Section 3.13
Water Quality, Hydrology, and Sediments

SECTION SUMMARY

This section addresses potential impacts on water quality, wastewater, sediments, and water circulation that could result from construction and operation of the Proposed Project and alternatives.

Section 3.13, Water Quality, Sediments, and Oceanography, provides the following:

1. A description of existing conditions;
2. A discussion on the methodology used to determine whether the Proposed Project or an alternative would result in an impact;
3. An impact analysis of both the Proposed Project and alternatives; and
4. A description of any mitigation measures proposed to reduce any potential impacts, as applicable.

Key Points of Section 3.13:

Water quality impacts from construction of the Proposed Project could include increased turbidity (reduced water clarity and light transmittance), increased sediment suspension (or suspended solids), increased dissolved or particulate contaminants (that were previously bound to dredged sediments or in pore water), and reduced dissolved oxygen (from suspension of sediments with low oxygen). Standard controls imposed on construction projects by permits and the Port's construction guidelines would reduce such effects, and impacts of construction would be less than significant under CEQA and NEPA.

Impacts on water quality during operations could occur from stormwater runoff, atmospheric (aerial) deposition of contaminants generated by operational activities, discharges of contaminants from vessels during their transit through the Harbor, and accidental spills. With implementation of international, federal, state, and local regulations and tariffs, the potential for such effects would be low, and impacts would be less than significant under CEQA and NEPA.

Construction and operation of the Proposed Project would not increase the number of people or amount of property exposed to potential flooding on the proposed Project site. Site topography and the stormwater management system at the terminal would be essentially unchanged from baseline conditions. Accordingly, construction and operation would result in less than significant impacts from flooding under CEQA and NEPA.

The Proposed Project would operate on the same footprint as the baseline condition, and the Project site would continue to be largely paved. Accordingly, construction and operation of the Proposed Project would not accelerate natural processes of wind and water erosion or soil deposition into Los Angeles Harbor, and impacts would be less than significant under CEQA and NEPA.

3.13.1 Introduction

This section addresses the potential impacts on water quality, sediments, and circulation that would result from implementing the Proposed Project or any alternatives. This section also addresses surface water hydrology and potential for flooding impacts.

3.13.2 Environmental Setting

3.13.2.1 Regional Setting

The Proposed Project is located at the Berths 121-131 Terminal in the West Basin of the Port of Los Angeles (the Port, Figure 1-1), an area that supports industrial activities related to international cargo handling. Los Angeles Harbor is considered the receiving water area for the Dominguez Watershed, which drains approximately 132 square miles (342 square kilometers) of southern Los Angeles County and empties into the western side of San Pedro Bay. The Port consists of approximately 7,500 acres of land and water, approximately 3,200 acres of which is open water. In addition to extensive industrial cargo facilities, the Port supports commercial and recreational water-related activities such as cruise ships, sportfishing and commercial fishing, recreational boating, and maritime support facilities.

The Port of Los Angeles has been an active port for approximately 100 years and, in the course of its development, has undergone significant physical modifications through dredging and filling projects and the construction of breakwaters, fills, and other structures. Currently, waters of the Port are subjected to continuous vessel traffic and periodic in-water construction activities.

The San Pedro Bay Port Complex includes both Los Angeles Harbor and Long Beach Harbor. The two harbors function oceanographically as one unit due to their shared water connections within San Pedro Bay. The Port Complex oceanographic unit has two major hydrologic divisions: marine and freshwater. The marine hydrologic division is primarily influenced by the Southern California coastal marine environment known as the Southern California Bight. The main freshwater input to the Los Angeles side of the Complex is the Dominguez Channel, but effluent from the Terminal Island Water Reclamation Plant (TIWRP), sheet runoff, storm drain discharges from several large City and County drains, and spillover from Lake Machado also contribute fresh water. The main input to the Long Beach side of the Complex is the Los Angeles River.

The waters of Los Angeles Harbor are under the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB) Basin Plan and applicable statewide plans, which serve as the state Water Quality Management Plan. The current beneficial uses of the waters of Inner Los Angeles Harbor (which includes the Project site), as identified in the *Water Quality Control Plan: Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan; LARWQCB 2014, as amended), include: industrial service supply, navigation, noncontact water recreation, commercial and sportfishing, marine habitat, and preservation of rare and endangered species. Section 303(d) of the Clean Water Act (CWA) requires states (as well as territories and authorized tribes) to develop lists of "impaired waters," or those that fail to meet applicable water quality standards. The CWA also requires the establishment of total maximum daily loads (TMDLs) for impaired water bodies. TMDLs are normally set in terms of long-term mass loading levels, and the state and U.S. Environmental Protection Agency (EPA) work with stakeholders to weigh many factors in setting waste

load and load allocations. A TMDL is defined as "the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background" (40 CFR Section 130.2) such that the capacity of the water body to assimilate pollutant loadings is not exceeded. Upon establishment of TMDLs, the state is required to incorporate the TMDLs along with appropriate implementation measures into the state Water Quality Management Plan (40 CFR Sections 130.6(c)(1), 130.7). TMDLs are divided among existing (and potentially future) loading sources through an allocation process.

Water, sediment, and fish tissue data for the Port have been evaluated by the LARWQCB and EPA over the years as part of the assessment of impaired water bodies of the nation under CWA Section 303(d). The most recent Section 303(d) list identifies numerous impairments in harbor waters (SWRCB 2018). California listing policy allows for the inclusion of pollutants not yet identified by listing designated use impairments such as sediment toxicity, beach closures, and benthic community effects. The Los Angeles/Long Beach Inner Harbor waters, including the West Basin, are listed for: sediment toxicity and benthic community effects; the pesticide DDT and polychlorinated biphenyls (PCBs) in fish tissue; the polynuclear aromatic hydrocarbons (PAHs) benzo(a)pyrene and chrysene in sediments; and the metals copper and zinc in sediments.

The LARWQCB has developed TMDLs to address the identified impairments and has amended the Basin Plan to incorporate those TMDLs. The TMDL for bacteria became effective in 2005 and the TMDL for toxics (the remaining elements on the list of impairments) took effect in March 2012 and was revised in 2022; the revision has been approved at the state level and is awaiting final approval by EPA. The Harbor Toxics TMDL is being implemented by a working group of responsible parties, including the LAHD, that undertakes comprehensive monitoring and special studies required by the TMDL.

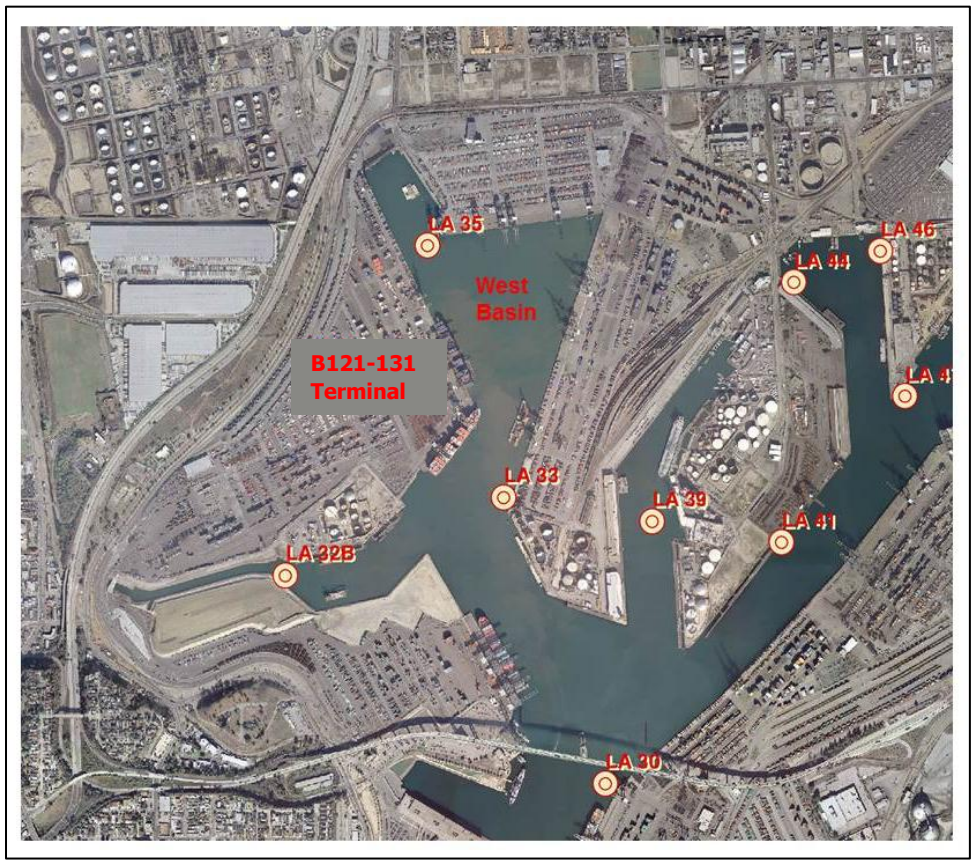
The water and sediment quality parameters that could be affected directly by the Proposed Project and alternatives include dissolved oxygen (DO), hydrogen ion concentration (or acidity/alkalinity [pH]) turbidity/transparency, oil and grease, and contaminants. Water and sediment quality parameters that could be indirectly affected by the Proposed Project and alternatives include nutrients and contaminants. Nutrients and contaminants in the sediments could be resuspended during in-water activities from wharf reconstruction and dredging operations, although there is ultimately mass removal of contaminants in the dredged sediments. Other parameters commonly used to describe marine water quality include salinity and temperature, which are relevant because of the potential effects of stormwater runoff into the West Basin.

3.13.2.2 Water Quality

Water quality conditions in Los Angeles Harbor, including the Project area, have been summarized from the Water Resources Action Plan (WRAP) (POLA and POLB 2009), results of monthly water quality sampling conducted by the Los Angeles Harbor Department in 2019 (LAHD 2021), the 2018 Biological Surveys (Wood E&IS 2021), the Regional Monitoring Coalition's 2019/2020 annual report (Anchor QEA 2020), and other sources as cited below. Use of these data to approximate conditions for the CEQA baseline year 2019 is appropriate because, as a review of the various sources indicates, water quality in the harbor changes only slowly from year to year. For some parameters, data are only collected periodically, so earlier data (e.g., from 2000 and 2008) are provided for context. Data from these studies have also been included because the reports provided analysis of spatial patterns. LAHD's monthly water quality sampling was

conducted at numerous stations in Los Angeles Harbor, including three stations (LA32B, LA33, and LA35) in the West Basin (Figure 3.12-1). The 2018 Biological Surveys' stations LA13 and LA5 roughly correspond in location to LAHD water quality stations LA32B and LA35, respectively.

Figure 3.13-1. LAHD Water Quality Monitoring Stations in the West Basin



No natural freshwater surface features occur at or near the Berths 121-131 Terminal. Surface fresh water at the site could occur as a result of stormwater runoff, occurring episodically following rain events. Runoff from the terminal is collected by a stormwater system (consisting of catch basins and drain pipes) that drains into the West Basin. Runoff water could include loadings from oils, grease, hydrocarbons, dissolved metals, and particulate matter associated with the operation of vessel loading/unloading facilities, container storage and cargo handling areas, and runoff from adjacent streets, which accumulate on the land surfaces during periods of dry weather.

Marine water quality in the harbor is primarily affected by climate, circulation (including tidal currents), and biological activity. Parameters such as salinity, pH, temperature, and transparency/turbidity are influenced primarily by large-scale oceanographic and climatic conditions, while DO and nutrients are related to both local processes and regional conditions. Results of the 2018 Biological Surveys indicated that water quality parameters in the harbor did not exhibit strong spatial trends, and variability appeared to be related more to water temperature than to location (Wood E&IS 2021).

Dissolved Oxygen

Dissolved oxygen (DO) is a measure of the amount of oxygen dissolved in water that is available to support the marine ecosystem and is used as a principal indicator of marine water quality. Concentrations vary in response to a variety of processes and conditions, such as:

- respiration of aquatic plants and other organisms;
- oxygen demand from waste discharges;
- surface water mixing through wave action;
- diffusion rates at the water surface;
- water depth; and
- disturbance of anaerobic bottom sediments (those with little or no oxygen).

The Basin Plan (LARWQCB 2014) specifies that the mean annual DO concentration of inland surface waters, including bays and estuaries, in the coastal watersheds of Los Angeles and Ventura Counties, shall be 7 milligrams per liter (mg/L, equivalent to parts per million [ppm]) or greater with no event less than 5 mg/L (except when natural conditions cause lesser concentrations), and the mean annual DO concentration in the Outer Harbor area shall be 6 mg/L or higher. Current DO concentrations throughout the harbor generally exceed the 5-mg/L standard, with average values in the 6 to 8 mg/L range; values just under 7 mg/L are typical at Inner Harbor stations such as in the West Basin (Wood E&IS 2021).

Dissolved oxygen data from LAHD's monthly sampling in 2019 at the three stations in the West Basin showed that DO concentrations ranged from 4.8 to 8.4 mg/L; the only instance of DO concentrations below the 5 mg/L standard was at the bottom of the water column at Station 35 in October (LAHD 2021). The 2018 Biological Surveys sampled two stations in the West Basin and one in the Main Channel at the entrance to the West Basin during three seasons (Wood E&IS 2021). Concentrations ranged from just under 6 mg/L near the bottom in spring to 9 mg/L just below the surface in summer. The lowest value in the project area (5.8 mg/L) was recorded at a depth of 15 meters at Station LA13, just off Berths 121-126, in May 2018.

pH

Acidity or alkalinity in liquid is expressed as hydrogen ion concentration, or pH. In the ocean, pH typically remains fairly constant due to the buffering capacity of seawater. It is affected by plant and animal metabolism, by mixing with water with different pH values from external sources and, on a small scale, by disturbances in the water column that cause redistribution of waters with varying pH levels or the resuspension of bottom sediments. In the ocean, pH levels typically range from 8.0 to 8.3 pH units.

