3.7 Hydrology and Water Quality

3.7.1 Section Summary

This section analyzes the hydrology and water quality within or in the vicinity of the West Harbor Modification Project (Proposed Project) Site. It also assesses whether the Proposed Project would affect hydrology or water quality through reasonably foreseeable upset and conditions involving degraded surface or groundwater quality through the release of pollutants, including discharge of polluted stormwater, increased erosion, or violation of any water quality standards or waste-discharge requirements. The following discussion also discloses whether the activities proposed by the Proposed Project itself, during either the construction or operational phase, may have the potential to adversely affect groundwater supply or recharge, substantially alter drainage patterns, or impede or redirect flood flows.

Section 3.7, *Hydrology and Water Quality*, includes the following:

- A description of the environmental setting for hydrology and water quality in the Proposed Project vicinity, including the results of a water quality database search and applicable publicly available reports;
- A description of regulations and policies regarding hydrology and water quality that are applicable to the Proposed Project;
- A discussion of the methodology used to determine impacts on hydrology or water quality, including groundwater and flood hazards;
- An impact analysis of the Proposed Project; and
- A description of Mitigation Measures proposed to reduce significant impacts, as applicable.

Key points of Section 3.7, *Hydrology and Water Quality* include the following:

- During the construction and operational phases, the Proposed Project would not violate any water quality standards or waste-discharge requirements, or otherwise substantially degrade surface or groundwater quality, and no Mitigation Measures would be required; and
- The Proposed Project would not substantially alter the existing drainage pattern of the site or area, result in substantial erosion, substantially increase the rate or amount of surface runoff in a manner that would result in flooding, exceed the capacity of existing or planned stormwater drainage systems, or impede flood flows. No mitigation measures would be required.

3.7.2 Introduction

This section describes the affected environment and regulatory setting for hydrology and water quality, the impacts on hydrology and water quality that would result from the Proposed Project, and the mitigation measures that would reduce these impacts.

3.7.3 Environmental Setting

3.7.3.1 Surface Water

The Proposed Project is within the Port of Los Angeles, which is located in San Pedro Bay in the city of Los Angeles, California. The Proposed Project area is in the Dominguez watershed (State Water Resources Control Board [SWRCB] Hydrologic Unit 405.12), which encompasses an area of 133 square miles of land and water. The watershed is bordered by the cities of Inglewood on the north and Torrance on the west and the federal breakwaters of Los Angeles and Long Beach Harbors on the south. Approximately 93 percent of the land within the watershed is developed, and 62 percent of stormwater runoff from these lands drains to the Dominquez Channel, which drains into Los Angeles Harbor. The remaining runoff drains into retention basins.

The Dominguez watershed comprises five sub-watersheds: (1) Upper Channel; (2) Lower Channel; (3) Machado Lake; (4) retention basins; and (5) Los Angeles and Long Beach Harbors sub-watershed, which has an area of 36.7 square miles and covers portions of the cities of Los Angeles, Long Beach, Rancho Palos Verdes, and Rolling Hills before draining directly into Los Angeles and Long Beach Harbors.

Los Angeles Harbor has been physically modified through past dredging and filling projects and construction of breakwaters and other structures. Los Angeles Harbor is adjacent to Long Beach Harbor, and they function oceanographically as one unit, due to an inland connection via Cerritos Channel and because they share Outer Harbors behind the San Pedro, Middle, and Long Beach breakwaters. In addition, an opening in the causeway leading to Pier 400 was designed to enhance circulation.

3.7.3.2 Water Quality

Water quality in San Pedro Bay has improved greatly over the last 40 years through compliance with federal and state regulations, improved pollution-source control, and dredging that has removed accumulated contaminants in harbor sediment. However, legacy contaminants flow into Los Angeles Harbor from Port land and upstream sources in the watershed well beyond the Ports' boundaries. The *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (SWRCB 2014) specifies beneficial uses that apply to waterbodies with the potential to be affected by the Proposed Project, as shown in Table 3.7-1. A *beneficial use* is one of the various ways that water can be used for the benefit of people and/or wildlife. The Clean Water Act (CWA) Section 303(d)–listed impairments for the Los Angeles and Long Beach Inner Harbor are shown in Table 3.7-2 and based on the 2020/2022 California Integrated Report (SWRCB 2022).

Table 3.7-1. Existing Beneficial Uses for Surface Waters of Waterbodies with Potential to Be Affected by the Proposed Project

Water Body	Designated Beneficial Uses
Los Angeles: Long Beach Harbor (Inner Areas)	IND, NAV, COMM, MAR, RARE[1], SHELL, REC-1[2], REC-2

Source: Los Angeles RWQCB 2014.
[1] One or more rare species utilizes all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.
[2] Potential beneficial use.
COMM = Commercial and Sport Fishing; IND = Industrial Service Supply; MAR = Marine Habitat; NAV = Navigation; RARE = Rare; Threatened or Endangered Species; REC-1 = Water Contact Recreation; REC-2 = Non-contact Water Recreation; SHELL = Shellfish Harvesting.

Table 3.7-2. Water Quality Impairments within the Proposed Project Area: Los Angeles/Long Beach Inner Harbor

Listed 303(d) Impairments[1]	Potential Sources	EPA TMDL Report Completion
Copper	Source Unknown	March 23, 2012
Dichlorodiphenyltrichloroethane (DDT)	Source Unknown	March 23, 2012
Polychlorinated biphenyls (PCBs)	Source Unknown	March 23, 2012
Toxicity	Source Unknown	March 23, 2012
Zinc	Source Unknown	March 23, 2012
Benthic Community Effects	Source Unknown	March 23, 2012
Benzo(a)pyrene	Source Unknown	March 23, 2012
Chrysene	Source Unknown	March 23, 2012

Source: SWRCB 2022.
[1] All 303(d)-listed impairments are for the sediment matrix; there were no water column 303(d) impairments listed.
EPA = U.S. Environmental Protection Agency; TMDL = total maximum daily load.

3.7.3.3 Groundwater

The Proposed Project is within the Coastal Plain of Los Angeles – West Coast groundwater basin, which covers an area of approximately 91,300 acres. The West Coast Basin is bounded on the north by the Ballona Escarpment, to the east by the Newport–Inglewood fault zone, and on the south and west by the Pacific Ocean and consolidated rocks of the Palos Verdes Hills (DWR 2004). The California Department of Water Resources considers the West Coast Basin a very low-priority basin pursuant to the Sustainable Groundwater Management Act, because of its adjudication (DWR 2020). In the West Coast Basin, the most critical issue is high concentrations of total dissolved solids, an indicator of salt content, along the Pacific Ocean coast from seawater intrusion. Recharge occurs primarily by injection of imported water and reclaimed water into wells of the seawater-intrusion barrier and by underflow from the Central Basin. Groundwater flow directions are controlled by the engineered recharge and groundwater pumping from the numerous wells distributed across the region (Fram and Belitz 2012).

Seawater intrusion has produced deterioration of water quality over time. In the West Coast Basin, one or more inorganic constituents were present at high and moderate concentrations in approximately 6 percent and 26 percent of the primary aquifer system, respectively. Total dissolved

solid concentrations were high (i.e., greater than the upper limit) and moderate (i.e., between the recommended and upper limits) in approximately 2 percent and 47 percent of the primary aquifer system, respectively. Iron or manganese (or both) were present at high concentrations in approximately 19 percent, and at moderate concentrations in approximately 15 percent of the primary aquifer system. Perchlorate, an ingredient in rocket fuel, fireworks, and other products, was detected at moderate concentrations in approximately 35 percent of the primary aquifer system (Fram and Belitz 2012).

