therefore no mitigation is required.

Flooding: A less than significant impact would occur and therefore no mitigation is required.

Capacity of Storm Water Drainage Systems or Polluted Runoff: A less than significant impact would occur and therefore no mitigation is required.

Flows: A less than significant impact would occur and therefore no mitigation is required.

***Impact Comparison Summary:*** The Project would result in a less than significant impact. The Project would result in similar impacts when compared with the impact analysis in the previously prepared MND, which identified less than significant impacts related to drainage patterns.

### **Threshold 4.9d *In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?***

The Project Site is outside of 100-year flood hazard zones (City of Long Beach 2022). The Project Site is not in a dam inundation area mapped on the California Department of Water Resources Dam Breach Inundation Map (DWR 2024b). 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 outside of tsunami flood zones mapped by the CGS (CGS 2023). A seiche is a surface wave created when an inland water body is shaken, usually by an earthquake. No surface water bodies are close enough to the Project Site to pose a flood hazard to the Site due to a seiche. Development of the Project would not risk release of pollutants due to project inundation due to a flood within a 100-year flood zone, tsunami, or seiche. Impacts would be less than significant.

### **Mitigation Measures**

No mitigation measures are required.

### **Level of Significance After Mitigation**

Release of Pollutants: A less than significant impact would occur and therefore no mitigation is required.

***Impact Comparison Summary:*** The Project would result in a less than significant impact. The Project would result in similar impacts when compared with the impact analysis in the previously prepared MND, which identified less than significant impacts related to inundation.

#### **4.9.4 CUMULATIVE IMPACTS**

The cumulative study area with regard to hydrology and water quality is the City of Long Beach. Future development of the Project, in conjunction with the existing development and planned development in the City of Long Beach, may result in a cumulatively considerable impact to surface water runoff due to construction activities in the area and post-development runoff. All construction projects larger than one acre would be subject to the NPDES Construction General Permit requirements for implementation of individual SWPPPs, which outline erosion control, sediment control, wind erosion control, tracking control, non-storm water management and waste management, and materials pollution control BMPs. Additionally, new development and significant redevelopment projects are required to prepare and implement permanent source-control, Site design, and treatment-control BMPs to ensure compliance with water quality goals and compliance with City and MS4 permit requirements.

Cumulative groundwater impacts are considered for the underlying groundwater basins, from which the City provides the majority of its water supply. Increases in the resident population and intensity of development would translate to a greater demand for water and increased pumping of the groundwater basins, as well as greater use of imported water sources. Individual developments would coordinate with their respective water service providers to allow them to provide water service in a timely and adequate manner. The water service provider's groundwater supplies from the Subbasin are controlled by WRDs, designated as the Watermaster for under a court judgment. WRD is responsible for monitoring groundwater levels and water quality, including the operating safe yields of the basin and extraction limits and amounts. Continued management of the groundwater basin would prevent overdraft conditions, water quality problems, and other impacts on groundwater resources.

Cumulative drainage impacts are considered for the Los Angeles River Watershed. Future growth and development within the watershed would increase impermeable surfaces and decrease water percolation areas. Increase in impervious surfaces would increase storm water volumes and flow rates in local and regional drainage channels. However, all development within Los Angeles County is subject to development in compliance with NPDES and local municipal code standards for reducing storm drain capacity impacts. Storm drain infrastructure is incrementally improved

with project-specific design plans that are subject to the review and approval of the local jurisdiction. Project-specific design and utility improvements would prevent negative impacts to regional drainage channel capacity.

As noted above, the Project Site is outside of 100-year flood hazard zones (City of Long Beach 2022) and is not susceptible to dam inundation, seiche, or tsunami. The hazards associated with a tsunami are confined to the shoreline and coastal areas of the City and the Project would not exacerbate this hazard.

### **Mitigation Measures**

No mitigation measures are required.

### **Level of Significance After Mitigation**

Cumulative Impacts: No cumulative impacts related to groundwater recharge or supplies, or drainage patterns or inadequate storm drainage, would occur. Pollutants generated by the Project and cumulative projects in the City would be reduced through compliance with applicable regulations during construction activities and in the long-term. Compliance with the Los Angeles RWQCB's requirements for the water quality certifications and/or WDRs and discharge prohibitions would also prevent long-term storm water quality impacts. A less than significant impact would occur and therefore no mitigation is required.

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