The pH and buffering capacity at the Project site are similar to that of the ocean because the Port Complex is directly connected to and exchanges seawater with the Pacific Ocean. The LARWQCB has established an acceptable range of 6.5 to 8.5 pH units with a change in tolerance level of no more than 0.2 due to discharges (e.g., runoff from a facility) in bays or estuaries (LARWQCB 2014). Monthly sampling in 2019 at the three West Basin stations measured pH values ranging narrowly between approximately 7.9 and 8.4 pH units (LAHD 2021). The 2018 Biological Surveys reported similar pH values in the West Basin, ranging from 7.99 to 8.47 (Wood E&IS 2021).

Transparency

Transparency is a measure of water clarity or the ability of light to pass through water. Transparency can be determined by evaluating turbidity and/or transmissivity and can be measured in several ways. The methods commonly used in recent surveys of water quality in the Port Complex are transmissometry, in which an electronic instrument measures the percent of light transmission through the water; turbidimetry/nephelometry, in which an instrument measures the cloudiness of water caused by suspended particles, expressed as nephelometric turbidity units (NTUs); and total suspended solids (TSS), a chemical analysis of the amount (mass) of suspended material, including sediments and organic solids, such as algae and detritus, in a water sample expressed in mg/L.

The Los Angeles Region Basin Plan prohibits turbidity (solids) from adversely affecting beneficial uses or causing nuisances and sets allowable increases in turbidity based on ambient conditions (LARWQCB 2014). For instance, when natural turbidity is between 0 and 50 NTUs, increases cannot exceed 20%, and when turbidity is greater than 50 NTUs, increases cannot exceed 10%. The Basin Plan also allows for exceptions during issuance of Waste Discharge Requirements (WDRs).

Increased turbidity usually results in decreased transparency. Turbidity generally increases because of one or a combination of the following conditions: fine sediment from terrestrial runoff or resuspension of fine bottom sediments by currents or disturbance; algal blooms; and dredging activities. Propeller wash from vessel activity is also a source of mixing in the water column that may temporarily disturb bottom sediments and affect transparency, especially in narrower channels.

Water clarity in Los Angeles Harbor has been fairly consistent for the last 40 years, with a slight increase from 1968 to 2006 (USACE and LAHD 2008). Monthly sampling in 2019 at the three West Basin stations (Figure 3.7-1) found that light transmission ranged between approximately 0.1% and 85%, with the majority of values in the range of 50 - 75% (LAHD 2021); the 2018 Biological Surveys reported similar values in the West Basin (Wood E&IS 2021). Light transmission was typically lower near the bottom and in the surface layers, reflecting the influences of sediment resuspension and algal growth, respectively, but there was considerable spatial and temporal variability due to currents, vessel movements, and other local influences. Transparency tended to be higher in fall and winter than in spring and summer. Turbidity at the three stations generally ranged between 1 and 3 NTUs (LAHD 2021), with highest values usually recorded near the bottom.

Chemical and Biological Contaminants

Contaminants in harbor waters can originate from a number of sources in and outside Los Angeles Harbor. Potential sources of trace metals and organics include: illicit municipal and industrial wastewater discharges; stormwater runoff from drainage channels (e.g., Dominguez Channel) and storm drains; local surface and storm drain runoff within the harbor; municipal wastewater treatment effluents (i.e., TIWRP), dry weather flows; leaching from antifouling paints (applied to ship hulls to prevent growth of attached organisms, such as barnacles and mussels); petroleum or waste spills; atmospheric deposition; and resuspension of bottom sediments containing legacy (i.e., historically deposited) contaminants such as DDT and PCBs. In general, operational controls required of dischargers, and non-structural and structural controls of stormwater runoff and discharge sources have reduced the input of contaminants into the harbor over time.

A significant portion of the dissolved or particulate organic contaminants that enter Los Angeles Harbor have a low solubility in water and adsorb onto (adhere to the surface of)

particulate matter that eventually settles to the bottom and accumulates in bottom sediments. Routine maintenance dredging, capital improvement dredging, and channel deepening projects in the harbor, including the Deep Draft Navigation Improvement Program and the Port of Los Angeles Channel Deepening Project, have resulted in a net removal of contaminated sediments from the Harbor (POLA and POLB 2009). In addition, some contaminated sediments have been capped by less contaminated sediments as part of construction of landfills or shallow water habitat (e.g., Cabrillo Shallow Water Habitat), thereby isolating contaminated sediments from exchange with the overlying ocean water.

Recent port-wide studies of contaminant levels in the waters of Los Angeles Harbor (Anchor QEA 2020) included one station (IA-RW-02) in the Los Angeles Harbor Turning Basin, approximately 1.2 miles east of the project site that was sampled in September 2019. Statistical analysis indicated that water quality at that station was representative of water quality in the West Basin where the project site is located. Concentrations of metals in near-surface water at that station were very low relative to regulatory criteria for continuous or maximum exposure (i.e., California Toxics Rule [CTR]). Concentrations of chlorinated pesticides and PCBs were below detection limits.

Water quality regulations have established a set of indicator bacteria designed to be protective of human health; these include total and fecal coliform bacteria, and enterococcus. Assembly Bill 411 (AB 411) established minimum protective bacteriological standards for waters adjacent to public beaches and water-contact recreational areas. The Basin Plan also includes bacteria standards for water contact recreation with geometric mean limits for each indicator bacterium. In tests conducted during seven Harbor-wide sampling events (three wet and four dry season events) between 2006 and 2008, and during a special study in the East Basin/Consolidated Slip area in 2009, the vast majority of samples had nondetectable levels of indicator bacteria. However, bacterial concentrations in excess of AB 411 and Basin Plan criteria were recorded following storm events. With the exception of the Cabrillo Beach area adjacent to the federal breakwater in the Outer Harbor, Inner Harbor areas are more susceptible to elevated bacteria levels than the Outer Harbor, indicating that the Dominguez Channel and Inner Harbor storm drains are the likely primary source of high bacteria levels (POLA and POLB 2009). During sampling in May 2012, bacterial concentrations at the two stations off the Berths 121-131 Terminal were all well below AB 411 standards (AMEC 2012).

Atmospheric Deposition

Direct atmospheric deposition refers to air pollutants that settle directly on water bodies, whereas indirect atmospheric deposition occurs on upland areas where the pollutants collect and are later conveyed to water bodies during storm events.

The atmospheric deposition of pollutants—such as particulates, metals, phthalates, and PAHs—has been linked to pollutant loads in Chesapeake Bay and the Great Lakes (The Delta Institute 2000; Batiuk 2011). In response to such research, California air and water regulators have also begun to examine the role of atmospheric deposition in California waters (both fresh and marine). Still, only limited studies have been undertaken to measure the role of atmospheric deposition in pollutant transport or its contribution to pollutant loading in the Port Complex (POLA and POLB 2009). Deposition mechanisms are not understood for all potential pollutants, and the assessment of actual concentrations of such pollutants is not complete. The California Air Resources Board (CARB) and State Water Resources Control Board (SWRCB) are in the process of examining the need

to regulate atmospheric deposition to protect both fresh and saltwater bodies from pollution.

Indirect deposition can influence stormwater quality in urban areas, which in turn can affect water quality in receiving water bodies. Sabin et al. (2006) determined that trace metal loads from indirect deposition to land in the Los Angeles River, Dominguez Channel, and Ballona Creek watersheds were far larger than the estimated trace metal loads found in stormwater emanating from the same watersheds, which agreed with results from previous studies. Heavy metals from road dust, tire wear, and construction dust adsorb on particulates that are greater than 10 microns in diameter that settle in the watershed, and then are washed into bodies of water in storm runoff (Bishop 2006; Sabin et al. 2007).

Direct atmospheric deposition of vanadium and nickel as a result of marine vessels burning residual fuel oil has been linked to concentrations observed in air and rainwater (Poor 2002); however, since oceangoing vessels are now required to switch to lighter distillates within 24 miles of the California coast and many are required to use shore power while at berth, thereby reducing emissions from auxiliary engines, this source of pollution may now be of less concern. In contrast to indirect aerial deposition, direct deposition of metals onto the water surface is a minor source of water pollution (Sabin et al. 2006).

Aqueous Sources of Contaminants

Potential contaminants in harbor waters can be derived from sources such as permitted discharges, nonpoint source runoff, illicit dumping of wastes, and leaching of contaminants from sediments into the overlying waters. Data from the LARWQCB indicate that permitted discharges to the Dominguez Channel and Los Angeles Harbor include: major NPDES discharge sources (industrial sources with a yearly average flow of 0.1 million gallons per day or more); a publicly owned treatment works (i.e., TIWRP); refineries; minor discharges (discharges other than major discharges); general discharges (covered by general industrial or construction permits); discharges covered under individual industrial stormwater permits; and discharges from municipal storm drains covered under the Los Angeles County municipal separate storm sewers system (MS4) permit. As described above, a number of segments of the Dominguez Watershed and the Port Complex are listed under Section 303(d) of the CWA as impaired, including Inner Cabrillo Beach, Cabrillo Marina, Dominquez Channel (estuary to Vermont), Fish Harbor, Consolidated Slip, and Inner and Outer Harbor waters.

Runoff

Runoff from the Project area is collected in catch basins located throughout the Berths 121-131 Terminal and is conveyed to outfalls along the wharves that discharge to the West Basin. All drains are equipped with smart drains to help filter runoff prior to discharge. The combination of such structural BMPs and operational control BMPs limits the input of contaminants to waters of the Port Complex via stormwater runoff. As a result, water quality in the Port Complex is not substantially degraded by stormwater runoff.

As described in Section 3.13.2.2, water chemistry sampling near the project site in 2019 found no contaminants at concentrations exceeding CTR regulatory criteria for chronic exposure of marine life (Anchor QEA 2020). Mixing with the harbor receiving waters dilutes pollutants so that receiving water standards are usually not exceeded. It is reasonable to expect that these findings also apply to stormwater runoff from the project site, and that concentrations of pollutants in runoff do not typically cause violations of

receiving water quality objectives, given compliance with SWPPP and SUSMP/LID requirements.

Leachate from Vessel Hulls

Antifouling paints are designed to slowly release biocides that prevent settling and growth of fouling organisms on ship hulls, which otherwise would reduce vessel speeds and increase fuel consumption. These coatings are another source of metals, especially copper and zinc, to harbor waters. Antifouling paints containing tributyltin (TBT) were found to prevent fouling on ships for approximately five years (International Maritime Organization 2020). However, because TBT has not been employed in anti-fouling applications since being banned in 2008, leaching of TBT from vessel hulls is no longer a significant source of TBT in harbor waters.

Water sampling in and near the West Basin (AMEC 2012, Anchor QEA 2020) has consistently found copper concentrations well below the chronic toxicity standard of 3.1 µg/L and zinc concentrations an order of magnitude below the chronic toxicity standard of 81 ug/L.

Nutrients

Nutrients are necessary for primary production of organic matter by phytoplankton. Spatial and temporal variations in phosphates and nitrates change from day to day and are influenced by the local environment. Sources of nutrients to waters of the Port Complex include wastewater discharges, such as the TIWRP, industrial discharges, and stormwater runoff, as well as naturally occurring seasonal upwelling events. While dredging can physically remove nutrient-laden sediments, some of those nutrients can be released into the water column during dredging as well (Jones and Lee 1981). In the most recent port-wide water quality survey that measured nutrients (AMEC 2012), ammonia ranged from <0.02 to 0.22 ppm, nitrate concentrations ranged from <0.01 to 0.12 ppm, nitrite concentrations were below detection limits (<0.01 ppm), and phosphorus ranged from 0.049 to 0.39 ppm. Concentrations in the West Basin tended to be near the lower end of the range of values in the Port as a whole.

Temperature

Water temperatures in the Port Complex show seasonal and spatial variation that reflects the influence of the ocean, local climate, physical configuration of the harbors, and circulation patterns. General seasonal trends in water temperature consist of uniform, cooler temperatures throughout the water column in the winter and spring, and of stratified, warmer upper water temperatures with cooler waters at the bottom in the summer and fall. The stratified summer and fall conditions may be attributed to warmer ocean currents, local warming of surface waters through absorption of incident sunlight (insolation), and reduced runoff into nearshore waters.

During monthly sampling in 2019 at the three West Basin stations (LAHD 2021), water temperatures ranged from 13.7°C (57.0°F) in March to 20.0°C (68.0°F) in September; the 2018 Biological Surveys reported similar temperatures at two stations in the West Basin (Wood E&IS 2021). There was little thermal stratification of the water column in late fall and winter, but pronounced stratification throughout the summer, with vertical differences of as much as 4°C (7°F).

Salinity

Salinity measures the amount of dissolved salts in a water body. Typical salinity for Southern California coastal waters is around 33.5 parts per thousand (ppt), and salinities

in the Port Complex usually range from 32.0 to 34.0 ppt. Higher salinity values in the Port Complex are generally associated with evaporation in warm months in the farther recesses of the harbors (areas with a reduced rate of exchange with offshore waters), while lower values are generally found near the surface as a result of freshwater input, including rainfall, stormwater and urban runoff, and waste discharges. Fresh water mixes with the seawater due to wind, vessel traffic, tidal currents, and diffusion, resulting in increasing salinity with distance from the source of the freshwater plume. During monthly sampling in 2019 at the three West Basin stations, salinity values ranged between 32.4 and 33.6 practical salinity units (psu, essentially equivalent to ppt in Southern California) (LAHD 2021), and the 2018 Biological Surveys reported a similar range of salinity values in the West Basin (Wood E&IS 2021).