3.7.3.4 Flooding

The Proposed Project site is outside of the 100-year floodplain and within Federal Emergency Management Agency (FEMA) Zone X (Flood Insurance Rate Map Panel 06037C2032G). FEMA Zone X is an area of minimal flood hazard, usually depicted on flood insurance rate maps as above the 500-year flood level. Areas adjacent to the Proposed Project site within the Los Angeles and Long Beach Inner Harbors are within the 100-year floodplain, in FEMA Zone AE. The 100-year floodplain is east and west of the Proposed Project, beyond the boundary of the Project Site (FEMA 2021).

3.7.4 Regulatory Setting

3.7.4.1 Federal Regulations

Clean Water Act

The federal Water Pollution Control Act Amendments of 1972, better known as the CWA (33 U.S. Code §§ 1251–1376), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's water." Important applicable sections of the CWA are as follows.

- **CWA Section 303** requires states to develop water quality standards for all waters and submit to the U.S. Environmental Protection Agency (EPA) for approval all new or revised standards established for inland surface and ocean waters. Under Section 303(d), the state is required to list water segments that do not meet water quality standards and develop action plans, called total daily maximum loads (TMDLs), to improve water quality.
- **CWA Section 304** provides water quality standards and criteria, as well as guidelines that are enforced under the California Toxics Rule, described below under Section 3.7.4.2, *State Regulations*.
- **CWA Section 401** requires an applicant for any federal permit that proposes an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the CWA. Certification is provided by the Regional Water Quality Control Board (RWQCB).
- **CWA Section 402** establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the United States. This permit program is administered by the RWQCB and is discussed further below under Section 3.7.4.2, *State Regulations*.

- **CWA Section 404** provides for issuance of dredge/fill permits by the U.S. Army Corps of Engineers (USACE). Permits typically include conditions to minimize impacts on water quality. Common conditions include: (1) USACE review and approval of sediment quality analysis prior to dredging; (2) a detailed pre- and post-construction monitoring plan that includes disposal-site monitoring; (3) timing and water quality restrictions on flowback of dredged water at the dredging site; and (4) requiring compensation for loss of waters of the United States, including wetlands.

Marine Protection, Research, and Sanctuaries Act

The Marine Protection, Research, and Sanctuaries Act, Section 103 (33 U.S. Code §§ 1401, *et seq.*), allows for the siting of offshore ocean disposal sites and use permits by EPA. In 2005, EPA redesignated two sites for limited disposal of suitable (i.e., nontoxic) dredge material off the Los Angeles/Orange County shoreline, identified as LA-2 and LA-3, respectively. Prior to permit issuance, the applicant must demonstrate a need for ocean disposal and have evaluated alternative beneficial reuse options. Also, material must be deemed suitable in accordance with EPA ocean-disposal criteria.

3.7.4.2 State Regulations

Porter-Cologne Water Quality Control Act

The State of California's Porter-Cologne Water Quality Control Act (Porter-Cologne; California Water Code §§ 13000, *et seq.*) is the principal law governing water quality regulation within California. The act established the SWRCB and nine RWQCBs, which are charged with implementing its provisions and have primary responsibility for protecting water quality in California. Porter-Cologne also implements many provisions of the federal CWA, such as the NPDES permitting program. CWA Section 401 gives the SWRCB the authority to review any proposed federally permitted or licensed activity that may affect water quality and to certify, condition, or deny the activity if it does not comply with state water quality standards. If the SWRCB imposes a condition on its certification, then those conditions must be included in the federal permit or license. Porter-Cologne also requires a Report of Waste Discharge for any discharge of waste (i.e., liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. Beneficial uses were discussed in Section 3.7.3.2, *Water Quality*.

National Pollutant Discharge Elimination System General Permit for Construction Activities

Most construction activities that disturb 1 acre of land or more are required to obtain coverage under the current NPDES General Permit for Construction Activities (Construction General Permit). Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation, that result in soil disturbances of at least 1 acre of total land area. The Construction General Permit requires an applicant to file a Notice of Intent (NOI) to discharge stormwater and to prepare and implement a stormwater pollution prevention plan (SWPPP). The SWPPP must include a site map and description of proposed construction activities, a demonstration of compliance with relevant local ordinances and regulations, and an overview of best management practices (BMPs) that would be implemented to prevent soil

erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Permittees are further required to conduct annual monitoring and reporting to ensure that BMPs are correctly implemented and effective in controlling the discharge of stormwater-related pollutants.

California Toxics Rule

On May 18, 2000, EPA promulgated numeric water quality criteria for priority toxic pollutants and other provisions for water quality standards to be applied to waters in the state of California. EPA promulgated this rule, known as the California Toxics Rule, based on the Administrator's determination that the numeric criteria are necessary in California to protect human health and the environment. The California Toxics Rule fills a gap in California water quality standards that was created in 1994 when a state court overturned the state's water quality control plans containing water quality criteria for priority toxic pollutants. The State of California has been without numeric water quality criteria for many priority toxic pollutants, as required by the CWA, necessitating this action by EPA. These federal criteria are legally applicable in California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA.

3.7.4.3 Local Regulations

Los Angeles Regional Municipal Separate Storm Sewer System Permit

The Los Angeles RWQCB regulates discharges from municipal separate storm sewer systems (MS4s) through the latest Los Angeles and Ventura Counties' MS4 Permit. This permit is issued under the NPDES Program and covers the city of Los Angeles and 84 other municipalities within Los Angeles County. The City of Los Angeles Department of Public Works (DPW) plays a large role in the administration of the MS4 Permit's Public Agency Activity Program components. The City is ultimately responsible for citywide administration and reporting requirements in the MS4 permit, with the Los Angeles Harbor Department (LAHD) providing additional oversight and assistance at the harbor.

The Port of Los Angeles leases property to a variety of industrial and commercial tenants. Tenants are required to comply with the appropriate NPDES permit requirements for their facilities. Tenants file and report directly to the SWRCB for the NPDES General Industrial Stormwater Permit or to the Los Angeles RWQCB for individual NPDES permits. The Port maintains an outreach and coordination effort with its tenants including providing stormwater outreach materials for tenants, conducting site evaluations for select tenants to assist them in understanding their NPDES permit compliance responsibilities, and identifying activities that require BMPs to prevent stormwater pollution.

Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties

Discharges of treated or untreated groundwater generated from permanent or temporary dewatering operations, or other applicable wastewater discharges not specifically covered in other general or individual NPDES permits, are currently regulated under a regional general permit, General Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties. Construction

dewatering wastes (except stormwater) are regulated as low-threat discharges to surface waters. An NOI and Report of Waste Discharge must be submitted to the Los Angeles RWQCB to comply with this general permit.

Waste Discharge Requirements for Discharges of Residual Firework Pollutants from Public Fireworks Displays to Surface Waters in Los Angeles and Ventura Counties

Discharges from public firework displays (i.e., residual firework pollutants) into waters of the United States in the Los Angeles region are regulated under a regional permit, Waste Discharge Requirements for Discharges of Residual Firework Pollutants from Public Fireworks Displays to Surface Waters in Los Angeles and Ventura Counties.

To comply with this general permit, an NOI must be submitted to the Los Angeles RWQCB, as well as general monitoring and reporting requirements. Receiving-water limitations include prohibitions against causing or contributing to floating materials or suspended material (including trash), altering suspended sediment in a manner that causes nuisance, adversely affecting beneficial uses, increasing concentrations of toxic pollutants in sediments or aquatic life, or violating any water quality standard.

City of Los Angeles General Plan

The *Conservation Element* of the *City of Los Angeles General Plan* (City of Los Angeles 2001) includes provisions for the protection and enhancement of the city's watersheds, beaches, and bays. The following objectives and policies are relevant to the Proposed Project.