3.13.2.3 Marine Sediments

Sediment quality in the Port Complex has been investigated during numerous focused studies and monitoring efforts since the 1960s (POLA and POLB 2009). Studies have been conducted for the characterization of dredge material, during regional monitoring programs, and to locate contamination hotspots. Recent studies included: randomized sampling studies conducted in 1998, 2003, 2005, and 2006; hotspot characterizations reported in 2005, 2006, and 2007; and a data gap study reported in 2008 (POLA and POLB 2009). Data from these studies were summarized in the WRAP and are used to characterize current conditions. Additional focused special studies related to the Harbor Toxics TMDL have been undertaken from 2012 to 2015. Sediment quality is also being assessed by periodic monitoring, conducted by a Regional Monitoring Coalition, required under the Harbor Toxics TMDL.

Sediment quality in the Port Complex varies widely, and there are localized areas of sediment contamination "hotspots," which have driven the Section 303(d) listings and creation of TMDLs for the harbors (POLB and POLA 2009). Much of the sediment contamination in the Port Complex is "legacy contamination" from historic Port activities and watershed inputs (POLA and POLB 2009). Potential sources of sediment contamination include municipal storm drains, the Dominguez Channel, industrial outfalls, stormwater runoff from Port facilities, commercial vessels (oceangoing vessels and harbor craft), recreational vessels, aerial deposition, and the redistribution into the Port Complex, by ocean currents, of sediments from outside the harbors (POLA and POLB 2009).

Marine biological communities in parts of the Inner Harbor appear to be adversely affected by sediment contamination. Results from regional sampling efforts in 2003 and 2008 indicated that areas of the Port Complex vary from no sediment toxicity to high toxicity (Vidal and Bay 2005; Lao et al. 2010). Although the Project area is listed as impaired pursuant to Section 303(d) of the CWA (see Section 3.13.2.1), it is not considered a hotspot.

A preliminary study to characterize sediments at Berths 121-131 in support of planning dredging and disposal options was conducted in 2016 (KLI 2017). Portions of the material that would be dredged for the Proposed Project showed somewhat elevated concentrations of arsenic, copper, PCBs, and polyaromatic hydrocarbons (PAHs), and tissues of test organisms showed some level of bioaccumulation of DDT, PCBs, and PAHs. However, the bulk of the sediments did not demonstrate toxicity to test organisms. Additional sampling will be conducted for permitting purposes, and it is therefore possible that some of the sediments to be dredged as part of project construction will be found to be suitable for unconfined aquatic disposal, and could be disposed of at the LA-

2 Ocean Dredged Material Disposal Site (ODMDS). To be conservative, the analysis in this Draft EIS/EIR assumes that 50,000 cubic yards (cy) of the up to 310,000 cy to be dredged would be disposed of at the LA-2 site; the remainder would be disposed of at an approved upland location outside the Port (the Port's confined disposal facility at Berths 244-245 is not available, being reserved for dredged material from maintenance and emergency projects). This assumption is conservative because although the KLI sampling indicated only somewhat elevated concentrations and some bioaccumulation, it is nevertheless very possible that most of the material to be disposed of will not be found suitable for disposal at LA-2. Furthermore, the capacity of LA-2 is constrained, and the need to accommodate clean material from a number of maintenance dredging operations elsewhere in Southern California (e.g., Marina del Rey, Newport Harbor, Dana Point Harbor) and possible capital project dredging in the ports means that capacity at LA-2 must be conserved.

3.13.2.4 Hydrology and Oceanography

The Port Complex is a southern extension of the relatively flat coastal plain, bounded on the west by the Palos Verdes Hills. The Palos Verdes Hills offers protection to the bay from prevailing westerly winds and ocean currents. The Port Complex was originally an estuary that received fresh water from the Los Angeles and San Gabriel rivers. During the past 80 to 100 years, development of the Port Complex, through dredging, filling, and channelization, has completely altered the local estuarine physiography.

Tides

Tides are sea level variations that result from astronomical and meteorological forces. Tidal variations along the coast of Southern California are influenced primarily by the passage of two harmonic tide waves, one with a period of 12.5 hours and the other with a period of 25 hours. This combination of two harmonic tide waves usually produces two high and two low tides each day. The twice daily (semidiurnal) tide of 12.5 hours predominates over the daily (diurnal) tide of 25 hours in the Port Complex, generating a diurnal inequality, or mixed semidiurnal tides. This causes a difference in height between successive high and low waters ("water" is commonly used in this context instead of "tide"). The result is two high waters and two low waters each day, consisting of a higher-high water (HHW), a lower-high water (LHW), a higher-low water (HLW), and a lower-low water (LLW).

The mean tidal range for the Outer Harbor, calculated by averaging the difference between all high and low waters, is 3.81 feet (1.16 meters), and the mean diurnal range, calculated by averaging the difference between all the HHW and LLW, is approximately 5.5 feet (1.68 meters) (NOAA 2021). Mean lower-low water (MLLW) is the mean of all LLWs, equal to 2.8 feet (0.85 meter) below mean sea level (MSL), and 0.7 feet (0.23 meter) below North American Vertical Datum of 1988 in the Port. MLLW is the datum from which Southern California tides are usually measured. The extreme tidal range (between maximum high and maximum low waters) is about 10.5 feet (3.20 meters). The highest and lowest tides measured at the Los Angeles Harbor tide station (NOAA No. 9410660) reported are 7.96 feet (2.43 meters) above MLLW, measured in January 2005 and -2.73 feet (-0.83 meters) below MLLW, measured in December 1933, respectively (NOAA 2021).

Waves

Waves along the Southern California coast can be divided into three primary categories according to origin: southern hemisphere swell, northern hemisphere swell, and swells

generated by local winds (USACE 1986). The Port Complex is directly exposed to ocean swells entering from two main exposure windows to the south and southeast, regardless of swell origin. The more severe waves from extratropical storms (Hawaiian storms) enter from a southerly direction. The Channel Islands, including Santa Catalina Island, provide some sheltering from these larger waves, depending on the direction of approach. Waves and seas entering the Port Complex are greatly diminished by the time they reach the Inner Harbor. Most swells from the southern hemisphere, which characteristically have low heights and long periods, arrive at Los Angeles from May through October. Typical swells rarely exceed 4 feet (1.2 meters) in height in deep water. However, with periods as long as 18 to 21 seconds, they can break at over twice their deep-water wave height. Northern hemisphere swells occur primarily from November through April. Significant, deepwater wave heights have ranged up to 20 feet (6.1 meters) but are typically less than 12 feet (3.7 meters), with wave periods generally between 12 and 18 seconds.

Local wind-generated swells are predominantly from the west and southwest. However, they can occur from all offshore directions throughout the year, as can waves generated by diurnal sea breezes. Local swells are usually less than 6 feet (1.8 meters) in height, with wave periods of less than 10 seconds.

From January 2010 through December 2019, mean wave height at the Coastal Data Information Program's (CDIP's) Buoy 92, located 5.5 nautical miles (10.2 kilometers) south of Point Fermin, was approximately 3.2 feet (0.98 meter) (CDIP 2021). The maximum waves during that same time period ranged between 14.0 feet (4.3 meters) and 16.8 feet (5.1 meters), all recorded in winter.

Circulation

To better understand circulation patterns and watershed inputs into the Port Complex, LAHD and the Port of Long Beach undertook a program to develop a hydrodynamic and water quality model for the harbors to improve their predictions of the effectiveness of current and future control measures (the WRAP Model) (POLA and POLB 2009). The WRAP model has been validated through the Harbor Technical Working Group, which includes LARWQCB and SWRCB, as well as independent third-party reviewers, and is continually being updated.

Circulation patterns in the Port Complex are established and maintained by tidal currents. Flood tides in the Port Complex flow into the Harbor and up the channels (generally northward), while ebb tides flow down the channels and out of the Port Complex (generally southward) (POLA and POLB 2009). The Port Complex is protected from incoming waves by the Federal Breakwater, which consists of three sections: San Pedro, Middle, and Long Beach. In addition to protecting the ports from waves, the breakwaters reduce the exchange of the water between the Port Complex and the rest of San Pedro Bay, hence creating unique tidal circulation patterns.

Flooding

There are three primary flood hazards in the Project area: the tidal influence of the Pacific Ocean, flood flows in the Dominguez Channel, and shallow urban runoff and localized ponding. Tsunami and seiche are other potential sources of flooding and are caused by geologic occurrences. The potential for future sea level rise to affect the Project site is addressed in Section 3.6, Greenhouse Gases.

The Berths 121-131 Terminal is primarily located in flood zone X, with portions of the site in Zone AE. The current Federal Emergency Management Agency (FEMA) Flood

Insurance Rate Maps (FIRMs) identify flooding potential in Zone AE or Zone X. It is important to note that the two flood zones identified at the Berths 121-131 site do not represent a uniform water surface at a single point in time.

The Project site is located primarily in Zone X, which consists of areas of 0.2% annual chance of flood (500-year flood); areas of 1% annual chance flood (100-year flood) with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood (FEMA 2021). Zone X occurs on site primarily because precipitation has the potential to create shallow flooding in these adjacent land and wharf areas until the shallow flooding is collected by storm drainage systems or until it spills over the edge of the wharf to open water. A portion of the site along the wharves at Berths 121-131 is within Zone AE (Base Flood Elevation of EL 8), which is identified as a Special Flood Hazard Area (SFHA) subject to inundation by the 1% annual chance flood, also known as the base flood, which has a 1% chance of being equaled or exceeded in any given year (FEMA 2021). The tidal influence of the Pacific Ocean is the basis for Zone AE (EL 8, NAVD88), which would be generally limited to the open water areas of the West Basin because, in fact, the wharves and adjacent backlands are several feet higher than elevation 8. This zone and predicted flood elevation extend upstream to the mouth of the Dominguez Channel, indicating that the tidal influence and channel flood flows are consistent in the Project area.

A tsunami event in the Port could result in injury or damage to property. A study of potential tsunami-induced wave action in the Los Angeles-Long Beach Harbor (Moffatt and Nichol 2007) examined the consequences of various combinations of large earthquakes along offshore faults (a tsunamigenic earthquake) and underwater landslides along the Palos Verdes peninsula coastline to predict maximum tsunami wave heights. The most likely, or reasonable, worst-case tsunami was predicted to have a recurrence interval of no less than 10,000 years, and the case in which the largest tsunami coincided with the 40-year highest tide was estimated to have a return interval of more than 100,000 years. The assumption of such an unlikely event represents an extremely conservative, worst-case scenario, which is not required under CEQA or NEPA; accordingly, this impact analysis is based on the reasonable worst case (i.e., a 10,000-year return interval).

The study predicted a water level rise of approximately 8.0 to 9.4 feet above Mean Lower Low Water (MLLW) for scenarios involving a large earthquake and approximately 10.0 to 25.8 feet above MLLW for scenarios involving a massive landslide. The highest anticipated water levels from the earthquake scenarios are predicted to occur in the East Channel area of the Port, and the highest anticipated water levels from the landslide scenarios would occur in the Outer Harbor area and the western side of Pier 400. The report predicted that even for the landslide scenario, little overtopping of wharves would occur at most locations in the Port.

3.13.3 Applicable Regulations

3.13.3.1 Clean Water Act of 1972

The CWA provides for the restoration and maintenance of the physical, chemical, and biological integrity of the nation's waters. Discharges of wastes to waters of the United States (e.g., surface waters) must be authorized through National Pollutant Discharge Elimination System (NPDES) permits (under Section 402 of the CWA). In California, the SWRCB and the nine RWQCBs have authority delegated by EPA to issue NPDES permits. California permits are also issued as WDRs as required under California law by

the Porter-Cologne Water Quality Control Act (see below). Section 301(a) of the CWA prohibits discharges without a permit and is the basis of the NPDES permit program. Discharges from vessels were previously exempted from the CWA, but in December 2008 EPA issued the first Vessel General Permit and revised the permit in 2013 (described below; (USEPA 2013).

Section 303 of the CWA requires states to develop water quality standards for all waters and submit to EPA for approval all new or revised standards established for inland surface waters, estuaries, and ocean waters. Under Section 303(d), the state is required to list water bodies that do not meet water quality standards and to develop action plans, called TMDLs, to improve water quality. The SWRCB and the RWQCBs implement sections of the CWA through the Ocean Plan, the Enclosed Bays and Estuaries Plan, the nine Water Quality Control Plans (one for each region), and permits for waste discharges.

Coordination with the agencies on dredging, permits, and dredged material disposal would be handled through the interagency Southern California Dredged Materials Management Team (DMMT) and the Los Angeles Regional Contaminated Sediments Task Force (CSTF), in accordance with the CSTF Long Term Management Strategy (Anchor et al. 2005). The LARWQCB can issue CWA Section 401 Water Quality Certifications to certify that discharges of dredged or fill material in waters of the United States would not have adverse water quality impacts. Permits for the discharge of dredged or fill material in jurisdictional waters of the United States are issued by USACE under CWA Section 404. Permits typically include the following conditions to minimize water quality effects:

- USACE review and approval of sediment quality analysis prior to dredging and dredged material disposal;
- Detailed pre- and post-construction monitoring plan that includes disposal site monitoring; and
- Return flow from stockpiled dredged material that is free of solid dredged material.

Disposal of dredged material from the Proposed Project could occur at the LA-2 ODMDS or at an approved upland site, or some combination of the two. Effects from sediment disposal at LA-2 were evaluated under Section 404 of the CWA and Section 102 of the Marine Protection, Research and Sanctuaries Act during the site designation process (USEPA 1988), and subsequently evaluated in consideration of higher maximum annual disposal volume (USEPA and USACE 2011). However, project-related ocean disposal at LA-2 requires case-specific sediment testing, DMMT review of test results, EPAs concurrence, and a USACE permit.

3.13.3.2 Rivers and Harbors Appropriations Act of 1899

The Rivers and Harbors Appropriations Act of 1899 authorizes USACE to require permits for construction projects in/over/under navigable waters of the United States. The intent of the Rivers and Harbors Appropriations Act was originally to protect navigation and navigable capacity for the purpose of maritime commerce. These objectives were later expanded to include a public interest review, including environmental protection. Section 10 of the act (33 U.S.C. Section 403) gives the USACE the authority to regulate work (e.g., dredging) and construction and maintenance of structures (e.g., piers, wharves, overwater cranes, bulkheads, etc.) in/over/under navigable waters of the United States. Under Section 10, the USACE evaluates impacts on navigation and navigable

capacity related to work and structures in/over/under navigable waters of the United States.