Conservation Element – Section 8, Erosion

- **Objective**: Protect the coastline from erosion and inappropriate sedimentation that may or has resulted from human actions.
    - **Policy 2**: Continue to prevent or reduce erosion that will damage the watershed or beaches or will result in harmful sedimentation that might damage beaches or natural areas.
- **Objective**: Protect and enhance the diversity and sustainability of the natural ecologies of the Santa Monica and San Pedro bays, including the bay fishery populations.
    - **Policy 1**: Continue to reduce pollutant discharge into the bays from both natural and human sources.
    - **Policy 2**: Continue to support legislation and to seek funding and legislation intended for bay and coastal protection, enhancement and habitat restoration.
    - **Policy 3**: Continue to support and/or participate in programs to clean bay sediments and/or mitigate potentially harmful effects of contaminants in the sediments and waters of the bays.

Conservation Element – Section 16, Ocean

- **Objective**: Protect and enhance the diversity and sustainability of the natural ecologies of the Santa Monica and San Pedro bays, including the bay fishery populations

- **Policy 1**: Continue to reduce pollutant discharge into the bays from both natural and human sources

City of Los Angeles Planning and Zoning Code

The City of Los Angeles Municipal Code contains provisions for water quality-related requirements applicable to the Proposed Project, as listed below.

- **Section 64.70**: Stormwater and Urban Runoff Pollution Control: This article sets forth uniform requirements and prohibitions for discharges and places of discharge into the storm drain system and receiving waters necessary to adequately enforce and administer all federal and state laws, legal standards, and orders that provide for the protection, enhancement, and restoration of water quality.
- **Section 64.72**: Stormwater Pollution Control Measures for Development Planning and Construction Activities: This section contains requirements for construction activities and facility operations of development and redevelopment projects to comply with the land development requirements of the MS4 permit though integrating LID practices and standards for stormwater pollution mitigation, and maximize open, green and pervious space on all Developments and Redevelopments consistent with the City's landscape ordinance and other related requirements in the Development Best Management Practices Handbook.

In addition, Division 70, *Grading, Excavation, and Fills*, includes provisions for erosion control and grading permits.

City of Los Angeles Manuals and Standards

Per the City of Los Angeles Special Order No. 007-1299 of December 3, 1999, the City of Los Angeles has adopted the Los Angeles County DPW's *Hydrology Manual* (DPW 2006) as its basis of design for storm-drainage facilities. Drainage and flood-control structures and improvements within the city of Los Angeles are subject to review and approval by the City of Los Angeles's DPW, Bureau of Engineering, and Department of Building and Safety. As required by DPW, all public storm facilities must be designed in conformity with the standards set forth by Los Angeles County. DPW reviews and approves storm-drain plans prior to construction. Other City of Los Angeles manuals relevant to the Proposed Project include the *Storm Drain Design Manual, Standards Plans*, and *Stormwater Pollution Abatement Handbooks and Publications*.

City of Los Angeles Low-Impact Development Ordinance

In 1998, the City of Los Angeles passed a stormwater ordinance (Los Angeles Municipal Code 64.70) that prohibits the entry of illicit discharges into the municipal storm-drain system. The City of Los Angeles also adopted a Low-Impact Development (LID) ordinance in 2011 (updated in September 2015) that amends Los Angeles Municipal Code 64.70 and requires runoff to be captured, infiltrated, and/or used on site at most development and redevelopment projects. Objectives include reduction of non-stormwater discharge to the storm-drain system to the maximum extent practicable and compliance with federal and state laws applicable to stormwater and urban runoff pollution control.

3.7.5 2009 Mitigation Measures and Revisions

The 2009 San Pedro Waterfront (SPW) Environmental Impact Statement (EIS)/Environmental Impact Report (EIR; 2009 SPW EIS/EIR) concluded that there was a potential for exposure of contaminated groundwater due to historical industrial land uses on the SPW Project Site. Several MMs were included to reduce potential impacts to less-than-significant levels. The following are descriptions of **MM-GW-1** and **MM-GW-2** from the 2016 *Addendum to the San Pedro Waterfront Project Environmental Impact Statement/Environmental Impact Report for the San Pedro Public Market Project* (2016 SPPM Addendum; ICF 2016), which apply to the Proposed Project. Implementation of **MM-GW-1** and **MM-GW-2** would minimize impacts related to encountering toxic substances and altering contaminant transport pathways. No new MMs or revisions are proposed.

MM-GW-1. Complete site remediation.

Unless otherwise authorized by the lead regulatory agency for any given site, LAHD will remediate or cause to be remediated all contaminated soils within Proposed Project boundaries prior to or during demolition and grading activities. Remediation will occur in compliance with local, state, and federal regulations as described in Section 3.6.3 of the 2009 SPW EIS/EIR and as directed by the Los Angeles County Fire Department, Department of Toxic Substances Control, and/or Regional Water Quality Control Board.

Soil remediation will be completed such that contamination levels are below health screening levels established by the California Office of Environmental Health Hazard Assessment and/or applicable action levels established by the lead regulatory agency with jurisdiction over the site. Use of localized soil capping/paving, combined with agency-approved deed restrictions, may be an acceptable remediation measure in upland areas and/or risk-based soil assessments, but would be subject to the discretion of the lead regulatory agency.

Existing groundwater contamination throughout the Proposed Project boundary will continue to be monitored and remediated, simultaneously and/or subsequent to site redevelopment, in accordance with direction provided by the RWQCB.

Unless otherwise authorized by the lead regulatory agency for any given site, areas of soil contamination that will be remediated prior to or in conjunction with project demolition, grading, and construction would include, but not be limited to, the properties within and adjacent to the Proposed Project as listed in Tables 3.6-3 and 3.6-4 of the 2009 SPW EIS/EIR.

MM-GW-2. LAHD will prepare a contamination contingency plan for nonspecific facilities.

The Project Site has a long history of industrial activity, so it is possible that future construction activity could encounter historical soil or groundwater contamination that had not been previously reported to regulatory agencies. The following contingency plan will be implemented to address previously unknown contamination during demolition, grading, and construction.

a) All trench excavation and fill operations will be observed for the presence of chemicals of potential concern and petroleum products. Soils that are suspected to be affected with chemicals of potential concern and/or petroleum products will be segregated from clean soil. Indications of contaminated/affected soil may include, but are not limited to, discolored soil, petroleum or organic odors, and/or visible sheen. In the event that unexpected suspected

chemically affected material (i.e., soil or water) is encountered during construction, the contractor will notify LAHD's Chief Harbor Engineer and Director of Environmental Management and Risk Management's Industrial Hygienist. LAHD will confirm the presence of the suspect material, direct the contractor to remove, stockpile, or contain the material, and characterize the suspect material identified within the boundaries of the construction area. Continued work at a contaminated site will require the approval of the Chief Harbor Engineer.

b) As warranted, appropriate air-monitoring equipment (e.g., photoionization detector, combustible gas indicator, organic vapor analyzer) will be present during grading and/or excavation activities in soils that are suspected to be affected with chemicals of concern and/or petroleum products.

c) Excavation of volatile organic compound-affected soil will require obtaining and complying with a South Coast Air Quality Management District Rule 1166 permit.

d) The remedial option(s) selected will be dependent on a number of criteria (e.g., types of chemical constituents, concentration of the chemicals, health and safety issues, time constraints, cost) and will be determined on a site-specific basis. Both offsite and onsite remedial options will be evaluated.

e) The extent of removal actions will be determined on a site-specific basis. At a minimum, the chemically affected area(s) within the boundaries of the construction area will be remediated to the satisfaction of the lead regulatory agency for the site. The LAHD Project Manager overseeing removal actions will inform the contractor when the removal action is complete.

f) Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials will be submitted to the Chief Harbor Engineer within 30 days of project completion.

g) In the event that suspected contaminated soil is encountered, all onsite personnel handling the suspected contaminated material must be trained in accordance with the federal Hazardous Waste Operations and Emergency Response (HAZWOPER) standard. This training provides precautions and protective measures for workers remediating contaminated sites. Workers not certified with HAZWOPER training will not be allowed to resume work in suspected contaminated areas until appropriate site characterization confirms that contaminated soil, groundwater, or soil vapor are not present.

h) As warranted, real-time perimeter and ambient air-monitoring stations will be established during all grading, excavation, trenching, and/or soil-handling activities associated with contaminated soil.

i) All excavations will be filled with structurally suitable fill material that is free from contamination.