3.13.3.3 Marine Protection, Research, and Sanctuaries Act of 1972

Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (Act; 33 U.S.C. Section 1401 *et seq.)* gives the USACE the authority to regulate transport of dredged material for the purpose of ocean disposal, prohibits ocean disposal of certain wastes without a permit, and prohibits the disposal of certain materials entirely. Prohibited materials include those that contain radiological, chemical, or biological warfare agents; high-level radiological wastes; and industrial waste. The Act applies to U.S. ocean waters beyond three nautical miles of the nearest shoreline (the CWA governs disposal within three miles of the shoreline). Section 102 of the Act authorizes EPA to promulgate environmental criteria for evaluation of all disposal permit actions at ocean disposal sites, to retain review authority over the USACE-issued Section 103 permits, and to designate ocean disposal sites for dredged material disposal.

3.13.3.4 Vessel General Permit

EPA regulates the discharges incidental to the normal operation of commercial vessels operating as a means of transportation, through the Vessel General Permit (VGP, for vessels longer than 79 feet). The VGP was first issued in 2008 and was re-issued in March 2013 (USEPA 2013); it became effective on December 19, 2013.

The permit specifies the types of discharges that are allowed (and not allowed), who must obtain coverage under the permit, effluent limitations, corrective actions required to remedy deficiencies and violations, and the monitoring, record keeping, and reporting requirements. The VGP covers multiple discharges and waste streams from vessels, including deck washdown and runoff, bilgewater (which accumulates in the vessel hull), ballast water, anti-fouling hull coatings and leachate, chain locker effluent, and graywater (from showers, baths, sinks, and laundry facilities). Ballast water as it relates to invasive species is discussed in greater detail in Section 3.3, Biological Resources.

3.13.3.5 Porter-Cologne Water Quality Control Act of 1972

The Porter-Cologne Water Quality Control Act (or Porter-Cologne Act – California Water Code Section 13000 *et seq*.), which is the principal law governing receiving water quality regulation in California, establishes a comprehensive program to protect water quality and the beneficial uses of state waters. Since 1973, the SWRCB and the nine RWQCBs were established by this act and have been delegated the responsibility for implementing its provisions and administering permitted waste discharge into the coastal marine waters of California.

The Porter-Cologne Act also implements many provisions of the CWA, such as the NPDES permitting program. Under the Porter Cologne Act "any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state" must file a report of the discharge with the appropriate RWQCB. The RWQCB may then prescribe WDRs that add conditions related to control of the discharge. The Porter-Cologne Act defines "waste" broadly, and the term has been applied to a diverse array of materials, including non-point source pollution. When regulating discharges that are covered under the CWA, the SWRCB and RWQCBs issue section 401 water quality certifications, WDRs, and NPDES permits as a single permitting vehicle. In April 1991, the SWRCB and other state environmental agencies

were incorporated into the California Environmental Protection Agency (Cal/EPA). Section 401 of the CWA gives the SWRCB the authority to review any proposed federally permitted or federally licensed activity that may impact 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, those conditions (including WDRs) must be included in the federal permit or license.

Standard WDRs include conditions and requirements addressing potential impacts to surface water, groundwater, and sediment quality. These conditions are addressed by complying with the requirements of the applicable permit and implementing management programs. The assessment of impacts for dredging and filling is based on these regulatory controls for dredging and filling activities that contain conditions including standard WDRs. More recently, installation of pilings and other associated wharf work that does not require a Section 404 permit from USACE, has required a Section 401 water quality certification from the LARWQCB to certify these installations would not violate state water quality standards.

3.13.3.6 Bays and Estuaries Plan

Under the California Bay Protection and Toxic Cleanup Act, the SWRCB is required to develop sediment quality objectives for toxic pollutants to protect the condition of enclosed bays and estuaries. The SWRCB issued Part 1 (Sediment Quality) of the *Water Quality Control Plan for Enclosed Bays and Estuaries* in August 2009. Part 1 of this document represents the first phase of the SWRCB's development of Sediment Quality Objective (SQOs). This first phase (direct effects) is focused on the protection of benthic communities in enclosed bays and estuaries as based on chemical and biological measures to determine if the sediment-dependent biota are protected or degraded from exposure to toxic substances in the sediment (SWRCB 2009). Part 2 (indirect effects) of this plan is currently under development and includes a tool for assessing whether sediment contamination at a site results in an unacceptable health risk to humans because of the consumption of contaminated fish and shellfish. This program is applicable to all enclosed bays and estuaries in the state, including Los Angeles Harbor.

3.13.3.7 Water Quality Control Plan, Los Angeles Region (Basin Plan)

The Basin Plan (LARWQCB 2014) is designed to preserve and enhance water quality and to protect beneficial uses of regional waters (inland surface waters, groundwater, and coastal waters such as bays and estuaries). The Basin Plan designates beneficial uses of surface water and groundwater, such as contact recreation or municipal drinking water supply. The Basin Plan also establishes water quality objectives, which are defined as "the allowable limits or levels of water quality constituents or characteristics that are established for the reasonable protection of beneficial uses of water or the prevention of nuisance in a specific area."

The Basin Plan specifies water quality objectives for a number of constituents and characteristics that could be affected by a project or alternatives. These include: bioaccumulation, biostimulatory substances (those that promote excessive aquatic growth, such as algal blooms), chemical constituents, DO, oil and grease, pesticides, pH, PCBs, suspended solids, toxicity, and turbidity. With the exceptions of DO and pH, water quality objectives for most of these constituents are expressed as descriptive rather than numerical limits.

The Basin Plan also specifies water quality objectives for other constituents, including ammonia, bacteria, total chlorine residual, and radioactive substances. These are not evaluated in this Draft EIS/EIR because the Proposed Project and alternatives do not include any discharges or activities that would affect the water quality objectives for these parameters.

A Basin Plan amendment establishing the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL was approved by LARWQCB in 2011 and subsequently approved by the SWRCB and USEPA in 2012, with an effective date of March 23, 2012. The TMDL was revised by the LARWQCB (R22-005) in 2022 to establish final waste load allocations, revised monitoring and reporting protocols, and revised implementation strategies and schedules. The revisions were adopted as an amendment to the Basin Plan and were approved by the SWRCB in 2024; the amendment is awaiting approval by the Office of Administrative Law and the EPA.

3.13.3.8 State Water Resources Control Board General Stormwater Permits

The SWRCB has issued and periodically renews a statewide General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (GCASP) and a statewide General Permit for Storm Water Discharges Associated with Industrial Activities (GIASP) for projects that do not require an individual permit for these activities. The GCASP was adopted in 2009 and further revised in 2012 and 2022 (WQ 2022-0057-DWQ NPDES NO. CAS000002). All construction activities that disturb one acre or more must prepare and implement a construction Stormwater Pollution Prevention Plan (SWPPP) that specifies Best Management Practices (BMPs) to prevent pollutants from contacting stormwater. Best Management Practices are effective, practical, structural, or non-structural methods used to prevent or reduce the movement of sediments, nutrients, and pollutants from land to surface waters. The intent of the SWPPP and BMPs is to keep all products of erosion from moving off site into receiving waters, eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States, and perform sampling and analysis to determine the effectiveness of BMPs in reducing or preventing pollutants (even if not visually detectable) in stormwater discharges from causing or contributing to violations of water quality objectives.

The most recent GIASP (Order No. 2014-0057-DWQ) requires dischargers to develop and implement a SWPPP to reduce or prevent industrial pollutants in stormwater discharges, to eliminate unauthorized non-storm discharges, to conduct visual and analytical stormwater discharge monitoring to verify the effectiveness of the SWPPP, and to submit an annual report. The permit was amended in 2015 and again in 2018.

3.13.3.9 Los Angeles Municipal Separate Storm Sewer System (MS4) NPDES Permit

The agencies that discharge stormwater and non-stormwater (urban runoff) to MS4s in Los Angeles County are required to obtain and comply with an NPDES permit/WDRs to meet the NPDES requirements. In Los Angeles County, all the MS4 agencies are permitted under a single permit issued to Los Angeles County and 84 incorporated cities. The permit is the *Waste Discharge Requirements and Pollutant Discharge Elimination System (NPDES) Permit for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles and Ventura Counties* (Order No. R4-2021-0105, NPDES Permit No. CAS004004). The City of Los Angeles, Department of

Public Works, Bureau of Sanitation, Watershed Protection Division (WPD) implements the MS4 inspection program of industrial/commercial "critical sources" located within the City of Los Angeles. The current permit was issued on July 23, 2021, and became effective on September 11, 2021.

The MS4 permit requirements are consistent with the assumptions and requirements of the available waste load allocations (WLAs) assigned to MS4 discharges in the applicable TMDLs, including the TMDLs in the Dominguez Channel and Los Angeles/Long Beach Harbors Watershed Management Area. The permit also includes the TMDL compliance schedules.

The MS4 permit identifies the implementation of Watershed Management Programs as a permissible framework for permittees to implement the requirements of the permit in an integrated and collaborative fashion to address water quality priorities on a watershed scale, including complying with TMDL provisions and by customizing certain control measures.

Development and Construction Program

For construction activities that would result in the disturbance of one acre or more, permittees must develop, implement, and enforce a program to reduce pollutant runoff in stormwater. This includes (1) a program to prevent illicit stormwater discharges, (2) structural and non-structural BMPs to reduce pollutants in runoff from construction sites, and (3) preventing discharges from causing or contributing to violations of water quality standards. Permittees are required to review construction site plans to determine potential water quality impacts and ensure proposed controls are adequate. Permittees are required to develop a list of BMPs for a range of construction activities.

Industrial/Commercial Business Program

For industrial facilities, such as the Berths 121-131 Terminal, the Industrial/Commercial Business Program identifies inspection timelines, which vary based on exposure to stormwater. Inspections include determinations of compliance with minimum BMPs and local stormwater ordinances.

In addition, as part of POLA's Tenant Outreach Program, staff visits Port facilities annually and reviews the SWPPP, training records, sample results, and other documents. Staff conduct a site visit, review BMPs, and help the tenant comply with the stormwater discharge permit requirements.

Planning and Land Development Program

The Planning and Land Development Program applies to all development and re-development projects subject to the MS4. The requirements of the Program include: lessening water quality impacts by using smart growth strategies and safeguarding environmentally sensitive areas; minimizing the amount of impervious surfaces, designing projects to minimize impervious footprints, and employing Low Impact Development (LID) design principles; minimizing pollutant loads from impervious surfaces through properly designed, technically appropriate BMPs and LID strategies; and prioritizing the selection of BMPs to remove stormwater pollutants, reduce stormwater volume, and beneficially reuse stormwater.

Low Impact Development (LID)

The City of Los Angeles' LID ordinance (Ordinance No. 181899) became effective in May 2012 and expands the applicability of the former SUSMP requirements. The

ordinance requires stormwater mitigation for all development and redevelopment projects that create, add, or replace 500 square feet or more of impervious area.

The main purpose of the LID ordinance is to ensure that development and redevelopment projects mitigate runoff in a manner that captures rainwater at its source, while utilizing natural resources. LID comprises a set of site design approaches and BMPs that are designed to address runoff and pollution at the source by using infiltration, evapotranspiration, and stormwater to remove nutrients, bacteria, and metals while reducing the volume and intensity of stormwater flows. Project applicants are required to prepare and implement a stormwater mitigation plan when their projects fall into certain categories; the categories applicable to the Port include industrial/commercial developments with more than one acre of impervious surface, restaurants, and parking lots of 5,000 square feet or more.

LID requirements would need to be met for a building permit to be issued. For new non-residential development or for re-development projects that result in an alteration of at least 50% or more of the impervious surfaces of an existing developed site, the entire site would need to comply with the standards and requirements of the ordinance and of the Planning and Land Development Handbook (City of Los Angeles 2016). The handbook includes quantitative guidance on the selection and design of specific BMPs.

California Toxics Rule

This rule establishes numeric criteria for priority toxic pollutants in inland waters, as well as enclosed bays and estuaries, to protect ambient aquatic life (23 priority toxics) and human health (57 priority toxics). The numeric criteria are the same as those recommended by EPA in its CWA Section 304(a) guidance. The CTR also includes provisions for compliance schedules to be issued for new or revised NPDES permit limits when certain conditions are met.

3.13.3.10 Oil Spill Prevention and Response

The California Office of Spill Prevention and Response (OSPR) is a multi-agency effort that implements the requirements of the Clean Water Act and Oil Pollution Act with respect to oil spill prevention and response. It involves the USCG, the California State Lands Commission, and the California Department of Fish and Wildlife's Marine Safety Branch (the Marine Safety Branch is the lead agency). The OSPR requires all marine facilities (including marine terminals) and tank vessels carrying petroleum products as cargo, and all non-tank vessels over 300 gross tons, to have a California-approved oil spill contingency plan (OSCP). Marine terminals are also required to prepare and implement a spill prevention, control and countermeasures (SPCC) plan. Among OSPR's many responsibilities are: conducting spill drills for contingency plan holders and response organizations, licensing spill cleanup agents in California, and assisting local governments in preparing local OSCPs. The OSPR is also assisting in funding and implementing the Vessel Traffic System (VTS) for Los Angeles/Long Beach Harbor.

3.13.3.11 Water Resources Action Plan

The WRAP was prepared by the Ports of Los Angeles and Long Beach, in coordination with their cities, EPA, and the LARWQCB (POLA and POLB 2009). The WRAP's purpose is to provide a programmatic framework to identify mechanisms for the Ports to achieve the goals and targets that have been established in the relevant TMDLs, GCASP, GIASP, and municipal permits issued to the Ports and their respective cities and tenants

through the NPDES program. The WRAP identifies multiple current and potential control measures to minimize effects to water and sediment quality. These include Land Use Control Measures, On-Water Source Control Measures, Sediment Control Measures, and Watershed Control Measures. The WRAP is considered a living document that the Ports will modify as circumstances warrant. At present, the LAHD has prepared several documents in support of the WRAP objectives, including a Vessel Discharge Rules and Regulations guidance document and a Sediment Management Strategy document.

3.13.3.12 Port Tariff No. 4

A Port Tariff is the published set of rates, charges, rules and regulations for those doing business with a port. A tariff is generally applicable to all port users, although individual tenant operating leases may set additional and/or different requirements. Port of Los Angeles Tariff No. 4 describes the rates, charges, rules, and regulations of the Port of Los Angeles. The tariff applies to all persons making use of the navigable waters of Los Angeles Harbor. Tariff No. 4 includes information about pilotage, dockage, wharfage, passengers, free time, wharf demurrage, wharf storage, space assignments, cranes, and other operational rules and regulations. Certain provisions of Tariff No. 4 are intended to ensure safe and lawful operations of vessels while in the Port and thereby function to minimize the risk of accidents that could cause impairment of water quality. Section 18 includes prohibitions related to waste oil, dumping of materials (including refuse, rubbish, and waste materials), oil discharges, regulation of ballast water discharges, and related activities that could potentially affect water quality.

3.13.4 Impacts and Mitigation Measures

3.13.4.1 Methodology

Potential impacts of the Proposed Project and alternatives to water quality and sediment conditions were assessed through a combination of literature data (including applicable water quality criteria), results from past dredge and fill projects in the Port, results from previous testing of sediments in the Port Complex, results from current testing of sediment chemistry and water quality, and scientific expertise of the preparers. For oceanographic resources and flooding, potential impacts were assessed using results from previous modeling studies for the Port Complex and preparer expertise. Impacts are considered significant if any of the significance criteria listed below in Section 3.13.4.2 occur in association with construction or operation of the Proposed Project or an alternative.

Assumptions

The assessment of impacts is based on the assumption that the Proposed Project or alternative (as applicable) would adhere to the following:

1. Coverage under the GCASP for the onshore portions of the Proposed Project would be obtained by LAHD as the “Legally Responsible Person” that would delegate applicable responsibilities to the tenant. The associated SWPPP would contain the following measures:
    - Equipment would be inspected regularly (daily) during construction, and any leaks found would be repaired immediately.
    - Refueling of vehicles and equipment would occur in a designated, contained area.

- Drip pans would be used under stationary equipment (e.g., diesel fuel generators), during refueling, and when equipment is maintained.
- Drip pans that are in use would be covered during rainfall to prevent washout of pollutants.
- Appropriate containment structures would be constructed and maintained to prevent off-site transport of pollutants from spills and construction debris.
- Monitoring would occur to verify that the BMPs are implemented and kept in good working order.

2. Other relevant standard operating procedures and BMPs for Port construction projects would be followed. This includes adherence to a SWPPP during operation of the Proposed Project or alternatives as part of the GIASP.
3. The LAHD would incorporate MS4/LID measures into the Proposed Project's design for review and approval by the City of Los Angeles Department of Building and Safety.
4. All onshore contaminated upland soils would be characterized and remediated in accordance with LAHD, LARWQCB, Department of Toxic Substances Control, and Los Angeles County Fire Department protocol and cleanup standards.
5. The tenant would obtain and implement the appropriate stormwater discharge permits for operations.
6. Sediments to be dredged have undergone preliminary evaluation using established EPA/USACE protocols to determine the suitability of the material for unconfined aquatic disposal. Following additional characterization and a suitability determination by the appropriate agencies, all dredged material would be disposed of at approved in-water disposal sites (i.e., the LA-2 ODMDS and at upland sites in the region.
7. A permit under RHA Section 10 and CWA Section 404 would be obtained from USACE for construction activities in waters of the United States (e.g., dredging, excavation, rock dike and wharf reconstruction, and pile and crane installation). Under the assumption that there would be no return water flow to waters of the U.S., no USACE permit would be required for sediment disposal at an approved upland facility. Upland disposal facilities (e.g., landfills) may require sediment test results in order to accept the dredged sediment.
8. A CWA Section 401 Water Quality Certification from the LARWQCB would be required for activities related to in-water construction.
9. A MPRSA Section 103 permit would be obtained if disposal of dredged material at the approved LA-2 ODMDS occurs.
10. A Debris Management Plan and Oil Spill Contingency Plan (OSCP) would be prepared and implemented prior to the start of demolition, dredging, and construction activities associated with the Proposed Project. The OSCP would specifically identify in-water containment and spill management in the event of an accidental spill. The plan would require that emergency cleanup equipment is available on site to respond to such accidental spills. All pollutants would be managed in accordance with all applicable laws and regulations.
11. During dredging, LAHD would implement an integrated multi-parameter water quality monitoring program in conjunction with the CWA Section 401

Certification/WDRs issued by the LARWQCB. The objective of the monitoring program would be adaptive management of the dredging operation, whereby potential exceedances of water quality objectives can be measured and dredging operations subsequently modified. If turbidity levels exceed the threshold established in the WDRs, water chemistry analysis would be conducted and LAHD would immediately meet with the construction manager to discuss modifications of dredging operations to reduce turbidity to acceptable levels. This could include alteration of dredging methods, and/or implementation of additional BMPs to reduce turbidity. During dredging and disposal, data specified by the Dredging Quality Management (DQM) requirements in the DA permit would be transmitted to the USACE's DQM center.

Although BMPs, SWPPP, NPDES permit compliance, and OSCP are requirements that must be implemented and that would prevent significant water quality impacts, compliance with these requirements would be included as conditions of permits issued by LAHD and USACE to ensure their tracking implementation.

CEQA Baseline

CEQA Guidelines §15125 requires EIRs to include a description of the physical environmental conditions in the vicinity of a project that exist at the time of the NOP. These environmental conditions normally would constitute the baseline physical conditions by which the CEQA lead agency determines if an impact is significant. The NOP for the Proposed Project was published in April 2014. As described in Section 2.7.1, however, the LAHD has determined that the appropriate CEQA baseline for the Proposed Project is the calendar year 2019. The CEQA baseline conditions are described in Section 2.7.1 and summarized in Table 2-1.

NEPA Baseline

For purposes of this Draft EIS/EIR, the evaluation of significance under NEPA is defined by comparing the Proposed Project or other alternative to the NEPA baseline. The NEPA baseline conditions are described in Section 2.7.2 and summarized in Table 2-1. The NEPA baseline condition for determining significance of impacts includes the full range of construction and operational activities the applicant could implement and is likely to implement absent a federal action, in this case the issuance of a USACE permit.

The NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal Action Alternative as described in Section 2.7. Under the No Federal Action Alternative (Alternative 2), no dredging, dredged material disposal, rock dike reconstruction, wharf reconstruction, pile installation, or crane installation would occur. Expansion of the WBICTF, however, would occur.

3.13.4.2 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2025 CEQA Guidelines, and are the basis for determining the significance of impacts associated with water quality, sediment quality, hydrology, and circulation resulting from proposed project/alternative development.

The effects of a project or alternative on water and sediment quality, hydrology, and circulation are considered to be significant if the project or an alternative would result in any of the following:

WQ-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

WQ-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

WQ-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

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

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

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

iv) impede or redirect flood flows.

WQ-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

WQ-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The Initial Study that supported the NOP for the Proposed Project concluded that construction and operation of the Proposed Project would have no impacts on groundwater supplies or recharge. Accordingly, an evaluation of impacts under WQ-2 is not included in this Draft EIS/EIR.

3.13.4.3 Impacts and Mitigation Measures

Proposed Project

Proposed Project construction would include demolishing the existing Berths 126-129 wharf, including approximately 900 piles; deepening the berth and disposing of the dredged material (approximately 310,000 cubic yards); reconstructing the existing rock dike by removing the rocks, re-grading the shoreline, and replacing the rock; installing approximately 650 piles and constructing a new wharf; adding and replacing wharf cranes; and expanding the WBICTF on-dock rail. Sediments from the proposed dredging area would be disposed of in accordance with the suitability determination; that determination would be made on the basis of future additional sediment testing and DMMT review.

Following completion of construction activities, operation of the terminal would result in increased vessel traffic and container cargo throughput, as described in Section 2.6.1.2. For purposes of impact analyses, it is assumed that increased vessel calls (relative to the CEQA baseline in 2019) and container throughput would increase truck traffic at the terminal, and result in a corresponding increase in the amounts of pollutants in runoff from terminal surfaces, and increased potential for accidental spills of pollutants into waters of Los Angeles Harbor.

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

Construction

In-water and over-water construction activities would extend over approximately 18 months. Impacts on water quality could occur from sediment suspension, erosional runoff, and contaminant inputs caused by wharf and pile demolition, dredging, rock dike reconstruction, installation of piles, wharf construction, and backland improvements (through erosion runoff and construction-related spills). Suspension is the dislodgement and dispersal of sediment into the water column (where finer sediments are subject to transport and dispersion by currents). Sediment suspension can also result in the short-term release of contaminants in the water column through release of pore water (water between individual sediment particles) and by desorption, or separation, from suspended particles. The potential water quality effects from construction for each of the major Proposed Project components are described separately below.

Water quality impacts could include:

- Increased turbidity (reduced water clarity and light transmittance),
- Increased sediment suspension (or suspended solids),
- Increased dissolved or particulate contaminants (that were previously bound to dredged sediments or in pore water),
- Reduced dissolved oxygen (from suspension of sediments with low oxygen),
- Reduced pH, and
- Plankton blooms (from suspension of nutrient-laden sediments that increase biochemical oxygen demand).

Construction and operation of the Proposed Project would have negligible effects on salinity or water temperature. The biological effects on marine biota from potential water quality impacts are discussed in Section 3.3, Biological Resources.

Effects of Wharf Demolition and Rock Dike Reconstruction: Wharf demolition would take place largely over the water along the shoreline. Accordingly, demolition material such as concrete rubble and dust could fall into the water. Removal of piles would cause localized turbidity due to disturbance of sediments. Removal of the rock dike would cause turbidity as sediments caught in the lower reaches of the rock dike would be released into the water column. Replacement of the rock dike would also cause turbidity through resuspension of sediments.

Elevated turbidity would be limited to the immediate vicinity of the work area. The majority of suspended sediments would settle within one hour of being disturbed, as is discussed below for dredging (Palermo et al. 2008). Transport of suspended particles by tidal currents would result in some redistribution of sediment contaminants. The amounts of contaminants redistributed in this manner would be small, and the distribution would be localized in the West Basin adjacent to the work area. In addition, the Water Quality Certification for the Proposed Project (see the discussion under dredging, below) would include monitoring requirements necessary to ensure compliance with applicable effluent limitations or any other CWA limitation and with all State laws or regulations.

Contaminants, including metals and organics, could be released into the water column during wharf demolition and dike reconstruction. However, any increase in contaminant concentrations in the water would be localized and of short duration. Harbor-wide and

project-area water quality monitoring has shown that contaminant concentrations in harbor waters are below regulatory limits (see Section 3.13.2.2), indicating that in-water construction has not caused substantial increases in contaminant concentrations.

Nutrients could be released into the water column during wharf demolition and dike reconstruction. Release of nutrients may promote nuisance growths of phytoplankton if operations occur during warm water conditions. Although phytoplankton blooms have occurred during previous dredging projects, there is no evidence that the plankton blooms observed were not a natural occurrence or that they were exacerbated by construction activities. The Basin Plan's (LARWQCB 2014) limits on biostimulatory substances are defined as "concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses." Given the limited spatial and temporal extent of Proposed Project construction activities with the potential for releasing nutrients from bottom sediments, effects on beneficial uses of harbor waters would not occur in response to the Proposed Project.

Effects of Dredging and Pile Installation: Dredging would resuspend some bottom sediments and create localized and temporary turbidity plumes over a relatively small area. Suspension of sediments during clamshell dredging, which would be the only method used for the Proposed Project, occurs during bucket impact, penetration, removal from the sediment, and bucket retrieval through the water column.

For continuous dredging operations, elevated turbidity would occur in the immediate vicinity of the dredge. The majority of suspended sediments would settle within one hour of dredging (Palermo et al. 2008). Transport of suspended particles by tidal currents would result in some redistribution of sediment contaminants. The amounts of contaminants redistributed in this manner would be small, and the distribution would be localized in the West Basin adjacent to the work area. Monitoring efforts associated with previous dredging projects in the Port Complex have shown that resuspension followed by settling of sediments is generally two percent or less of the total volume (Anchor Environmental 2003), suggesting that only a small portion of the dredged sediment is subject to movement and transport through the water column.

Dredging sediments adjacent to the Berths 121-131 Terminal would likely generate a relatively small turbidity plume. Receiving water monitoring studies at other dredge sites in the Port Complex and other water bodies have documented a relatively small, turbid dredge plume that dissipates rapidly with distance from dredging operations (MBC 2001a, b; USACE and LAHD 2008; POLA 2009a–i, 2010a–d). For example, water quality was measured during dredging at Berths 212–215, in the nearby East Turning Basin, in 2001 (MBC 2001a). During dredging, light transmittance was reduced by about 15% in the bottom half of the water column 300 feet down-current from the dredge (MBC 2001a). Furthermore, the West Basin, being largely enclosed and isolated from the Main Channel, is characterized by slow currents and limited circulation, which would further limit the spread of a sediment plume.

Piles would be lowered through the water column and then driven through the rock dike into the seafloor by both vibratory and impact driving methods. Some sediment would be suspended during this process, but over a much smaller area than during dredging, and any turbidity would be limited to waters near the seafloor. Within areas of sediment resuspension, DO and pH could be slightly reduced, but any reductions would be brief and would not persist or cause detrimental effects to biological resources. During dredging at Berths 212–215 in 2001, there was little difference in DO and pH between Station C (300 feet down-current of dredging) and Station D (the control station in the

East Basin; MBC 2001a); similar conditions are anticipated during dredging and pile installation for the Proposed Project.