The 2009 SPW EIS/EIR also concluded that there was a potential for significant impacts on water quality from contaminant leaching, such as copper from antifouling paint, which could increase pollutant loading in the harbor. However, the 2009 SPW EIS/EIR concluded that, beyond legal requirements, there are no available MMs to eliminate the leaching of contaminants from antifouling paint on vessel hulls.

3.7.6 Methodology

The baseline for hydrology and water quality includes the surface water features and water quality conditions that existed in the plan area at the time the 2009 SPW EIS/EIR was certified and that are identified in Section 3.14.2, *Environmental Setting*, of that document. Within the context of the 2009 baseline, this section provides a qualitative discussion of the potential hydrology and water quality impacts that could result from implementation of the Proposed Project. The most recently available hydrology and water quality data were reviewed and used to represent current baseline conditions.

The Initial Study/Environmental Checklist (Appendix A-1 of this Draft Subsequent EIR [SEIR]) determined that the Proposed Project would have less-than-significant impacts associated with groundwater recharge and groundwater supplies (Threshold X.b), as well as with the risk of release of pollutants from Proposed Project inundation due to a flood hazard, tsunami, or seiche (Threshold X.d). Additionally, the Initial Study found that the Proposed Project would have no impact related to conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater-management plan (Threshold X.e). Because these issues were already determined to have no impact or less-than-significant impacts, they are not addressed further in this SEIR. It was determined after the release of the Notice of Preparation that the Proposed Project could have the potential to affect water quality standards (Threshold X.a) or alter the existing drainage pattern of the site or area (Threshold X.c); therefore, these issues are analyzed further in the subsequent sections.

All Proposed Project elements were analyzed by comparing baseline conditions, as described in Section 3.7.3, *Environmental Setting*, above, to conditions that would occur during construction and/or operation of the Proposed Project. The analysis focuses on issues related to surface hydrology and surface and groundwater quality. The key construction and operational impacts are identified and evaluated based on the physical characteristics of the Proposed Project and the magnitude, intensity, location, and duration of activities.

- **Surface Water Hydrology:** The surface water hydrology impact analysis considers changes in impervious surfaces and drainage patterns.
- **Surface and Groundwater Quality:** Impacts on surface water and groundwater quality are analyzed using information on potential existing sources of pollution generated by activities such as vehicle use and parking, building maintenance, pesticide use, trash, and material storage. These impacts are compared to potential Proposed Project-related sources of pollution that would occur during construction, such as sediments and other construction materials, and during operation, such as vehicle use, building maintenance, pesticide use, trash, and storage of hazardous materials.

3.7.7 Thresholds of Significance

Based on Appendix G of the California Environmental Quality Act Guidelines (Environmental Checklist), the Proposed Project would have a significant hydrology and water quality impact if it would cause any of the following to occur:

- **HYD-1**: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality; or

- **HYD-2**: 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 that would:
    - Result in substantial erosion or siltation on or off site;
    - Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site;
    - Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    - Impede or redirect flood flows.

Impact HYD-1. Would the Proposed Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Summary of 2009 San Pedro Waterfront Environmental Impact Statement/Environmental Impact Report Findings

The 2009 SPW EIS/EIR determined surface water quality impacts would be less than significant. However, the impact from contaminant leaching would be significant and unavoidable. Based on the analysis in the 2009 SPW EIS/EIR, impacts on surface water quality during construction would be less than significant. Because of historical industrial land uses on the SPW Project Site, there is a potential for exposure of contaminated soil or groundwater. Construction activities could inadvertently spread contaminated soil and expose contaminants to groundwater. Implementation of **MM-GW-1** and **MM-GW-2** would reduce potential impacts to less-than-significant levels.

During operation, LAHD would comply with the NPDES discharge permit limits. The Water Quality Certification would define a *mixing zone* around dredging and construction activities. During dredge and fill activities, an integrated, multiparameter monitoring program would be implemented by LAHD's Environmental Management Division, in conjunction with both USACE and RWQCB permit requirements, wherein dredging performance is measured *in situ*. Each tenant operating cruise ships in the SPW Project area would conform to applicable requirements of the Non-Point Source Pollution Control Program. The 2009 SPW EIS/EIR also determined there would be the potential for an increase in accidental spills and illegal discharges because of increased vessel calls at the facility, but improvements in water quality were observed despite increased use of the harbor, due to tightened regulations and improved enforcement. Leaching of contaminants, such as copper from antifouling paint, could also increase pollutant loading in the harbor, which is listed as impaired for copper. However, it was determined there were no available mitigation measures to eliminate the leaching of contaminants from antifouling paint on vessel hulls; therefore, there would be a significant residual impact from leaching of antifouling paints on vessel hulls. All other surface water quality impacts were determined to be less than significant.

Summary of 2016 Addendum Findings

The 2016 SPPM Addendum determined that the San Pedro Public Market (SPPM) Project would not result in new significant impacts on surface and groundwater quality, sediment, and oceanography,

substantially increase the severity of a previously analyzed impact, nor require new mitigation measures that were not already evaluated in the 2009 SPW EIS/EIR.

Impacts of the Proposed Project

Construction

Proposed Project construction activities, such as grading, stockpiling of spoil materials, and other construction-related earth-disturbing activities, could result in short-term water quality impacts associated with soil erosion and subsequent sediment transport to adjacent properties, roadways, or watercourses via storm drains. Construction activities could also generate dust, settlement, litter, oil, and other pollutants that could temporarily contaminate water runoff from the Proposed Project site.

Construction activities must comply with the Construction General Permit, the Los Angeles Regional MS4, and local regulations, which contain standards to ensure that water quality is not degraded. As part of the Construction General Permit, standard erosion-control measures and BMPs would be identified in a SWPPP and implemented during construction to reduce sedimentation of waterways and loss of topsoil. The Proposed Project would, in accordance with the Construction Stormwater General Permit, implement an SWPPP that incorporates BMPs, such as sediment basins, traps and fabric filter fences, or straw bale barriers, to control runoff of eroded soils and pollutants. The SWPPP also would incorporate monitoring requirements intended to minimize potential impacts and verify BMP effectiveness. These measures, combined with the low potential for erosion and remediation of sites prior to construction, would limit the soil and contaminant loading to Los Angeles Harbor. Compliance with the City's grading permit and the latest Construction General Permit would require use of BMPs to restrict soil erosion and sedimentation and restrict non-stormwater discharges from the construction site and the release of hazardous materials. As a performance standard, BMPs to be selected would represent the best-available technology that is economically achievable and the best conventional pollutant-control technology to reduce pollutants.

Other potential water quality impacts include chemical spills into storm drains or groundwater aquifers, if proper minimization measures were not implemented. However, BMPs would be implemented to reduce pollutants in stormwater and other nonpoint-source runoff, as required by the Construction General Permit. Measures range from source control to treatment of polluted runoff. BMPs include watering active construction areas to control dust generation during earthmoving activities and installing erosion-control measures (e.g., silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes) to prevent silt runoff to public roadways, storm drains, or waterways. No disturbed surfaces would be left without erosion-control measures in place during the rainy season, which generally occurs between October 15 and April 15. In addition to compliance with the Construction General Permit, the Proposed Project would be required to comply with local stormwater and construction site–runoff requirements.

During excavation activities, construction dewatering in areas of shallow groundwater may be required, which could result in the exposure of pollutants from spills or contaminated soils that may contaminate groundwater. Concentrations of total petroleum hydrocarbon in groundwater meet the criteria for closure under the low-threat closure policy. Total petroleum hydrocarbon concentrations would not affect anticipated beneficial use of affected water, and compounds would attenuate naturally. However, existing concerns are associated with contaminated onsite soil, which may be disturbed during construction and adversely affect water quality. However, dewatering would be

conducted on a one-time or temporary basis. If dewatering were to result in discharge into surface waters, then the contractor would notify the Los Angeles RWQCB. The SWPPP would include a dewatering plan, which would establish measures to prevent/minimize sediment and contaminant releases into groundwater during excavation. Compliance with dewatering requirements would prevent potential water quality impacts on surface waters and ensures that proper treatment measures would be implemented prior to discharge.

Small amounts of construction-related dewatering are covered under the Construction General Permit. In the event of dewatering during construction activities or before dewatering to surface water via a storm drain, the contractor would obtain coverage under the latest Construction General Permit from the Los Angeles RWQCB. Coverage under the Construction General Permit typically includes dewatering activities as authorized non-stormwater discharges, provided dischargers prove the quality of water to be adequate and unlikely to affect beneficial uses. Dewatering would also be consistent with the appropriate NPDES waste-discharge requirements for the region, such as the Tentative Order for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties. All requirements of dewatering compliance would be met to ensure that the Proposed Project does not affect water quality.

As required, the Proposed Project would comply with Los Angeles Regional MS4 requirements and the Construction General Permit, and would implement a SWPPP and the associated erosion-control measures. The SWPPP would identify standard stormwater control measures and BMPs to be implemented during construction to reduce pollutants in waterways as required by MS4 and NPDES permits. Compliance with these stormwater requirements would ensure that construction activities do not result in a violation of water quality standards or waste discharges requirements, or otherwise result in water quality degradation. However, soil disturbances as part of Proposed Project implementation could expose contaminated soil, which may adversely affect water quality. Although no excavations that might encounter contaminated soil would be completed as part of the Proposed Project, onsite operations would be significantly affected due to historical industrial land uses. Therefore, with implementation of **MM-GW-1** and **MM-GW-2**, the Proposed Project would not create a new impact nor increase the severity of a previously identified impact. Implementation of the 2009 SPW EIS/EIR's **MM-GW-1** and **MM-GW-2** would reduce potential impacts to less-than-significant levels.

The Proposed Project would be subject to existing regulations requiring the implementation of a SWPPP and stormwater control BMPs, which would ensure that impacts related to the Project would be less than significant with mitigation, consistent with the findings of the 2009 SPW EIS/EIR and 2016 SPPM Addendum. Proposed Project construction could add to impacts already deemed less than significant with mitigation in the 2009 SPW EIS/EIR but would not result in new significant impacts, substantially increase the severity of a previously analyzed impact, or require new mitigation measures that have not already been evaluated in the 2009 SPW EIS/EIR and 2016 SPPM Addendum. Therefore, with implementation of **MM-GW-1** and **MM-GW-2**, the Proposed Project would not create a new impact or result in a substantial increase in the severity of a previously identified impact.

Operation

The 208 E. 22nd Street Parking Lot Improvements portion of the Proposed Project would result in an increase of impervious surface on the Project Site, which would result in increased runoff rates and

volumes and associated pollutants. Impervious areas also reduce infiltration of stormwater and prevent pollutant filtration of stormwater that would otherwise occur in pervious areas. Increased storm runoff would also increase the potential for erosion and sedimentation. Increased areas of impervious surfaces, as well as increased human activity (e.g., automobile and pesticide use), can also result in increased pollutant loading to surface waters and degraded groundwater quality.

The Proposed Project would be required to comply with the City of Los Angeles's LID ordinance. LID measures include site design, pollutant source control, stormwater treatment, and flow-control measures. LID treatment measures include infiltration, "capture and reuse" or rainwater harvesting, and bioretention basins or flow-through planters.

Operations would also comply with the latest MS4 permit. In addition, standard Port of Los Angeles permit conditions would require the provision of adequate onsite waste collection, contained trash enclosures, and minimization of waste from concessions through compliance with City ordinances for single-use items and food recycling. To ensure that trash is picked up, standard BMPs would also be part of the permit conditions, and the entire site would be cleaned after each event to minimize mobilization of pollutants from concert events. The Los Angeles River Watershed Trash TMDL and the Statewide Water Quality Control Plan for Trash also require measures to limit load allocations associated with trash. Where possible, sustainable practices and products, such as biodegradable confetti, would be used during events, and care would be taken to direct the spray away from the main channel. This material, along with other trash, would be cleaned up after each event to prevent debris and microplastics from entering the storm drain system and ocean. Furthermore, implementation of **MM-BIO-7**, *Trash Management and Post-event Cleanup*, and **MM-BIO-10**, *Biodegradable Venue Products*, would ensure that trash and other debris resulting from Amphitheater events and fireworks shows would be removed from the harbor and that biodegradable products would be used to reduce impacts on nearby marine environments.

The Proposed Project would be designed and maintained in accordance with Los Angeles RWQCB water quality requirements, such as the Los Angeles Regional MS4 permit. The Proposed Project would also comply with the Construction General Permit post-construction stormwater management measures and the City of Los Angeles's LID ordinance. Consequently, potential surface water quality impacts from operation of the Proposed Project would not violate any waste-discharge requirements or otherwise substantially degrade water quality.

However, soil and groundwater in limited portions of the Project Site have been affected by hazardous substances and petroleum products from spills during historical industrial land uses. These areas are in various stages of contaminant site characterization and remediation. Hazards are further described in Section 3.6, *Hazards and Hazardous Materials*. Operations related to the Proposed Project on these sites would be significantly affected. Implementation of the 2009 SPW EIS/EIR's **MM-GW-1** and **MM-GW-2**, and new **MM-HAZ-1,** *Develop a Soil Management Plan for the 208 E. 22nd Street Parking Lot Site*, would reduce potential impacts during operation to less-than-significant levels with mitigation.

As discussed above, water quality impacts related to Proposed Project operations would be less than significant with mitigation, consistent with the findings of the 2009 SPW EIS/EIR and 2016 SPPM Addendum. Proposed Project operations could add to impacts already deemed less than significant with mitigation in the 2009 SPW EIS/EIR, but would not result in new significant impacts or substantially increase the severity of a previously analyzed impact that was not already evaluated in

the 2009 SPW EIS/EIR and 2016 SPPM Addendum. With implementation of **MM-GW-1**, **MM-GW-2**, **MM-HAZ-1**, **MM-BIO-7**, and **MM-BIO-10**, impacts during the operations phase would be less than significant.

208 E. 22nd Street Parking Lot Improvements

Improvements to the 208 E. 22nd Street Parking Lot would include paving the entirety of the 20-acre site, except for 1.92 acres of already paved parking and some landscaping along the eastern side to accommodate up to 2,600 stalls. These improvements would increase the impervious surface of the Project Site. As noted above, the Proposed Project would comply with LID requirements. Based on soil conditions, an infiltration basin or a flow-through planter/sand filter are proposed to treat stormwater. However, historical site characterizations and remedial investigations have indicated that soil and groundwater at the site have been contaminated; affected soil and groundwater exist in limited areas of the Proposed Project. Locations of historic hazards on the Project Site are further described in Section 3.6. Implementation of the 2009 SPW EIS/EIR's **MM-GW-1** and **MM-GW-2**, along with the development and implementation of a Soil Management Plan (SMP) for the 208 E. 22nd Street Parking Lot site (**MM-HAZ-1**), would reduce potential impacts to a less-than-significant level.