Contaminants, including metals and organics, could be released into the water column during dredging and pile installation. However, any increase in contaminant levels in the water would be localized and of short duration. Harbor-wide and project-area water quality monitoring has shown that contaminant concentrations in harbor waters are below regulatory limits (see Section 3.13.2.2), indicating that dredging has not caused substantial increases in contaminant concentrations.

Nutrients could be released into the water column during dredging and pile installation. As discussed above under wharf demolition, however, the limited extent and duration of construction would mean that effects on beneficial uses of harbor waters would not occur in response to the Proposed Project.

Dredging for the Proposed Project would require a Section 10 permit from the USACE and a CWA Section 401 Water Quality Certification from the LARWQCB. The Water Quality Certification would include monitoring requirements necessary to ensure compliance with applicable effluent limitations or any other CWA limitation and with all State laws or regulations. Monitoring requirements typically include measurements of DO, light transmittance (turbidity), pH, and TSS at varying distances from the dredging operations. If turbidity levels exceed the threshold established in the WDRs issued by the LARWQCB, water chemistry analysis would be conducted and the LAHD would immediately meet with the construction manager to discuss modifications of dredging operations to keep turbidity to acceptable levels. Analyses of contaminant concentrations (such as metals, DDT, PCBs, and PAHs) in waters during the dredging operations may also be required in the WDRs if turbidity levels are elevated above certain established thresholds. Monitoring data would be used by the Port and the construction contractor to ensure that water quality limits specified in the permit are not exceeded. This would include alteration of dredging methods, and/or implementation of additional BMPs to limit the size and extent of the dredge plume.

Adverse effects of dredged material disposal at an upland disposal site (including dewatering) or a confined disposal site in the Port would be minimized by the application of the controls imposed by the requirements of the construction SWPPP prepared in accordance with the GCASP (see below), by the disposal facility's permit requirements, and by the WDRs and Section 401 Certification issued for the project by the LARWQCB (see Section 3.13.3.1) and the DQM requirements of the DA permit as applicable. Disposal at the LA-2 ODMDS would require USEPAs concurrence and be subject to the USEPA's site use conditions as well as the Section 103 permit conditions issued by the USACE. Ocean disposal requires monitoring of barge speed and disposal site tracking.

Effects of Backlands Improvements: Grading, excavation, and other construction activities related to expansion of the WBICTF could result in temporary impacts on surface water quality if uncontrolled runoff of exposed soils, asphalt leachate, concrete washwater, and other construction materials enter waters of the West Basin. Runoff from the construction site could contain a variety of contaminants in addition to soils, including metals and PAHs, associated with construction materials, and spills of oil or other petroleum products. No upland surface bodies of water currently exist within the proposed project boundaries. Thus, Project-related impacts on surface water quality would be limited to potential discharges of both stormwater and non-stormwater runoff to Harbor waters.

Runoff at the Berths 121-131 Terminal is collected by the on-site storm drain system and is managed in compliance with applicable permits and ordinances (including MS4/LID requirements) prior to discharge to the West Basin. Runoff from the construction site would be controlled under a construction SWPPP prepared in accordance with GCASP requirements and implemented prior to start of any construction activities. This construction SWPPP would specify BMPs to prevent and/or control releases of soils and contaminants and avoid adverse impacts on receiving water quality. One or more types of runoff control structures would be placed and maintained around the construction area to minimize loss of site soils to the storm drain system. As another standard measure, concrete truck wash water and runoff of any water that has come in contact with wet cement would be contained on site so that it does not run off into the harbor. These measures, combined with the low potential for erosion (see Impact WQ-4, below), would minimize soil and contaminant loading to waters of the Harbor resulting from construction activities. The SWPPP would be prepared by LAHD (or consultant) with LAHD designated as the "Legally Responsible Person."

Spills and Leaks: Accidental spills of fuel, lubricants, or hydraulic fluid from equipment used during dredging, pile installation, backlands improvement, and/or disposal of dredged material, could occur during Proposed Project construction. Based on the history for this type of work in the Harbor, accidental leaks and spills of large volumes of hazardous materials or wastes containing contaminants during onshore construction activities have a very low probability of occurring because large volumes of these materials typically are not used or stored at construction sites, and their use and storage is controlled by routine construction management practices (see Section 3.7, Hazards and Hazardous Materials).

Construction and industrial SWPPPs and standard Port BMPs (e.g., use of drip pans, contained refueling areas, regular inspections of equipment and vehicles, and immediate repairs of leaks) would reduce the potential for materials from onshore construction activities to be transported off site and enter storm drains. Spill prevention and cleanup procedures for the Proposed Project would be addressed in a plan that would be prepared in accordance with LAHD guidelines and implemented by the construction contractor prior to the notice to proceed with construction operations. The plan would define actions to minimize potentials for spills and provide efficient responses to spill events to minimize the magnitude of the spill and extent of impacts.

Operation

Operation of the Proposed Project would not involve any direct point source discharges of wastes or wastewaters to the harbor: all wastes and wastewaters would be handled by appropriate treatment and disposal facilities, including the sanitary sewer system. Impacts on water quality during operations could occur from stormwater runoff, atmospheric (aerial) deposition of contaminants generated by operational activities, discharges of contaminants from vessels during their transit to and from the Berths 121-131 Terminal through the Harbor, and accidental spills at the Berths 121-131 Terminal.

Under the Proposed Project, the footprint of the Berths 121-131 Terminal would not change but truck and train traffic and the amount of yard equipment would increase to handle up to 1,871,000 TEUs annually (from approximately 319,000 TEUs annually under the CEQA 2019 baseline and 1,332,000 TEUs under the NEPA baseline). This would increase the amounts of particulates and chemical pollutants from normal wear of tires/train wheels and other moving parts, as well as from leaks of lubricants and hydraulic fluids that can fall on backland surfaces and subsequently be transported by stormwater runoff into the Harbor. Vessel traffic would increase by three vessel calls per

year from the CEQA baseline, but would be lower than the NEPA baseline of 208 vessels per year).

Runoff: Stormwater at the Berths 121-131 Terminal is collected in catch basins and conveyed to storm drains that empty into the West Basin. The storm drains are fitted with "Smart Drains," which reduce the amount of sediment (and bound contaminants) in the runoff, and terminal operations incorporate best management practices in accordance with the requirements of the GIASP and MS4 permit (see sections 3.13.3.8 through 3.13.3.10).

The operation of the Proposed Project would comply with the GIASP, the City of Los Angeles MS4 permit, and City of Los Angeles LID ordinance requirements (City of Los Angeles 2016). The structural control BMPs applicable to the Berths 121-131 Terminal under those requirements would be incorporated where possible into the proposed WBICTF expansion plan and plan of the new wharf. The Proposed Project's design plans, which would include proposed stormwater BMPs, would be reviewed by the Department of City Planning, the Department of Building and Safety, and the Bureau of Sanitation WPD prior to issuance of building and grading permits. In accordance with the guidance in City of Los Angeles (2016), BMPs would emphasize infiltration and stormwater capture and reuse systems to the extent feasible, as well as source control measures such as containment, berms, and slopes. The City's approvals would include inspection and maintenance requirements to ensure the long-term effectiveness of the BMPs.

Leaks and Spills: Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from Proposed Project-related upland operations are expected to be limited to small volume releases because large quantities of those substances are unlikely to be used, transported, or stored on the site. The terminal operator would prepare an SPCC Plan and an OSCP, which would be reviewed and approved by OSPR, in consultation with other responsible agencies. The SPCC Plan would detail and implement spill prevention and control measures to prevent spills from reaching navigable waters. The OSCP would identify and plan as necessary for contingency measures that would minimize damage to water quality and provide for restoration to pre-spill conditions. Compliance with applicable federal, state, and local laws and regulations governing the transport of hazardous materials and emergency response to hazardous material spills, as described above, would minimize the potential for spills to reach Harbor waters.

Atmospheric Deposition: Atmospheric deposition of contaminants into Harbor waters from emissions from the Proposed Project's vessel, truck, and cargo-handling equipment and from particulates generated by on-road traffic (see Section 3.13.2.2) could occur. However, the major source, particulates from landside sources, would not be expected to substantially affect water quality due to its limited and dispersed nature.

Vessel Discharges and Contaminants: Vessel discharges could include legal discharges (e.g., ballast water), illegal discharges (e.g., bilge water, gray water, oily wastes), and leachates from hulls (antifouling compounds, rust, etc.). Discharges of polluted water (such as bilge water or gray water) directly to the Harbor are prohibited under the Port tariff and other regulations, but discharges of clean ballast water are not. Discharges of ballast water are regulated by State law and enforced by the California State Lands Commission. Federal ballast water laws are enforced by USEPA and the USCG and include measures to reduce the introduction of invasive species (see Section 3.3, Biological Resources).

In 2013, the Ports of Los Angeles and Long Beach published "Vessel Discharge Rules and Regulations," which summarizes the rules and regulations of discharges from vessels (POLB and POLA 2013). This document, which is updated as regulations change, has been distributed to all terminal operators/shipping lines, and vessel operators are responsible for being aware of, and in compliance with, all rules and regulations, including the Vessel General Permit. The number or severity of illegal discharges, and corresponding changes to water and sediment quality, from increased vessel traffic cannot be accurately quantified because the amounts and nature of illegal discharges from commercial vessels are unknown. However, there is no evidence that illegal discharges from ships presently utilizing the Project site are causing measurable degradation of water quality (e.g., AMEC 2012, Anchor 2020). Over several decades, there has been a considerable improvement in water quality despite an overall increase in ship traffic. In addition, the Port Police are authorized to cite any vessel that is in violation of Port tariffs, including illegal discharges. Accordingly, illegal discharges resulting from operation of the Proposed Project, while possible, are likely to be rare and small, and would not have substantial adverse effects on water quality.

Common anti-fouling compounds currently in use, following the 2008 ban on TBT-based coatings, include various copper and zinc compounds, which work by exerting a toxic effect on fouling organisms. Studies by the U.S. Navy have demonstrated that the leaching of metals from vessel hull coatings contributed to overall concentrations of water column metals in harbors such as Mayport, Florida; Pearl Harbor, Hawaii; and San Diego, California; however, estimated concentrations of metals resulting from vessel hull leachates were in most cases below federal and state water quality criteria (USEPA 1999).

The hull anti-fouling strategies of the vessels that could use the Berths 121-131 Terminal in the future are largely unknown. Therefore, hull leaching of contaminants such as metals is a potential concern. As described in Section 3.13.2.2, concentrations of metals in waters near the Project site have been well below regulatory criteria, indicating that metals leaching from vessel hulls have not substantially compromised water quality. Furthermore, the volume of vessel traffic would be very similar to baseline conditions, and less compared to the NEPA baseline, so that the increase in leaching potential would be insubstantial.

CEQA Impact Determination

Construction of the in-water elements of the Proposed Project would disturb and re-suspend bottom sediments, which would result in temporary and localized changes to water quality. As described above, however, reductions in DO concentrations, changes in pH, and increases in nutrients and contaminants would not extend beyond the dredge area or persist following the completion of the dredging operation. The extent and intensity of the dredge plume would be limited by the monitoring and control measures implemented in accordance with the various permits, as described above. Accordingly, impacts on water quality as a result of in-water construction activities would be less than significant.

Upland disposal would have less-than-significant impacts on water quality because the control measures imposed by the construction SWPPP and the disposal facility's requirements would prevent substantial inputs of sediment and other pollutants into storm drains or other water conveyances. The impacts of dredged material disposal at the LA-2 ODMDS were evaluated during the site designation process (USEPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (USEPA and USACE 2011). Those evaluations found that disposal would not have significant impacts on water quality. The Proposed Project would not result in additional

or new impacts to sediment quality or water quality related to disposal of dredge material at LA-2 that were not previously evaluated.

The routine controls that would be in place, per the construction stormwater permits, to respond to soil erosion during construction means that the impacts of soil runoff on Harbor waters would be less than significant. The low likelihood of leaks or spills from construction equipment as well as the routine controls in place to respond to such incidents means that the impacts of leaks and spills during construction would be less than significant.

As described above, operation of the Proposed Project would not result in direct discharges of wastes to Harbor waters. Discharges of stormwater would comply with the NPDES discharge permit limits and SWPPP requirements, and they would be subject to treatment via LID measures prior to discharge to harbor waters. In addition, atmospheric deposition is unlikely to constitute a substantial source of contaminants. As discussed above, available data indicate that pollutants are detectable in runoff, but receiving water standards are rarely exceeded. Accordingly, runoff from the redeveloped terminal would not cause violations of receiving water quality objectives, and water quality impacts from site runoff would be less than significant.

Operation of the Proposed Project would not substantially increase the probable frequency and severity of consequences of cargo-related spills and leaks. Accordingly, impacts would be less than significant.

With implementation of international, federal, state, and local regulations and tariffs, the increased vessel traffic associated with the Proposed Project would not result in substantially increased discharges from vessels. Similarly, available data indicate that leaching of contaminants from hull coatings does not substantially degrade water quality. Accordingly, the impacts from increased vessel traffic would be less than significant.

In summary, construction of the Proposed Project, including dredging, pile installation, and backlands improvements, and operation of the Proposed Project, including increased container throughput and increased truck and vessel traffic, are not expected to create substantial pollution, contamination, or a nuisance, or result in violations of water quality standards or permit conditions. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of the in-water elements of the Proposed Project would disturb and re-suspend bottom sediments, which would result in temporary and localized changes to water quality. Reductions in DO concentrations, changes in pH, and increases in nutrients and contaminants would not extend beyond the dredge or excavation area or persist following the completion of the dredging operation. The extent and intensity of the dredge plume would be limited by the monitoring and control measures implemented in accordance with the various permits, as described above. Accordingly, impacts on water quality as a result of in-water construction activities would be less than significant. Upland disposal would have less-than-significant impacts on water quality because the control measures imposed by the construction SWPPP and the disposal facility's requirements would prevent substantial inputs of sediment and other pollutants into storm

drains or other water conveyances. The impacts of disposal at the LA-2 site were examined in the site designation environmental analysis and found to be less than significant (USEPA 1988).