Amphitheater

As part of the Amphitheater, a 50,000-square-foot artificial-turf lawn would be installed. The lawn is proposed to utilize a FieldTurf™ product or equivalent, which is specifically designed for festivals and event spaces. The turf fibers are made of ultraviolet-stabilized polyethylene with polyurethane-coated backing layers, which is 100-percent permeable. Unlike an artificial sport field or pitch, ground rubber infill is not used; instead, the infill materials would be sand, ground cork, or granulated olive cores or some combination thereof (Brown pers. comm.). With use of these materials and by avoiding ground rubber, the amount of polyfluoroalkyl substances would be inconsequential, thus addressing comments raised during the Notice of Preparation period. Additionally, the artificial turf would be vacuumed regularly and intermittently washed down (approximately four times per year). Because the artificial lawn would be a permeable surface to promote infiltration, water quality benefits would be achieved via percolation and filtration through the underlying soil. Implementation of the 2009 SPW EIS/EIR's **MM-GW-1** and **MM-GW-2** would reduce potential water quality impacts to a less-than-significant level.

Fireworks

Fireworks may be launched from a barge at approximately 25 Amphitheater events per year and may last up to 20 minutes. According to the Los Angeles RWQCB, after fireworks explode, they can release into the water some polluting chemicals and materials, including aluminum, antimony, barium, carbon, calcium, chlorine, cesium, copper, iron, potassium, lithium, magnesium, oxidizers (including nitrates, chlorates, and perchlorates), phosphorus, sodium sulfur, strontium, titanium, and zinc. Particulate matter and debris from exploded fireworks and unignited pyrotechnic material, as well as paper, cardboard, wires, and fuses from ignited pyrotechnic material, can also adversely affect the quality of the surrounding waters. Residual firework pollutants discharged into surface waters constitute discharge of a pollutant from a point source. The Los Angeles RWQCB adopted a General NPDES Permit intended to authorize discharges of residual firework pollutants from public fireworks displays into surface waters in Los Angeles and Ventura Counties. Prior to the public display of

fireworks and residual firework pollutant discharges to surface waters, coverage under the General NPDES Permit must be obtained. Complying with the permit requires developing a list of BMPs that must be approved by the Los Angeles RWQCB. Therefore, with compliance with the General NPDES Permit, water quality impacts would be less than significant.

Previous Mitigation Measures Applicable to the Proposed Project

MM-GW-1 and **MM-GW-2** from the 2009 SPW EIS/EIR would apply to the Proposed Project.

New Mitigation Measures Applicable to the Proposed Project

MM-HAZ-1: Develop a Soil Management Plan (SMP) for the 208 E. 22nd Street Parking Lot Site.

The Proposed Project sponsor will retain the services of a qualified environmental engineering firm to prepare and implement an SMP during site-preparation and grading activities. The SMP will be designed to protect human health and the environment and will include protocols, measures, and techniques for the proper handling, management, and disposition of affected soils found on site and in any areas of offsite work during site preparation and grading activities. The SMP will also be designed to protect workers and offsite receptors during site activities and ensure that proper characterization, management, and/or disposal of contaminated environmental media is above applicable environmental-screening levels. A commercial environmental engineering firm with demonstrated expertise and experience in the preparation of SMPs will prepare the SMP, which will be stamped by an appropriately licensed professional. The SMP will be implemented throughout all ground-disturbing work.

Impacts would be significant; however, **MM-BIO-7**, **MM-BIO-10**, and **MM-HAZ-1** would apply to the Proposed Project and reduce impacts to a less-than-significant level. No new or substantially more severe significant impacts would occur.

Significance after Mitigation

The Proposed Project, including construction and operation of the 208 E. 22nd Street Parking Lot, would not lead to a new significant environmental effect nor a substantial increase in the severity of previously identified significant effects. Implementation of the 2009 SPW EIS/EIR's **MM-GW-1** and **MM-GW-2**, along with new **MM-HAZ-1**, **MM-BIO-7**, and **MM-BIO-10**, would reduce potential impacts to a less-than-significant level.

Impact HYD-2. Would the Proposed 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 that would result in substantial erosion or siltation on or off site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?

Summary of 2009 San Pedro Waterfront Environmental Impact Statement/Environmental Impact Report Findings

The 2009 SPW EIS/EIR found that the existing drainage on the SPW Project site would be maintained. Site elevations would remain generally the same with the SPW Project, but construction of the North, Downtown, and 7th Street Harbors would decrease the land surface area on which precipitation would fall. There would be a slight decrease in impervious surface in the SPW Project area from the creation of parks, primarily at the Outer Harbor Cruise Ship Terminal, San Pedro Park, and Fisherman's Park. SPW Project site grading would direct runoff from the site to storm drains designed for a 10-year event, which is the standard design capacity for the storm-drain systems in the vicinity of the harbor. Runoff associated with larger storm events (e.g., 50- or 100-year events) could exceed the capacity of the storm-drain system, resulting in temporary ponding of water on site. However, because the SPW Project site terrain is flat and the runoff velocity would not be increased by construction activities, the SPW Project would not increase the risk of flooding or severity of flooding impacts relative to the baseline conditions.

Summary of 2016 Addendum Findings

The 2016 Addendum determined that the SPPM Project would not result in new significant impacts on water quality, sediment, and oceanography, substantially increase the severity of a previously analyzed impact, nor require new mitigation measures that were not already evaluated in the 2009 SPW EIS/EIR.

Impacts of the Proposed Project

Construction

During Proposed Project construction, earth-disturbing activities (e.g., grading, stockpiling) could result in short-term water quality impacts associated with soil erosion and subsequent sediment transport. Sediment transport to local drainage facilities, such as drainage inlets and storm drains, could result in reduced storm-flow capacity, which could further result in localized ponding or flooding during storm events. During construction, stormwater drainage patterns could be temporarily altered. However, the Proposed Project would implement BMPs required in the Proposed Project's SWPPP to minimize the potential for erosion or siltation in nearby storm drains and temporary changes in drainage patterns during construction. During construction, provisions for erosion- and stormwater-control measures would be implemented, as required by City of Los Angeles Municipal Code. Construction BMPs (e.g., sediment basins and traps, filter berms, diversion berms) would capture and infiltrate small amounts of sheetflow into the ground such that offsite runoff from the construction site would not increase, ensuring that drainage patterns would not be significantly altered. Erosion- and stormwater-control measures (e.g., silt fences, staked straw wattles, geofabric)

required by the Construction General Permit would also limit site runoff during construction and would not alter stormwater drainage patterns. BMPs would be implemented to control construction-site runoff by diverting runoff to sediment- and stormwater-control devices used to divert clean water from entering a disturbed area, ensure proper stormwater control and treatment, and reduce the discharge of pollution to the storm-drain system. Construction of the Proposed Project would not substantially alter the existing drainage pattern of the area in a manner that would result in substantial erosion or siltation, nor increase the rate or amount of surface runoff in a manner that would result in flooding on or off site. Therefore, Proposed Project construction would not result in an exceedance of drainage system capacities, and the associated impact would be less than significant.

Drainage and stormwater impacts related to Proposed Project operations would be less than significant, consistently with the findings of the 2009 SPW EIS/EIR and 2016 SPPM Addendum. Proposed Project construction would not result in new significant impacts, substantially increase the severity of a previously analyzed impact, nor require new mitigation measures that have not already been evaluated in the 2009 SPW EIS/EIR and 2016 SPPM Addendum. Proposed Project construction impacts would be less than significant.

Operation

Stormwater from the Project Site currently indirectly drains to harbor waters via a storm-drain system. Implementation of the Proposed Project would not modify the site's existing drainage patterns. The installation of artificial turf and LID compliance through infiltration would reduce runoff rates and volumes. Green spaces and garden areas would minimize stormwater-runoff rates and volume and would treat stormwater runoff through biological uptake. Stormwater runoff at the site would comply with applicable LID requirements, including the City of Los Angeles's LID ordinance and the Los Angeles Regional MS4 permit. Adequate drainage capacity would be maintained based on existing and proposed improvements. All drainage facilities would be designed to meet City of Los Angeles standards and Port of Los Angeles guidelines. The Proposed Project would have no impact with respect to exceeding capacity of the stormwater-drainage system, nor would it provide a substantial source of polluted runoff. To meet federal, state, and local requirements for water quality treatment and flood control, stormwater-management facilities would be maintained. Therefore, Proposed Project operations would not result in an exceedance of drainage-system capacities nor provide substantial additional sources of polluted runoff, and the associated impact would be less than significant.

Drainage and stormwater impacts related to Proposed Project operations would be less than significant, consistently with the findings of the 2009 SPW EIS/EIR and 2016 SPPM Addendum. Proposed Project operations would not result in new significant impacts, substantially increase the severity of a previously analyzed impact, nor require new mitigation measures that have not already been evaluated in the 2009 SPW EIS/EIR and 2016 SPPM Addendum. Proposed Project operational impacts would be less than significant.

208 E. 22nd Street Parking Lot

Generally, the entire 18.1 acres would be paved to accommodate up to 2,600 stalls with the exception of 1.92 acres of already paved parking and landscaping along the eastern side. This would require removal of the existing Red Car maintenance facility, loading platform, rail, and parking lot along Miner Street and the Pacific Performance Racing building at the corner of Harbor Boulevard and

22nd Street; the pump station at Harbor Boulevard and 22nd Street would remain in place. An infiltration basin on the western side of the parking lot is proposed to treat stormwater. Ultimately, drainage would be improved, and impeded or redirected flood flows would be reduced. The parking lot improvements would comply with LID requirements and would require utility work and site regrading and paving. Site grading would require import of soil and pavement to cap the area of contaminated soils. During construction, BMPs would be implemented to control construction-site runoff to ensure proper stormwater control and treatment and reduce the discharge of pollution to the storm-drain system, as required by the Construction General Permit and described in the Proposed Project's SWPPP. As required by **MM-HAZ-1**, an SMP would be implemented throughout all ground-disturbing work, and drainage patterns would be similar to those under existing conditions. Therefore, construction and operation of the 208 E. 22nd Street Parking Lot would not result in an exceedance of drainage-system capacities nor provide substantial additional sources of polluted runoff, and the associated impact would be less than significant with mitigation.

Amphitheater

The Amphitheater would occupy approximately 2.1 acres, including a 50,000-square-foot area consisting of an artificial lawn. During construction, BMPs would be implemented to control construction-site runoff, as required by the Construction General Permit. The artificial lawn would be a permeable surface to promote infiltration. As a result, stormwater-runoff rates and volume would be managed and stormwater runoff treated through filtration via the underlying soil cover. Infill materials would include sand, ground cork, or granulated olive cores or some combination. LID through infiltration would reduce runoff rates and volumes. Stormwater runoff would comply with applicable LID requirements, including the City of Los Angeles's LID ordinance and the Los Angeles Regional MS4 permit. Therefore, construction and operation of the Amphitheater would not result in an exceedance of drainage-system capacities nor provide substantial additional sources of polluted runoff, and the associated impact would be less than significant.

Previous Mitigation Measures Applicable to the Proposed Project

No mitigation measures regarding drainage patterns were included in the 2009 SPW EIS/EIR or the 2016 SPPM Addendum.

New Mitigation Measures Applicable to the Proposed Project

MM-HAZ-1 would apply to the Proposed Project.

Significance after Mitigation

The Proposed Project, including the 208 E. 22nd Street Parking Lot, would not lead to a new significant environmental effect nor a substantial increase in the severity of previously identified significant effects. Implementation of **MM-HAZ-1** would ensure that residual impacts are reduced to a less-than-significant level.

3.7.8 Alternatives Impact Determination

3.7.8.1 Alternative 1 (No Project)

Alternative 1 is defined as a No Project Alternative, where conditions would remain based on the previously approved projects in both the 2009 SPW EIS/EIR and 2016 SPPM Addendum.

Alternative 1 would implement a SWPPP and incorporate BMPs to ensure that all erosion, runoff, and drainage impacts during construction and operation would be less than significant. Copper from antifouling paint from boats in the harbor could result in increased pollutant loading in the harbor. However, it was determined that there are no available mitigation measures beyond legal requirements to eliminate leaching of contaminants from antifouling paint on vessel hulls. Therefore, impacts would be significant and unavoidable. No new or substantially more-severe significant impacts would occur compared to the 2009 SPW EIS/EIR analysis. However, development under this alternative would require implementation of **MM-GW-1** and **MM-GW-2** from the 2009 SPW EIS/EIR.

3.7.8.2 Alternative 2 (Half-Capacity Amphitheater)

Alternative 2 is an Amphitheater with a similar build to the Proposed Project, with an anticipated maximum capacity of 3,100 patrons per event. Construction and operational activities would remain similar to those of the Proposed Project, but include fewer attendees. Reducing the seating by half would not substantially affect hydrologic or water quality conditions; therefore, impacts would be similar to those of the Proposed Project. Alternative 2 would implement a SWPPP and incorporate BMPs to reduce potential erosion, runoff, and drainage impacts during construction and operation. However, soil and groundwater in limited portions of the Project site have been affected by hazardous substances, and operations on these sites would be significant. With implementation of **MM-GW-1** and **MM-GW-2** from the 2009 SPW EIS/EIR and new **MM-HAZ-1**, **MM-BIO-7**, and **MM-BIO-10**, impacts would be less than significant.

3.7.9 Impact Summary

Table 3.7-3 summarizes the Proposed Project's impacts with respect to hydrology and water quality, which are described in detail in Section 3.7.7.1 above. As presented in Table 3.7-3, the Proposed Project's impacts would include newly significant impacts, but no new significant or substantially more-severe impacts than previously analyzed.

For each type of potential impact, Table 3.7-3 describes the impact, notes the impact determinations, describes any applicable MMs, and notes the residual impacts (i.e., the impact remaining after mitigation). All impacts, whether significant or not, are included in this table.

Table 3.7-3. Summary of Potential Impacts on Hydrology and Water Quality Associated with the Proposed Project

Environmental Impacts	Impact Determination	MM(s)	Impact After Mitigation
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	**Construction** The 2009 SPW EIS/EIR findings of a less-than-significant impact for surface water quality and a significant impact for groundwater quality during construction remain valid for the Proposed Project.	**Construction** **MM-GW-1** and **MM-GW-2** from the 2009 SPW EIS/EIR would apply to the Proposed Project.	**Construction** No new or substantially more-severe significant impacts would occur during construction. Implementation of **MM-GW-1** and **MM-GW-2** would reduce impacts to less-than-significant levels.
	Operation Surface water quality impacts associated with the Proposed Project would be less than significant, and groundwater quality impacts would be significant.	**Operation** **MM-GW-1** and **MM-GW-2** from the 2009 SPW EIS/EIR and new **MM-HAZ-1**, **MM-BIO-7**, and **MM-BIO-10** would apply to the Proposed Project.	**Operation** No new or substantially more-severe significant impacts would occur. Implementation of **MM-GW-1**, **MM-GW-2**, **MM-HAZ-1**, **MM-BIO-7**, and **MM-BIO-10** would reduce impacts to less-than-significant levels.
Impact HYD-2: Substantially alter the existing drainage pattern of the site or area in a manner that would: (1) result in substantial erosion or siltation; (2) substantially increase the rate or amount of surface runoff in a manner that would result in flooding; (3) create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems; or (4) impede or redirect flood flows.	**Construction** The 2009 SPW EIS/EIR findings of less-than-significant impacts during construction remains valid for the Proposed Project.	**Construction** New **MM HAZ-1** would apply to the Proposed Project.	**Construction** No new or substantially more-severe significant impacts would occur. Implementation of **MM-HAZ-1** would reduce impacts to less-than-significant levels.
	Operation The 2009 SPW EIS/EIR findings of less-than-significant impacts during operations remains valid for the Proposed Project.	**Operation** No mitigation is required.	**Operation** No new or substantially more-severe significant impacts would occur during operations.
Alternative 1 – No Project Alternative			
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise	**Construction** The 2009 SPW EIS/EIR findings of a less-than-significant impact for	**Construction** **MM-GW-1** and **MM-GW-2** from the 2009 SPW EIS/	**Construction** No new or substantially more severe significant