The routine controls that would be in place, per the construction stormwater permits, to respond to soil erosion during construction means that the impacts of soil runoff on harbor waters would be less than significant. The low likelihood of leaks or spills from construction equipment as well as the routine controls in place to respond to such incidents means that the impacts of leaks and spills during construction would be less than significant.

As described above, operation of the Proposed Project would not result in direct discharges of wastes to harbor waters. Discharges of stormwater would comply with the NPDES discharge permit limits and SWPPP requirements, and they would be subject to treatment via LID measures prior to discharge to harbor waters. As discussed above, available data indicate that pollutants are detectable in runoff, but receiving water standards are rarely exceeded. Accordingly, runoff from the redeveloped terminal would not cause violations of receiving water quality objectives, and water quality impacts from site runoff would be less than significant.

Proposed Project operations would not substantially increase the probable frequency and severity of consequences of cargo-related spills and leaks. Accordingly, impacts would be less than significant.

With implementation of international, federal, state, and local regulations and tariffs, the increased vessel traffic associated with the Proposed Project is not anticipated to result in substantially increased discharges from vessels. Similarly, available data indicate that leaching of contaminants from hull coatings does not substantially degrade Harbor water quality. Accordingly, the impacts from increased vessel traffic would be less than significant.

In summary, based on the analysis above, construction of the Proposed Project, including dredging, pile installation, and backlands improvements, and operation of the Proposed Project, including increased container throughput and increased truck traffic, are not expected to create pollution, contamination, or a nuisance, or result in violations of water quality standards or permit conditions. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impact

Impacts would be less than significant.

Impact WQ-3: 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 which would:

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

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

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

iv) impede or redirect flood flows?

Construction

Dredging would deepen areas of the West Basin adjacent to the new wharf, but the Proposed Project does not include the creation of new land that could increase runoff, substantially alter the shoreline configuration or topography in a way that would alter drainage patterns and quantities, result in erosion or siltation, or impede or redirect flood flows.

Deepening the berths would alter the water depths in a limited area of the West Basin by approximately eight feet, which would not have a substantial effect on water movements in the West Basin, and a minor change in shoreline configuration would likewise have a minimal effect on circulation and no effect on drainage.

The proposed dredging would not increase the flood potential in the channel because the change in the bottom topography and shoreline configuration of the West Basin would be minimal. The Zone AE mapping would remain consistent with current mapping after implementation of the Proposed Project. Most of the terminal is designated by FEMA as Flood Zone X (defined as areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood).

Construction activities would not increase the potential for flooding on site because site elevations would remain generally the same as under CEQA 2019 baseline conditions. Any minor grade changes resulting from reconfigured facilities (i.e., the WBICTF) would not substantially alter flood depths or flow paths.

A construction SWPPP would be prepared that would specify (1) logistics and a schedule for construction activities that would minimize the potential for erosion and (2) standard BMPs for erosion control as described by the current County of Los Angeles Hydrology Manual and to treat runoff meeting the criteria defined in the current City of Los Angeles LID Handbook (City of Los Angeles 2016). These features would minimize the potential for erosion of exposed soils. Standard practices would follow guidance developed by LAHD for soil management (e.g., temporary sediment basin [ESC 56], solid waste management [CA 020], and contaminated soil management [CA 022]). During construction, exposed soil areas would be minimized to reduce the potential for erosion, and the flat topography of the site would further minimize erosion and siltation. Thus, construction activities would not be expected to accelerate erosion or increase sediment loads to Los Angeles Harbor in the form of soils carried by stormwater runoff.

Operation

Operation of the Proposed Project would closely resemble CEQA baseline activities, and would not involve any activities that could cause changes in drainage patterns or quantities, flood flows, or erosion and siltation. Proposed Project operations would not increase the potential for flooding. Runoff from the Proposed Project area would continue to be collected in catch basins located throughout the Berths 121-131 Terminal and conveyed to essentially the same discharge points along the wharves (including the new wharf at Berth 126-129) as at present. Accordingly, the system would be adequate to accommodate design flows, particularly since total impervious area would not increase.

CEQA Impact Determination

Because neither construction nor operation of the Proposed Project would include elements that would result in a substantial change in site drainage patterns or flood flows, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction and operation of the Proposed Project would not substantially alter site drainage patterns or flood flows. Accordingly, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-4: In flood hazard, tsunami, or seiche zones, would the Proposed Project risk release of pollutants due to project inundation?

Construction

Most of the terminal is designated by FEMA as Flood Zone X (defined as areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood). Accordingly, the Proposed Project site is not located in a flood hazard zone.

According to the City of Los Angeles Safety Element of the General Plan (City of Los Angeles 1996), the Berths 121-131 Terminal is within an area susceptible to impacts from a tsunami and subject to possible inundation. A computer model of Los Angeles-Long Beach harbor that assessed tsunami and seiche scenarios determined that in each case modeled, impacts from a tsunami were equal to or more severe than those from a seiche (Moffatt and Nichol 2007). As a result, the discussion below refers to tsunamis as the worst case of potential impacts; potential impacts related to seiches would be the same as or less than those identified below. A major tsunami event is considered improbable (Section 3.13.2), and the chance that one would occur during the construction period is more remote. Furthermore, the Moffatt & Nichol study determined that if a major tsunami did occur, tsunami-induced flooding in Inner Harbor areas such as the

Berths 121-131 Terminal would not cause overtopping of wharves. Accordingly, tsunami-induced flooding at the site, especially during construction, is considered improbable.

Construction activities would not increase the potential for flooding on site because site elevations would remain generally the same as under baseline conditions. Any minor grade changes resulting from reconfigured facilities (i.e., the WBICTF) would not substantially alter flood depths or flow paths.

Although construction could encounter contaminated soils and would include the use of potential pollutants such as fuels and lubricants, the control measures required by the construction SWPPP (see Impact WQ-3) would minimize the chance of pollutant release. Furthermore, construction would not increase the very low risk of site inundation.

Operation

Operation of the Proposed Project would involve the use of potential pollutants such as fuels and lubricants, as well as cargo containers carrying hazardous materials. However, operational activities and the configuration of the terminal would closely resemble baseline conditions and would not increase the probability or severity of flooding, tsunamis, seiches, or site inundation. Accordingly, the risk of release of pollutants due to site inundation would not be increased by the Proposed Project.

With respect to potential flood hazard due to potential sea level rise, two studies are relevant: updated guidance from the State of California (OPC 2018) and the Port of Los Angeles' Sea Level Rise Adaptation Study (LAHD 2018). Both studies recognize the uncertainty of SLR projections, particularly beyond approximately 2050, and offer multiple potential future scenarios of SLR under different assumptions of GHG emissions, ice cap melting, and other factors. The State's study recommends selecting a level of risk aversion (low, medium-high, extreme) in order to select an appropriate future SLR scenario (for the Proposed Project, low risk aversion would be appropriate, given that the Berths 121-131 Terminal would not involve critical infrastructure or hazardous materials for which SLR impacts would be serious). The State's study uses a high-emissions assumption through 2050 to estimate SLR. The Port's SLR estimates, which are based on an earlier National Research Council study, do not include a consideration of risk aversion levels but do incorporate a high-emissions scenario. The Port's study considers horizon years of 2030, 2050, and 2100 and three scenarios of global warming (low, mid-range, high). The Port's study focuses on Port infrastructure by predicting inundation and flooding under various scenarios of SLR, high tides, and storm tides, whereas the State's study is a more general consideration of SLR alone along the California coast.

The State's study for the low-risk aversion level, high-emissions scenario at the Los Angeles tide gauge predicts SLR of approximately 12 inches (1.0 ft) higher than the 2000 level by 2050 and 38 inches (3.2 ft) by 2100 (see OPC [2018] Appendix 3 Table 28). That prediction is based on the 66% probability for SLR, but a less likely outcome (the 1-in-200 chance) predicts SLR in 2050 of 22 inches (1.8 ft). The Port's study projects that under the high-emissions scenario, sea level at the Port could rise 24 inches above the 2000 level by 2050, and between 37 inches (the mid-point estimate) to as much as 66 inches (the high scenario) above the 2000 level by 2100. To evaluate the effects of SLR on a proposed project, the State's study recommends considering project life when selecting horizon years and SLR scenarios. The Proposed Project is assumed to have a service life of 30 years, and would therefore operate until 2055; accordingly, SLR estimates for 2050 are appropriate for evaluating impacts of SLR.

Under the 24-inch estimate of SLR for 2050, the Port's study concludes that SLR, alone or in combination with normal and storm tide assumptions, would not cause inundation of the Berths 121-131 Terminal, and therefore would not threaten the facilities at the Project site.

CEQA Impact Determination

The Proposed Project would operate on the same footprint as the baseline, and the probability of site inundation from flooding or tsunamis would not be increased during construction or operation. Accordingly, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The Proposed Project would operate on the same footprint as the baseline, and the probability of site inundation from flooding or tsunamis would not be increased during construction or operation. Accordingly, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-5: Would the Proposed Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Responsibility for the protection of surface water and groundwater quality in California rests with the SWRCB and nine Regional Water Quality Control Boards (RWQCB). Region-specific water quality regulations are contained in Water Quality Control Plans that recognize regional beneficial uses, water quality characteristics, and water quality problems. The Proposed Project is not located in an area designated for a sustainable groundwater management plan but is in the area designated under the Los Angeles Region Water Quality Control Plan (Basin Plan, LARWQCB 2014). The Basin Plan designates beneficial uses of the waters of Inner Los Angeles Harbor (which includes the Project site), as: industrial service supply, navigation, non-contact water recreation, commercial and sportfishing, marine habitat, and preservation of rare and endangered species.

As described in Impact WQ-1, construction and operation of the Proposed Project would not have substantial adverse effects on water quality in the Port. As described in Section 3.3, Biology, the Proposed Project would not have significant impacts, after mitigation, on sportfish, marine habitat, or rare or endangered species.

CEQA Impact Determination

The Proposed Project would not interfere with implementation of the Basin Plan because it would have no substantial adverse effects on any of the beneficial uses designated by the Plan. Because the Proposed Project is not located in an area designated for a sustainable groundwater management plan, construction and operation of the Proposed

Project would not interfere with any groundwater management plan. Accordingly, impacts related to consistency with applicable plans would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Because the Proposed Project is not located in an area designated for a sustainable groundwater management plan, construction and operation of the Proposed Project would not interfere with any groundwater management plan. The Proposed Project would not interfere with implementation of the Basin Plan because it would have no substantial adverse effects on any of the beneficial uses designated by the Plan. Accordingly, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Alternative 1 – No Project

Under the No Project Alternative, the LAHD would not implement any terminal improvements. No dredging or wharf construction would occur, no cranes would be installed, and no backland improvements (i.e., expansion of the WBICTF) would occur.

Under the No Project Alternative, the existing Berths 121-131 Terminal would continue to operate as an approximately 186-acre container terminal. Terminal operations would grow over time to the existing capacity of the terminal (approximately 1,332,000 TEUs) as throughput demand increases. Under Alternative 1, the number of ship calls would increase from 66 in 2014 to 170 by 2062, although the size of the ships would be similar to baseline conditions (i.e., less than 8,000 TEU).

The No Project Alternative would not preclude future improvements to the Project site. However, any future proposed changes in use or physical improvements would need to be analyzed in separate CEQA environmental documents.

Impact WQ-1: Would Alternative 1 violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction

Alternative 1 would not involve any construction activities. Therefore, there would be no violation of regulatory standards or requirements, and no degradation of water quality related to construction.

Operation

Under the No Project Alternative, activity levels of trucks, yard equipment, vessels, and trains would increase to the existing's terminal's capacity, which would increase the amount of particulates and chemical pollutants that would fall on backland surfaces and subsequently be transported by stormwater runoff into Los Angeles Harbor.

Runoff: Although the footprint of the terminal would not increase, the amount of truck traffic, yard equipment operations, and rail traffic at the Project site would increase as a result of the increased throughput. These activities could increase the amount of particulates and chemical pollutants from normal wear of tires/train wheels and other moving parts, as well as from leaks of lubricants and hydraulic fluids that can fall on backland surfaces and subsequently be transported by stormwater runoff into Los Angeles Harbor.

As described above, stormwater at the Berths 121-131 Terminal is managed by procedures and infrastructure that incorporate best management practices in accordance with the requirements of the GIASP and the City of Los Angeles LID ordinance requirements (see sections 3.12.3.8 through 3.12.3.10). These measures would continue under the No Project Alternative and be modified and updated as necessary to comply with future regulations. Accordingly, runoff from the terminal would not substantially change receiving water quality.

As described in Section 3.6, Hazards and Hazardous Materials, spills and leaks of containerized cargo are statistically possible, and the likelihood would increase with increasing cargo throughput. The terminal would continue to operate in accordance with its approved SPCC Plan and OSCP. Compliance with these plans and other applicable federal, state, and local laws and regulations governing the transport of hazardous materials and emergency response to hazardous material spills, as described above, would minimize the potential for spills to reach Harbor waters.

Vessel Discharges and Contaminants: The amount of vessel traffic at the site under Alternative 1 would increase by up to 55 annual ship calls (by 2062) as compared to the CEQA baseline. The increased traffic raises the potential for increased leaching of metals from vessel hull coatings and inputs from other discharges; however, as described for the Proposed Project, concentrations of contaminants, including metals used in antifouling applications, have been measured near or below detection limits in waters off the Berths 121-131 Terminal, indicating that vessel discharges do not have a substantial effect on local water quality.