Environmental Impacts	Impact Determination	MM(s)	Impact After Mitigation
substantially degrade surface or groundwater quality.	surface water quality and significant impact for groundwater quality during construction remain valid for this alternative.	EIR would apply to this alternative.	impacts would occur during construction. Implementation of **MM-GW-1** and **MM-GW-2** would reduce groundwater impacts to less-than-significant levels.
	Operation Surface water quality impacts associated with this alternative would be less than significant and groundwater quality impacts would be significant.	**Operation** **MM-GW-1** and **MM-GW-2** would apply to this alternative.	**Operation** No new or substantially more severe significant impacts would occur. Implementation of **MM-GW-1** and **MM-GW-2** would reduce impacts to less-than-significant levels.
Impact HYD-2: Substantially alter the existing drainage pattern of the site or area in a manner that would: (1) result in substantial erosion or siltation; (2) substantially increase the rate or amount of surface runoff in a manner that would result in flooding; (3) create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems; or (4) impede or redirect flood flows.	**Construction** The 2009 SPW EIS/EIR findings of a less-than-significant impact remain valid for this alternative.	**Construction** No mitigation is required.	**Construction** No new or substantially more-severe significant impacts would occur during construction.
	Operation The 2009 SPW EIS/EIR findings of a less-than-significant impact during operations remain valid for this alternative.	**Operation** No mitigation is required.	**Operation** No new or substantially more-severe significant impacts would occur during operations.
Alternative 2 – Half-Capacity Amphitheater Alternative			
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	**Construction** Impacts associated with this alternative during construction would be significant.	**Construction** **MM-GW-1** and **MM-GW-2** from the 2009 SPW EIS/EIR would apply to this alternative.	**Construction** No new or substantially more-severe significant impacts would occur during construction. Implementation of **MM-GW-1** and **MM-GW-2** would reduce impacts to less-than-significant levels.

Environmental Impacts	Impact Determination	MM(s)	Impact After Mitigation
	Operation Impacts associated with this alternative during operation would be significant.	**Operation** **MM-GW-1** and **MM-GW-2** from the 2009 SPW EIS/ EIR and new **MM-HAZ-1**, **MM-BIO-7**, and **MM-BIO-10** would apply to this alternative.	**Operation** No new or substantially more-severe significant impacts would occur during operation.
Impact HYD-2: Substantially alter the existing drainage pattern of the site or area in a manner that would (1) result in substantial erosion or siltation; (2) substantially increase the rate or amount of surface runoff in a manner that would result in flooding; (3) create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems; and (4) impede or redirect flood flows.	**Construction** Impacts associated with this alternative during construction would be less than significant.	**Construction** New **MM HAZ-1** would apply to the Proposed Project.	**Construction** No new or substantially more-severe significant impacts would occur. Implementation of **MM-HAZ-1** would reduce impacts to less-than-significant levels.
	Operation Impacts associated with this alternative during operation would be less than significant.	**Operation** No mitigation is required.	**Operation** No new or substantially more-severe significant impacts would occur during operations.

EIR = Environmental Impact Report; EIS = Environmental Impact Statement; MM = mitigation measure; SPPM = San Pedro Public Marketplace; SPW = San Pedro Waterfront

3.7.9.1 Mitigation Monitoring Program

The mitigation monitoring program outlined in Table 3.7-4 is applicable to the Proposed Project.

Table 3.7-4. Mitigation Monitoring Program

MM-GW-1: Complete Site Remediation LAHD will remediate all contaminated soils within Proposed Project boundaries. Remediation will occur in compliance with federal, state, and local regulations. Soil remediation will be completed such that contamination levels are below health-screening levels established by the California Office of Environmental Health Hazard Assessment and/or applicable action levels established by the lead regulatory agency with jurisdiction over the site. Use of localized soil capping/paving, combined with agency-approved deed restrictions, may be an acceptable remediation measure in upland areas and/or for risk-based soil assessments, but would be subject to the discretion of the lead regulatory agency.	
Timing	Prior to or in conjunction with Proposed Project demolition, grading, and construction

Methodology	Existing groundwater contamination throughout the Proposed Project boundary will continue to be monitored and remediated, simultaneously and/or subsequently to site redevelopment, in accordance with direction provided by RWQCB and/or the Department of Toxic Substance Control.
MM-GW-2: Create a Contamination Contingency Plan LAHD will prepare a contamination contingency plan for nonspecific facilities. The Proposed Project site has a long history of industrial activity, so it is possible that future construction activity could encounter historical soil or groundwater contamination that had not been previously reported to regulatory agencies.	
Timing	Prior to the start of construction activities
Methodology	The contingency plan will be implemented to address previously unknown contamination that may be uncovered during demolition, grading, and construction.
MM-HAZ-1: Develop a Soil Management Plan (SMP) for the 208 E. 22nd Street Parking Lot Site The Proposed Project sponsor will retain the services of a qualified environmental engineering firm to prepare and implement, during site preparation and grading activities, an SMP. The SMP will be designed to protect human health and the environment and will include protocols, measures, and techniques for the proper handling, management, and disposition of affected soils found on site and in any areas of offsite work during site-preparation and grading activities. The SMP will also be designed to protect workers and offsite receptors during site activities and ensure that the proper characterization, management, and/or disposal of contaminated environmental media is above applicable environmental-screening levels. A commercial environmental engineering firm with demonstrated expertise and experience in the preparation of SMPs will prepare the SMP, which will be stamped by an appropriately licensed professional. The SMP will be implemented throughout all ground-disturbing work.	
Timing	Prior to issuance of a grading permit and start of construction activities
Methodology	The SMP would protect human health and the environment by including protocols, measures, and techniques for the proper handling, management, and disposition of contaminated soils that result from Proposed Project implementation. The SMP would protect workers and offsite receptors during site activities and ensure the proper characterization, management, and/or disposal of contaminated media.
MM-BIO-7: Post-Event Cleanup • To prevent trash and debris produced by Amphitheater events from entering nearby waters and causing harm to sensitive marine environments and species, a Standard Operating Procedure (SOP) will be developed for post-event cleanup. At a minimum, the SOP must include covered trash receptacles located near the harbor to deter animals (e.g., gulls) from easily accessing litter and to prevent wind-blown trash from entering the harbor. • Following any events at the Amphitheater, trash will be removed from all venue locations as soon as practicable and no later than 4 hours following the event, including areas in the Amphitheater, parking lots, parks, surrounding walkways and open areas. Trash and debris will be properly disposed of in accordance with all applicable regulations.	
Timing	Prior to and immediately following events; all cleanup must be completed as soon as practicable, and no later than 4 hours following the event.
Methodology	Per SOP for post-event cleanup.

MM-BIO-10: Biodegradable Venue Products Wherever reusable, compostable, and/or recyclable products are infeasible or not required by regulations, event organizers will invest in biodegradable products (e.g., confetti, decorations, packaging, single-use items) for all Amphitheater events to prevent injury and damage to surrounding sensitive marine environments and protect species from harmful materials (e.g., plastics, mylar, metals). Event organizers will comply with the City of Los Angeles Comprehensive Plastics Reduction Program and the LAHD Zero Waste Plan with the incorporation of Ordinance 187718, *Zero Waste at City Facilities and Events on City Property*, once adopted. Ordinance 187718 contains extensive provisions including, but not limited to, the ban of single-use plastics and expanded polystyrene foam (or Styrofoam™) and the reduction of disposable foodware and accessories.	
Timing	Prior to and during events
Methodology	Invest in biodegradable products per guidance in **MM-BIO-10**.

LAHD = Los Angeles Harbor Department; RWQCB = Regional Water Quality Control Board; SMP = Soil Management Plan; SOP = Standard Operating Procedure.