Spills: As described for the Proposed Project, accidental spills on land that enter storm drains and accidental spills from vessels could reach the West Basin off the Berths 121-131 Terminal as well as other waters of Los Angeles Harbor under the No Project Alternative. The extent and severity of such spills would likely continue to be limited. Releases of pollutants from a large spill, were it to occur, would be minimized through existing regulatory and on-site controls, and in any case, as described in Section 3.6 Hazards, are unlikely to occur during the life of Alternative 1.

CEQA Impact Determination

Because there would be no new construction at the Project site as part of Alternative 1, there would be no pollution, contamination, nuisance, or violation of regulatory standards due to proposed project construction. No impacts would occur.

As described above, runoff during operation of the No Project Alternative would be managed consistent with applicable permit and ordinance requirements prior to discharge into Los Angeles Harbor waters. There is no evidence that illegal discharges are a source of water quality problems in Los Angeles Harbor. In addition, water quality monitoring has shown that water quality standards are not exceeded in the area around the Berths 121-131 Terminal.

The fact that concentrations of metals in waters near the proposed project site have been well below regulatory criteria indicate that the increased vessel traffic would not have a substantial effect on contaminant concentrations.

The frequency of hazardous materials cargo spills under Alternative 1 would increase, relative to the CEQA baseline, but the consequence of such accidents would be slight.

Based on the analysis above, therefore, no impacts would occur for construction of Alternative 1, and operations at the terminal from Alternative 1, including increased truck, equipment, train and vessel operations, would result in impacts that would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Analysis of the No Project Alternative is not required under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-3: Would Alternative 1 substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

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

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

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

iv) impede or redirect flood flows?

Construction

Alternative 1 would not involve any construction. Accordingly, the amount of impervious surface and the configuration and capacity of the existing drainage system would not change, nor would any features be constructed that could alter water flows on the terminal.

Operation

Alternative 1 would maintain the existing B121-131 Terminal's size and configuration and impervious surfaces. Because the nature of activities would remain the same as under baseline conditions, it would not result in increased runoff. The existing storm drain system would not be altered and would continue to comply with all discharge requirements imposed by USACE and LARWQCB permits. Furthermore, Alternative 1

would not include features that would impede or redirect water movement, including flood flows, on or near the Berths 121-131 Terminal.

CEQA Impact Determination

Because Alternative 1 would not include features that would substantially alter drainage patterns and runoff quantities or have features that would impede or redirect water movement, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Analysis of the No Project Alternative is not required under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-4: In flood hazard, tsunami, or seiche zones, would Alternative 1 risk release of pollutants due to project inundation?

Construction

Alternative 1 would not involve any construction, and therefore would not increase the potential for release of pollutants.

Operation

As described for the Proposed Project, the potential for the Berths 121-131 Terminal to be substantially affected by flooding, tsunami, or seiche is remote. Operational activities and the configuration of the terminal under Alternative 1 would closely resemble baseline conditions and would not increase the probability or severity of flooding, tsunamis, seiches, or site inundation. As with the Proposed Project, no combination of SLR and tides would result in flooding of the terminal. Accordingly, the risk of release of pollutants due to site inundation would not be increased by operation of Alternative 1.

CEQA Impact Determination

Because there would be no construction as part of Alternative 1, there would be no construction-related impacts related to flooding or tsunamis. Operations associated with Alternative 1 would not increase the probability or severity of flooding or tsunamis. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Analysis of the No Project Alternative is not required under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-5: Would Alternative 1 conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Responsibility for the protection of surface water and groundwater quality in California rests with the SWRCB and nine Regional Water Quality Control Boards (RWQCB). Region-specific water quality regulations are contained in Water Quality Control Plans that recognize regional beneficial uses, water quality characteristics, and water quality problems. The Berths 121-131 Terminal is not located in an area designated for a sustainable groundwater management plan but is in the area designated under the Los Angeles Region Water Quality Control Plan (Basin Plan, LARWQCB 2014). The Basin Plan designates beneficial uses of the waters of Inner Los Angeles Harbor (which includes the Project site), as: industrial service supply, navigation, non-contact water recreation, commercial and sportfishing, marine habitat, and preservation of rare and endangered species. Alternative 1 would not include construction, and because operation of Alternative 1 would closely resemble baseline conditions, it would not have adverse effects on the designated beneficial uses.

CEQA Impact Determination

No construction would occur, and because the terminal is not located in an area designated for a sustainable groundwater management plan, operation of Alternative 1 would not interfere with any groundwater management plan. Because operation of Alternative 1 would closely resemble baseline conditions, it would not conflict with or obstruct implementation of the Basin Plan. Accordingly, there would be no impacts.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Analysis of the No Project Alternative is not required under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Alternative 2 – No Federal Action

Alternative 2 is a NEPA-required no-action alternative for purposes of this Draft EIS/EIR. As described in Section 2.9.1.1, this alternative includes the activities that would occur absent a USACE permit, and could include improvements that require a local permit. Without a USACE permit, no dredging, dredged material disposal, cut, fill, pile installation, or wharf construction would occur; however, the proposed expansion of

the WBICTF, with installation of RMG cranes, would occur. Accordingly, the No Federal Action Alternative is identical to the NEPA baseline.

Alternative 2 includes the expansion of the WBICTF railyard, which would involve construction in the backlands of the Berths 121-131 Terminal. Accordingly, although Alternative 2 would not involve federal action it would nevertheless be a project under CEQA, and therefore impacts are analyzed in accordance with the requirements of CEQA.

Impact WQ-1: Would Alternative 2 violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction

Construction of Alternative 2 could affect harbor waters through runoff from the WBICTF expansion site. However, as described under WQ-1 for the Proposed Project, the small size of the construction and the controls that would be in place would limit runoff and minimize the entry of pollutants into harbor waters. Construction activities under Alternative 2 would be the same as under the NEPA baseline.

Operation

Operation of Alternative 2 would be similar to existing conditions, with the exception of projected growth in container throughput, vessel calls, and train and truck trips at the Berths 121-131 Terminal (Table 2-2) relative to the CEQA baseline. Those increases could incrementally increase polluted runoff in receiving waters, but the controls described under WQ-1 for the Proposed Project would limit the magnitude of those increases. In addition, water quality monitoring has shown that water quality standards are not exceeded in the area around the Berths 121-131 Terminal.

Atmospheric deposition of contaminants on the terminal and the waters of Los Angeles Harbor would continue, but it would continue to constitute a minor source of pollution. Illegal discharges from vessels calling the Berths 121-131 Terminal could occur, but as in the case of the Proposed Project, there is no evidence that illegal discharges are a source of exceedances of water quality standards in the harbor. The frequency of hazardous materials cargo spills under Alternative 2 would increase relative to the CEQA baseline, but as in the case of the Proposed Project the magnitude and consequences of such accidents would be small.

CEQA Impact Determination

Construction of Alternative 2 would be limited in area and would be subject to pollution control measures. Operation of Alternative 2 would be subject to pollution controls that would minimize the frequency and consequences of releases of pollutants. Accordingly, Alternative 2 would not result in violations of regulatory standards or requirements for surface or groundwater, and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

There would be no difference between Alternative 2 and the NEPA baseline; accordingly, Alternative 2 would result in no impact.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact WQ-3: Would Alternative 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 which would:

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

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

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

iv) impede or redirect flood flows?

Construction

Alternative 2 would not involve any construction that could result in a permanent change in the movement of surface water on or around the Berths 121-131 Terminal.

Operation

Alternative 2 would maintain the existing B121-131 Terminal's size and general configuration, and would have substantially the same amount of impervious surface. Because the nature of activities would remain the same as under baseline conditions, differing only in the number of railcars that could be handled, it would not result in increased runoff. The existing storm drain system would be only slightly altered and would continue to comply with all discharge requirements imposed by the LARWQCB permit. Furthermore, Alternative 2 would not include features that would impede or redirect water movement, including flood flows, on or near the Berths 121-131 Terminal.

CEQA Impact Determination

Because Alternative 2 would not include features that would substantially alter drainage patterns and runoff quantities or have features that would impede or redirect water movement, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

There would be no difference between Alternative 2 and the NEPA baseline; accordingly, Alternative 2 would result in no impact.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact WQ-4: In flood hazard, tsunami, or seiche zones, would Alternative 2 risk release of pollutants due to project inundation?

Construction

As described for the Proposed Project, the potential for the Berths 121-131 Terminal to be substantially affected by flooding, tsunami, or seiche is remote. Construction of the WBICTF expansion would expose soils to wind and water erosion. As described for the Proposed Project (see WQ-1), construction would be conducted in accordance with the requirements of the project's storm water pollution prevention plan (SWPPP), which would limit the potential for pollutant releases, even in the event of flooding.

Operation

As described for the Proposed Project, the potential for the Berths 121-131 Terminal to be substantially affected by flooding or tsunami is remote. Operational activities of the terminal under Alternative 2 would closely resemble baseline conditions, differing only in the number of railcars that could be handled, and would not increase the probability or severity of flooding, tsunamis, seiches, or site inundation. As with the Proposed Project, no combination of SLR and tides would result in flooding of the terminal. Accordingly, the risk of release of pollutants due to site inundation would not be increased by operation of Alternative 2.

CEQA Impact Determination

Because construction and operation of Alternative 2 would not create conditions that would substantially increase the risk of release of pollutants in the unlikely event of site inundation by flooding or tsunami, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

There would be no difference between Alternative 2 and the NEPA baseline; accordingly, Alternative 2 would result in no impact.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact WQ-5: Would Alternative 2 conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Responsibility for the protection of surface water and groundwater quality in California rests with the SWRCB and nine RWQCBs. Region-specific water quality regulations are contained in Water Quality Control Plans that recognize regional beneficial uses, water quality characteristics, and water quality problems. The Berths 121-131 Terminal is not located in an area designated for a sustainable groundwater management plan but is in the

area designated under the Los Angeles Region Water Quality Control Plan (Basin Plan, LARWQCB 2014). The Basin Plan designates beneficial uses of the surface waters of Inner Los Angeles Harbor (which includes the Project site), as: industrial service supply, navigation, non-contact water recreation, commercial and sportfishing, marine habitat, and preservation of rare and endangered species. As described in Impact WQ-1, construction of Alternative 2 would not result in conditions that would degrade water quality, and because the construction would be on land it would not conflict with beneficial uses designated by the Basin Plan. Because operation of Alternative 2 would closely resemble baseline conditions, it would not have adverse effects on the designated beneficial uses.

CEQA Impact Determination

Construction of the railyard expansion would not affect groundwater and would thus not conflict with or obstruct groundwater management plans. Because the Berths 121-131 Terminal is not located in an area designated for a sustainable groundwater management plan, operation of Alternative 2 would not interfere with any groundwater management plan. Because operation of Alternative 2 would closely resemble baseline conditions, it would not conflict with or obstruct implementation of the Basin Plan. Accordingly, there would be no impacts.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

There would be no difference between Alternative 2 and the NEPA baseline; accordingly, Alternative 2 would result in no impact.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

3.13.4.3 Summary of Impact Determinations

Table 3.13-1 summarizes the CEQA and NEPA impact determinations for the Proposed Project and its alternatives related to water quality, sediments, and circulation, as described in the detailed discussion above. This table is intended to allow easy comparison between the potential impacts of the Proposed Project and its alternatives with respect to this resource. Identified potential impacts may be based on federal, state, or City of Los Angeles significance criteria, LAHD criteria, and the scientific judgment of the report preparers. For each impact threshold, the table describes the impact, notes the CEQA and NEPA impact determinations, describes any applicable mitigation measures, and notes the residual impacts (i.e., the impact remaining after mitigation). All impacts, whether significant or not, are included in this table.

Table 3.13-1: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Circulation Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Proposed Project	**WQ-1:** Would the Proposed Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	WQ-3: 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 which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows?	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	WQ-4: In flood hazard, tsunami, or seiche zones, would the Proposed Project risk release of pollutants due to project inundation?	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	WQ-5: Would the Proposed Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant

Table 3.13-1: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Circulation Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Alternative 1 No Project	**WQ-1**: Would Alternative 1 violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	CEQA: Less than significant	No mitigation is required.	CEQA: Less than significant
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-3: Would Alternative 1 substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows?	CEQA: Less than significant	No mitigation is required.	CEQA: Less than significant
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-4: In flood hazard, tsunami, or seiche zones, would Alternative 1 risk release of pollutants due to project inundation?	CEQA: Less than significant	No mitigation is required.	CEQA: Less than significant
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-5: Would Alternative 1 conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	CEQA: No impact	No mitigation is required.	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
Alternative 2	**WQ-1**: Would Alternative 2 violate any water quality standards or waste discharge	CEQA: Less than significant	No mitigation is required.	CEQA: Less than significant

Table 3.13-1: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Circulation Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
No Federal Action	requirements or otherwise substantially degrade surface or groundwater quality?	NEPA: No impact		NEPA: No impact
	WQ-3: Would Alternative 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 which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows?	CEQA: No impact	No mitigation is required.	CEQA: No impact
		NEPA: No impact		NEPA: No impact
	WQ-4: In flood hazard, tsunami, or seiche zones, would Alternative 2 risk release of pollutants due to project inundation?	CEQA: Less than significant	No mitigation is required.	CEQA: Less than significant
		NEPA: No impact		NEPA: No impact
	WQ-5: Would Alternative 2 conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	CEQA: No impact	No mitigation is required	CEQA: No impact
		NEPA: No impact		NEPA: No impact

3.13.4.4 Mitigation Monitoring

No mitigation measures are required due to the implementation of existing regulations or measures included as part of the Proposed Project or any of the alternatives.

3.13.5 Significant Unavoidable Impacts

No significant unavoidable impacts on water quality, sediments, hydrology and circulation would occur as a result of construction or operation of the Proposed Project or any of the alternatives.